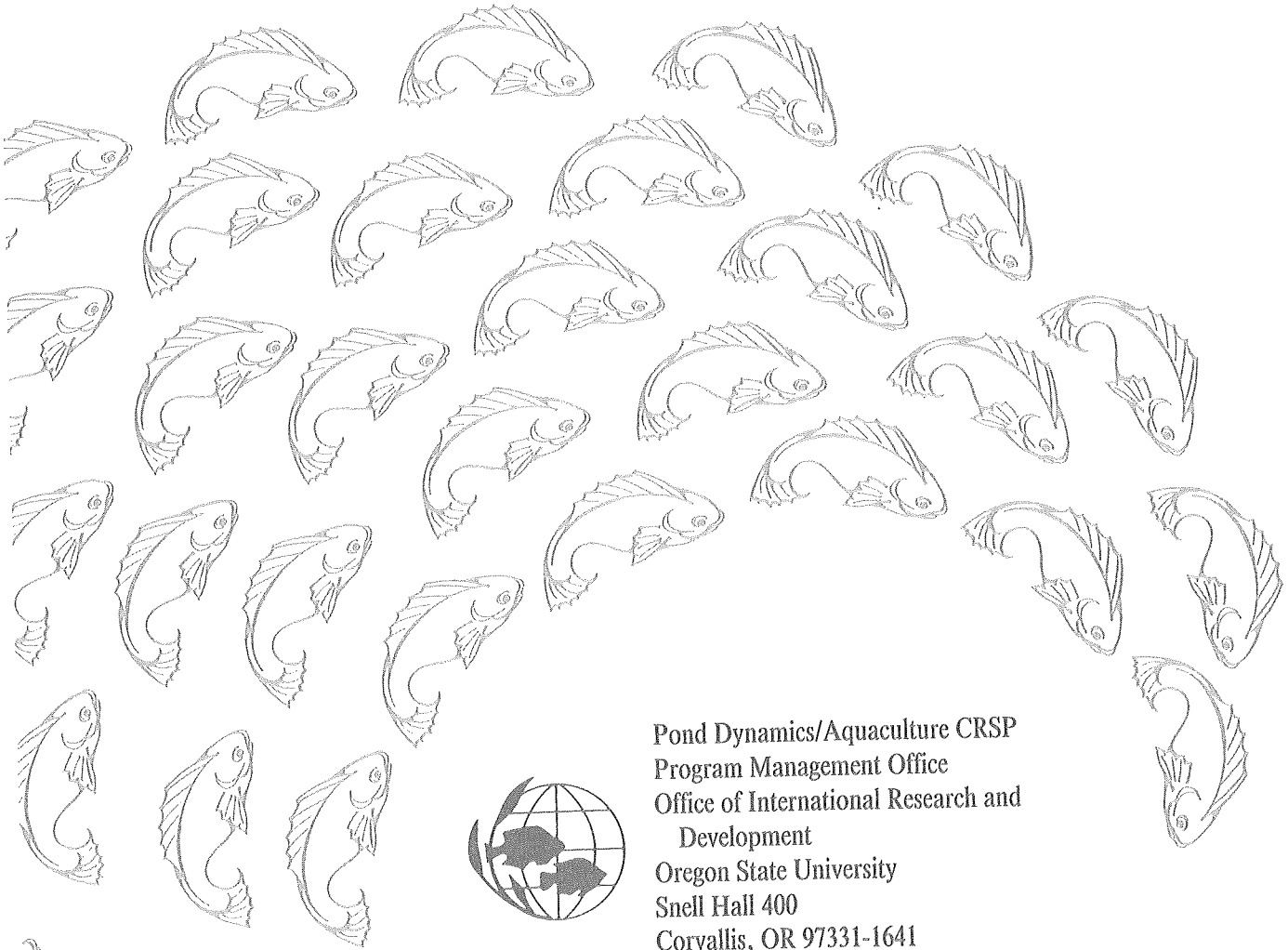
Pond Dynamics/Aquaculture Collaborative Research Data Reports

Volume Eight, Number One
Aguadulce, Panama Project

Cycle I of the
CRSP Global Experiment



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Volume Eight, Number One.
Aguadulce, Panama: Cycle I of The Global Experiment

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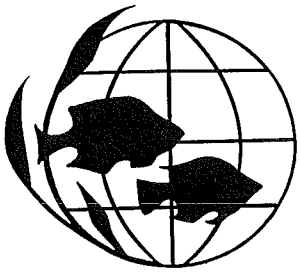

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FOREWORD

The Pond Dynamics/Aquaculture Collaborative Research Support Program (PD/A CRSP) represents an international community of researchers and institutions dedicated to strengthening health and nutrition in developing countries by improving the efficiency of pond aquaculture systems. It is one of several agricultural CRSPs supported by the U.S. Agency for International Development under the authority of Title XII of the International Development and Food Assistance Act of 1975.

The "Global Experiment" in Pond Dynamics/Aquaculture is the major CRSP research activity, covering the period from 1982 to 1987. The Global Experiment was designed to quantitatively describe the physical, chemical and biological principles of pond culture systems. The information gained from the Global Experiment will be used to improve production technologies and develop quantitative production functions to facilitate rigorous economic analyses of aquaculture systems.

Standardization is a key element of the Global Experiment. Standardization permits the comparison of data from diverse geographic locations. The experimental design involves monitoring specified environmental and fish production variables in accordance with standardized work plans in twelve or more ponds at each of seven geographical locations. The variables observed, frequency of observation, and materials and methods are uniform for all locations. The field data are filed in a centralized data base, called the CRSP Central Data Base. Statistical methods will be used to test hypotheses about correlations between variables and to evaluate the sources of variance within ponds, between ponds within locations, and between locations.

The CRSP Central Data Base will be used to develop predictive models of the processes occurring in pond culture systems. The models will be used to provide guidance for ongoing and future research, to predict the performance of existing and proposed pond systems subject to specific inputs and constraints, and to improve the operation and efficiency of pond culture systems.

The Global Experiment includes three cycles of experiments. Each cycle consists of two series of observations, one during the dry season and one during the wet season. The objective of the first cycle is to create a detailed baseline of chemical, physical, and biological data on all ponds treated with a standard level of inorganic fertilizer. In the second experimental cycle, ponds treated with inorganic fertilizer are compared to ponds treated with organic fertilizer. In the third cycle, the responses of ponds to different levels of organic fertilizer are compared.

The goal of the Pond Dynamics/Aquaculture Collaborative Research Data Reports (referred to as Data Reports) is to record the CRSP Central Data Base and to present interpretations of site specific results. The Pond Dynamics/Aquaculture CRSP has conducted the Global Experiment at seven project sites in six developing countries: Thailand, Indonesia, the Philippines, Panama, Honduras, and Rwanda. The first volume of these reports provides descriptive information for each CRSP site. It presents the physical characteristics of each site, including a geographical sketch, climatology, and water and soil analyses. Experimental cycles are described in CRSP Work Plans One to Three, which are summarized in the first volume.

Volume One will serve as the reference volume for the entire report series. Subsequent volumes will focus on each site separately. Each Data Report will include one cycle (wet and dry seasons) of the Pond Dynamics/Aquaculture CRSP Global Experiment. Therefore, with few exceptions, each project site will have three Data Reports devoted to it, representing the results of the three cycles of the Global Experiment. In addition to the hard copy of experimental data published as a part of each Data Report, data are also available from the PD/A CRSP in electronic form (on diskette) for computer analysis. Cycle I of the Global Experiment in Aguadulce, Panama is presented in this volume.

INTRODUCTION

The results of the Cycle I Pond Dynamics/Aquaculture (PD/A) CRSP rainy and dry season experiments, conducted at the Ingeniero Enrique Enseñat Brackishwater Experiment Station (BES), Aguadulce, Panama, are reported in this document. The BES is located about 5 km south of the town of Aguadulce, 0.5 km north of the Port of Aguadulce, and 190 km from Panama City. The BES is located within a zone of approximately 1500 ha of commercial brackishwater shrimp farms located adjacent to the Gulf of Parita on the Pacific Coast. The BES is part of the seed production and research station network of the Dirección Nacional de Acuicultura (DINAAC). Facilities at the station have been described by Egna et al. (1987).

The principal objective of the Cycle I studies was to describe baseline chemical, physical, biological, and hydrological characteristics in experimental ponds stocked with Pacific marine penaeid shrimp (*Penaeus* species) during the rainy and dry seasons.

MATERIALS AND METHODS

Thirteen earthen ponds (555 to 683 m^2) at the BES were used in the Cycle I baseline experiments. The rainy season (RS) experiment began on 26 July 1983 and ended on 13 December 1983. The dry season (DS) experiment was conducted from 6 February 1984 through 18 May 1984. Chicken litter (air-dried chicken manure and rice hull litter), obtained from a local commercial layer operation, was applied evenly over each pond bottom at 1000 kg/ha 14 days before stocking shrimp. After the manure application, ponds were filled to a depth of 10 cm and left for 10 days to permit development of a benthic algal mat. Water depth was then increased to 80 cm and four days later ponds were stocked with shrimp. No nutrients other than the initial manure application were added to ponds. Water in all ponds was exchanged daily at a rate equivalent to 5 to 10% of the pond volume.

Commercial hatchery-reared, post-larval (PL) penaeid shrimp with a mean weight of 0.01 g/PL were stocked into ponds during each season. The rainy season stocking rate was 7 PLs/m^2, and composed of 75% *Penaeus vannamei* and 25% *Penaeus stylirostris*. Because of an almost complete mortality of *P. stylirostris* in all ponds during the RS, dry season experiment ponds were stocked only with *P. vannamei* at 5.25 PLs/m^2. One pond in the dry season experiment was not stocked with shrimp. Ponds were managed according to guidelines given in the CRSP First Work Plan (undated).

Pond mud samples were collected using the methodology given in the CRSP First Work Plan. Initial RS samples were analyzed in the United States. The final RS samples, which also served as the initial DS samples, and the final DS samples were analyzed at a soils laboratory in Panama. Initial and final water samples were collected from each pond, preserved according to the CRSP First Work Plan, and analyzed for major and minor elements in the U.S.

Water quality samples were collected monthly and analyzed according to the CRSP First Work Plan. Exceptions to the stated methods are detailed below:

1) Solar radiation
   Daily light intensity (g-cal/cm^2-d) was measured with a battery-powered Belfort mechanical pyranograph.
2.) Wind speed and direction
   Not measured because of lack of equipment.
3.) Evaporation
   During the RS a provisional evaporation tank, consisting of a 32-cm diameter, 50-cm deep, 20-l metal water cooler insulated with polyurethane and buried 3/4 below ground level, was used to measure evaporation (cm).

During the DS, evaporation was estimated using a standard weather station evaporation pan equipped with a still-well and hook gauge Measurements of loss or gain of water were made once daily (at 0800 hours) in the RS, and twice daily (at 0700 and 1800 hours) in the DS.

4.) Salinity
Salinity (‰) was measured daily in each pond between 0530 and 0630 hours; measurements were made with an optical refractometer 25 cm below the surface at the deep end.

5.) pH
pH was measured daily in each pond between 0530 and 0630 hours; readings were taken 25 cm below the surface next to the drain pipe at the deep end.

6.) Water chemical analyses
Filterable orthophosphate (ascorbic acid method), nitrite (diazotization method), nitrate (cadmium reduction method), silicate (molybdosilicate method), and total alkalinity were analyzed according to the methodology of Strickland and Parsons (1972). Ammonia (salicylate-hypochlorite method) was analyzed according to the methodology of Bower and Holm-Hansen (1980).

7.) Chlorophyll *a*, *b*, and *c*
These were analyzed according to the methodology of Strickland and Parsons (1972).

8.) Secchi disk
Measured twice a week.

9.) Primary productivity
Primary productivity was determined monthly in both seasons at 2-h intervals using the modified diel curve method, as described by Welch (1968). DO readings were made at 25 cm below the surface.

10.) Zooplankton
During the DS experiment a horizontal tow along the longitudinal axis of each pond was made monthly using an 80-micron mesh Wisconsin plankton net. Wet samples were analyzed to quantify major taxa, and a subsample was dried to determine zooplankton standing crop.

11.) Shrimp growth
Shrimp from each pond were sampled every 15 d. A short beach seine (5 m long x 1 m deep, 2.0-mm mesh) was used for the first two periods. Beginning on day 45 a cast net (2.6 m in diameter, 6.4-mm mesh, 3.6-kg lead line) was used.

12.) Shrimp feeding habits
Ten shrimp were randomly sampled from each pond on three dates during the RS, individually weighed and measured, and the stomach contents individually preserved in 5% glycerin-buffered formalin. The degree of stomach fullness and percent occurrence of food organism taxa were determined for each shrimp size-class.

RESULTS AND DISCUSSION

Meteorology

Rainfall, evaporation, solar radiation, and air temperature data for both seasons are shown in Table 2. The DS was noted to have higher solar radiation, evaporation, and air temperature values. Rain fell on only two occasions during the DS, for a total of 0.23 mm.

Water Quality

Results of water quality analyses are summarized by pond in Table 3. Seasonal water quality means are compared in Table 4. The number of days of low early morning dissolved oxygen during the rainy season greatly exceeded the number during the dry season (Table 5).

Soil Analyses

Results of the pond mud analyses are presented by pond in Table 6; initial and final rainy season analyses are compared in Table 7.

Minor Elements in Water

Results of the initial and final analyses for the rainy and dry seasons are presented in Tables 8 and 10, respectively. Initial and final rainy season samples are compared in Table 9.

Biological Variables

Phytoplankton. Mean pond chlorophyll *a*, *b*, *c*, and *a* + *b* + *c* values during the RS ranged from 97.6 to 151.2, 13.3 to 60.8, 33.0 to 75.5, and 185.0 to 277.8 mg/m^3, respectively (Table 3). Mean pond values were significantly lower in the DS than in the RS (Table 4). During the RS chlorophyll concentrations in the water supply reservoir tended to be near or below the lowest values for the RS ponds, while in the DS reservoir values were near the highest for the DS pond values.

Mean Secchi disk readings were significantly higher in the RS than in the DS (Tables 3 and 4).

Primary Productivity. Primary productivity values (mg DO/l/d) for diel oxygen curve measurements are found in Table 11, and for light-dark bottle measurements in Table 13. Mean gross and net primary productivity, and mean community respiration were significantly higher during the RS (Table 12). Measurements of primary productivity by the light-dark bottle method were considerably lower than values from diel oxygen curve measurements during the DS.

Zooplankton. Densities and standing crops of zooplankton decreased as salinities increased. Between-pond mean densities were lowest in February (0.57 x 10^6 organisms/m^3) and increased to a high (0.20 x 10^6/m^3) in May . Mean standing crops were also lowest in February (191.5 mg dry matter/m^3), and and increased to a high (87.3 mg/m^3) in April (Table 14). Variance between ponds in both zooplankton density and standing crop was high, ranging from 50.0 to 64.1% CV for density, and 38.2 to 111.4% CV for standing crop. Juvenile copepods dominated in all DS months, with an overall minimum of 64.3% in February, an overall maximum of 84.6% in May, and a grand mean of 72.9% (Table 15). The density of adult copepods, *Oncea* and *Ergasulus*, (the second and third most dense taxa), decreased as salinities increased, while the density of calanoids (the fourth most dense taxon), increased as salinities increased, then decreased in the last month when salinities were highest. The tintinnid ciliates were present only in February, in six of the twelve ponds. Rotifers were totally absent or low in density in the first three months; densities were highest in May, when salinity was highest.

Shrimp Yield

Shrimp growth, survival, and yield were higher in the DS than the RS (Tables 16 and 17). The mean between-pond harvest weight for *P. vannamei* harvested at the end of the RS was 5.9 g, which represented a gain of 0.29 g/wk. The mean harvest weight for *P. stylirostris* was 20.1 g, which represented a gain of 1.00 g/wk. At the end of the DS, the mean weight for *P. vannamei* was 5.9 g, which represented a gain of 0.37 g/wk.

Mean survival in the RS was 62.8% for *P. vannamei* and only 1.1% for *P. stylirostris* Inquiry with the post-larvae supplier revealed that the entire lot of *P. stylirostris* was considered substandard in quality. *P. vannamei* post-larvae stocked in the RS were also considered suspect in quality because of the relatively high occurrence of

deformed rostra (22.8%) at harvest. In the DS, when only *P. vannamei* were stocked, the mean between-pond survival was 75.2%. No deformed rostra were found at harvest.

Mean shrimp yield during the RS was 173.2 kg/ha, and daily yield ranged from 1 06 to 1.35 kg/ha/d over the 140-day period. During the DS mean shrimp yield was 228.2 kg/ha, and daily yield ranged from 1.38 to 2.48 kg/ha/d over the 102-day period. Sampling data show that carrying capacity was reached for most ponds in the RS in approximately 60 days, when the mean standing crop for all ponds was estimated to be 161.3 kg/ha. In the DS the carrying capacity appeared to be reached on about day 92 when the mean standing crop for all ponds was 176.8 kg/ha.

Shrimp feeding habits. The following observations about *P. vannamei* feeding habits were made during the study:
1. Small shrimp (during the first, two months of the experiment) had the highest occurrence of empty stomachs. Of the five stomach-fullness categories (0, 25, 50, 75 and 100% full), 25% full occurred more often (42.2%) than any other category (Table 18).
2. The most frequently occurring food groups found in shrimp stomachs were (in descending order of importance): Ciliates (*Tintinnidae*); Cyanophyta (*Oscillatoria*); Chrysophyta (*Amphora, Navicula, Pleurosigma, Pinnularis*); Cnidaria (*Abietinaria*); Copepoda (larvae); and Cladocera (body segments) (Table 19).
3. Detritus constituted 26.9% of the stomach contents (Table 19).

CONCLUSIONS

The RS was characterized by higher rainfall, and pond water temperatures, higher ammonia, nitrite, and chlorophyll concentrations, and greater gross and net primary productivity and community respiration than the DS. The DS was characterized by higher evaporation, air temperature, and solar radiation, higher pond water alkalinity, nitrate, pH, and early morning dissolved oxygen levels, greater Secchi disk visibility, and higher orthophosphate, silicate, and salinity levels, as well as higher shrimp growth rate, survival, yield, and daily rate of production than were observed in the RS.

Zooplankton frequency and standing crop decreased as salinities increased. Adult copepods dominated throughout the DS.

The greatest shrimp production in ponds receiving a pre-stocking application of 1000 kg/ha of chicken litter and daily water exchange rate of 5-10%. was 189.6 kg/ha (1.33 kg/ha/d) in the RS and 273.2 kg/ha (2.48 kg/ha/d) in the DS. Mean shrimp production was 173.2 kg/ha (1.23 kg/ha/d) in the RS and 228.2 kg/ha (2.07 kg/ha/d) in the DS. Carrying capacity was reached on about day 60 in the RS (mean standing crop of 161 kg/ha), and on about day 92 in the DS (mean standing crop of 177 kg/ha).

P. vannamei was observed to be omnivorous, with a fairly high intake of detritus. The high occurrence of nearly-empty stomachs throughout the day indicated that natural food organisms were limited for the shrimp standing crops reached in this study.

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Table 1. Proximate analyses (on dry weight basis) of chicken litter added to pond bottoms during each season of CRSP Cycle I research in Aguadulce, Panama.

Variable	Rainy season	Dry season
Dry matter (%)	12.3	10.0
Ash (%)	23.8	24.4
Fiber (%)	19.9	21.1
N (%)	2.1	2.3
P (%)	1.3	1.4

Table 2. Seasonal means of meteorological variables during the rainy and dry seasons of CRSP Cycle I research in Aguadulce, Panama.

Variable	Mean	SD	Range
Solar radiation (g-cal/cm^2/d)			
Rainy season	347	117	66 to 587
Dry season	469	97	112 to 640
Rainfall (cm/d)			
Rainy season	0.4	1.1	0 to 7.9
Dry season	0	0.021	0 to 0.21
Evaporation (cm/d)			
Rainy season	0.4	0.1	0.2 to 0.6
Dry season	7.3	1.8	3.0 to 13.0
Air temperature, maximum (°C)			
Rainy season	30.0	1.5	26.4 to 32.6
Dry season	36.3	0.6	34.8 to 37.2
Air temperature, minimum (°C)			
Rainy season	23.0	0.6	20.9 to 23.3
Dry season	25.4	0.8	24.1 to 27.1

Table 3. Means of water quality variables by pond during the rainy and dry seasons of CRSP Cycle I research in Aguadulce, Panama.

Season	Pond	Early morning Temperature (°C)	Early morning D.O. (mg/l)	Maximum temperature (°C) Surface	Maximum temperature (°C) Bottom	Minimum temperature (°C) Surface	Minimum temperature (°C) Bottom	pH	Salinity (‰)	Secchi disk (cm)	Total alkalinity (mg/l CaCO3)	PO4-P (mg/l)	Total NH3-N (µg/l)
Rainy	4	27.1	4.6					8.47	28.4	25.8	83.6	0.065	142.0
Rainy	7	27.3	4.9	34.0	33.0	24.7	24.7	8.54	28.0	27.5	108.6	0.023	403.1
Rainy	13	27.2	4.8					8.45	28.4	28.1	100.2	0.011	72.5
Rainy	14	27.2	4.7					8.41	27.4	26.7	91.9	0.078	91.8
Rainy	16	27.1	4.4					8.48	27.4	27.5	116.8	0.015	41.1
Rainy	21	27.1	4.7					8.46	26.2	27.9	108.5	0.009	149.3
Rainy	25	27.0	4.5					8.45	27.2	27.2	91.9	0.045	92.4
Rainy	28	27.0	4.7					8.53	27.4	27.1	100.2	0.019	112.3
Rainy	34	27.1	4.7					8.53	27.1	26.8	116.8	0.016	103.3
Rainy	35	27.0	4.6					8.53	27.3	26.8	108.5	0.146	92.2
Rainy	37	27.0	4.5					8.42	27.2	26.8	91.9	0.043	27.7
Rainy	42	26.9	4.7	33.1	32.1	25.1	24.8	8.43	27.3	28.2	92.1	0.010	78.6
Rainy	22	26.9	4.0	33.2	32.2	24.8	24.5	8.36	27.7	22.6	83.6	0.438	107.7
Rainy	Res.									20.5		0.047	84.5
Dry	4	25.1	5.2					8.12	44.9	31.0	137.6	0.084	64.3
Dry	7	25.1	5.0	29.9	29.6	23.8	23.6	8.04	44.4	31.3	128.4	0.038	232.6
Dry	13	25.1	4.8					8.09	44.2	30.4	118.4	0.037	273.8
Dry	14	25.0	5.0					8.06	44.4	28.0	126.9	0.046	316.6
Dry	16	25.1	4.9					8.11	44.8	29.3	115.4	0.093	328.1
Dry	21	25.0	5.0					8.10	42.7	31.2	120.6	0.055	228.4
Dry	25	25.0	4.9					8.12	43.4	32.6	106.6	0.084	311.3
Dry	28	25.0	4.8					7.68	45.4	32.3	111.6	0.077	354.5
Dry	34	25.0	4.6					7.99	44.5	29.2	117.9	0.265	256.5
Dry	35	25.0	4.6					7.99	45.2	31.3	120.1	0.092	320.8
Dry	37	25.0	4.9					7.70	44.1	34.0	115.4	0.096	331.6
Dry	42	25.0	4.8	29.7	29.5	23.3	23.1	8.08	43.1	30.8	107.9	0.073	266.9
Dry	22							7.95	43.7	30.8	98.1	0.032	262.4
Dry	Res.							7.67	36.3	17.5	114.4	0.049	255.3

Table 3. Continued.

Season	Pond	NO3 (mg/l)	NO2 (mg/l)	NO3 + NO2 (mg/l)	Reactive silicate (mg/l)	Chlorophyll a (mg/m3)	Chlorophyll b (mg/m3)	Chlorophyll c (mg/m3)	Chlorophyll a + b + c (mg/m3)	Gross primary production (mg O2/l/d)	Net primary production (mg O2/l/d)	Community respiration (mg O2/l/d)
Rainy	4	0.003	0.001	0.004	2.184	127.5	50.9	68.0	246.4	12.8	7.0	5.8
Rainy	7	0.002	0.001	0.003	2.750	109.5	28.7	47.9	186.1	10.2	5.8	4.3
Rainy	13	0.005	0.001	0.006	3.306	108.7	37.7	75.5	221.9	7.8	4.0	3.8
Rainy	14	0.004	0.001	0.006	3.559	120.7	49.7	60.3	230.7	9.2	5.7	3.5
Rainy	16	0.006	0.002	0.008	3.404	149.2	13.3	52.0	214.5	9.8	5.6	4.2
Rainy	21	0.005	0.001	0.006	2.535	124.7	40.3	50.6	215.6	9.9	5.2	4.7
Rainy	25	0.002	0.002	0.004	3.041	117.0	49.7	47.5	214.2	10.4	6.0	4.4
Rainy	28	0.002	0.002	0.004	3.177	108.0	40.9	36.1	185.0	9.9	5.7	4.2
Rainy	34	0.004	0.003	0.007	2.790	148.7	60.8	68.3	277.8	9.4	5.5	4.0
Rainy	35	0.014	0.001	0.015	2.589	151.2	21.4	43.8	216.4	8.7	4.7	4.0
Rainy	37	0.007	0.002	0.009	2.535	122.1	32.8	33.0	187.9	11.2	5.7	5.5
Rainy	42	0.004	0.001	0.005	2.722	97.6	42.6	45.3	185.5	12.3	7.1	5.2
Rainy	22	0.002	0.000	0.002	2.647	121.4	59.2	54.8	235.4			
Rainy	Res.	0.014	0.003	0.017	4.572	53.1	19.3	22.2	94.6			
Dry	4	0.014	0.005	0.019	3.495	22.5	6.8	20.9	50.2	5.7	3.6	2.1
Dry	7	0.026	0.005	0.018	3.321	33.5	12.4	38.9	84.8	6.2	4.4	1.8
Dry	13	0.020	0.005	0.015	3.958	27.3	7.7	20.9	55.9	5.8	3.9	1.9
Dry	14	0.026	0.008	0.022	4.112	22.9	7.3	22.5	52.7	5.2	3.6	1.6
Dry	16	0.030	0.008	0.023	3.369	39.3	10.4	38.6	88.3	6.0	3.4	2.6
Dry	21	0.022	0.007	0.017	4.432	28.0	7.7	26.8	62.5	6.7	5.0	1.7
Dry	25	0.026	0.005	0.018	3.740	20.6	7.8	23.8	52.2	6.2	4.2	2.0
Dry	28	0.013	0.006	0.012	4.234	18.1	7.1	26.5	51.7	6.8	4.9	1.9
Dry	34	0.017	0.012	0.020	4.254	20.8	5.2	15.9	41.9	7.1	5.1	2.0
Dry	35	0.024	0.006	0.018	4.135	23.4	7.4	23.9	54.7	7.9	5.4	2.5
Dry	37	0.039	0.009	0.028	3.704	29.3	6.3	23.3	58.9	7.1	4.8	2.3
Dry	42	0.025	0.005	0.018	4.062	28.7	15.4	70.3	114.4	6.4	4.7	1.7
Dry	22	0.024	0.006	0.017	3.255	22.1	8.2	20.2	50.5			
Dry	Res.	0.017	0.006	0.015	5.981	28.1	14.0	39.4	81.5			

Table 4. Seasonal means of water quality variables during the rainy and dry seasons of CRSP Cycle I research in Aguadulce, Panama.

	Rainy season		Dry season		
Variable	Mean	SD	Mean	SD	t - value
Early morning temperature (°C)	27.1	0.11	25	.05	58.278**
Early morning DO (mg/l)	4.7	0.1	4.9	0.17	3.542**
Surface temperature, maximum (°C)	33.6	0.6	29.8	0.1	8.135*
Bottom temperature, maximum (°C)	32.6	0.6	29.6	0.1	6.626*
Surface temperature, minimum (°C)	24.9	0.3	23.6	0.4	4.217
Bottom temperature, minimum (°C)	24.8	0.1	23.4	0.4	5.491*
pH	8.5		8.9		5.259**
Salinity (‰)	27.4	0.6	44.3	0.8	56.978**
Secchi disk visibility (cm)	27.2	0.69	31.0	1.62	7.373**
Total alkalinity (mg/l $CaCO_3$)	100.9	10.9	118.9	8.8	4.441**
Orthophosphate (µg/l PO_4-P)	0.04	0.04	0.09	0.06	2.233*
Total ammonia (µg/l NH_3-N)	117.2	96.7	273.8	77.6	4.376**
Nitrate (mg/l NO_3-N)	0.0049	0.0033	0.024	0.007	8.185**
Nitrite (mg/l NO_2-N)	0.0155	0.0006	0.0067	0.002	8.076**
Nitrate-nitrite (mg/l NO_3-NO_2-N)	0.0064	0.0032	0.019	0.004	8.464**
Reactive silicate (mg/l)	2.88	0.41	3.9	0.37	6.363**
Chlorophyll *a* (mg/m^3)	123.7	17.7	26.2	6.1	18.024**
Chlorophyll *b* (mg/m^3)	39.1	13.4	8.5	2.9	7.724**
Chlorophyll *c* (mg/m^3)	52.3	13.2	29.4	14.6	4.054**
Chlorophyll *a* + *b* + *c* (mg/m^3)	215.1	27.9	64.0	21	14.987**

* Significantly different ($P < 0.05$)

** Significantly different ($P < 0.01$)

Table 5. Number of days of low early morning dissolved oxygen (mg/l) in ponds during the rainy and dry seasons of CRSP Cycle I research in Aguadulce, Panama.

	Rainy season			Dry season		
Pond	< 1.0	1.1 to 2.0	2.1 to 3.0	< 1.0	1.1 to 2.0	2.1 to 3.0
4	1	6	5	0	0	0
7	0	1	7	0	0	0
13	0	2	9	0	0	0
14	0	2	9	0	0	0
16	7	5	6	0	0	1
21	0	1	8	0	0	0
25	0	1	7	0	0	0
28	1	4	6	0	0	0
34	6	2	2	0	0	1
35	3	3	5	0	0	0
37	5	2	6	0	0	0
42	1	5	6	0	0	1
Sum	24	34	76	0	0	3
22	2	8	16	0	0	0
Reservoir	0**	4**	3**	3	3	5

Table 6. Soil chemistry parameters measured at the beginning and end of the rainy season, Cycle I, Aguadulce, Panama.

Sample	Pond	Clay (%)	Silt (%)	Sand (%)	Organic mater (%)	pH	P (ppm)	Ca (meq/ 100 g)	Mg	K (ppm)	Na (ppm)	NO3-N (ppm)	Al (ppm)	Zn (ppm)	Mn (ppm)	Cu (ppm)	B (ppm)	CaCO3 (%)
Initial	4	32	10	58	1.20	6.5	12.0	5.9	20.3	1716	53	2.6	Tr	1.2	48.2	4.0	13.5	<0.2
Initial	7	48	10	42	1.20	7.2	7.0	6.4	20.5	1833	71	0.6	Tr	1.2	39.4	4.6	14.1	<0.2
Initial	13	44	12	44	1.20	6.4	14.0	4.4	20.3	1755	57	9.8	Tr	1.4	17.2	3.0	13.2	<0.2
Initial	14	42	8	50	0.90	6.5	12.0	4.9	17.8	1560	49	9.1	Tr	1.2	29.8	3.0	13.3	<0.2
Initial	16	46	10	44	1.10	6.9	13.0	4.8	18.3	1482	47	8.9	Tr	1.2	44.4	3.6	14.1	<0.2
Initial	21	34	18	48	1.50	7.6	7.0	10.0	21.5	2379	67	1.2	Tr	1.4	40.8	5.2	17.5	<0.2
Initial	25	36	14	50	0.96	6.9	13.0	6.2	22.6	1950	61	3.0	Tr	1.2	32.8	4.2	16.7	<0.2
Initial	28	34	10	56	1.30	6.8	13.0	7.4	25.0	2067	78	3.0	Tr	1.0	18.8	3.0	20.4	<0.2
Initial	34	28	14	58	1.30	6.9	13.0	9.8	25.1	1989	76	2.3	Tr	1.6	21.2	5.2	21.9	<0.2
Initial	35	34	6	60	0.69	7.3	15.0	5.6	19.6	1911	66	3.7	Tr	1.4	13.2	4.0	19.1	<0.2
Initial	37	36	6	58	0.74	7.3	13.0	7.3	21.4	1911	70	4.4	Tr	1.6	19.0	4.0	19.0	<0.2
Initial	42	30	10	60	0.85	7.6	6.0	9.3	19.8	2145	61	0.8	Tr	1.2	54.6	5.8	22.2	<0.2
Final	4				1.07	7.0	55.0	5.4	15.0	1220	4		Tr					
Final	7	56	14	30	1.34	7.3	32.5	7.8	6.8	920	4		Tr					
Final	13	13			1.47	7.3	16.5	6.6	12.2	380	4		Tr					
Final	14	60	14	26	0.94	7.5	26.5	3.2	10.0	900	11		Tr					
Final	16	46	14	40	0.80	7.7	23.0	5.6	10.4	640	4		Tr					
Final	21	56	16	28	1.34	7.6	30.0	7.6	6.8	1060	11		Tr					
Final	25	36	20	44	1.21	7.8	42.5	12.6	7.4	1440	26		Tr					
Final	28	44	20	36	1.61	7.9	32.5	14.8	5.2	1300	11		Tr					
Final	34	32	20	48	0.67	7.8	25.0	6.6	11.6	56	26		Tr					
Final	35	34	20	46	0.67	7.4	56.5	7.6	10.8	1324	26		Tr					
Final	37	28	18	54	0.94	7.6	53.5	7.2	13.4	1380	26		Tr					
Final	42	38	14	44	0.80	8.0	30.0	5.2	13.2	1560	26		Tr					

Table 7. Mean soil chemistry parameters measured at the beginning and end of the rainy season of CRSP Cycle I research in Aguadulce, Panama.

	Initial sample		Final sample		
Variable	Mean	SD	Mean	SD	t - value
Clay (%)	37	6.5	43	11.2	1.57
Silt (%)	10.7	3.4	17	2.9	4.62*
Sand (%)	52.3	6.8	39.6	9.3	3.71*
Organic matter (%)	1.08	0.25	1.07	0.32	0.057
pH	6.8		7.5		3.09*
P (ppm)	11.5	3.0	35.3	13.4	5.99*
Ca (meq/100g)	6.8	2.0	7.5	3.2	0.63
Mg (meq/100g)	21.0	2.3	10.2	3.1	9.72*
K (ppm)	1891.5	248.1	1015.0	459.0	5.82*
Na (ppm)	63.0	10.1	14.9	10.2	11.61*
NO_3-N (ppm)	4.1	3.3			
Al (ppm)	Tr		Tr		
Zn (ppm)	1.3	0.2			
Mn (ppm)	31.6	13.8			
Cu (ppm)	4.1	0.9			
B (ppm)	17.1	3.4			
$CaCO_3$ (%)	<0.02				

* Significantly different ($P < 0.05$)

Table 8. Water chemistry parameters measured at the beginning and end of the rainy season, Cycle I, Aguadulce, Panama.

Sample	Pond	pH	Cl (mg/l)	Salinity (‰)	SO4 (mg/l)	B (mg/l)	Ca (mg/l)	Cu (mg/l)	Fe (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Zn (mg/l)	Si (mg/l)	Mn (mg/l)
Initial	4	9.0	20440	32	2820	4.73	307	<0.02	1.93	1525	395	5230	0.08	4.59	0.49
Initial	7	9.0	20640	30	2890	4.11	314	<0.02	2.00	1480	400	6210	0.03	4.46	0.50
Initial	13	9.0	20000	31	2710	4.25	224	<0.02	0.89	1005	300	3330	<.02	2.73	0.22
Initial	14	9.0	19800	32	2710	4.41	289	<0.02	1.43	1390	375	4840	<0.02	3.79	0.23
Initial	16	9.0	20000	33	2630	4.27	301	<0.02	1.04	1510	375	3560	<0.02	3.48	0.39
Initial	21	9.0	18840	28	2430	4.62	267	0.04	12.00	1365	380	4580	<0.02	13.60	0.53
Initial	22	9.5	18960	29	2620	3.91	299	<0.02	3.65	1430	360	4580	0.15	6.61	0.68
Initial	25	9.0	20660	30	2890	4.43	287	<0.02	1.41	1385	385	6940	<0.02	3.50	0.25
Initial	28	9.0	20400	31	2840	4.59	321	<0.02	2.61	1475	395	7260	0.04	5.13	0.33
Initial	34	9.0	20740	32	2870	4.23	312	<0.02	1.45	1585	410	8120	0.02	4.10	0.35
Initial	35	9.0	20540	33	2820	4.66	307	<0.02	1.24	1560	400	13000	0.02	3.45	0.44
Initial	37	8.5	20400	30	2840	4.64	280	<0.02	2.28	1405	355	4970	0.20	5.78	0.25
Initial	42	8.0	19100	32	2500	4.88	273	<0.02	8.15	1475	395	9230	<0.02	9.22	0.59
Initial	Res		18700	29	2560	10.50	286	<0.02	1.85	1395	365	5170	<0.02	3.61	0.26
Final	4	8.0	9520	15	1170	3.04	142	<0.02	3.37	710	170	4180	<0.02	5.68	0.31
Final	7	8.4	8300	15	1450	2.06	122	<0.02	1.92	629	165	3660	<0.02	3.84	0.31
Final	13	8.3	8900	16	948	2.62	131	<0.02	1.27	672	165	3890	<0.02	3.66	0.14
Final	14	8.9	7540	14	1060	1.75	121	<0.02	1.26	604	170	3550	<0.02	3.84	0.11
Final	16	8.7	7900	13	927	2.26	122	<0.02	2.93	610	140	3470	<0.02	4.69	0.18
Final	21	8.9	6980	13	948	2.22	110	<0.02	2.63	539	145	3140	<0.02	4.93	0.12
Final	22	8.6	8660	16	1040	1.83	135		14.70	673	155	3940	0.03	15.80	0.83
Final	25	8.3	7400	15	970	1.53	115	<0.02	2.15	558	140	3190	<0.02	4.25	0.11
Final	28	8.9	8020	14	927	2.08	125	<0.02	1.58	618	195	3590	<0.02	3.89	0.10
Final	34	8.8	7000	13	861	1.95	108	<0.02	2.95	541	135	3100	<0.02	6.69	0.20
Final	35	8.0	7280	13	905	1.49	111	<0.02	2.84	563	185	3780	<0.02	5.52	0.18
Final	37	8.8	7900	15	948	1.73	125	<0.02	2.63	625	145	3590	0.06	5.13	0.16
Final	42	8.9	7520	14	970	1.81	113	<0.02	2.52	570	135	3340	0.02	4.80	0.17
Final	Res		5980		774	1.89	95	<0.02	5.35	476	115	2700	<0.02	11.19	0.25

Table 9. Mean water chemistry parameters measured at the beginning and end of the rainy season, Cycle I, Aguadulce, Panama.

	Initial sample		Final sample		
Variable	Mean	SD	Mean	SD	t - value
pH	8.7		8.4		1.45
Cl (mg/l)	20130.0	617.2	7855.0	759.1	43.46**
Salinity (‰)	31.2	1.5	14.2	1.0	32.86**
SO_4 (mg/l)	2745.8	154.3	1007.0	160.5	27.06**
B (mg/l)	4.48	0.24	2.04	0.45	16.64**
Ca (mg/l)	290.2	27.0	120.4	9.8	20.48**
Fe (mg/l)	3.04	3.43	2.34	0.70	0.69
Mg (mg/l)	1430.0	151.4	603.2	52.5	17.88**
K (mg/l)	380.4	29.3	157.5	20.3	21.65**
Na (mg/l)	6439.2	2734.1	3540.0	320.5	3.65*
Si (mg/l)	5.319	3.015	4.743	0.916	0.62
Mn (mg/l)	0.381	0.129	0.174	0.071	4.87**

* Significantly different ($P < 0.05$)

** Significantly different ($P < 0.01$)

Table 10. Water chemistry parameters measured at the beginning and end of the dry season, Cycle I, Aguadulce, Panama.

Sample	Pond	pH	Salinity (‰)	B (mg/l)	Ca (mg/l)	Cu (mg/l)	Fe (mg/l)	Mg (mg/l)	K (mg/l)	Na (mg/l)	Zn (mg/l)	Si (mg/l)	P (mg/l)
Initial	4	7.2	35									4.05	
Initial	7	7.2	34									4.22	
Initial	13	7.1	33									3.52	
Initial	14	7.1	36									4.35	
Initial	16	7.3	34									3.29	
Initial	21	7.0	34									5.00	
Initial	25	7.0	34									5.31	
Initial	28	7.1	33									4.08	
Initial	34	7.2	34									4.12	
Initial	35	7.4	36									5.50	
Initial	37	7.5	34									4.09	
Initial	42	7.2	36									4.49	
Final	4	7.7	51	0.06	203	0.03	0.79	545	245	6200	0.02	4.92	0.48
Final	7	7.9	50	0.01	201	0.03	0.50	537	241	6100	0.02	4.55	0.31
Final	13	7.7	50		201	0.04	0.64	539	238	6100	0.03	6.07	0.30
Final	14	7.6	43		224	0.04	0.61	557	269	6800	0.04	6.77	0.34
Final	16	7.9	45	0.29	218	0.04	0.86	550	255	6400	0.02	5.25	0.31
Final	21	8.8	46	0.12	215	0.04	1.49	549	253	6500	0.05	7.02	0.11
Final	25	8.4	46		225	0.04	0.82	554	250	6800	0.04	5.00	0.23
Final	28	8.6	55	0.07	206	0.04	0.78	536	241	6100	0.02	3.37	0.41
Final	34	8.7	53	0.13	222	0.03	0.82	524	256	7100	0.04	6.69	0.40
Final	35	8.7	52	0.03	201	0.04	0.76	539	240	6100	0.02	5.51	0.41
Final	37	8.1	51	0.07	230	0.04	0.86	558	261	6900	0.04	5.93	0.33
Final	42	8.6	48		196	0.04	1.06	553	233	6000	0.03	5.98	0.26

Table 11. Mean primary productivity and community respiration (mg O2/l/d), by pond, based on 2-hour diel readings during the rainy and dry seasons of CRSP Cycle I research in Aguadulce, Panama.

Season	Pond	Gross primary production			Net primary production			Community respiration		
		Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Rainy	4	12.8	14.6	6.2	7.0	8.4	3.7	5.8	6.0	2.7
Rainy	7	10.2	5.1	2.3	5.8	4.4	2.0	4.3	2.7	1.1
Rainy	13	7.8	6.6	3.0	4.0	3.8	1.8	3.8	3.1	1.5
Rainy	14	9.2	8.7	4.0	5.7	8.4	3.7	3.5	1.5	0.7
Rainy	16	9.8	10.7	4.7	5.6	7.1	3.5	4.2	3.6	1.6
Rainy	21	9.9	5.4	2.2	5.2	4.1	1.9	4.7	2.2	0.9
Rainy	25	10.4	8.1	3.8	6.0	5.9	2.8	4.4	2.5	1.0
Rainy	28	9.9	10.8	4.9	5.7	7.0	3.3	4.2	3.8	1.7
Rainy	34	9.4	12.2	5.1	5.5	7.4	3.2	4.0	4.8	2.0
Rainy	35	8.7	9.3	4.4	4.7	7.7	3.5	4.0	2.9	1.2
Rainy	37	11.2	8.8	4.0	5.7	5.5	2.4	5.5	3.8	1.7
Rainy	42	12.3	11.5	5.3	7.1	6.2	2.6	5.2	8.6	3.6
Rainy	Res	10.8	4.2	2.2	5.4	1.0	0.4	5.4	3.7	1.9
Dry	4	5.7	5.8	3.1	3.6	2.8	1.4	2.1	3.8	1.9
Dry	7	6.2	3.4	1.8	4.4	1.9	1.1	1.8	3.4	1.8
Dry	13	5.8	2.3	1.2	3.9	1.3	0.7	1.9	2.8	1.4
Dry	14	5.2	2.8	1.5	3.6	1.3	0.7	1.6	2.2	1.1
Dry	16	6.0	5.4	2.8	3.4	2.3	1.1	2.6	3.1	1.7
Dry	21	6.7	3.5	1.8	5.0	4.3	2.2	1.7	2.3	1.2
Dry	25	6.2	5.4	2.8	4.2	3.8	2.1	2.0	3.7	1.9
Dry	28	6.8	6.4	3.2	4.9	3.9	2.3	1.9	2.6	1.5
Dry	34	7.1	5.0	2.7	5.1	3.6	2.0	2.0	4.0	2.0
Dry	35	7.9	5.7	2.9	5.4	3.7	1.9	2.5	3.6	1.9
Dry	37	7.1	6.9	3.6	4.8	4.5	2.3	2.3	4.1	2.1
Dry	42	6.4	4.1	2.3	4.7	2.6	1.4	1.7	3.5	1.8
Dry	22	8.1	5.6	2.8	5.5	4.8	2.7	2.5	3.2	1.7

Table 12. Seasonal means of primary productivity and community respiration (mg O_2/l/d), as measured by diel measurements at two-hour intervals, during the rainy and dry seasons of CRSP Cycle I research in Aguadulce, Panama.

	Rainy season		Dry season		
Variable	Mean	SD	Mean	SD	t-value
Gross primary production	10.1	1.4	6.4	0.7	8.03*
Net primary production	5.7	0.8	4.4	0.7	4.01*
Community respiration	4.5	0.7	2.0	0.3	11.05*

* Significantly different ($P < 0.01$).

Table 13. Means of primary productivity and community respiration (mg O_2/l/d), by pond, based on light-dark bottle technique, on three occasions during the dry season of CRSP Cycle I research in Aguadulce, Panama.

		Gross primary prod.			Net primary prod.			Community respiration		
Season	Pond	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Dry	4	2.2	1.6	0.8	0.6	3.5	1.8	1.6	2.4	1.4
Dry	7	2.6	3.4	1.9	1.0	4.2	2.1	1.6	1.5	0.8
Dry	13	2.0	0.8	0.4	0.2	2.1	1.0	1.7	2.3	1.2
Dry	14	3.1	4	2.2	1.2	4.5	2.3	1.9	1.8	0.9
Dry	16	3.0	3.6	1.8	1.1	3.8	1.9	1.9	5.0	2.9
Dry	21	2.9	2.6	1.4	0.7	2.6	1.3	2.2	1.9	1.0
Dry	25	1.9	2.2	1.1	0.7	1.2	0.6	1.2	3.4	1.7
Dry	28	2.1	1.7	1.0	0.4	2.4	1.2	1.7	1.4	0.7
Dry	34	3.5	5.3	2.7	1.6	5.6	2.8	2.0	1.3	0.7
Dry	35	3.2	2.9	1.6	1.3	4.1	2.0	1.8	1.3	0.7
Dry	37	2.2	1.2	0.7	0.6	3.0	1.6	1.6	2.4	1.2
Dry	42	2.4	1.3	0.6	0.8	3.0	1.6	1.6	3.0	1.6
MEAN		2.6			0.9			1.7		
Dry	22	3.4	3.9	2.1	0.7	2.0	1.0	2.7	5.2	2.6
Dry	RES	2.6	5.4	3.0	0.3	4.6	2.5	2.3	0.8	0.4

Table 14. Mean monthly zooplankton standing crop and density during the dry season of CRSP Cycle I research in Aguadulce, Panama.

Pond	February Dry matter (mg/m3)	February Number of organisms (x 10^6)	March Dry matter (mg/m3)	March Number of organisms (x 10^6)	April Dry matter (mg/m3)	April Number of organisms (x 10^6)	May Dry matter (mg/m3)	May Number of organisms (x 10^6)
4	282.6	1.36	46.9	0.09	75.1	0.22	54.1	0.18
7	234.1	0.74	73.8	0.19	45.6	0.09	96.0	0.36
13	239.0	0.75	77.3	0.31	27.2	0.06	30.8	0.24
14	65.6	0.40	108.7	0.16	25.6	0.16	79.9	0.18
16	102.4	0.58	61.6	0.27	9.9	0.04	56.4	0.20
21	280.7	0.67	147.2	0.38	59.5	0.29	74.3	0.28
25	116.8	0.41	86.1	0.54	88.5	0.30	443.6	0.14
28	225.1	0.42	151.7	0.47	112.2	0.20	77.4	0.04
35	254.3	0.27	106.3	0.40	197.7	0.36	106.8	0.15
37	174.6	0.36	133.1	0.40	97.4	0.25	26.4	0.03
42	128.7	0.29	131.3	0.37	112.3	0.35	142.3	0.32
Mean	191.5	0.57	126.1	0.39	87.3	0.22	101.5	0.20
SD	73.2	0.30	341.9	0.99	187.8	0.32	417.2	0.33
CV (%)	38.2	52.60	71.0	64.10	70.3	50.00	111.4	50.00

Table 15. Abundance of zooplankton taxa during the dry season of CRSP Cycle I research Aguadulce, Panama.

Taxon	February Individuals (No./m3)	Occurrence (%)	March Individuals (No./m3)	Occurrence (%)	April Individuals (No./m3)	Occurrence (%)	May Individuals (No./m3)	Occurrence (%)
Juvenile copepods	365632	64.3	294049	75.6	176511	79.7	166974	84.6
Calanoids	6776	1.2	34117	8.8	29311	13.2	11634	5.9
Adult copepods:								
Ergasulus	81182	14.3	5046	1.3	1062	0.5	6089	3.1
Oncea	80128	14.1	12978	3.3	3330	1.5	7252	3.7
Polychaete larvae	0	0	42751	11	10968	5	903	0.46
Tintinnids	34134	6	0	0	0	0	0	0
Harpacticoids	192	0.03	0	0	200	0.09	348	0.18
Rotifers	897	0.16	0	0	64	0.03	4087	2.1
Mysidacea	17	0.003	14	0.004	10	0.004	1	0.0005
Total number	568958		388955		221456		197288	

Table 16. Mean shrimp production during the rainy and dry seasons of CRSP Cycle I research in Aguadulce, Panama.

Season	Pond	Stocking PS* (No./m2)	PV** (No./m2)	Mean wt. (g/shrimp)	Harvest PS (g/shrimp)	PV (g/shrimp)	Growth PS (g/wk)	PV (g/wk)	Survival PS (%)	PV (%)	Gross production (kg/ha)	Daily yield (kg/ha/d)	Production of tails (kg/ha)
Rainy	4	1.75	5.25	0.01		4.4		0.22	0.0	70.6	180.70	1.29	106.0
Rainy	7	1.75	5.25	0.01	13.4	8.6	0.67	0.43	5.1	34.1	149.10	1.06	100.3
Rainy	13	1.75	5.25	0.01	16.4	5.2	0.82	0.26	0.1	57.4	155.30	1.11	88.8
Rainy	14	1.75	5.25	0.01		5.9		0.30	0.0	65.5	163.80	1.17	90.7
Rainy	16	1.75	5.25	0.01	22.8	6.5	1.14	0.32	0.2	57.1	177.00	1.26	104.7
Rainy	21	1.75	5.25	0.01	11.6	6.9	0.58	0.34	5.5	60.6	181.50	1.30	121.2
Rainy	25	1.75	5.25	0.01	16.2	7.3	0.81	0.36	1.1	60.7	186.70	1.33	113.1
Rainy	28	1.75	5.25	0.01		5.7		0.28	0.1	61.4	176.30	1.26	117.7
Rainy	34	1.75	5.25	0.01	38.2	5.1	1.91	0.26	0.2	61.0	177.60	1.27	107.2
Rainy	35	1.75	5.25	0.01	22.0	3.6	1.10	0.18	0.3	91.6	189.60	1.35	81.8
Rainy	37	1.75	5.25	0.01		5.7		0.28	0.1	69.2	175.40	1.25	89.5
Rainy	42	1.75	5.25	0.01		5.6		0.28	0.0	64.9	165.60	1.18	103.5
Dry	4		5.25	0.01		6.6		0.42		75.0	261.00	2.37	
Dry	7		5.25	0.01		5.8		0.37		66.0	199.30	1.81	
Dry	13		5.25	0.01		5.4		0.34		93.0	264.40	2.40	
Dry	14		5.25	0.01		6.0		0.38		62.0	195.10	1.77	
Dry	16		5.25	0.01		3.5		0.22		83.0	152.30	1.38	
Dry	21		5.25	0.01		7.6		0.48		54.0	215.00	1.95	
Dry	25		5.25	0.01		6.4		0.41		88.0	272.10	2.47	
Dry	28		5.25	0.01		6.3		0.40		68.0	235.80	2.14	
Dry	34		5.25	0.01		5.6		0.36		85.0	206.10	1.87	
Dry	35		5.25	0.01		4.6		0.29		68.0	199.30	1.81	
Dry	37		5.25	0.01		6.6		0.42		80.0	265.40	2.41	
Dry	42		5.25	0.01		5.9		0.38		81.0	273.20	2.48	

* *Penaeus stylirostris*

** *Penaeus vannamei*

Table 17. Seasonal means of shrimp production during the rainy and dry seasons of CRSP Cycle I research in Aguadulce, Panama.

		Rainy season		Dry season		
Variable	Species	Mean	SD	Mean	SD	t-value
Weight (g/shrimp)	PV[1]	5.88	1.33	5.86	1.05	0.034
	PS[2]	20.08	8.99			
Growth (g/week)	PV	0.29	0.065	0.37	0.07	2.96**
	PS	1.00				
Survival (%)	PV	62.8	12.9	75.2	11.7	2.46*
	PS	1.06	2.01			
Production (kg/ha)		173.2	12.3	228.2	39.3	4.63**
Daily production (kg/ha/d)		1.23	0.09	2.07	0.36	7.87**

1 *Penaeus vannamei.*

2 *Penaeus stylirostris.*

* Significantly different ($P < 0.05$).

** Significantly different ($P < 0.01$).

Table 18. Numbers of *Penaeus vannamei* examined with varying degrees of stomach fullness (%) during CRSP Cycle I research in Aguadulce, Panama.

	Shrimp	Stomach fullness (%)				
Sample date	examined (No.)	0	25	50	75	100
25 Aug 83	69	11	24	15	1	18
6 Sep 83	60	11	29	9	4	7
22 Sep 83	8	5	3	0	0	0
Total	137	27	56	24	5	25
%	100	19.7	40.9	17.5	3.6	18.3

Table 19. Number and percent (%) occurrence of food organisms found in Peneaus vannamei during CRSP Cycle I research in Aguadulce, Panama.

Sample date:	25-Jul-88	25-Aug-83		6-Sep-83			22-Sep-83	17-May-84	Total	
Shrimp size (mm):	20 to 40	40 to 60	60 to 80	30 to 50	50 to 70	70 to 95	85 to 95	80 to 110	number	
Taxon	Number of food organisms									% Occurrence
PROTOZOA										
Euglena	15	0	0	0	0	0	0	0	15	0.01
Tintinnidae	745	110	110	240	110	390	60	0	1765	0.83
ROTATORIA										
Philodina	0	95	0	0	0	0	0	0	95	0.04
CNIDARIA										
Abietinaria	250	720	170	30	10	110	0	0	1290	0.60
NEMATODA										
eggs	15	70	70	0	0	270	0	0	425	0.20
MOOLUSCA										
larvae	15	0	0	0	0	0	0	0	15	0.01
CRUSTACEA										
Copepods	5	95	125	0	0	21	0	41	287	0.13
nauplii	0	0	0	0	0	60	0	0	60	0.03
CYANOPHYTA										
Oscillatoria	5510	2110	12480	7400	4970	19570	90	18450	70580	33.00
Merismopedia	0	0	0	0	110	10	20	135	275	0.13
CHLOROPHYTA										
Clostereium	30	0	0	0	0	40	10	20	100	0.05
CHRYSOPHYTA										
Phaeodermatium	0	0	0	0	0	60	0	0	60	0.03
Anomoeneis	5	0	0	0	0	0	0	0	5	0.00
Neidium	5	0	0	0	0	0	0	0	5	0.00
Amphora	230	172	400	25020	10170	44381	760	245	81378	38.05
Cymbella	45	0	125	30	0	0	0	15	215	0.10
Pinnularia	10	55	20	90	0	410	190	55	830	0.39
Melosira	0	50	0	0	0	0	0	0	50	0.02
Caloneis	0	0	0	0	0	10	0	0	10	0.01
Gomphonema	0	0	20	0	0	0	0	0	20	0.01
Diatomella	0	0	0	0	0	10	0	0	10	0.01
Navicula	135	3901	545	4900	1660	15280	670	870	27961	13.07
Girosigma	0	0	305	0	0	1140	0	0	1445	0.68
Achantes	0	0	50	0	0	10	0	0	60	0.03

Table 19. Continued.

Sample date:	25-Jul-88	25-Aug-83		6-Sep-83			22-Sep-83	17-May-84	Total	
Shrimp size (mm):	20 to 40	40 to 60	60 to 80	30 to 50	50 to 70	70 to 95	85 to 95	80 to 110	number	
Taxon			Number	of	food		organisms			% Occurrence
CHRYSOPHYTA										
Pleurosigma	550	965	930	110	2400	0	80	3385	8420	3.94
SUB-TOTAL	7565	8343	15350	37820	19430	81772	1880	23216	200000	91.35
IDENTIFIABLE FRAGMENTS										
ANNELIDA										
Polychaete	80	10	0	0	0	0	10	0	100	0.05
CRUSTACEA										
Copepoda	655	835	6750	580	230	5480	10	176	14716	6.88
Cirripedia	10	0	0	30	0	460	0	0	500	0.23
Mysidacea	5	0	0	0	0	20	0	0	25	0.01
Amphipoda	0	25	0	0	0	40	0	0	65	0.03
Cladocera	205	1150	0	0	80	680	130	0	2245	1.05
DIPTERA										
Mosquito	0	0	408	0	0	0	0	0	408	0.19
PLANTS										
Macrophytes	390	5	16	0	0	30	0	5	446	0.21
SUB-TOTAL	1345	2025	7174	610	310	6710	150	181	18505	8.65
TOTAL	8910	10368	22524	38430	19740	88482	2030	23397	200000	100.00
DETRITUS ONLY* (% volume of each sample date)	25	24	23	20	24	46	43	12		

* The detrital component is excluded from the frequency determination.

APPENDIX

Complete Set of Data from Cycle I of the Pond Dynamics/ Aquaculture CRSP in Aguadulce, Panama

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Units of Measurement and Abbreviations Used in the Appendix Tables

Daily Weather Measurements:

- SOLAR1 (solar radiation) ..... $E/m^2/d$
- SOLAR2 (solar radiation) ..... $cal/cm^2/d$
- RAIN (rainfall) ..... cm/d
- WIND (wind speed) ..... km/hr
- ATEMPMAX (max air temperature) ..... °C
- ATEMPMIN (min air temperature) ..... °C
- EVAP (evaporation) ..... mm/d

Daily Pond Measurements:

- DEPTH ..... m
- INFLOW ..... m^3/hr
- OVERFLOW ..... Y/N
- "nil" ..... *Oreochromis niloticus*
- SALINITY ..... ppt

Weekly and Twice-Weekly Measurements:

- All DO (dissolved oxygen) ..... mg/L
- All TEMP (temperature) ..... °C
- ALKA (alkalinity) ..... mg/L (as $CaCO_3$)
- HARD (total hardness) ..... mg/L (as $CaCO_3$)
- All N (Kjeldahl, NO_2, NO_3, Total) ..... mg/L
- All P (Total, Ortho-PO_4) ..... mg/L
- SECCHI DISK ..... cm
- CHLOROPHYLL *a*, *b*, or *c* ..... mg/m^3

Diurnal Measurements:

- All DO (dissolved oxygen) ..... mg/L
- All TEMP (temperature) ..... °C

Fish/Shrimp Stocking, Sampling, and Harvesting:

- "STK" ..... stocking
- "SAM" ..... sampling
- "HAR" ..... harvesting
- "nil" ..... *Oreochromis niloticus*
- "VAN" ..... *Penaeus vannamei*
- "STY" ..... *Penaeus stylirostris*
- POP. WEIGHT ..... kg
- SAMPLE LENGTH ..... cm
- REPROD. WEIGHT ..... kg

Plankton and Benthos:

- NET (PRIMARY) PRODUCTION ..... mg $C/m^3/d$
- GROSS (PRIMARY) PRODUCTION ..... mg $C/m^3/d$

Water Quality Characteristics:

ALKALIN (alkalinity)	mg/L (as $CaCO_3$)
HARDNESS	mg/L (as $CaCO_3$)
All N (NH_3, NO_2, NO_3, NO_2+NO_3)	mg/L
All P (Total, Ortho-P)	mg/L
Cl^-	mg/L
SALT	ppt
SO_4	mg/L
BORON	mg/L
CALCIUM	mg/L
COPPER	mg/L
IRON	mg/L
MAGNESIUM	mg/L
POTASSIUM	mg/L
SODIUM	mg/L
ZINC	mg/L

Pond Soil Characteristics:

CLAY	%
SILT	%
SAND	%
ORGANIC MATTER	%
SOIL-P	ppm
SOIL Ca	meq/100g
SOIL Mg	meq/100g
SOIL K	ppm
SOIL Na	meq/100g
SOIL N	%
SOIL NH_4	ppm
SOIL NO_3	ppm
SOIL CEC	meq/100g
SOIL SALT	mmhos/cm
SOIL Al	ppm
SOIL Fe	ppm
SOIL Zn	ppm
SOIL Mn	ppm
SOIL Cu	ppm
SOIL SO_4	ppm

Pond Morphometrics

AREA	m^2
VOLUME	m^3

Analysis of Nutrients and Lime:

All NUTRIENTS	% (dry matter basis)

Nutrient and Lime Inputs:

All QUANTITIES	kg/ha
TSP	"triple superphosphate"
"cac"	$CaCO_3$

Table 1. Daily Weather Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
26	7	1983		528.	0.				
27	7	1983		211.	0.				0.35
28	7	1983		264.	0.51				0.4
29	7	1983		396.	0.				
30	7	1983		259.	0.				
31	7	1983		198.	0.				0.4
1	8	1983		396.	0.13		28.9	22.6	
2	8	1983		363.	0.				
3	8	1983		495.	0.				
4	8	1983		330.	0.				
5	8	1983		528.	0.38				
6	8	1983		561.	0.				
7	8	1983		462.	0.56				
8	8	1983		337.	0.		32.6	22.9	
9	8	1983		343.	0.13				
10	8	1983		330.	0.				
11	8	1983		462.	0.				0.5
12	8	1983		495.	0.				
13	8	1983		462.	0.				0.5
14	8	1983		561.	0.				
15	8	1983		396.	0.		27.4	21.8	0.3
16	8	1983		363.	0.				
17	8	1983		66.	0.				0.4
18	8	1983		396.	0.				0.4
19	8	1983		528.	0.13				0.4
20	8	1983			0.				0.4
21	8	1983		297.	0.				0.3
22	8	1983		462.	0.		32.6	23.3	
23	8	1983		264.	0.				0.3
24	8	1983		198.	0.25				0.2
25	8	1983		79.	0.				0.4
26	8	1983		330.	2.72				0.3
27	8	1983		330.	0.				0.2
28	8	1983		528.	0.51				
29	8	1983			0.51		31.1	22.2	0.2
30	8	1983			0.51				
31	8	1983		462.	0.				
1	9	1983		264.	0.				
2	9	1983		297.	0.13				0.4
3	9	1983		528.	3.31				0.3
4	9	1983		495.	0.				0.3
5	9	1983		66.	0.25		26.4	20.9	0.2
6	9	1983		165.	1.57				
7	9	1983		469.	0.				
8	9	1983		521.	0.56				0.3
9	9	1983		132.	0.				0.4

Table 1. Daily Weather Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
10	9	1983		363.	0.33				
11	9	1983		508.	0.9				
12	9	1983		429.	0.		30.4	22.9	0.4
13	9	1983		330.	0.				0.3
14	9	1983		396.	0.				0.2
15	9	1983		264.	0.				0.2
16	9	1983		79.	0.				0.3
17	9	1983		205.	0.8				
18	9	1983		264.	0.				
19	9	1983		330.	0.		29.6	23.3	
20	9	1983		455.	0.				
21	9	1983		422.	0.				
22	9	1983		330.	0.				
23	9	1983		350.	0.				0.5
24	9	1983		297.	0.				0.5
25	9	1983		356.	0.				0.4
26	9	1983		396.	0.		28.9	22.6	0.5
27	9	1983		330.	0.13				0.4
28	9	1983		238.	0.				
29	9	1983		297.	0.76				
30	9	1983		409.	0.				
1	10	1983		528.	2.67				
2	10	1983		264.	0.03				
3	10	1983		389.	0.		29.3	22.6	0.6
4	10	1983		158.	0.				0.5
5	10	1983		330.	0.				0.3
6	10	1983		376.	0.08				
7	10	1983		297.	0.				0.6
8	10	1983		475.	0.				
9	10	1983		515.	0.13				
10	10	1983		356.	0.		30.	22.6	
11	10	1983		587.	4.57				
12	10	1983		383.	0.				0.5
13	10	1983		132.	0.				0.4
14	10	1983		330.	6.35				
15	10	1983		290.	0.41				
16	10	1983		462.	0.11				
17	10	1983		330.	1.63		30.	22.7	
18	10	1983		396.	0.				
19	10	1983		198.	0.				0.3
20	10	1983		429.	0.03				0.2
21	10	1983		264.	0.				0.2
22	10	1983		429.	0.				0.5
23	10	1983		409.	0.				0.4
24	10	1983		132.	0.		29.3	22.6	0.4
25	10	1983		337.	0.				0.4
26	10	1983		429.	2.				0.2

Table 1. Daily Weather Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
27	10	1983		264.	0.				
28	10	1983		132.	0.6				
29	10	1983		264.	0.				
30	10	1983		396.	0.8				
31	10	1983		363.	0.05		28.9	23.3	
1	11	1983		264.	0.05				
2	11	1983		330.	0.				0.4
3	11	1983		251.	0.				0.4
4	11	1983		462.	0.02				
5	11	1983		264.	0.5				
6	11	1983		330.	0.				0.3
7	11	1983		350.	0.		30.7	22.3	
8	11	1983		330.	0.				
9	11	1983		462.	1.75				
10	11	1983		264.	0.				
11	11	1983		462.	0.14				
12	11	1983		469.	0.03				
13	11	1983		337.	0.02				
14	11	1983		396.	0.		30.4	21.5	
15	11	1983		462.	0.5				
16	11	1983		396.	0.3				
17	11	1983		297.	0.				0.3
18	11	1983		462.	0.				0.3
19	11	1983		363.	0.				
20	11	1983		165.	0.				
21	11	1983		198.	7.88		31.1	22.9	
22	11	1983		330.	0.				
23	11	1983		264.	0.				0.3
24	11	1983		271.	0.				
25	11	1983		528.	0.				
26	11	1983		66.	0.				
27	11	1983		330.	0.				
28	11	1983		363.	0.		31.1	22.2	
29	11	1983		297.	3.13				
30	11	1983		396.	0.				0.5
1	12	1983		396.	0.				0.4
2	12	1983		198.	0.				0.3
3	12	1983		264.	0.				0.4
4	12	1983		297.	0.				0.2
5	12	1983		528.	0.		30.7	22.6	0.3
6	12	1983		343.	0.				0.4
7	12	1983		363.	0.				0.3
8	12	1983		396.	0.				0.4
9	12	1983		264.	0.				0.2

Table 1. Daily Weather Measurements. Aguadulce, Panama, Cycle I, Dry Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
6	2	1984					36.3	27.1	
7	2	1984		528.					6.
8	2	1984		640.	0.				
9	2	1984		495.	0.				7.
10	2	1984		574.	0.				
11	2	1984		587.	0.				
12	2	1984		462.	0.				
13	2	1984		475.	0.		35.9	25.6	
14	2	1984		528.	0.				7.
15	2	1984		640.	0.				7.
16	2	1984		495.	0.				
17	2	1984		574.	0.				6.
18	2	1984		587.	0.				
19	2	1984		462.	0.				6.
20	2	1984		475.	0.		36.5	25.6	
21	2	1984			0.				7.
22	2	1984			0.				7.
23	2	1984			0.				6.
24	2	1984			0.				7.
25	2	1984			0.				
26	2	1984		422.	0.				7.
27	2	1984		515.	0.		36.2	25.7	
28	2	1984			0.				10.
29	2	1984		535.	0.				10.
1	3	1984		601.	0.				10.
2	3	1984		541.	0.				7.
3	3	1984			0.				7.
4	3	1984		502.	0.				
5	3	1984			0.		36.5	25.6	
6	3	1984			0.				10.
7	3	1984			0.				8.
8	3	1984		422.	0.				7.
9	3	1984		601.	0.				7.
10	3	1984		442.	0.				
11	3	1984		587.	0.				
12	3	1984		620.	0.		36.8	26.1	7.
13	3	1984		568.	0.				7.
14	3	1984		495.	0.				7.
15	3	1984		554.	0.				6.
16	3	1984		521.	0.				7.
17	3	1984		528.	0.				7.
18	3	1984		475.	0.				
19	3	1984		561.	0.		37.1	25.9	
20	3	1984		508.	0.				7.
21	3	1984		350.	0.				10.
22	3	1984		508.	0.				6.

Table 1. Daily Weather Measurements. Aguadulce, Panama, Cycle I, Dry Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
23	3	1984		495.	0.				6.
24	3	1984		462.	0.				6.
25	3	1984		508.	0.				
26	3	1984		436.	0.		36.7	24.1	
27	3	1984		502.	0.				7.
28	3	1984		323.	0.				7.
29	3	1984		396.	0.				
30	3	1984		436.	0.21				5.
31	3	1984			0.				
1	4	1984			0.				
2	4	1984			0.				7.
3	4	1984		396.	0.		35.4	24.8	6.
4	4	1984		462.	0.				6.
5	4	1984		422.	0.				6.
6	4	1984		515.	0.				7.
7	4	1984		502.	0.				6.
8	4	1984		508.	0.				
9	4	1984		323.	0.		34.8	25.9	
10	4	1984		462.	0.				10.
11	4	1984		455.	0.				6.
12	4	1984		640.	0.				7.
13	4	1984		482.	0.				7.
14	4	1984		502.	0.				3.
15	4	1984		271.	0.018				
16	4	1984		449.	0.		36.3	25.6	5.
17	4	1984		475.	0.				8.
18	4	1984		515.	0.				13.
19	4	1984		462.	0.				6.
20	4	1984		495.	0.				6.
21	4	1984			0.				
22	4	1984			0.				7.
23	4	1984			0.		36.5	24.4	10.
24	4	1984			0.				7.
25	4	1984			0.				5.
26	4	1984			0.				5.
27	4	1984			0.				9.
28	4	1984			0.				
29	4	1984			0.				
30	4	1984			0.		36.1	24.4	
1	5	1984			0.				7.
2	5	1984			0.				
3	5	1984			0.				
4	5	1984			0.				
5	5	1984			0.				
6	5	1984			0.				
7	5	1984			0.				
8	5	1984		495.	0.		36.1	24.8	7.

Table 1. Daily Weather Measurements. Aguadulce, Panama, Cycle I, Dry Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
9	5	1984		469.	0.				
10	5	1984		541.	0.				10.
11	5	1984		264.	0.				11.
12	5	1984		455.	0.				10.
13	5	1984		257.	0.				
14	5	1984		389.	0.		37.2	25.6	8.
15	5	1984		521.	0.				10.
16	5	1984		343.					
17	5	1984		442.					
18	5	1984		356.					
19	5	1984		337.					
20	5	1984		310.					
21	5	1984		112.					
22	5	1984		429.					
23	5	1984		343.					
24	5	1984		370.					
25	5	1984		376.					

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
25	7	1983	4	0.8	Y	Y			30.	
25	7	1983	7	0.8	Y	Y			30.	
25	7	1983	13	0.8	Y	Y			30.	
25	7	1983	14	0.8	Y	Y			30.	
25	7	1983	16	0.8	Y	Y			30.	
25	7	1983	21	0.8	Y	Y			26.	
25	7	1983	22	0.8	Y	Y			30.	
25	7	1983	25	0.8	Y	Y			28.	
25	7	1983	28	0.8	Y	Y			28.	
25	7	1983	34	0.8	Y	Y			28.	
25	7	1983	35	0.8	Y	Y			29.	
25	7	1983	36	0.8	Y	Y			28.	
25	7	1983	42	0.8	Y	Y				
26	7	1983	4	0.8	Y	Y				
26	7	1983	7	0.8	Y	Y				
26	7	1983	13	0.8	Y	Y				
26	7	1983	14	0.8	Y	Y				
26	7	1983	16	0.8	Y	Y				
26	7	1983	21	0.8	Y	Y				
26	7	1983	22	0.8	Y	Y				
26	7	1983	25	0.8	Y	Y				
26	7	1983	28	0.8	Y	Y				
26	7	1983	34	0.8	Y	Y				
26	7	1983	36	0.8	Y	Y				
26	7	1983	42	0.8	Y	Y				
27	7	1983	4	0.8	Y	Y				
27	7	1983	7	0.8	Y	Y				
27	7	1983	13	0.8	Y	Y				
27	7	1983	14	0.8	Y	Y				
27	7	1983	16	0.8	Y	Y				
27	7	1983	21	0.8	Y	Y				
27	7	1983	22	0.8	Y	Y				
27	7	1983	25	0.8	Y	Y				
27	7	1983	28	0.8	Y	Y				
27	7	1983	34	0.8	Y	Y				
27	7	1983	35	0.8	Y	Y				
27	7	1983	36	0.8	Y	Y				
27	7	1983	42	0.8	Y	Y				
28	7	1983	4	0.8	Y	Y			32.	
28	7	1983	7	0.8	Y	Y			30.	
28	7	1983	13	0.8	Y	Y			31.	
28	7	1983	14	0.8	Y	Y			32.	
28	7	1983	16	0.8	Y	Y			33.	
28	7	1983	21	0.8	Y	Y			28.	
28	7	1983	22	0.8	Y	Y			29.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
28	7	1983	25	0.8	Y	Y			30.	
28	7	1983	28	0.8	Y	Y			31.	
28	7	1983	34	0.8	Y	Y			32.	
28	7	1983	35	0.8	Y	Y			33.	
28	7	1983	36	0.8	Y	Y			30.	
28	7	1983	42	0.8	Y	Y			32.	
29	7	1983	4	0.8	Y	Y			32.	
29	7	1983	7	0.8	Y	Y			31.	
29	7	1983	13	0.8	Y	Y			32.	
29	7	1983	14	0.8	Y	Y			30.	
29	7	1983	16	0.8	Y	Y			32.	
29	7	1983	21	0.8	Y	Y			30.	
29	7	1983	22	0.8	Y	Y			31.	
29	7	1983	25	0.8	Y	Y			32.	
29	7	1983	28	0.8	Y	Y			32.	
29	7	1983	34	0.8	Y	Y			30.	
29	7	1983	35	0.8	Y	Y			30.	
29	7	1983	36	0.8	Y	Y			32.	
29	7	1983	42	0.8	Y	Y			31.	
30	7	1983	4	0.8	Y	Y				
30	7	1983	7	0.8	Y	Y				
30	7	1983	13	0.8	Y	Y				
30	7	1983	14	0.8	Y	Y				
30	7	1983	16	0.8	Y	Y				
30	7	1983	21	0.8	Y	Y				
30	7	1983	22	0.8	Y	Y			31.	
30	7	1983	25	0.8	Y	Y			31.	
30	7	1983	28	0.8	Y	Y				
30	7	1983	34	0.8	Y	Y				
30	7	1983	35	0.8	Y	Y				
30	7	1983	36	0.8	Y	Y				
30	7	1983	42	0.8	Y	Y			32.	
31	7	1983	4	0.8	Y	Y			32.	
31	7	1983	7	0.8	Y	Y			32.	
31	7	1983	13	0.8	Y	Y			33.	
31	7	1983	14	0.8	Y	Y			33.	
31	7	1983	16	0.8	Y	Y			33.	
31	7	1983	21	0.8	Y	Y			33.	
31	7	1983	22	0.8	Y	Y			30.	
31	7	1983	25	0.8	Y	Y			33.	
31	7	1983	28	0.8	Y	Y			33.	
31	7	1983	34	0.8	Y	Y			34.	
31	7	1983	35	0.8	Y	Y			34.	
31	7	1983	36	0.8	Y	Y			33.	
31	7	1983	42	0.8	Y	Y			34.	
1	8	1983	4	0.8	Y	Y			32.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
1	8	1983	7	0.8	Y	Y			32.	
1	8	1983	13	0.8	Y	Y			32.	
1	8	1983	14	0.8	Y	Y			32.	
1	8	1983	16	0.8	Y	Y			32.	
1	8	1983	21	0.8	Y	Y			30.	
1	8	1983	22	0.8	Y	Y			30.	
1	8	1983	25	0.8	Y	Y			34.	
1	8	1983	28	0.8	Y	Y			32.	
1	8	1983	34	0.8	Y	Y			34.	
1	8	1983	35	0.8	Y	Y			32.	
1	8	1983	37	0.8	Y	Y			32.	
1	8	1983	42	0.8	Y	Y			32.	
2	8	1983	4	0.8	Y	Y			30.	
2	8	1983	7	0.8	Y	Y			30.	
2	8	1983	13	0.8	Y	Y			30.	
2	8	1983	14	0.8	Y	Y			30.	
2	8	1983	16	0.8	Y	Y			30.	
2	8	1983	21	0.8	Y	Y			30.	
2	8	1983	22	0.8	Y	Y			30.	
2	8	1983	25	0.8	Y	Y			32.	
2	8	1983	28	0.8	Y	Y			30.	
2	8	1983	34	0.8	Y	Y			30.	
2	8	1983	35	0.8	Y	Y			30.	
2	8	1983	37	0.8	Y	Y			30.	
2	8	1983	42	0.8	Y	Y			30.	
3	8	1983	4	0.8	Y	Y			30.	
3	8	1983	7	0.8	Y	Y			30.	
3	8	1983	13	0.8	Y	Y			30.	
3	8	1983	14	0.8	Y	Y			30.	
3	8	1983	16	0.8	Y	Y			30.	
3	8	1983	21	0.8	Y	Y			30.	
3	8	1983	22	0.8	Y	Y			30.	
3	8	1983	25	0.8	Y	Y			30.	
3	8	1983	28	0.8	Y	Y			30.	
3	8	1983	34	0.8	Y	Y			30.	
3	8	1983	35	0.8	Y	Y			30.	
3	8	1983	37	0.8	Y	Y			30.	
3	8	1983	42	0.8	Y	Y			30.	
4	8	1983	4	0.8	Y	Y			30.	
4	8	1983	7	0.8	Y	Y			32.	
4	8	1983	13	0.8	Y	Y			30.	
4	8	1983	14	0.8	Y	Y			30.	
4	8	1983	16	0.8	Y	Y			30.	
4	8	1983	21	0.8	Y	Y			32.	
4	8	1983	22	0.8	Y	Y			30.	
4	8	1983	25	0.8	Y	Y			30.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
4	8	1983	28	0.8	Y	Y			30.	
4	8	1983	34	0.8	Y	Y			30.	
4	8	1983	35	0.8	Y	Y			30.	
4	8	1983	37	0.8	Y	Y			30.	
4	8	1983	42	0.8	Y	Y			30.	
5	8	1983	4	0.8	Y	Y			32.	
5	8	1983	7	0.8	Y	Y			34.	
5	8	1983	13	0.8	Y	Y			34.	
5	8	1983	14	0.8	Y	Y			34.	
5	8	1983	16	0.8	Y	Y			33.	
5	8	1983	21	0.8	Y	Y			31.	
5	8	1983	22	0.8	Y	Y			32.	
5	8	1983	25	0.8	Y	Y			35.	
5	8	1983	28	0.8	Y	Y			34.	
5	8	1983	34	0.8	Y	Y			35.	
5	8	1983	35	0.8	Y	Y			34.	
5	8	1983	37	0.8	Y	Y			35.	
5	8	1983	42	0.8	Y	Y			34.	
6	8	1983	4	0.8	Y	Y			30.	
6	8	1983	7	0.8	Y	Y			30.	
6	8	1983	13	0.8	Y	Y			34.	
6	8	1983	14	0.8	Y	Y			32.	
6	8	1983	16	0.8	Y	Y			31.	
6	8	1983	21	0.8	Y	Y			30.	
6	8	1983	22	0.8	Y	Y			30.	
6	8	1983	25	0.8	Y	Y			32.	
6	8	1983	28	0.8	Y	Y			33.	
6	8	1983	34	0.8	Y	Y			34.	
6	8	1983	35	0.8	Y	Y			32.	
6	8	1983	37	0.8	Y	Y			33.	
6	8	1983	42	0.8	Y	Y			32.	
7	8	1983	4	0.8	Y	Y				
7	8	1983	7	0.8	Y	Y				
7	8	1983	13	0.8	Y	Y				
7	8	1983	14	0.8	Y	Y				
7	8	1983	16	0.8	Y	Y				
7	8	1983	21	0.8	Y	Y				
7	8	1983	22	0.8	Y	Y				
7	8	1983	25	0.8	Y	Y				
7	8	1983	28	0.8	Y	Y				
7	8	1983	34	0.8	Y	Y				
7	8	1983	35	0.8	Y	Y				
7	8	1983	37	0.8	Y	Y				
7	8	1983	42	0.8	Y	Y				
8	8	1983	4	0.8	Y	Y			34.	
8	8	1983	7	0.8	Y	Y			34.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
8	8	1983	13	0.8	Y	Y			35.	
8	8	1983	14	0.8	Y	Y			36.	
8	8	1983	16	0.8	Y	Y			35.	
8	8	1983	21	0.8	Y	Y			32.	
8	8	1983	22	0.8	Y	Y			32.	
8	8	1983	25	0.8	Y	Y			36.	
8	8	1983	28	0.8	Y	Y			35.	
8	8	1983	34	0.8	Y	Y			35.	
8	8	1983	35	0.8	Y	Y			36.	
8	8	1983	37	0.8	Y	Y			35.	
8	8	1983	42	0.8	Y	Y			35.	
9	8	1983	4	0.8	Y	Y			35.	
9	8	1983	7	0.8	Y	Y			35.	
9	8	1983	13	0.8	Y	Y			35.	
9	8	1983	14	0.8	Y	Y			36.	
9	8	1983	16	0.8	Y	Y			35.	
9	8	1983	21	0.8	Y	Y			34.	
9	8	1983	22	0.8	Y	Y			34.	
9	8	1983	25	0.8	Y	Y			36.	
9	8	1983	28	0.8	Y	Y			35.	
9	8	1983	34	0.8	Y	Y			36.	
9	8	1983	35	0.8	Y	Y			36.	
9	8	1983	37	0.8	Y	Y			35.	
9	8	1983	42	0.8	Y	Y			36.	
10	8	1983	4	0.8	Y	Y			35.	
10	8	1983	7	0.8	Y	Y			35.	
10	8	1983	13	0.8	Y	Y			35.	
10	8	1983	14	0.8	Y	Y			30.	
10	8	1983	16	0.8	Y	Y			36.	
10	8	1983	21	0.8	Y	Y			35.	
10	8	1983	22	0.8	Y	Y			35.	
10	8	1983	25	0.8	Y	Y			36.	
10	8	1983	28	0.8	Y	Y			35.	
10	8	1983	34	0.8	Y	Y			38.	
10	8	1983	35	0.8	Y	Y			35.	
10	8	1983	37	0.8	Y	Y			36.	
10	8	1983	42	0.8	Y	Y			35.	
11	8	1983	4	0.8	Y	Y			30.	
11	8	1983	7	0.8	Y	Y			31.	
11	8	1983	13	0.8	Y	Y			31.	
11	8	1983	14	0.8	Y	Y			30.	
11	8	1983	16	0.8	Y	Y			31.	
11	8	1983	21	0.8	Y	Y			30.	
11	8	1983	22	0.8	Y	Y			31.	
11	8	1983	25	0.8	Y	Y			32.	
11	8	1983	28	0.8	Y	Y			30.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
11	8	1983	34	0.8	Y	Y			31.	
11	8	1983	35	0.8	Y	Y			31.	
11	8	1983	37	0.8	Y	Y			32.	
11	8	1983	42	0.8	Y	Y			32.	
12	8	1983	4	0.8	Y	Y			31.	
12	8	1983	7	0.8	Y	Y			32.	
12	8	1983	13	0.8	Y	Y			32.	
12	8	1983	14	0.8	Y	Y			31.	
12	8	1983	16	0.8	Y	Y			31.	
12	8	1983	21	0.8	Y	Y			31.	
12	8	1983	22	0.8	Y	Y			31.	
12	8	1983	25	0.8	Y	Y			32.	
12	8	1983	28	0.8	Y	Y			32.	
12	8	1983	34	0.8	Y	Y			32.	
12	8	1983	35	0.8	Y	Y			30.	
12	8	1983	37	0.8	Y	Y			30.	
12	8	1983	42	0.8	Y	Y			31.	
13	8	1983	4	0.8	Y	Y			36.	
13	8	1983	7	0.8	Y	Y			36.	
13	8	1983	13	0.8	Y	Y			37.	
13	8	1983	14	0.8	Y	Y			40.	
13	8	1983	16	0.8	Y	Y			37.	
13	8	1983	21	0.8	Y	Y			35.	
13	8	1983	22	0.8	Y	Y			36.	
13	8	1983	25	0.8	Y	Y			38.	
13	8	1983	28	0.8	Y	Y			36.	
13	8	1983	34	0.8	Y	Y			38.	
13	8	1983	35	0.8	Y	Y			38.	
13	8	1983	37	0.8	Y	Y			37.	
13	8	1983	42	0.8	Y	Y			38.	
14	8	1983	4	0.8	Y	Y			36.	
14	8	1983	7	0.8	Y	Y			36.	
14	8	1983	13	0.8	Y	Y			37.	
14	8	1983	14	0.8	Y	Y			40.	
14	8	1983	16	0.8	Y	Y			37.	
14	8	1983	21	0.8	Y	Y			36.	
14	8	1983	22	0.8	Y	Y			36.	
14	8	1983	25	0.8	Y	Y			38.	
14	8	1983	28	0.8	Y	Y			36.	
14	8	1983	34	0.8	Y	Y			38.	
14	8	1983	35	0.8	Y	Y			38.	
14	8	1983	37	0.8	Y	Y			37.	
14	8	1983	42	0.8	Y	Y			38.	
15	8	1983	4	0.8	Y	Y			37.	
15	8	1983	7	0.8	Y	Y			37.	
15	8	1983	13	0.8	Y	Y			37.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
15	8	1983	14	0.8	Y	Y			40.	
15	8	1983	16	0.8	Y	Y			37.	
15	8	1983	21	0.8	Y	Y			36.	
15	8	1983	22	0.8	Y	Y			36.	
15	8	1983	25	0.8	Y	Y			38.	
15	8	1983	28	0.8	Y	Y			38.	
15	8	1983	34	0.8	Y	Y			39.	
15	8	1983	35	0.8	Y	Y			39.	
15	8	1983	37	0.8	Y	Y			38.	
15	8	1983	42	0.8	Y	Y			38.	
16	8	1983	4	0.8	Y	Y			36.	
16	8	1983	7	0.8	Y	Y			37.	
16	8	1983	13	0.8	Y	Y			37.	
16	8	1983	14	0.8	Y	Y			38.	
16	8	1983	16	0.8	Y	Y			38.	
16	8	1983	21	0.8	Y	Y			37.	
16	8	1983	22	0.8	Y	Y			39.	
16	8	1983	25	0.8	Y	Y			38.	
16	8	1983	28	0.8	Y	Y			40.	
16	8	1983	34	0.8	Y	Y			38.	
16	8	1983	35	0.8	Y	Y			38.	
16	8	1983	37	0.8	Y	Y			39.	
16	8	1983	42	0.8	Y	Y			40.	
17	8	1983	4	0.8	Y	Y			38.	
17	8	1983	7	0.8	Y	Y			38.	
17	8	1983	13	0.8	Y	Y			37.	
17	8	1983	14	0.8	Y	Y			37.	
17	8	1983	16	0.8	Y	Y			38.	
17	8	1983	21	0.8	Y	Y			38.	
17	8	1983	22	0.8	Y	Y			37.	
17	8	1983	25	0.8	Y	Y			38.	
17	8	1983	28	0.8	Y	Y			38.	
17	8	1983	34	0.8	Y	Y			38.	
17	8	1983	35	0.8	Y	Y			38.	
17	8	1983	37	0.8	Y	Y			38.	
17	8	1983	42	0.8	Y	Y			36.	
18	8	1983	4	0.8	Y	Y			38.	
18	8	1983	7	0.8	Y	Y			38.	
18	8	1983	13	0.8	Y	Y			37.	
18	8	1983	14	0.8	Y	Y			37.	
18	8	1983	16	0.8	Y	Y			38.	
18	8	1983	21	0.8	Y	Y			38.	
18	8	1983	22	0.8	Y	Y			38.	
18	8	1983	25	0.8	Y	Y			38.	
18	8	1983	28	0.8	Y	Y			37.	
18	8	1983	34	0.8	Y	Y			36.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
18	8	1983	35	0.8	Y	Y			39.	
18	8	1983	37	0.8	Y	Y			37.	
18	8	1983	42	0.8	Y	Y			40.	
19	8	1983	4	0.8	Y	Y			37.	
19	8	1983	7	0.8	Y	Y			36.	
19	8	1983	13	0.8	Y	Y			37.	
19	8	1983	14	0.8	Y	Y			37.	
19	8	1983	16	0.8	Y	Y			37.	
19	8	1983	21	0.8	Y	Y			38.	
19	8	1983	22	0.8	Y	Y			38.	
19	8	1983	25	0.8	Y	Y			42.	
19	8	1983	28	0.8	Y	Y			39.	
19	8	1983	34	0.8	Y	Y			38.	
19	8	1983	35	0.8	Y	Y			40.	
19	8	1983	37	0.8	Y	Y			38.	
19	8	1983	42	0.8	Y	Y			38.	
20	8	1983	4	0.8	Y	Y				
20	8	1983	7	0.8	Y	Y			39.	
20	8	1983	13	0.8	Y	Y			39.	
20	8	1983	14	0.8	Y	Y			39.	
20	8	1983	16	0.8	Y	Y			40.	
20	8	1983	21	0.8	Y	Y			38.	
20	8	1983	22	0.8	Y	Y			38.	
20	8	1983	25	0.8	Y	Y			38.	
20	8	1983	28	0.8	Y	Y			39.	
20	8	1983	34	0.8	Y	Y			40.	
20	8	1983	35	0.8	Y	Y			40.	
20	8	1983	37	0.8	Y	Y			38.	
20	8	1983	42	0.8	Y	Y			38.	
21	8	1983	4	0.8	Y	Y			38.	
21	8	1983	7	0.8	Y	Y			38.	
21	8	1983	13	0.8	Y	Y			40.	
21	8	1983	14	0.8	Y	Y			38.	
21	8	1983	16	0.8	Y	Y			38.	
21	8	1983	21	0.8	Y	Y			38.	
21	8	1983	22	0.8	Y	Y			38.	
21	8	1983	25	0.8	Y	Y			40.	
21	8	1983	28	0.8	Y	Y			40.	
21	8	1983	34	0.8	Y	Y			40.	
21	8	1983	35	0.8	Y	Y			40.	
21	8	1983	37	0.8	Y	Y			38.	
21	8	1983	42	0.8	Y	Y			39.	
22	8	1983	4	0.8	Y	Y				
22	8	1983	7	0.8	Y	Y				
22	8	1983	13	0.8	Y	Y				
22	8	1983	14	0.8	Y	Y				

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
22	8	1983	16	0.8	Y	Y				
22	8	1983	21	0.8	Y	Y				
22	8	1983	22	0.8	Y	Y				
22	8	1983	25	0.8	Y	Y				
22	8	1983	28	0.8	Y	Y				
22	8	1983	34	0.8	Y	Y				
22	8	1983	35	0.8	Y	Y				
22	8	1983	37	0.8	Y	Y				
22	8	1983	42	0.8	Y	Y				
23	8	1983	4	0.8	Y	Y			40.	
23	8	1983	7	0.8	Y	Y			40.	
23	8	1983	13	0.8	Y	Y			40.	
23	8	1983	14	0.8	Y	Y			40.	
23	8	1983	16	0.8	Y	Y			40.	
23	8	1983	21	0.8	Y	Y			40.	
23	8	1983	22	0.8	Y	Y			40.	
23	8	1983	25	0.8	Y	Y			40.	
23	8	1983	28	0.8	Y	Y			40.	
23	8	1983	34	0.8	Y	Y			40.	
23	8	1983	35	0.8	Y	Y			40.	
23	8	1983	37	0.8	Y	Y			40.	
23	8	1983	42	0.8	Y	Y			40.	
24	8	1983	4	0.8	Y	Y			40.	
24	8	1983	7	0.8	Y	Y			40.	
24	8	1983	13	0.8	Y	Y			40.	
24	8	1983	14	0.8	Y	Y			40.	
24	8	1983	16	0.8	Y	Y			40.	
24	8	1983	21	0.8	Y	Y			40.	
24	8	1983	22	0.8	Y	Y			40.	
24	8	1983	25	0.8	Y	Y			40.	
24	8	1983	28	0.8	Y	Y			40.	
24	8	1983	34	0.8	Y	Y			40.	
24	8	1983	35	0.8	Y	Y			40.	
24	8	1983	37	0.8	Y	Y			40.	
24	8	1983	42	0.8	Y	Y			40.	
25	8	1983	4	0.8	Y	Y			40.	
25	8	1983	7	0.8	Y	Y			40.	
25	8	1983	13	0.8	Y	Y			40.	
25	8	1983	14	0.8	Y	Y			40.	
25	8	1983	16	0.8	Y	Y			40.	
25	8	1983	21	0.8	Y	Y			40.	
25	8	1983	22	0.8	Y	Y			40.	
25	8	1983	25	0.8	Y	Y			40.	
25	8	1983	28	0.8	Y	Y			40.	
25	8	1983	34	0.8	Y	Y			40.	
25	8	1983	35	0.8	Y	Y			40.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
25	8	1983	37	0.8	Y	Y			40.	
25	8	1983	42	0.8	Y	Y			40.	
26	8	1983	4	0.8	Y	Y			40.	
26	8	1983	7	0.8	Y	Y			40.	
26	8	1983	13	0.8	Y	Y			40.	
26	8	1983	14	0.8	Y	Y			40.	
26	8	1983	16	0.8	Y	Y			40.	
26	8	1983	21	0.8	Y	Y			40.	
26	8	1983	22	0.8	Y	Y			40.	
26	8	1983	25	0.8	Y	Y			40.	
26	8	1983	28	0.8	Y	Y			40.	
26	8	1983	34	0.8	Y	Y			40.	
26	8	1983	35	0.8	Y	Y			40.	
26	8	1983	37	0.8	Y	Y			40.	
26	8	1983	42	0.8	Y	Y			40.	
27	8	1983	4	0.8	Y	Y			38.	
27	8	1983	7	0.8	Y	Y			38.	
27	8	1983	13	0.8	Y	Y			38.	
27	8	1983	14	0.8	Y	Y			38.	
27	8	1983	16	0.8	Y	Y			38.	
27	8	1983	21	0.8	Y	Y			38.	
27	8	1983	22	0.8	Y	Y			38.	
27	8	1983	25	0.8	Y	Y			38.	
27	8	1983	28	0.8	Y	Y			38.	
27	8	1983	34	0.8	Y	Y			38.	
27	8	1983	35	0.8	Y	Y			38.	
27	8	1983	37	0.8	Y	Y			38.	
27	8	1983	42	0.8	Y	Y			38.	
28	8	1983	4	0.8	Y	Y			38.	
28	8	1983	7	0.8	Y	Y			38.	
28	8	1983	13	0.8	Y	Y			38.	
28	8	1983	14	0.8	Y	Y			38.	
28	8	1983	16	0.8	Y	Y			38.	
28	8	1983	21	0.8	Y	Y			38.	
28	8	1983	22	0.8	Y	Y			38.	
28	8	1983	25	0.8	Y	Y			38.	
28	8	1983	28	0.8	Y	Y			38.	
28	8	1983	34	0.8	Y	Y			38.	
28	8	1983	35	0.8	Y	Y			38.	
28	8	1983	37	0.8	Y	Y			38.	
28	8	1983	42	0.8	Y	Y			38.	
29	8	1983	4	0.8	Y	Y			38.	
29	8	1983	7	0.8	Y	Y			38.	
29	8	1983	13	0.8	Y	Y			38.	
29	8	1983	14	0.8	Y	Y			38.	
29	8	1983	16	0.8	Y	Y			38.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
29	8	1983	21	0.8	Y	Y			38.	
29	8	1983	22	0.8	Y	Y			38.	
29	8	1983	25	0.8	Y	Y			38.	
29	8	1983	28	0.8	Y	Y			37.	
29	8	1983	34	0.8	Y	Y			38.	
29	8	1983	35	0.8	Y	Y			38.	
29	8	1983	37	0.8	Y	Y			38.	
29	8	1983	42	0.8	Y	Y			38.	
30	8	1983	4	0.8	Y	Y			40.	
30	8	1983	7	0.8	Y	Y			40.	
30	8	1983	13	0.8	Y	Y			40.	
30	8	1983	14	0.8	Y	Y			40.	
30	8	1983	16	0.8	Y	Y			40.	
30	8	1983	21	0.8	Y	Y			40.	
30	8	1983	22	0.8	Y	Y			40.	
30	8	1983	25	0.8	Y	Y			40.	
30	8	1983	28	0.8	Y	Y			40.	
30	8	1983	34	0.8	Y	Y			40.	
30	8	1983	35	0.8	Y	Y			40.	
30	8	1983	37	0.8	Y	Y			40.	
30	8	1983	42	0.8	Y	Y			40.	
31	8	1983	4	0.8	Y	Y			38.	
31	8	1983	7	0.8	Y	Y			38.	
31	8	1983	13	0.8	Y	Y			38.	
31	8	1983	14	0.8	Y	Y			40.	
31	8	1983	16	0.8	Y	Y			39.	
31	8	1983	21	0.8	Y	Y			40.	
31	8	1983	22	0.8	Y	Y			40.	
31	8	1983	25	0.8	Y	Y				
31	8	1983	28	0.8	Y	Y				
31	8	1983	34	0.8	Y	Y			39.	
31	8	1983	35	0.8	Y	Y			39.	
31	8	1983	37	0.8	Y	Y			39.	
31	8	1983	42	0.8	Y	Y			39.	
1	9	1983	4	0.8	Y	Y			40.	
1	9	1983	7	0.8	Y	Y			40.	
1	9	1983	13	0.8	Y	Y			40.	
1	9	1983	14	0.8	Y	Y			40.	
1	9	1983	16	0.8	Y	Y			40.	
1	9	1983	21	0.8	Y	Y			40.	
1	9	1983	22	0.8	Y	Y			40.	
1	9	1983	25	0.8	Y	Y			40.	
1	9	1983	28	0.8	Y	Y			40.	
1	9	1983	34	0.8	Y	Y			40.	
1	9	1983	35	0.8	Y	Y			40.	
1	9	1983	37	0.8	Y	Y			40.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
1	9	1983	42	0.8	Y	Y			40.	
2	9	1983	4	0.8	Y	Y			40.	
2	9	1983	7	0.8	Y	Y			40.	
2	9	1983	13	0.8	Y	Y			42.	
2	9	1983	14	0.8	Y	Y			42.	
2	9	1983	16	0.8	Y	Y			40.	
2	9	1983	21	0.8	Y	Y			40.	
2	9	1983	22	0.8	Y	Y			40.	
2	9	1983	25	0.8	Y	Y			40.	
2	9	1983	28	0.8	Y	Y			44.	
2	9	1983	34	0.8	Y	Y			41.	
2	9	1983	35	0.8	Y	Y			42.	
2	9	1983	37	0.8	Y	Y			41.	
2	9	1983	42	0.8	Y	Y			41.	
3	9	1983	4	0.8	Y	Y			40.	
3	9	1983	7	0.8	Y	Y			40.	
3	9	1983	13	0.8	Y	Y			40.	
3	9	1983	14	0.8	Y	Y			40.	
3	9	1983	16	0.8	Y	Y			40.	
3	9	1983	21	0.8	Y	Y			40.	
3	9	1983	22	0.8	Y	Y			40.	
3	9	1983	25	0.8	Y	Y			40.	
3	9	1983	28	0.8	Y	Y			40.	
3	9	1983	34	0.8	Y	Y			40.	
3	9	1983	35	0.8	Y	Y			40.	
3	9	1983	37	0.8	Y	Y			40.	
3	9	1983	42	0.8	Y	Y			40.	
4	9	1983	4	0.8	Y	Y			38.	
4	9	1983	7	0.8	Y	Y			38.	
4	9	1983	13	0.8	Y	Y			38.	
4	9	1983	14	0.8	Y	Y			38.	
4	9	1983	16	0.8	Y	Y			38.	
4	9	1983	21	0.8	Y	Y			38.	
4	9	1983	22	0.8	Y	Y			39.	
4	9	1983	25	0.8	Y	Y			38.	
4	9	1983	28	0.8	Y	Y			38.	
4	9	1983	34	0.8	Y	Y			38.	
4	9	1983	35	0.8	Y	Y			38.	
4	9	1983	37	0.8	Y	Y			38.	
4	9	1983	42	0.8	Y	Y			38.	
5	9	1983	4	0.8	Y	Y			38.	
5	9	1983	7	0.8	Y	Y			38.	
5	9	1983	13	0.8	Y	Y			38.	
5	9	1983	14	0.8	Y	Y			28.	
5	9	1983	16	0.8	Y	Y			38.	
5	9	1983	21	0.8	Y	Y			38.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
5	9	1983	22	0.8	Y	Y			38.	
5	9	1983	25	0.8	Y	Y			38.	
5	9	1983	28	0.8	Y	Y			38.	
5	9	1983	34	0.8	Y	Y			38.	
5	9	1983	35	0.8	Y	Y			38.	
5	9	1983	37	0.8	Y	Y			38.	
5	9	1983	42	0.8	Y	Y			38.	
6	9	1983	4	0.8	Y	Y			38.	
6	9	1983	7	0.8	Y	Y			38.	
6	9	1983	13	0.8	Y	Y			38.	
6	9	1983	14	0.8	Y	Y			38.	
6	9	1983	16	0.8	Y	Y			38.	
6	9	1983	21	0.8	Y	Y			38.	
6	9	1983	22	0.8	Y	Y			36.	
6	9	1983	25	0.8	Y	Y			38.	
6	9	1983	28	0.8	Y	Y			38.	
6	9	1983	34	0.8	Y	Y			38.	
6	9	1983	35	0.8	Y	Y			38.	
6	9	1983	37	0.8	Y	Y			38.	
6	9	1983	42	0.8	Y	Y			38.	
7	9	1983	4	0.8	Y	Y				
7	9	1983	7	0.8	Y	Y				
7	9	1983	13	0.8	Y	Y				
7	9	1983	14	0.8	Y	Y				
7	9	1983	16	0.8	Y	Y				
7	9	1983	21	0.8	Y	Y				
7	9	1983	22	0.8	Y	Y				
7	9	1983	25	0.8	Y	Y				
7	9	1983	28	0.8	Y	Y				
7	9	1983	34	0.8	Y	Y				
7	9	1983	35	0.8	Y	Y				
7	9	1983	37	0.8	Y	Y				
7	9	1983	42	0.8	Y	Y				
8	9	1983	4	0.8	Y	Y				
8	9	1983	7	0.8	Y	Y				
8	9	1983	13	0.8	Y	Y				
8	9	1983	14	0.8	Y	Y				
8	9	1983	16	0.8	Y	Y				
8	9	1983	21	0.8	Y	Y				
8	9	1983	22	0.8	Y	Y				
8	9	1983	25	0.8	Y	Y				
8	9	1983	28	0.8	Y	Y				
8	9	1983	34	0.8	Y	Y				
8	9	1983	35	0.8	Y	Y				
8	9	1983	37	0.8	Y	Y				
8	9	1983	42	0.8	Y	Y				

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
9	9	1983	4	0.8	Y	Y				
9	9	1983	7	0.8	Y	Y				
9	9	1983	13	0.8	Y	Y				
9	9	1983	14	0.8	Y	Y				
9	9	1983	16	0.8	Y	Y				
9	9	1983	21	0.8	Y	Y				
9	9	1983	22	0.8	Y	Y				
9	9	1983	25	0.8	Y	Y				
9	9	1983	28	0.8	Y	Y				
9	9	1983	34	0.8	Y	Y				
9	9	1983	35	0.8	Y	Y				
9	9	1983	37	0.8	Y	Y				
9	9	1983	42	0.8	Y	Y				
10	9	1983	4	0.8	Y	Y			38.	
10	9	1983	7	0.8	Y	Y				
10	9	1983	13	0.8	Y	Y			38.	
10	9	1983	14	0.8	Y	Y			38.	
10	9	1983	16	0.8	Y	Y				
10	9	1983	21	0.8	Y	Y			38.	
10	9	1983	22	0.8	Y	Y			38.	
10	9	1983	25	0.8	Y	Y			38.	
10	9	1983	28	0.8	Y	Y				
10	9	1983	34	0.8	Y	Y			38.	
10	9	1983	35	0.8	Y	Y			38.	
10	9	1983	37	0.8	Y	Y			38.	
10	9	1983	42	0.8	Y	Y			38.	
11	9	1983	4	0.8	Y	Y				
11	9	1983	7	0.8	Y	Y			38.	
11	9	1983	13	0.8	Y	Y				
11	9	1983	14	0.8	Y	Y				
11	9	1983	16	0.8	Y	Y				
11	9	1983	21	0.8	Y	Y				
11	9	1983	22	0.8	Y	Y				
11	9	1983	25	0.8	Y	Y				
11	9	1983	28	0.8	Y	Y				
11	9	1983	34	0.8	Y	Y				
11	9	1983	35	0.8	Y	Y				
11	9	1983	37	0.8	Y	Y				
11	9	1983	42	0.8	Y	Y				
12	9	1983	4	0.8	Y	Y			29.	
12	9	1983	7	0.8	Y	Y			36.	
12	9	1983	13	0.8	Y	Y			28.	
12	9	1983	14	0.8	Y	Y			30.	
12	9	1983	16	0.8	Y	Y			28.	
12	9	1983	21	0.8	Y	Y			30.	
12	9	1983	22	0.8	Y	Y			30.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
12	9	1983	25	0.8	Y	Y			30.	
12	9	1983	28	0.8	Y	Y			29.	
12	9	1983	34	0.8	Y	Y			28.	
12	9	1983	35	0.8	Y	Y			29.	
12	9	1983	37	0.8	Y	Y			28.	
12	9	1983	42	0.8	Y	Y			36.	
13	9	1983	4	0.8	Y	Y			29.	
13	9	1983	7	0.8	Y	Y			36.	
13	9	1983	13	0.8	Y	Y			28.	
13	9	1983	14	0.8	Y	Y			30.	
13	9	1983	16	0.8	Y	Y			28.	
13	9	1983	21	0.8	Y	Y			30.	
13	9	1983	22	0.8	Y	Y			30.	
13	9	1983	25	0.8	Y	Y			30.	
13	9	1983	28	0.8	Y	Y			29.	
13	9	1983	34	0.8	Y	Y			28.	
13	9	1983	35	0.8	Y	Y			29.	
13	9	1983	37	0.8	Y	Y			28.	
13	9	1983	42	0.8	Y	Y			36.	
14	9	1983	4	0.8	Y	Y			29.	
14	9	1983	7	0.8	Y	Y			28.	
14	9	1983	13	0.8	Y	Y			28.	
14	9	1983	14	0.8	Y	Y			30.	
14	9	1983	16	0.8	Y	Y			28.	
14	9	1983	21	0.8	Y	Y			30.	
14	9	1983	22	0.8	Y	Y			30.	
14	9	1983	25	0.8	Y	Y			30.	
14	9	1983	28	0.8	Y	Y			29.	
14	9	1983	34	0.8	Y	Y			28.	
14	9	1983	35	0.8	Y	Y			29.	
14	9	1983	37	0.8	Y	Y			28.	
14	9	1983	42	0.8	Y	Y			29.	
15	9	1983	4	0.8	Y	Y				
15	9	1983	7	0.8	Y	Y				
15	9	1983	13	0.8	Y	Y				
15	9	1983	14	0.8	Y	Y				
15	9	1983	16	0.8	Y	Y				
15	9	1983	21	0.8	Y	Y				
15	9	1983	22	0.8	Y	Y				
15	9	1983	25	0.8	Y	Y				
15	9	1983	28	0.8	Y	Y				
15	9	1983	34	0.8	Y	Y				
15	9	1983	35	0.8	Y	Y				
15	9	1983	37	0.8	Y	Y				
15	9	1983	42	0.8	Y	Y				
16	9	1983	4	0.8	Y	Y				

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
16	9	1983	7	0.8	Y	Y				
16	9	1983	13	0.8	Y	Y				
16	9	1983	14	0.8	Y	Y				
16	9	1983	16	0.8	Y	Y				
16	9	1983	21	0.8	Y	Y				
16	9	1983	22	0.8	Y	Y				
16	9	1983	25	0.8	Y	Y				
16	9	1983	28	0.8	Y	Y				
16	9	1983	34	0.8	Y	Y				
16	9	1983	35	0.8	Y	Y				
16	9	1983	37	0.8	Y	Y				
16	9	1983	42	0.8	Y	Y				
17	9	1983	4	0.8	Y	Y				
17	9	1983	7	0.8	Y	Y				
17	9	1983	13	0.8	Y	Y				
17	9	1983	14	0.8	Y	Y				
17	9	1983	16	0.8	Y	Y				
17	9	1983	21	0.8	Y	Y				
17	9	1983	22	0.8	Y	Y				
17	9	1983	25	0.8	Y	Y				
17	9	1983	28	0.8	Y	Y				
17	9	1983	34	0.8	Y	Y				
17	9	1983	35	0.8	Y	Y				
17	9	1983	37	0.8	Y	Y				
17	9	1983	42	0.8	Y	Y				
18	9	1983	4	0.8	Y	Y				
18	9	1983	7	0.8	Y	Y				
18	9	1983	13	0.8	Y	Y				
18	9	1983	14	0.8	Y	Y				
18	9	1983	16	0.8	Y	Y				
18	9	1983	21	0.8	Y	Y				
18	9	1983	22	0.8	Y	Y				
18	9	1983	25	0.8	Y	Y				
18	9	1983	28	0.8	Y	Y				
18	9	1983	34	0.8	Y	Y				
18	9	1983	35	0.8	Y	Y				
18	9	1983	37	0.8	Y	Y				
18	9	1983	42	0.8	Y	Y				
19	9	1983	4	0.8	Y	Y			29.	
19	9	1983	7	0.8	Y	Y			30.	
19	9	1983	13	0.8	Y	Y			30.	
19	9	1983	14	0.8	Y	Y			30.	
19	9	1983	16	0.8	Y	Y			30.	
19	9	1983	21	0.8	Y	Y			30.	
19	9	1983	22	0.8	Y	Y			30.	
19	9	1983	25	0.8	Y	Y			30.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
19	9	1983	28	0.8	Y	Y			30.	
19	9	1983	34	0.8	Y	Y			30.	
19	9	1983	35	0.8	Y	Y			30.	
19	9	1983	37	0.8	Y	Y			29.	
19	9	1983	42	0.8	Y	Y			30.	
20	9	1983	4	0.8	Y	Y			30.	
20	9	1983	7	0.8	Y	Y			30.	
20	9	1983	13	0.8	Y	Y			30.	
20	9	1983	14	0.8	Y	Y			30.	
20	9	1983	16	0.8	Y	Y			30.	
20	9	1983	21	0.8	Y	Y			30.	
20	9	1983	22	0.8	Y	Y			30.	
20	9	1983	25	0.8	Y	Y			30.	
20	9	1983	28	0.8	Y	Y			30.	
20	9	1983	34	0.8	Y	Y			30.	
20	9	1983	35	0.8	Y	Y			30.	
20	9	1983	37	0.8	Y	Y			30.	
20	9	1983	42	0.8	Y	Y			30.	
21	9	1983	4	0.8	Y	Y				
21	9	1983	7	0.8	Y	Y				
21	9	1983	13	0.8	Y	Y				
21	9	1983	14	0.8	Y	Y				
21	9	1983	16	0.8	Y	Y				
21	9	1983	21	0.8	Y	Y				
21	9	1983	22	0.8	Y	Y				
21	9	1983	25	0.8	Y	Y				
21	9	1983	28	0.8	Y	Y				
21	9	1983	34	0.8	Y	Y				
21	9	1983	35	0.8	Y	Y				
21	9	1983	37	0.8	Y	Y				
21	9	1983	42	0.8	Y	Y				
22	9	1983	4	0.8	Y	Y			30.	
22	9	1983	7	0.8	Y	Y			30.	
22	9	1983	13	0.8	Y	Y			30.	
22	9	1983	14	0.8	Y	Y			30.	
22	9	1983	16	0.8	Y	Y			30.	
22	9	1983	21	0.8	Y	Y			30.	
22	9	1983	22	0.8	Y	Y			30.	
22	9	1983	25	0.8	Y	Y			30.	
22	9	1983	28	0.8	Y	Y			30.	
22	9	1983	34	0.8	Y	Y			30.	
22	9	1983	35	0.8	Y	Y			30.	
22	9	1983	37	0.8	Y	Y			30.	
22	9	1983	42	0.8	Y	Y			30.	
23	9	1983	4	0.8	Y	Y			31.	
23	9	1983	7	0.8	Y	Y			31.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
23	9	1983	13	0.8	Y	Y			31.	
23	9	1983	14	0.8	Y	Y			31.	
23	9	1983	16	0.8	Y	Y			31.	
23	9	1983	21	0.8	Y	Y			31.	
23	9	1983	22	0.8	Y	Y			31.	
23	9	1983	25	0.8	Y	Y			31.	
23	9	1983	28	0.8	Y	Y			31.	
23	9	1983	34	0.8	Y	Y			31.	
23	9	1983	35	0.8	Y	Y			31.	
23	9	1983	37	0.8	Y	Y			31.	
23	9	1983	42	0.8	Y	Y			31.	
24	9	1983	4	0.8	Y	Y			31.	
24	9	1983	7	0.8	Y	Y			31.	
24	9	1983	13	0.8	Y	Y			31.	
24	9	1983	14	0.8	Y	Y			31.	
24	9	1983	16	0.8	Y	Y			31.	
24	9	1983	21	0.8	Y	Y			31.	
24	9	1983	22	0.8	Y	Y			31.	
24	9	1983	25	0.8	Y	Y			31.	
24	9	1983	28	0.8	Y	Y			31.	
24	9	1983	34	0.8	Y	Y			31.	
24	9	1983	35	0.8	Y	Y			31.	
24	9	1983	37	0.8	Y	Y			32.	
24	9	1983	42	0.8	Y	Y			31.	
25	9	1983	4	0.8	Y	Y			32.	
25	9	1983	7	0.8	Y	Y			32.	
25	9	1983	13	0.8	Y	Y			32.	
25	9	1983	14	0.8	Y	Y			32.	
25	9	1983	16	0.8	Y	Y			32.	
25	9	1983	21	0.8	Y	Y			32.	
25	9	1983	22	0.8	Y	Y			32.	
25	9	1983	25	0.8	Y	Y			32.	
25	9	1983	28	0.8	Y	Y			32.	
25	9	1983	34	0.8	Y	Y			32.	
25	9	1983	35	0.8	Y	Y			32.	
25	9	1983	37	0.8	Y	Y			32.	
25	9	1983	42	0.8	Y	Y			32.	
26	9	1983	4	0.8	Y	Y			32.	
26	9	1983	7	0.8	Y	Y			32.	
26	9	1983	13	0.8	Y	Y			32.	
26	9	1983	14	0.8	Y	Y			32.	
26	9	1983	16	0.8	Y	Y			32.	
26	9	1983	21	0.8	Y	Y			32.	
26	9	1983	22	0.8	Y	Y			32.	
26	9	1983	25	0.8	Y	Y			32.	
26	9	1983	28	0.8	Y	Y			32.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
26	9	1983	34	0.8	Y	Y			32.	
26	9	1983	35	0.8	Y	Y			32.	
26	9	1983	37	0.8	Y	Y			32.	
26	9	1983	42	0.8	Y	Y			32.	
27	9	1983	4	0.8	Y	Y				
27	9	1983	7	0.8	Y	Y				
27	9	1983	13	0.8	Y	Y				
27	9	1983	14	0.8	Y	Y				
27	9	1983	16	0.8	Y	Y				
27	9	1983	21	0.8	Y	Y				
27	9	1983	22	0.8	Y	Y				
27	9	1983	25	0.8	Y	Y				
27	9	1983	28	0.8	Y	Y				
27	9	1983	34	0.8	Y	Y				
27	9	1983	35	0.8	Y	Y				
27	9	1983	37	0.8	Y	Y				
27	9	1983	42	0.8	Y	Y				
28	9	1983	4	0.8	Y	Y			34.	
28	9	1983	7	0.8	Y	Y			33.	
28	9	1983	13	0.8	Y	Y			34.	
28	9	1983	14	0.8	Y	Y			32.	
28	9	1983	16	0.8	Y	Y			34.	
28	9	1983	21	0.8	Y	Y			34.	
28	9	1983	22	0.8	Y	Y			32.	
28	9	1983	25	0.8	Y	Y			30.	
28	9	1983	28	0.8	Y	Y			30.	
28	9	1983	34	0.8	Y	Y			32.	
28	9	1983	35	0.8	Y	Y			35.	
28	9	1983	37	0.8	Y	Y			32.	
28	9	1983	42	0.8	Y	Y			30.	
29	9	1983	4	0.8	Y	Y			34.	
29	9	1983	7	0.8	Y	Y			33.	
29	9	1983	13	0.8	Y	Y			34.	
29	9	1983	14	0.8	Y	Y			33.	
29	9	1983	16	0.8	Y	Y			34.	
29	9	1983	21	0.8	Y	Y			34.	
29	9	1983	22	0.8	Y	Y			33.	
29	9	1983	25	0.8	Y	Y			33.	
29	9	1983	28	0.8	Y	Y			31.	
29	9	1983	34	0.8	Y	Y			33.	
29	9	1983	35	0.8	Y	Y			34.	
29	9	1983	37	0.8	Y	Y			33.	
29	9	1983	42	0.8	Y	Y			34.	
30	9	1983	4	0.8	Y	Y				
30	9	1983	7	0.8	Y	Y				
30	9	1983	13	0.8	Y	Y				

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
30	9	1983	14	0.8	Y	Y				
30	9	1983	16	0.8	Y	Y				
30	9	1983	21	0.8	Y	Y				
30	9	1983	22	0.8	Y	Y				
30	9	1983	25	0.8	Y	Y				
30	9	1983	28	0.8	Y	Y				
30	9	1983	34	0.8	Y	Y				
30	9	1983	35	0.8	Y	Y				
30	9	1983	37	0.8	Y	Y				
30	9	1983	42	0.8	Y	Y				
1	10	1983	4	0.8	Y	Y				
1	10	1983	7	0.8	Y	Y				
1	10	1983	13	0.8	Y	Y				
1	10	1983	14	0.8	Y	Y				
1	10	1983	16	0.8	Y	Y				
1	10	1983	21	0.8	Y	Y				
1	10	1983	22	0.8	Y	Y				
1	10	1983	25	0.8	Y	Y				
1	10	1983	28	0.8	Y	Y				
1	10	1983	34	0.8	Y	Y				
1	10	1983	35	0.8	Y	Y				
1	10	1983	37	0.8	Y	Y				
1	10	1983	42	0.8	Y	Y				
2	10	1983	4	0.8	Y	Y				
2	10	1983	7	0.8	Y	Y				
2	10	1983	13	0.8	Y	Y				
2	10	1983	14	0.8	Y	Y				
2	10	1983	16	0.8	Y	Y				
2	10	1983	21	0.8	Y	Y				
2	10	1983	22	0.8	Y	Y				
2	10	1983	25	0.8	Y	Y				
2	10	1983	28	0.8	Y	Y				
2	10	1983	34	0.8	Y	Y				
2	10	1983	35	0.8	Y	Y				
2	10	1983	37	0.8	Y	Y				
2	10	1983	42	0.8	Y	Y				
3	10	1983	4	0.8	Y	Y			32.	
3	10	1983	7	0.8	Y	Y			30.	
3	10	1983	13	0.8	Y	Y			30.	
3	10	1983	14	0.8	Y	Y			30.	
3	10	1983	16	0.8	Y	Y			30.	
3	10	1983	21	0.8	Y	Y			31.	
3	10	1983	22	0.8	Y	Y			31.	
3	10	1983	25	0.8	Y	Y			31.	
3	10	1983	28	0.8	Y	Y			32.	
3	10	1983	34	0.8	Y	Y			31.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
3	10	1983	35	0.8	Y	Y			31.	
3	10	1983	37	0.8	Y	Y			35.	
3	10	1983	42	0.8	Y	Y			31.	
4	10	1983	4	0.8	Y	Y			32.	
4	10	1983	7	0.8	Y	Y			30.	
4	10	1983	13	0.8	Y	Y			32.	
4	10	1983	14	0.8	Y	Y			30.	
4	10	1983	16	0.8	Y	Y			32.	
4	10	1983	21	0.8	Y	Y			29.	
4	10	1983	22	0.8	Y	Y			29.	
4	10	1983	25	0.8	Y	Y			30.	
4	10	1983	28	0.8	Y	Y			30.	
4	10	1983	34	0.8	Y	Y			30.	
4	10	1983	35	0.8	Y	Y			29.	
4	10	1983	37	0.8	Y	Y			29.	
4	10	1983	42	0.8	Y	Y			29.	
5	10	1983	4	0.8	Y	Y			32.	
5	10	1983	7	0.8	Y	Y			31.	
5	10	1983	13	0.8	Y	Y			32.	
5	10	1983	14	0.8	Y	Y			30.	
5	10	1983	16	0.8	Y	Y			32.	
5	10	1983	21	0.8	Y	Y			28.	
5	10	1983	22	0.8	Y	Y			33.	
5	10	1983	25	0.8	Y	Y			30.	
5	10	1983	28	0.8	Y	Y			31.	
5	10	1983	34	0.8	Y	Y			31.	
5	10	1983	35	0.8	Y	Y			32.	
5	10	1983	37	0.8	Y	Y			30.	
5	10	1983	42	0.8	Y	Y			32.	
6	10	1983	4	0.8	Y	Y			33.	
6	10	1983	7	0.8	Y	Y			35.	
6	10	1983	13	0.8	Y	Y			34.	
6	10	1983	14	0.8	Y	Y			31.	
6	10	1983	16	0.8	Y	Y			31.	
6	10	1983	21	0.8	Y	Y			31.	
6	10	1983	22	0.8	Y	Y			33.	
6	10	1983	25	0.8	Y	Y			30.	
6	10	1983	28	0.8	Y	Y			31.	
6	10	1983	34	0.8	Y	Y			31.	
6	10	1983	35	0.8	Y	Y			32.	
6	10	1983	37	0.8	Y	Y			30.	
6	10	1983	42	0.8	Y	Y			32.	
7	10	1983	4	0.8	Y	Y			33.	
7	10	1983	7	0.8	Y	Y			35.	
7	10	1983	13	0.8	Y	Y			34.	
7	10	1983	14	0.8	Y	Y			31.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
7	10	1983	16	0.8	Y	Y			31.	
7	10	1983	21	0.8	Y	Y			31.	
7	10	1983	22	0.8	Y	Y			33.	
7	10	1983	25	0.8	Y	Y			30.	
7	10	1983	28	0.8	Y	Y			31.	
7	10	1983	34	0.8	Y	Y			31.	
7	10	1983	35	0.8	Y	Y			32.	
7	10	1983	37	0.8	Y	Y			30.	
7	10	1983	42	0.8	Y	Y			32.	
8	10	1983	4	0.8	Y	Y			29.	
8	10	1983	7	0.8	Y	Y			29.	
8	10	1983	13	0.8	Y	Y			29.	
8	10	1983	14	0.8	Y	Y			27.5	
8	10	1983	16	0.8	Y	Y			28.	
8	10	1983	21	0.8	Y	Y			29.	
8	10	1983	22	0.8	Y	Y			31.	
8	10	1983	25	0.8	Y	Y			30.	
8	10	1983	28	0.8	Y	Y				
8	10	1983	34	0.8	Y	Y			30.	
8	10	1983	35	0.8	Y	Y			31.	
8	10	1983	37	0.8	Y	Y			30.	
8	10	1983	42	0.8	Y	Y			30.	
9	10	1983	4	0.8	Y	Y			33.	
9	10	1983	7	0.8	Y	Y			32.	
9	10	1983	13	0.8	Y	Y			33.	
9	10	1983	14	0.8	Y	Y			30.	
9	10	1983	16	0.8	Y	Y			32.	
9	10	1983	21	0.8	Y	Y			30.	
9	10	1983	22	0.8	Y	Y			30.	
9	10	1983	25	0.8	Y	Y			29.	
9	10	1983	28	0.8	Y	Y				
9	10	1983	34	0.8	Y	Y			29.	
9	10	1983	35	0.8	Y	Y				
9	10	1983	37	0.8	Y	Y			30.	
9	10	1983	42	0.8	Y	Y			31.	
10	10	1983	4	0.8	Y	Y			34.	
10	10	1983	7	0.8	Y	Y			32.	
10	10	1983	13	0.8	Y	Y			29.	
10	10	1983	14	0.8	Y	Y			26.	
10	10	1983	16	0.8	Y	Y			29.	
10	10	1983	21	0.8	Y	Y			28.	
10	10	1983	22	0.8	Y	Y			30.	
10	10	1983	25	0.8	Y	Y			31.	
10	10	1983	28	0.8	Y	Y			31.	
10	10	1983	34	0.8	Y	Y			28.	
10	10	1983	35	0.8	Y	Y			30.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
10	10	1983	37	0.8	Y	Y			28.	
10	10	1983	42	0.8	Y	Y			30.	
11	10	1983	4	0.8	Y	Y			34.	
11	10	1983	7	0.8	Y	Y			32.	
11	10	1983	13	0.8	Y	Y			29.	
11	10	1983	14	0.8	Y	Y			26.	
11	10	1983	16	0.8	Y	Y			29.	
11	10	1983	21	0.8	Y	Y			28.	
11	10	1983	22	0.8	Y	Y			30.	
11	10	1983	25	0.8	Y	Y			31.	
11	10	1983	28	0.8	Y	Y			31.	
11	10	1983	34	0.8	Y	Y			28.	
11	10	1983	35	0.8	Y	Y			30.	
11	10	1983	37	0.8	Y	Y			28.	
11	10	1983	42	0.8	Y	Y			30.	
12	10	1983	4	0.8	Y	Y			34.	
12	10	1983	7	0.8	Y	Y			32.	
12	10	1983	13	0.8	Y	Y			29.	
12	10	1983	14	0.8	Y	Y			26.	
12	10	1983	16	0.8	Y	Y			29.	
12	10	1983	21	0.8	Y	Y			28.	
12	10	1983	22	0.8	Y	Y			30.	
12	10	1983	25	0.8	Y	Y			31.	
12	10	1983	28	0.8	Y	Y			31.	
12	10	1983	34	0.8	Y	Y			28.	
12	10	1983	35	0.8	Y	Y			30.	
12	10	1983	37	0.8	Y	Y			28.	
12	10	1983	42	0.8	Y	Y			30.	
13	10	1983	4	0.8	Y	Y			35.	
13	10	1983	7	0.8	Y	Y			33.	
13	10	1983	13	0.8	Y	Y			29.	
13	10	1983	14	0.8	Y	Y			29.	
13	10	1983	16	0.8	Y	Y			30.	
13	10	1983	21	0.8	Y	Y			29.	
13	10	1983	22	0.8	Y	Y			31.	
13	10	1983	25	0.8	Y	Y			32.	
13	10	1983	28	0.8	Y	Y			32.	
13	10	1983	34	0.8	Y	Y			29.	
13	10	1983	35	0.8	Y	Y			31.	
13	10	1983	37	0.8	Y	Y			29.	
13	10	1983	42	0.8	Y	Y			31.	
14	10	1983	4	0.8	Y	Y			29.	
14	10	1983	7	0.8	Y	Y			30.	
14	10	1983	13	0.8	Y	Y			32.	
14	10	1983	14	0.8	Y	Y			30.	
14	10	1983	16	0.8	Y	Y			33.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
14	10	1983	21	0.8	Y	Y			28.	
14	10	1983	22	0.8	Y	Y			33.	
14	10	1983	25	0.8	Y	Y			31.	
14	10	1983	28	0.8	Y	Y			32.	
14	10	1983	34	0.8	Y	Y			30.	
14	10	1983	35	0.8	Y	Y			32.	
14	10	1983	37	0.8	Y	Y			30.	
14	10	1983	42	0.8	Y	Y			28.	
15	10	1983	4	0.8	Y	Y			27.	
15	10	1983	7	0.8	Y	Y			35.	
15	10	1983	13	0.8	Y	Y			38.	
15	10	1983	14	0.8	Y	Y			35.	
15	10	1983	16	0.8	Y	Y			35.	
15	10	1983	21	0.8	Y	Y			34.	
15	10	1983	22	0.8	Y	Y			32.	
15	10	1983	25	0.8	Y	Y			30.	
15	10	1983	28	0.8	Y	Y			35.	
15	10	1983	34	0.8	Y	Y			33.	
15	10	1983	35	0.8	Y	Y			33.	
15	10	1983	37	0.8	Y	Y			33.	
15	10	1983	42	0.8	Y	Y			35.	
16	10	1983	4	0.8	Y	Y			26.	
16	10	1983	7	0.8	Y	Y			25.	
16	10	1983	13	0.8	Y	Y			25.	
16	10	1983	14	0.8	Y	Y			28.	
16	10	1983	16	0.8	Y	Y			23.	
16	10	1983	21	0.8	Y	Y			26.	
16	10	1983	22	0.8	Y	Y			28.	
16	10	1983	25	0.8	Y	Y			28.	
16	10	1983	28	0.8	Y	Y			25.	
16	10	1983	34	0.8	Y	Y			27.	
16	10	1983	35	0.8	Y	Y			35.	
16	10	1983	37	0.8	Y	Y			29.	
16	10	1983	42	0.8	Y	Y			16.	
17	10	1983	4	0.8	Y	Y			31.	
17	10	1983	7	0.8	Y	Y			32.	
17	10	1983	13	0.8	Y	Y			31.	
17	10	1983	14	0.8	Y	Y			27.	
17	10	1983	16	0.8	Y	Y			25.5	
17	10	1983	21	0.8	Y	Y			27.	
17	10	1983	22	0.8	Y	Y			25.	
17	10	1983	25	0.8	Y	Y			26.	
17	10	1983	28	0.8	Y	Y			30.	
17	10	1983	34	0.8	Y	Y			29.5	
17	10	1983	35	0.8	Y	Y			29.	
17	10	1983	37	0.8	Y	Y			28.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
17	10	1983	42	0.8	Y	Y			29.5	
18	10	1983	4	0.8	Y	Y			34.	
18	10	1983	7	0.8	Y	Y			32.	
18	10	1983	13	0.8	Y	Y			34.	
18	10	1983	14	0.8	Y	Y			32.	
18	10	1983	16	0.8	Y	Y			31.	
18	10	1983	21	0.8	Y	Y			30.	
18	10	1983	22	0.8	Y	Y			26.	
18	10	1983	25	0.8	Y	Y			30.	
18	10	1983	28	0.8	Y	Y			31.	
18	10	1983	34	0.8	Y	Y			31.	
18	10	1983	35	0.8	Y	Y			31.5	
18	10	1983	37	0.8	Y	Y			30.	
18	10	1983	42	0.8	Y	Y			30.	
19	10	1983	4	0.8	Y	Y			35.	
19	10	1983	7	0.8	Y	Y			34.	
19	10	1983	13	0.8	Y	Y			35.	
19	10	1983	14	0.8	Y	Y			34.	
19	10	1983	16	0.8	Y	Y			34.	
19	10	1983	21	0.8	Y	Y			31.	
19	10	1983	22	0.8	Y	Y			32.	
19	10	1983	25	0.8	Y	Y			32.	
19	10	1983	28	0.8	Y	Y			32.	
19	10	1983	34	0.8	Y	Y			33.	
19	10	1983	35	0.8	Y	Y			34.	
19	10	1983	37	0.8	Y	Y			33.	
19	10	1983	42	0.8	Y	Y			31.	
20	10	1983	4	0.8	Y	Y			35.	
20	10	1983	7	0.8	Y	Y			35.	
20	10	1983	13	0.8	Y	Y			35.	
20	10	1983	14	0.8	Y	Y			32.	
20	10	1983	16	0.8	Y	Y			33.	
20	10	1983	21	0.8	Y	Y			30.	
20	10	1983	22	0.8	Y	Y			34.	
20	10	1983	25	0.8	Y	Y			33.	
20	10	1983	28	0.8	Y	Y			34.	
20	10	1983	34	0.8	Y	Y			32.	
20	10	1983	35	0.8	Y	Y			34.5	
20	10	1983	37	0.8	Y	Y			33.	
20	10	1983	42	0.8	Y	Y			32.	
21	10	1983	4	0.8	Y	Y			36.	
21	10	1983	7	0.8	Y	Y			35.	
21	10	1983	13	0.8	Y	Y			35.	
21	10	1983	14	0.8	Y	Y			33.	
21	10	1983	16	0.8	Y	Y			32.	
21	10	1983	21	0.8	Y	Y			30.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
21	10	1983	22	0.8	Y	Y			31.	
21	10	1983	25	0.8	Y	Y			31.	
21	10	1983	28	0.8	Y	Y			33.	
21	10	1983	34	0.8	Y	Y			31.	
21	10	1983	35	0.8	Y	Y			32.	
21	10	1983	37	0.8	Y	Y			32.	
21	10	1983	42	0.8	Y	Y			30.	
22	10	1983	4	0.8	Y	Y			35.	
22	10	1983	7	0.8	Y	Y			35.	
22	10	1983	13	0.8	Y	Y			36.	
22	10	1983	14	0.8	Y	Y			38.	
22	10	1983	16	0.8	Y	Y			32.	
22	10	1983	21	0.8	Y	Y			32.	
22	10	1983	22	0.8	Y	Y			31.	
22	10	1983	25	0.8	Y	Y			30.	
22	10	1983	28	0.8	Y	Y			32.	
22	10	1983	34	0.8	Y	Y			31.	
22	10	1983	35	0.8	Y	Y			32.	
22	10	1983	37	0.8	Y	Y			31.	
22	10	1983	42	0.8	Y	Y			31.	
23	10	1983	4	0.8	Y	Y				
23	10	1983	7	0.8	Y	Y				
23	10	1983	13	0.8	Y	Y				
23	10	1983	14	0.8	Y	Y				
23	10	1983	16	0.8	Y	Y				
23	10	1983	21	0.8	Y	Y				
23	10	1983	22	0.8	Y	Y				
23	10	1983	25	0.8	Y	Y				
23	10	1983	28	0.8	Y	Y				
23	10	1983	34	0.8	Y	Y				
23	10	1983	35	0.8	Y	Y				
23	10	1983	37	0.8	Y	Y				
23	10	1983	42	0.8	Y	Y				
24	10	1983	4	0.8	Y	Y			27.	
24	10	1983	7	0.8	Y	Y			29.	
24	10	1983	13	0.8	Y	Y			30.	
24	10	1983	14	0.8	Y	Y			27.	
24	10	1983	16	0.8	Y	Y			26.	
24	10	1983	21	0.8	Y	Y			24.	
24	10	1983	22	0.8	Y	Y			27.	
24	10	1983	25	0.8	Y	Y			25.	
24	10	1983	28	0.8	Y	Y			27.	
24	10	1983	34	0.8	Y	Y			25.	
24	10	1983	35	0.8	Y	Y			27.	
24	10	1983	37	0.8	Y	Y			26.	
24	10	1983	42	0.8	Y	Y			25.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
25	10	1983	4	0.8	Y	Y			30.	
25	10	1983	7	0.8	Y	Y			28.	
25	10	1983	13	0.8	Y	Y			27.	
25	10	1983	14	0.8	Y	Y			26.	
25	10	1983	16	0.8	Y	Y			26.	
25	10	1983	21	0.8	Y	Y			24.	
25	10	1983	22	0.8	Y	Y			27.	
25	10	1983	25	0.8	Y	Y			22.	
25	10	1983	28	0.8	Y	Y			27.	
25	10	1983	34	0.8	Y	Y			25.	
25	10	1983	35	0.8	Y	Y			25.	
25	10	1983	37	0.8	Y	Y			25.	
25	10	1983	42	0.8	Y	Y			25.	
26	10	1983	4	0.8	Y	Y			30.	
26	10	1983	7	0.8	Y	Y			24.	
26	10	1983	13	0.8	Y	Y			30.	
26	10	1983	14	0.8	Y	Y			25.	
26	10	1983	16	0.8	Y	Y			25.	
26	10	1983	21	0.8	Y	Y			22.	
26	10	1983	22	0.8	Y	Y			27.	
26	10	1983	25	0.8	Y	Y			21.	
26	10	1983	28	0.8	Y	Y			25.	
26	10	1983	34	0.8	Y	Y			23.	
26	10	1983	35	0.8	Y	Y			25.	
26	10	1983	37	0.8	Y	Y			24.	
26	10	1983	42	0.8	Y	Y			25.	
27	10	1983	4	0.8	Y	Y			22.	
27	10	1983	7	0.8	Y	Y			18.	
27	10	1983	13	0.8	Y	Y			20.	
27	10	1983	14	0.8	Y	Y			18.	
27	10	1983	16	0.8	Y	Y			20.	
27	10	1983	21	0.8	Y	Y			15.	
27	10	1983	22	0.8	Y	Y			20.	
27	10	1983	25	0.8	Y	Y			18.	
27	10	1983	28	0.8	Y	Y			19.	
27	10	1983	34	0.8	Y	Y			16.	
27	10	1983	35	0.8	Y	Y			17.	
27	10	1983	37	0.8	Y	Y			18.	
27	10	1983	42	0.8	Y	Y			22.	
28	10	1983	4	0.8	Y	Y			26.	
28	10	1983	7	0.8	Y	Y			25.	
28	10	1983	13	0.8	Y	Y			25.	
28	10	1983	14	0.8	Y	Y			23.	
28	10	1983	16	0.8	Y	Y			25.	
28	10	1983	21	0.8	Y	Y			20.	
28	10	1983	22	0.8	Y	Y			24.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
28	10	1983	25	0.8	Y	Y			22.	
28	10	1983	28	0.8	Y	Y			24.	
28	10	1983	34	0.8	Y	Y			22.	
28	10	1983	35	0.8	Y	Y			20.	
28	10	1983	37	0.8	Y	Y			23.	
28	10	1983	42	0.8	Y	Y			21.	
29	10	1983	4	0.8	Y	Y			25.	
29	10	1983	7	0.8	Y	Y			24.	
29	10	1983	13	0.8	Y	Y			24.	
29	10	1983	14	0.8	Y	Y			22.	
29	10	1983	16	0.8	Y	Y			24.	
29	10	1983	21	0.8	Y	Y			20.	
29	10	1983	22	0.8	Y	Y			24.	
29	10	1983	25	0.8	Y	Y			21.	
29	10	1983	28	0.8	Y	Y			23.	
29	10	1983	34	0.8	Y	Y			22.	
29	10	1983	35	0.8	Y	Y			20.	
29	10	1983	37	0.8	Y	Y			22.	
29	10	1983	37	0.8	Y	Y				
29	10	1983	42	0.8	Y	Y			21.	
30	10	1983	4	0.8	Y	Y			20.	
30	10	1983	7	0.8	Y	Y			18.	
30	10	1983	13	0.8	Y	Y			18.	
30	10	1983	14	0.8	Y	Y			18.	
30	10	1983	16	0.8	Y	Y			20.	
30	10	1983	21	0.8	Y	Y			14.	
30	10	1983	22	0.8	Y	Y			22.	
30	10	1983	25	0.8	Y	Y			20.	
30	10	1983	28	0.8	Y	Y			20.	
30	10	1983	34	0.8	Y	Y			22.	
30	10	1983	35	0.8	Y	Y			20.	
30	10	1983	37	0.8	Y	Y			20.	
30	10	1983	42	0.8	Y	Y			20.	
31	10	1983	4	0.8	Y	Y			23.	
31	10	1983	7	0.8	Y	Y			22.	
31	10	1983	13	0.8	Y	Y			22.	
31	10	1983	14	0.8	Y	Y			20.	
31	10	1983	16	0.8	Y	Y			21.	
31	10	1983	21	0.8	Y	Y			15.	
31	10	1983	22	0.8	Y	Y			21.	
31	10	1983	25	0.8	Y	Y			20.	
31	10	1983	28	0.8	Y	Y			20.	
31	10	1983	34	0.8	Y	Y			18.	
31	10	1983	35	0.8	Y	Y			20.	
31	10	1983	37	0.8	Y	Y			21.	
31	10	1983	42	0.8	Y	Y			20.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
1	11	1983	4	0.8	Y	Y			24.	
1	11	1983	7	0.8	Y	Y			23.	
1	11	1983	13	0.8	Y	Y			23.	
1	11	1983	14	0.8	Y	Y			24.	
1	11	1983	16	0.8	Y	Y			20.	
1	11	1983	21	0.8	Y	Y			19.	
1	11	1983	22	0.8	Y	Y			22.	
1	11	1983	25	0.8	Y	Y			21.	
1	11	1983	28	0.8	Y	Y			21.	
1	11	1983	34	0.8	Y	Y			23.	
1	11	1983	35	0.8	Y	Y			20.	
1	11	1983	37	0.8	Y	Y			20.	
1	11	1983	42	0.8	Y	Y			21.	
2	11	1983	4	0.8	Y	Y			23.	
2	11	1983	7	0.8	Y	Y			20.	
2	11	1983	13	0.8	Y	Y			24.	
2	11	1983	14	0.8	Y	Y			25.	
2	11	1983	16	0.8	Y	Y			21.	
2	11	1983	21	0.8	Y	Y			19.	
2	11	1983	22	0.8	Y	Y			23.	
2	11	1983	25	0.8	Y	Y			23.	
2	11	1983	28	0.8	Y	Y			22.	
2	11	1983	34	0.8	Y	Y			23.	
2	11	1983	35	0.8	Y	Y			22.	
2	11	1983	37	0.8	Y	Y			23.	
2	11	1983	42	0.8	Y	Y			22.	
3	11	1983	4	0.8	Y	Y			25.	
3	11	1983	7	0.8	Y	Y			25.	
3	11	1983	13	0.8	Y	Y			24.	
3	11	1983	14	0.8	Y	Y			25.	
3	11	1983	16	0.8	Y	Y			25.	
3	11	1983	21	0.8	Y	Y			24.	
3	11	1983	22	0.8	Y	Y			23.	
3	11	1983	25	0.8	Y	Y			24.	
3	11	1983	28	0.8	Y	Y			23.	
3	11	1983	34	0.8	Y	Y			24.	
3	11	1983	35	0.8	Y	Y			22.	
3	11	1983	37	0.8	Y	Y			24.	
3	11	1983	42	0.8	Y	Y			23.	
4	11	1983	4	0.8	Y	Y			23.	
4	11	1983	7	0.8	Y	Y			18.	
4	11	1983	13	0.8	Y	Y			24.	
4	11	1983	14	0.8	Y	Y			18.	
4	11	1983	16	0.8	Y	Y			19.	
4	11	1983	21	0.8	Y	Y			13.	
4	11	1983	22	0.8	Y	Y			22.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
4	11	1983	25	0.8	Y	Y			22.	
4	11	1983	28	0.8	Y	Y			21.	
4	11	1983	34	0.8	Y	Y			20.	
4	11	1983	35	0.8	Y	Y			20.	
4	11	1983	37	0.8	Y	Y			19.	
4	11	1983	42	0.8	Y	Y			22.	
5	11	1983	4	0.8	Y	Y			24.	
5	11	1983	7	0.8	Y	Y			24.	
5	11	1983	13	0.8	Y	Y			23.	
5	11	1983	14	0.8	Y	Y			24.	
5	11	1983	16	0.8	Y	Y			23.	
5	11	1983	21	0.8	Y	Y			18.	
5	11	1983	22	0.8	Y	Y			24.	
5	11	1983	25	0.8	Y	Y			20.	
5	11	1983	28	0.8	Y	Y			22.	
5	11	1983	34	0.8	Y	Y			21.	
5	11	1983	35	0.8	Y	Y			20.	
5	11	1983	37	0.8	Y	Y			22.	
5	11	1983	42	0.8	Y	Y			21.	
6	11	1983	4	0.8	Y	Y			25.	
6	11	1983	7	0.8	Y	Y			20.	
6	11	1983	13	0.8	Y	Y			26.	
6	11	1983	14	0.8	Y	Y			20.	
6	11	1983	16	0.8	Y	Y			21.	
6	11	1983	21	0.8	Y	Y			25.	
6	11	1983	22	0.8	Y	Y			25.	
6	11	1983	25	0.8	Y	Y			14.	
6	11	1983	28	0.8	Y	Y			24.	
6	11	1983	34	0.8	Y	Y			22.	
6	11	1983	35	0.8	Y	Y			22.	
6	11	1983	37	0.8	Y	Y			21.	
6	11	1983	42	0.8	Y	Y			21.	
7	11	1983	4	0.8	Y	Y			25.	
7	11	1983	7	0.8	Y	Y			21.	
7	11	1983	13	0.8	Y	Y			20.	
7	11	1983	14	0.8	Y	Y			20.	
7	11	1983	16	0.8	Y	Y			21.	
7	11	1983	21	0.8	Y	Y			14.	
7	11	1983	22	0.8	Y	Y			25.	
7	11	1983	25	0.8	Y	Y			25.	
7	11	1983	28	0.8	Y	Y			24.	
7	11	1983	34	0.8	Y	Y			22.	
7	11	1983	35	0.8	Y	Y			20.	
7	11	1983	37	0.8	Y	Y			21.	
7	11	1983	42	0.8	Y	Y			21.	
8	11	1983	4	0.8	Y	Y			24.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
8	11	1983	7	0.8	Y	Y			21.	
8	11	1983	13	0.8	Y	Y			24.	
8	11	1983	14	0.8	Y	Y			21.	
8	11	1983	16	0.8	Y	Y			20.	
8	11	1983	21	0.8	Y	Y			18.	
8	11	1983	22	0.8	Y	Y			21.	
8	11	1983	25	0.8	Y	Y			20.	
8	11	1983	28	0.8	Y	Y			20.	
8	11	1983	34	0.8	Y	Y			20.	
8	11	1983	35	0.8	Y	Y			20.	
8	11	1983	37	0.8	Y	Y			20.	
8	11	1983	42	0.8	Y	Y			20.	
9	11	1983	4	0.8	Y	Y			24.	
9	11	1983	7	0.8	Y	Y			18.	
9	11	1983	13	0.8	Y	Y			24.	
9	11	1983	14	0.8	Y	Y			21.	
9	11	1983	16	0.8	Y	Y			21.	
9	11	1983	21	0.8	Y	Y			18.	
9	11	1983	22	0.8	Y	Y			21.	
9	11	1983	25	0.8	Y	Y			20.	
9	11	1983	28	0.8	Y	Y			20.	
9	11	1983	34	0.8	Y	Y			20.	
9	11	1983	35	0.8	Y	Y			20.	
9	11	1983	37	0.8	Y	Y			20.	
9	11	1983	42	0.8	Y	Y			20.	
10	11	1983	4	0.8	Y	Y			22.	
10	11	1983	7	0.8	Y	Y			18.	
10	11	1983	13	0.8	Y	Y			22.	
10	11	1983	14	0.8	Y	Y			19.	
10	11	1983	16	0.8	Y	Y			18.	
10	11	1983	21	0.8	Y	Y			16.	
10	11	1983	22	0.8	Y	Y			19.	
10	11	1983	25	0.8	Y	Y			18.	
10	11	1983	28	0.8	Y	Y			18.	
10	11	1983	34	0.8	Y	Y			18.	
10	11	1983	35	0.8	Y	Y			18.	
10	11	1983	37	0.8	Y	Y			18.	
10	11	1983	42	0.8	Y	Y			18.	
11	11	1983	4	0.8	Y	Y			20.	
11	11	1983	7	0.8	Y	Y			18.	
11	11	1983	13	0.8	Y	Y			18.	
11	11	1983	14	0.8	Y	Y			18.	
11	11	1983	16	0.8	Y	Y			20.	
11	11	1983	21	0.8	Y	Y			20.	
11	11	1983	22	0.8	Y	Y			19.	
11	11	1983	25	0.8	Y	Y			18.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
11	11	1983	28	0.8	Y	Y			20.	
11	11	1983	34	0.8	Y	Y			20.	
11	11	1983	35	0.8	Y	Y			18.	
11	11	1983	37	0.8	Y	Y			18.	
11	11	1983	42	0.8	Y	Y			18.	
12	11	1983	4	0.8	Y	Y			24.	
12	11	1983	7	0.8	Y	Y			20.	
12	11	1983	13	0.8	Y	Y			25.	
12	11	1983	14	0.8	Y	Y			20.	
12	11	1983	16	0.8	Y	Y			24.	
12	11	1983	21	0.8	Y	Y			14.	
12	11	1983	22	0.8	Y	Y			24.	
12	11	1983	25	0.8	Y	Y			24.	
12	11	1983	28	0.8	Y	Y			24.	
12	11	1983	34	0.8	Y	Y			22.	
12	11	1983	35	0.8	Y	Y			22.	
12	11	1983	37	0.8	Y	Y			21.	
12	11	1983	42	0.8	Y	Y			20.	
13	11	1983	4	0.8	Y	Y				
13	11	1983	7	0.8	Y	Y				
13	11	1983	13	0.8	Y	Y				
13	11	1983	14	0.8	Y	Y				
13	11	1983	16	0.8	Y	Y				
13	11	1983	21	0.8	Y	Y				
13	11	1983	22	0.8	Y	Y				
13	11	1983	25	0.8	Y	Y				
13	11	1983	28	0.8	Y	Y				
13	11	1983	34	0.8	Y	Y				
13	11	1983	35	0.8	Y	Y				
13	11	1983	37	0.8	Y	Y				
13	11	1983	42	0.8	Y	Y				
14	11	1983	4	0.8	Y	Y			22.	
14	11	1983	7	0.8	Y	Y			20.	
14	11	1983	13	0.8	Y	Y			20.	
14	11	1983	14	0.8	Y	Y			18.	
14	11	1983	16	0.8	Y	Y			18.	
14	11	1983	21	0.8	Y	Y			15.	
14	11	1983	22	0.8	Y	Y			18.	
14	11	1983	25	0.8	Y	Y			16.	
14	11	1983	28	0.8	Y	Y			18.	
14	11	1983	34	0.8	Y	Y			16.	
14	11	1983	35	0.8	Y	Y			15.	
14	11	1983	37	0.8	Y	Y			17.	
14	11	1983	42	0.8	Y	Y			16.	
15	11	1983	4	0.8	Y	Y			21.	
15	11	1983	7	0.8	Y	Y			19.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
15	11	1983	13	0.8	Y	Y			20.	
15	11	1983	14	0.8	Y	Y			18.	
15	11	1983	16	0.8	Y	Y			18.	
15	11	1983	21	0.8	Y	Y			16.	
15	11	1983	22	0.8	Y	Y			19.	
15	11	1983	25	0.8	Y	Y			15.	
15	11	1983	28	0.8	Y	Y			18.	
15	11	1983	34	0.8	Y	Y			17.	
15	11	1983	35	0.8	Y	Y			17.	
15	11	1983	37	0.8	Y	Y			19.	
15	11	1983	42	0.8	Y	Y			18.	
16	11	1983	4	0.8	Y	Y			21.	
16	11	1983	7	0.8	Y	Y			19.	
16	11	1983	13	0.8	Y	Y			21.	
16	11	1983	14	0.8	Y	Y			18.	
16	11	1983	16	0.8	Y	Y			18.	
16	11	1983	21	0.8	Y	Y			15.	
16	11	1983	22	0.8	Y	Y			19.	
16	11	1983	25	0.8	Y	Y			16.	
16	11	1983	28	0.8	Y	Y			18.	
16	11	1983	34	0.8	Y	Y			17.	
16	11	1983	35	0.8	Y	Y			17.	
16	11	1983	37	0.8	Y	Y			19.	
16	11	1983	42	0.8	Y	Y			18.	
17	11	1983	4	0.8	Y	Y			23.	
17	11	1983	7	0.8	Y	Y			21.	
17	11	1983	13	0.8	Y	Y			21.	
17	11	1983	14	0.8	Y	Y			19.	
17	11	1983	16	0.8	Y	Y			19.	
17	11	1983	21	0.8	Y	Y			16.	
17	11	1983	22	0.8	Y	Y			19.	
17	11	1983	25	0.8	Y	Y			17.	
17	11	1983	28	0.8	Y	Y			19.	
17	11	1983	34	0.8	Y	Y			17.	
17	11	1983	35	0.8	Y	Y			16.	
17	11	1983	37	0.8	Y	Y			18.	
17	11	1983	42	0.8	Y	Y			16.	
18	11	1983	4	0.8	Y	Y			23.	
18	11	1983	7	0.8	Y	Y			21.	
18	11	1983	13	0.8	Y	Y			21.	
18	11	1983	14	0.8	Y	Y			18.	
18	11	1983	16	0.8	Y	Y			18.	
18	11	1983	21	0.8	Y	Y			16.	
18	11	1983	22	0.8	Y	Y			19.	
18	11	1983	25	0.8	Y	Y			17.	
18	11	1983	28	0.8	Y	Y			19.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
18	11	1983	34	0.8	Y	Y			17.	
18	11	1983	35	0.8	Y	Y			16.	
18	11	1983	37	0.8	Y	Y			18.	
18	11	1983	42	0.8	Y	Y			16.	
19	11	1983	4	0.8	Y	Y			20.	
19	11	1983	7	0.8	Y	Y			18.	
19	11	1983	13	0.8	Y	Y			21.	
19	11	1983	14	0.8	Y	Y			18.	
19	11	1983	16	0.8	Y	Y			21.	
19	11	1983	21	0.8	Y	Y			17.	
19	11	1983	22	0.8	Y	Y			18.	
19	11	1983	25	0.8	Y	Y			18.	
19	11	1983	28	0.8	Y	Y			18.	
19	11	1983	34	0.8	Y	Y			20.	
19	11	1983	35	0.8	Y	Y			18.	
19	11	1983	37	0.8	Y	Y			17.	
19	11	1983	42	0.8	Y	Y			18.	
20	11	1983	4	0.8	Y	Y			12.	
20	11	1983	7	0.8	Y	Y			14.	
20	11	1983	13	0.8	Y	Y			15.	
20	11	1983	14	0.8	Y	Y			15.	
20	11	1983	16	0.8	Y	Y			14.	
20	11	1983	21	0.8	Y	Y			12.	
20	11	1983	22	0.8	Y	Y			12.	
20	11	1983	25	0.8	Y	Y			14.	
20	11	1983	28	0.8	Y	Y			12.	
20	11	1983	34	0.8	Y	Y			11.	
20	11	1983	35	0.8	Y	Y			13.	
20	11	1983	37	0.8	Y	Y			15.	
20	11	1983	42	0.8	Y	Y			14.	
21	11	1983	4	0.8	Y	Y			11.	
21	11	1983	7	0.8	Y	Y			14.	
21	11	1983	13	0.8	Y	Y			14.	
21	11	1983	14	0.8	Y	Y			13.	
21	11	1983	16	0.8	Y	Y			12.	
21	11	1983	21	0.8	Y	Y			11.	
21	11	1983	22	0.8	Y	Y			10.	
21	11	1983	25	0.8	Y	Y			11.	
21	11	1983	28	0.8	Y	Y			12.	
21	11	1983	34	0.8	Y	Y			10.	
21	11	1983	35	0.8	Y	Y			12.	
21	11	1983	37	0.8	Y	Y			11.	
21	11	1983	42	0.8	Y	Y			12.	
22	11	1983	4	0.8	Y	Y			16.	
22	11	1983	7	0.8	Y	Y			15.	
22	11	1983	13	0.8	Y	Y			14.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
22	11	1983	14	0.8	Y	Y			14.	
22	11	1983	16	0.8	Y	Y			14.	
22	11	1983	21	0.8	Y	Y			11.	
22	11	1983	22	0.8	Y	Y			15.	
22	11	1983	25	0.8	Y	Y			14.	
22	11	1983	28	0.8	Y	Y			15.	
22	11	1983	34	0.8	Y	Y			10.	
22	11	1983	35	0.8	Y	Y			14.	
22	11	1983	37	0.8	Y	Y			11.	
22	11	1983	42	0.8	Y	Y			14.	
23	11	1983	4	0.8	Y	Y			16.	
23	11	1983	7	0.8	Y	Y			15.	
23	11	1983	13	0.8	Y	Y			14.	
23	11	1983	14	0.8	Y	Y			14.	
23	11	1983	16	0.8	Y	Y			14.	
23	11	1983	21	0.8	Y	Y			11.	
23	11	1983	22	0.8	Y	Y			15.	
23	11	1983	25	0.8	Y	Y			14.	
23	11	1983	28	0.8	Y	Y			15.	
23	11	1983	34	0.8	Y	Y			10.	
23	11	1983	35	0.8	Y	Y			14.	
23	11	1983	37	0.8	Y	Y			11.	
23	11	1983	42	0.8	Y	Y			14.	
24	11	1983	4	0.8	Y	Y			10.	
24	11	1983	7	0.8	Y	Y			16.	
24	11	1983	13	0.8	Y	Y			17.	
24	11	1983	14	0.8	Y	Y			15.	
24	11	1983	16	0.8	Y	Y			16.	
24	11	1983	21	0.8	Y	Y			14.	
24	11	1983	22	0.8	Y	Y			14.	
24	11	1983	25	0.8	Y	Y			11.	
24	11	1983	28	0.8	Y	Y			15.	
24	11	1983	34	0.8	Y	Y			14.	
24	11	1983	35	0.8	Y	Y			12.	
24	11	1983	37	0.8	Y	Y			13.	
24	11	1983	42	0.8	Y	Y			15.	
25	11	1983	4	0.8	Y	Y			17.	
25	11	1983	7	0.8	Y	Y			16.	
25	11	1983	13	0.8	Y	Y			16.	
25	11	1983	14	0.8	Y	Y			15.	
25	11	1983	16	0.8	Y	Y			15.	
25	11	1983	21	0.8	Y	Y			12.	
25	11	1983	22	0.8	Y	Y			15.	
25	11	1983	25	0.8	Y	Y			14.	
25	11	1983	28	0.8	Y	Y			15.	
25	11	1983	34	0.8	Y	Y			14.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
25	11	1983	35	0.8	Y	Y			14.	
25	11	1983	37	0.8	Y	Y			13.	
25	11	1983	42	0.8	Y	Y			12.	
26	11	1983	4	0.8	Y	Y			12.	
26	11	1983	7	0.8	Y	Y			14.	
26	11	1983	13	0.8	Y	Y			15.	
26	11	1983	14	0.8	Y	Y			15.	
26	11	1983	16	0.8	Y	Y			14.	
26	11	1983	21	0.8	Y	Y			12.	
26	11	1983	22	0.8	Y	Y			12.	
26	11	1983	25	0.8	Y	Y			14.	
26	11	1983	28	0.8	Y	Y			12.	
26	11	1983	34	0.8	Y	Y			11.	
26	11	1983	35	0.8	Y	Y			13.	
26	11	1983	37	0.8	Y	Y			15.	
26	11	1983	42	0.8	Y	Y			15.	
27	11	1983	4	0.8	Y	Y			15.	
27	11	1983	7	0.8	Y	Y			14.	
27	11	1983	13	0.8	Y	Y			15.	
27	11	1983	14	0.8	Y	Y			15.	
27	11	1983	16	0.8	Y	Y			14.	
27	11	1983	21	0.8	Y	Y			10.	
27	11	1983	22	0.8	Y	Y			16.	
27	11	1983	25	0.8	Y	Y			14.	
27	11	1983	28	0.8	Y	Y			15.	
27	11	1983	34	0.8	Y	Y			10.	
27	11	1983	35	0.8	Y	Y			10.	
27	11	1983	37	0.8	Y	Y			13.	
27	11	1983	42	0.8	Y	Y			11.	
28	11	1983	4	0.8	Y	Y			15.	
28	11	1983	7	0.8	Y	Y			14.	
28	11	1983	13	0.8	Y	Y			15.	
28	11	1983	14	0.8	Y	Y			15.	
28	11	1983	16	0.8	Y	Y			14.	
28	11	1983	21	0.8	Y	Y			12.	
28	11	1983	22	0.8	Y	Y			15.	
28	11	1983	25	0.8	Y	Y			14.	
28	11	1983	28	0.8	Y	Y			15.	
28	11	1983	34	0.8	Y	Y			12.	
28	11	1983	35	0.8	Y	Y			14.	
28	11	1983	37	0.8	Y	Y			15.	
28	11	1983	42	0.8	Y	Y			11.	
29	11	1983	4	0.8	Y	Y			16.	
29	11	1983	7	0.8	Y	Y			15.	
29	11	1983	13	0.8	Y	Y			15.	
29	11	1983	14	0.8	Y	Y			14.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
29	11	1983	16	0.8	Y	Y			13.	
29	11	1983	21	0.8	Y	Y			11.	
29	11	1983	22	0.8	Y	Y			12.	
29	11	1983	25	0.8	Y	Y			12.	
29	11	1983	28	0.8	Y	Y			14.	
29	11	1983	34	0.8	Y	Y			11.	
29	11	1983	35	0.8	Y	Y			11.	
29	11	1983	37	0.8	Y	Y			15.	
29	11	1983	42	0.8	Y	Y			11.	
30	11	1983	4	0.8	Y	Y			15.	
30	11	1983	7	0.8	Y	Y			11.	
30	11	1983	13	0.8	Y	Y			15.	
30	11	1983	14	0.8	Y	Y			10.	
30	11	1983	16	0.8	Y	Y			10.	
30	11	1983	21	0.8	Y	Y			10.	
30	11	1983	22	0.8	Y	Y			14.	
30	11	1983	25	0.8	Y	Y			10.	
30	11	1983	28	0.8	Y	Y			12.	
30	11	1983	34	0.8	Y	Y			10.	
30	11	1983	35	0.8	Y	Y			11.	
30	11	1983	37	0.8	Y	Y			15.	
30	11	1983	42	0.8	Y	Y			11.	
1	12	1983	4	0.8	Y	Y			15.	
1	12	1983	7	0.8	Y	Y			12.	
1	12	1983	13	0.8	Y	Y			15.	
1	12	1983	14	0.8	Y	Y			10.	
1	12	1983	16	0.8	Y	Y			10.	
1	12	1983	21	0.8	Y	Y			10.	
1	12	1983	22	0.8	Y	Y			14.	
1	12	1983	25	0.8	Y	Y			10.	
1	12	1983	28	0.8	Y	Y			12.	
1	12	1983	34	0.8	Y	Y			10.	
1	12	1983	35	0.8	Y	Y			11.	
1	12	1983	37	0.8	Y	Y			15.	
1	12	1983	42	0.8	Y	Y			11.	
2	12	1983	4	0.8	Y	Y			15.	
2	12	1983	7	0.8	Y	Y			12.	
2	12	1983	13	0.8	Y	Y			15.	
2	12	1983	14	0.8	Y	Y			13.	
2	12	1983	16	0.8	Y	Y			13.	
2	12	1983	21	0.8	Y	Y			10.	
2	12	1983	22	0.8	Y	Y			15.	
2	12	1983	25	0.8	Y	Y			13.	
2	12	1983	28	0.8	Y	Y			14.	
2	12	1983	34	0.8	Y	Y			12.	
2	12	1983	35	0.8	Y	Y			11.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
2	12	1983	37	0.8	Y	Y			14.	
2	12	1983	42	0.8	Y	Y			11.	
3	12	1983	4	0.8	Y	Y			17.	
3	12	1983	7	0.8	Y	Y			16.	
3	12	1983	13	0.8	Y	Y			16.	
3	12	1983	14	0.8	Y	Y			15.	
3	12	1983	16	0.8	Y	Y			15.	
3	12	1983	21	0.8	Y	Y			12.	
3	12	1983	22	0.8	Y	Y			15.	
3	12	1983	25	0.8	Y	Y			14.	
3	12	1983	28	0.8	Y	Y			15.	
3	12	1983	34	0.8	Y	Y			14.	
3	12	1983	35	0.8	Y	Y			14.	
3	12	1983	37	0.8	Y	Y			13.	
3	12	1983	42	0.8	Y	Y			12.	
4	12	1983	4	0.8	Y	Y			14.	
4	12	1983	7	0.8	Y	Y			14.	
4	12	1983	13	0.8	Y	Y			15.	
4	12	1983	14	0.8	Y	Y			13.	
4	12	1983	16	0.8	Y	Y			12.	
4	12	1983	21	0.8	Y	Y			12.	
4	12	1983	22	0.8	Y	Y			15.	
4	12	1983	25	0.8	Y	Y			14.	
4	12	1983	28	0.8	Y	Y			13.	
4	12	1983	34	0.8	Y	Y			12.	
4	12	1983	35	0.8	Y	Y			12.	
4	12	1983	37	0.8	Y	Y			14.	
4	12	1983	42	0.8	Y	Y			13.	
5	12	1983	4	0.8	Y	Y			14.	
5	12	1983	7	0.8	Y	Y			14.	
5	12	1983	13	0.8	Y	Y			15.	
5	12	1983	14	0.8	Y	Y			13.	
5	12	1983	16	0.8	Y	Y			12.	
5	12	1983	21	0.8	Y	Y			12.	
5	12	1983	22	0.8	Y	Y			15.	
5	12	1983	25	0.8	Y	Y			14.	
5	12	1983	28	0.8	Y	Y			13.	
5	12	1983	34	0.8	Y	Y			12.	
5	12	1983	35	0.8	Y	Y			12.	
5	12	1983	37	0.8	Y	Y			14.	
5	12	1983	42	0.8	Y	Y			13.	
6	12	1983	4	0.8	Y	Y			14.	
6	12	1983	7	0.8	Y	Y			14.	
6	12	1983	13	0.8	Y	Y			15.	
6	12	1983	14	0.8	Y	Y			13.	
6	12	1983	16	0.8	Y	Y			12.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
6	12	1983	21	0.8	Y	Y			12.	
6	12	1983	22	0.8	Y	Y			15.	
6	12	1983	25	0.8	Y	Y			14.	
6	12	1983	28	0.8	Y	Y			13.	
6	12	1983	34	0.8	Y	Y			12.	
6	12	1983	35	0.8	Y	Y			12.	
6	12	1983	37	0.8	Y	Y			14.	
6	12	1983	42	0.8	Y	Y			13.	
7	12	1983	4	0.8	Y	Y			15.	
7	12	1983	7	0.8	Y	Y			15.	
7	12	1983	13	0.8	Y	Y			15.	
7	12	1983	14	0.8	Y	Y			13.	
7	12	1983	16	0.8	Y	Y			13.	
7	12	1983	21	0.8	Y	Y			13.	
7	12	1983	22	0.8	Y	Y			16.	
7	12	1983	25	0.8	Y	Y			15.	
7	12	1983	28	0.8	Y	Y			14.	
7	12	1983	34	0.8	Y	Y			13.	
7	12	1983	35	0.8	Y	Y			13.	
7	12	1983	37	0.8	Y	Y			14.	
7	12	1983	42	0.8	Y	Y			14.	
8	12	1983	4	0.8	Y	Y			15.	
8	12	1983	7	0.8	Y	Y			15.	
8	12	1983	13	0.8	Y	Y			16.	
8	12	1983	14	0.8	Y	Y			14.	
8	12	1983	16	0.8	Y	Y			13.	
8	12	1983	21	0.8	Y	Y			13.	
8	12	1983	22	0.8	Y	Y			16.	
8	12	1983	25	0.8	Y	Y			15.	
8	12	1983	28	0.8	Y	Y			14.	
8	12	1983	34	0.8	Y	Y			13.	
8	12	1983	35	0.8	Y	Y			13.	
8	12	1983	37	0.8	Y	Y			15.	
8	12	1983	42	0.8	Y	Y			14.	
9	12	1983	4	0.8	Y	Y			15.	
9	12	1983	7	0.8	Y	Y			15.	
9	12	1983	13	0.8	Y	Y			16.	
9	12	1983	14	0.8	Y	Y			14.	
9	12	1983	16	0.8	Y	Y			13.	
9	12	1983	21	0.8	Y	Y			13.	
9	12	1983	22	0.8	Y	Y			16.	
9	12	1983	25	0.8	Y	Y			15.	
9	12	1983	28	0.8	Y	Y			14.	
9	12	1983	34	0.8	Y	Y			13.	
9	12	1983	35	0.8	Y	Y			13.	
9	12	1983	37	0.8	Y	Y			15.	

Table 2. Daily Pond Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	INFLOW	OVERFLOW	DEAD#	SPECIES	SALINITY	H2O-FLOW
9	12	1983	42	0.8	Y	Y			14.	

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
25	7	1983	Y	7	600							34.	33.	27.	26.															
25	7	1983	Y	22	600							34.	33.	27.	26.															
25	7	1983	Y	42	600							34.	33.	27.	26.															
7	8	1983	Y	7	600							34.	32.	26.	25.															
7	8	1983	Y	22	600							34.	33.	26.	25.															
7	8	1983	Y	42	600							34.	32.	26.	25.															
15	8	1983	Y	7	600							35.	33.	26.	26.															
15	8	1983	Y	22	600							35.	33.	25.5	25.															
15	8	1983	Y	42	600							35.	32.5	25.5	25.															
22	8	1983	Y	7	600							33.	33.	25.	25.															
22	8	1983	Y	22	600							34.	34.	27.	26.															
22	8	1983	Y	42	600							33.	32.5	25.	24.	0.														
29	8	1983	Y	7	600							35.	35.	24.5	24.5	0.														
29	8	1983	Y	22	600							33.	33.	25.	24.5	0.														
29	8	1983	Y	42	600							34.5	35.	24.5	24.5	0.														
30	8	1983	Y	4	600											84.				49.18	0.	0.003	0.003		0.011			373.54	178.25	237.39
30	8	1983	Y	7	600											109.				0.	0.	0.002	0.002		0.006			102.51	62.879	64.755
30	8	1983	Y	13	600											100.				0.	0.	0.002	0.002		0.001			96.502	62.985	68.942
30	8	1983	Y	14	600											92.				0.	0.	0.001	0.001		0.004			171.97	96.418	41.711
30	8	1983	Y	16	600											117.				0.	0.	0.015	0.015		0.013			177.34	3.604	0.
30	8	1983	Y	21	600											109.				0.	0.	0.005	0.005		0.001			90.1	70.607	56.286
30	8	1983	Y	22	600											84.				0.	0.	0.	0.		0.015			151.97	120.11	95.941
30	8	1983	Y	25	600											92.				0.	0.	0.001	0.001		0.003			93.905	66.102	68.2
30	8	1983	Y	28	600											100.				0.911	0.	0.002	0.002		0.01			130.34	91.043	70.373
30	8	1983	Y	34	600											117.				0.455	0.	0.004	0.004		0.			65.126	40.884	6.4978
30	8	1983	Y	35	600											109.				2.004	0.	0.012	0.012		0.01			107.92	56.795	38.817
30	8	1983	Y	37	600											92.				2.004	0.	0.004	0.004		0.005			5.3	0.	0.
30	8	1983	Y	42	600											92.				0.	0.	0.003	0.003		0.005			80.327	56.413	58.777
30	8	1983	Y	50	600											0.				0.638	0.	0.001	0.001		0.007			11.745	4.1764	0.
7	9	1983	Y	7	600							34.	32.	25.	24.5															
7	9	1983	Y	22	600							33.5	32.	25.	24.5															
7	9	1983	Y	42	600							34.	32.	25.	24.5															
12	9	1983	Y	4																								97.054	54.208	75.85
12	9	1983	Y	7																								43.237	36.909	0.
12	9	1983	Y	13																								45.41	27.08	53.731
12	9	1983	Y	14																								100.11	61.331	94.318
12	9	1983	Y	16																								25.588	13.3	0.011
12	9	1983	Y	21																								67.851	48.452	47.127
12	9	1983	Y	22																								44.721	38.05	45.092
12	9	1983	Y	25																								50.509	23.977	41.827
12	9	1983	Y	28																								45.909	22.84	29.764
12	9	1983	Y	34																								26.829	22.832	27.072
12	9	1983	Y	35																								33.379	33.241	13.737

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
12	9	1983	Y	37																							25.504	53.58	37.98
12	9	1983	Y	42																							49.407	55.353	54.505
12	9	1983	Y	50																							9.1054	6.3	0.
14	9	1983	Y	7	600							34.	34.	22.5	21.5															
14	9	1983	Y	22	600							34.	34.	22.5	22.5															
14	9	1983	Y	42	600							35.	34.	23.	22.5															
21	9	1983	Y	7	600							35.5	0.	24.5																
21	9	1983	Y	22	600							35.	28.	24.	24.															
21	9	1983	Y	42	600							35.	29.5	25.	25.															
26	9	1983	Y	4	600																									
26	9	1983	Y	7	600							31.	31.		27.				7.754	0.002	0.	0.002		0.011			50.445	28.99	5.119
26	9	1983	Y	13	600														5.21	0.	0.	0.		0.006			53.843	37.969	25.1
26	9	1983	Y	14	600														12.966	0.002	0.	0.002		0.001			17.538	31.524	46.041
26	9	1983	Y	16	600														16.398	0.	0.001	0.001		0.004			45.071	36.008	19.39
26	9	1983	Y	21	600														7.5	0.	0.	0.		0.013			19.287	20.177	23.775
26	9	1983	Y	22	600							31.	31.	24.5	25.				40.17	0.001	0.001	0.002		0.001			29.167	24.574	0.
26	9	1983	Y	25	600														50.848	0.	0.	0.		0.015			58.056	53.54	33.57
26	9	1983	Y	28	600														0.	0.002	0.	0.002		0.003			27.74	25.355	40.59
26	9	1983	Y	34	600														35.72	0.001	0.	0.001		0.01			23.972	14.251	11.797
26	9	1983	Y	35	600														3.941	0.002	0.	0.002		0.			19.25	19.005	38.35
26	9	1983	Y	37	600														6.864	0.003	0.001	0.003		0.01			23.728	16.371	23.781
26	9	1983	Y	42	600							30.	30.	28.	28.				8.898	0.002	0.001	0.003		0.005			20.254	31.248	30.162
26	9	1983	Y	50	600														10.17	0.	0.001	0.001		0.005			46.545	29.987	36.935
3	10	1983	Y	7	600														22.627	0.003	0.	0.003		0.007			21.73	25.461	44.78
3	10	1983	Y	22	600							31.	31.	25.	25.															
3	10	1983	Y	42	600							28.	28.	25.	25.															
10	10	1983	Y	4																							31.159	18.719	43.687
10	10	1983	Y	7	600																									
10	10	1983	Y	13																							22.193	20.284	32.478
10	10	1983	Y	14																							42.131	24.85	36.204
10	10	1983	Y	16																							39.686	26.24	31.36
10	10	1983	Y	21																							19.349	12.171	11.389
10	10	1983	Y	22	600							32.	32.	26.	25.												27.141	26.052	35.011
10	10	1983	Y	22																										
10	10	1983	Y	25																							55.338	59.317	25.27
10	10	1983	Y	28																							30.445	8.9686	0.
10	10	1983	Y	34																							46.586	18.049	0.
10	10	1983	Y	35																							35.402	11.77	22.026
10	10	1983	Y	37																							28.285	5.5162	4.
10	10	1983	Y	42	600							28.	28.	25.	25.												13.157	1.7511	10.901
10	10	1983	Y	42																										
10	10	1983	Y	50																							25.612	13.649	35.568
17	10	1983	Y	7	600																						28.959	9.5961	25.703

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
17	10	1983	Y	22	600							31.	29.	25.	24.															
17	10	1983	Y	42	600							29.	28.	26.	25.															
24	10	1983	Y	4	600															9.4	0.	0.006	0.006		0.003			68.596	14.8	43.687
24	10	1983	Y	7	600															89.443	0.	0.005	0.005		0.007			104.15	6.7829	50.56
24	10	1983	Y	7	600																									
24	10	1983	Y	13	600															9.761	0.	0.	0.		0.003			92.995	8.252	39.177
24	10	1983	Y	14	600															26.392	0.	0.005	0.005		0.			125.36		44.774
24	10	1983	Y	16	600															2.531	0.	0.005	0.005		0.02			11.808		56.116
24	10	1983	Y	21	600															27.477	0.	0.01	0.01		0.007			13.494	0.275	67.076
24	10	1983	Y	22	600							29.	29.	24.	23.															
24	10	1983	Y	22	600															1.446	0.	0.005	0.005		0.001			104.36	4.791	41.205
24	10	1983	Y	25	600															42.299	0.	0.009	0.009		0.001			115.33		64.87
24	10	1983	Y	28	600															17.354	0.	0.008	0.008		0.004			111.72	9.8495	0.
24	10	1983	Y	34	600															40.13	0.	0.009	0.009		0.003			88.222		37.447
24	10	1983	Y	35	600															30.369	0.	0.009	0.009		0.013			258.86		54.11
24	10	1983	Y	37	600															0.362	0.	0.009	0.009		0.018			125.33		21.761
24	10	1983	Y	42	600															23.861	0.	0.006	0.006		0.004			73.416	5.2533	26.648
24	10	1983	Y	42	600							30.	30.	26.	24.															
24	10	1983	Y	50	600															13.015	0.	0.065	0.065		0.007			84.203	4.3523	28.768
31	10	1983	Y	7	600							31.	31.	26.	26.															
31	10	1983	Y	22	600							32.	31.	26.	25.															
31	10	1983	Y	42	600							31.	31.	26.	26.															
7	11	1983	Y	4																								189.2	108.93	9.1234
7	11	1983	Y	7	600							34.	34.	28.	28.															
7	11	1983	Y	7																								55.671	46.687	19.254
7	11	1983	Y	13																								67.225	61.766	9.338
7	11	1983	Y	14																								174.53	145.2	42.696
7	11	1983	Y	16																								60.131	56.934	42.845
7	11	1983	Y	21																								157.47	147.79	14.699
7	11	1983	Y	22	600							35.	35.	24.	24.															
7	11	1983	Y	22																								256.26	173.23	26.39
7	11	1983	Y	25																								267.4	271.2	18.348
7	11	1983	Y	28																								183.7	166.79	50.784
7	11	1983	Y	34																								577.74	283.85	0.
7	11	1983	Y	35																								61.449	59.284	7.372
7	11	1983	Y	37																								378.81	176.22	0.
7	11	1983	Y	42	600							29.	29.	24.	24.															
7	11	1983	Y	42																								178.45	177.88	14.539
7	11	1983	Y	50																								77.744	83.188	0.312
14	11	1983	Y	7	600							35.	34.	24.	24.															
14	11	1983	Y	22	600							34.	34.	24.	24.															
14	11	1983	Y	42	600							35.	35.	24.	24.															
21	11	1983	Y	7	600							35.	34.	24.	24.															
21	11	1983	Y	22	600							34.	34.	24.	24.															

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
21	11	1983	Y	42	600							35.	35.	24.	24.															
28	11	1983	Y	4	600															2.85	0.005	0.	0.005		0.002			108.32	3.1619	57.847
28	11	1983	Y	7	600															4.967	0.001	0.005	0.005		0.006			164.33	17.778	89.075
28	11	1983	Y	7	600							35.	35.	24.	24.										0.					
28	11	1983	Y	13	600															8.062	0.002	0.004	0.006		0.			253.08	85.123	241.35
28	11	1983	Y	14	600															2.117	0.005	0.008	0.013		0.011			140.59	32.238	144.61
28	11	1983	Y	16	600															2.85	0.	0.001	0.001		0.009			409.21		144.36
28	11	1983	Y	21	600															5.7	0.004	0.	0.004		0.005			161.43	4.42	71.507
28	11	1983	Y	22	600							35.	34.	24.	24.										0.					
28	11	1983	Y	22	600															1.547	0.	0.005	0.005		0.032			129.03	2.713	57.96
28	11	1983	Y	25	600															1.792	0.004	0.	0.004		0.031			122.8	2.0309	48.492
28	11	1983	Y	28	600															1.059	0.009	0.	0.009		0.075			136.55	4.1912	51.388
28	11	1983	Y	34	600															5.7	0.012	0.003	0.015		0.005			162.21	9.5993	77.48
28	11	1983	Y	35	600															4.235	0.001	0.046	0.047		0.008			395.1		122.2
28	11	1983	Y	37	600															2.769	0.002	0.022	0.024		0.011			182.64		54.939
28	11	1983	Y	42	600															2.85	0.003	0.011	0.014		0.012			164.05	2.2408	60.589
28	11	1983	Y	42	600							34.	34.	24.	24.										0.					
28	11	1983	Y	50	600															3.257	0.01	0.	0.01		0.043			106.	15.372	42.092
5	12	1983	Y	7	600							35.	34.	24.	24.										0.					
5	12	1983	Y	22	600							35.	34.	24.	24.										0.					
5	12	1983	Y	42	600							35.	35.	24.	24.										0.					
10	12	1983	Y	4																								151.55		71.38
10	12	1983	Y	7																								329.79		101.89
10	12	1983	Y	13																								254.57		108.93
10	12	1983	Y	14																								168.09		63.43
10	12	1983	Y	16																								364.39		137.41
10	12	1983	Y	21																								292.09		113.09
10	12	1983	Y	22																								171.79	22.14	112.71
10	12	1983	Y	25																								227.81		97.761
10	12	1983	Y	28																								185.07		74.447
10	12	1983	Y	34																								214.79	98.208	337.33
10	12	1983	Y	35																								300.76		90.129
10	12	1983	Y	37																								225.67		72.965
10	12	1983	Y	42																								162.72		74.992
10	12	1983	Y	50																								85.687	6.158	35.985
12	12	1983	Y	4	600															1.818	0.	0.004	0.005		0.307					
12	12	1983	Y	7	600															1.919	0.004	0.	0.004		0.096					
12	12	1983	Y	13	600															5.453	0.002	0.017	0.019		0.052					
12	12	1983	Y	14	600															1.01	0.002	0.007	0.008		0.373					
12	12	1983	Y	16	600															7.674	0.008	0.011	0.018		0.032					
12	12	1983	Y	21	600															1.313	0.002	0.008	0.01		0.03					
12	12	1983	Y	22	600															0.	0.	0.	0.		2.144					
12	12	1983	Y	25	600															2.12	0.003	0.	0.003		0.189					
12	12	1983	Y	28	600															1.111	0.001	0.	0.001		0.008					

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
12	12	1983	Y	34	600															1.414	0.001	0.005	0.006		0.071					
12	12	1983	Y	35	600															2.625	0.001	0.004	0.005		0.699					
12	12	1983	Y	37	600															1.818	0.004	0.	0.004		0.179					
12	12	1983	Y	42	600															2.423	0.002	0.	0.002		0.027					
12	12	1983	Y	50	600															2.726	0.003	0.002	0.005		0.179					

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
30	1	1984	Y	4												99.		7.2		88.038	4.46	74.93	79.38		139.41			28.9	14.4	35.4
30	1	1984	Y	7												111.		7.2		87.568	7.29	58.58	65.86		88.45			21.8	18.	67.2
30	1	1984	Y	8																								43.1	17.1	51.3
30	1	1984	Y	11																								49.4	83.8	320.7
30	1	1984	Y	12																								29.3	16.5	68.6
30	1	1984	Y	13												104.		7.1		93.198	8.91	38.12	47.03		56.97			41.7	9.7	38.3
30	1	1984	Y	14												115.		7.1		114.46	7.69	58.88	66.58		106.42			19.4	5.	13.6
30	1	1984	Y	15																								12.3	6.2	19.8
30	1	1984	Y	16												103.		7.2		134.48	10.13	68.13	78.26		289.32			33.	8.6	23.6
30	1	1984	Y	17																								23.5	7.8	24.9
30	1	1984	Y	18																								26.6	8.7	29.9
30	1	1984	Y	19																								14.3	6.7	18.2
30	1	1984	Y	20																								18.4	7.1	24.4
30	1	1984	Y	21												107.		7.		81.939	6.88	51.96	58.84		140.9			21.2	8.5	46.9
30	1	1984	Y	22																								17.7	7.	21.8
30	1	1984	Y	25												100.		7.		112.43	1.63	54.85	56.47		269.84			21.	14.	42.2
30	1	1984	Y	28												102.		7.1		126.19	6.47	32.73	39.2		127.42			6.9	3.7	22.8
30	1	1984	Y	29																								15.9	8.5	26.6
30	1	1984	Y	32																								15.8	4.9	12.9
30	1	1984	Y	33																								13.1	5.3	23.5
30	1	1984	Y	34												98.		7.2		82.095	9.72	34.55	44.27		536.67			8.5	3.5	16.1
30	1	1984	Y	35												109.		7.4		124.94	5.67	50.65	56.32		286.32			22.9	19.7	42.
30	1	1984	Y	36																								10.	6.1	15.8
30	1	1984	Y	37												113.		7.5		110.09	5.67	91.28	96.95		280.31			10.9	4.4	10.3
30	1	1984	Y	38																								41.2	36.9	49.8
30	1	1984	Y	39																								12.9	13.3	56.8
30	1	1984	Y	40																								8.2	3.8	10.5
30	1	1984	Y	42												102.		7.2		86.63	1.22	54.18	55.4		176.9			9.	2.5	12.1
30	1	1984	Y	50																								70.9	26.9	90.
30	1	1984	Y	ESERV												114.		7.9		14.386	6.08	32.41	38.49		65.96			70.9	26.9	90.
30	1	1984	Y	0 SHR												93.		7.5		81.47	4.05	50.09	54.13		52.48			17.7	7.	21.8
10	2	1984	Y	4																						30.				
10	2	1984	Y	7																						47.5				
10	2	1984	Y	13																						30.				
10	2	1984	Y	14																						32.5				
10	2	1984	Y	16																						30.				
10	2	1984	Y	21																						37.5				
10	2	1984	Y	25																						40.				
10	2	1984	Y	28																						50.				
10	2	1984	Y	34																						47.5				
10	2	1984	Y	35																						47.5				
10	2	1984	Y	37																						47.5				
10	2	1984	Y	42																						47.5				
10	2	1984	Y	ESERV																						7.5				

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
10	2	1984	Y	0 SHR																					37.5					
13	2	1984	Y	4																					27.5					
13	2	1984	Y	7								28.5	28.	23.	23.										22.5					
13	2	1984	Y	13																					17.5					
13	2	1984	Y	14																					22.5					
13	2	1984	Y	16																					17.5					
13	2	1984	Y	21																					27.5					
13	2	1984	Y	25																					22.5					
13	2	1984	Y	28																					22.5					
13	2	1984	Y	34																					22.5					
13	2	1984	Y	35																					27.5					
13	2	1984	Y	37																					17.5					
13	2	1984	Y	42								27.5	27.	22.5	22.5										22.5					
13	2	1984	Y	ESERV																					17.5					
13	2	1984	Y	0 SHR																					27.5					
15	2	1984	Y	4																					32.5					
15	2	1984	Y	7																					32.5					
15	2	1984	Y	13																					32.5					
15	2	1984	Y	14																					32.5					
15	2	1984	Y	16																					27.5					
15	2	1984	Y	21																					27.5					
15	2	1984	Y	25																					32.5					
15	2	1984	Y	28																					27.5					
15	2	1984	Y	34																					27.5					
15	2	1984	Y	35																					27.5					
15	2	1984	Y	37																					32.5					
15	2	1984	Y	42																					32.5					
15	2	1984	Y	ESERV																					22.5					
15	2	1984	Y	0 SHR																					27.5					
17	2	1984	Y	4																					27.5					
17	2	1984	Y	7																					27.5					
17	2	1984	Y	13																					27.5					
17	2	1984	Y	14																					32.5					
17	2	1984	Y	16																					32.5					
17	2	1984	Y	21																					32.5					
17	2	1984	Y	25																					27.5					
17	2	1984	Y	28																					32.5					
17	2	1984	Y	34																					32.5					
17	2	1984	Y	35																					27.5					
17	2	1984	Y	37																					27.5					
17	2	1984	Y	42																					32.5					
17	2	1984	Y	ESERV																					27.5					
17	2	1984	Y	0 SHR																					22.5					
20	2	1984	Y	4																					32.5					
20	2	1984	Y	7								29.	28.5	24.	24.										27.5					

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
20	2	1984	Y	13																										
20	2	1984	Y	14																						32.5				
20	2	1984	Y	16																						27.5				
20	2	1984	Y	21																						27.5				
20	2	1984	Y	25																						27.5				
20	2	1984	Y	28																						32.5				
20	2	1984	Y	34																						27.5				
20	2	1984	Y	35																						27.5				
20	2	1984	Y	37																						27.5				
20	2	1984	Y	42								28.	28.	23.	23.											27.5				
20	2	1984	Y	ESERV																						12.5				
20	2	1984	Y	0 SHR																						27.5				
21	2	1984	Y	4																	8.85		8.85	74.63						
21	2	1984	Y	7																	5.9		5.9	52.67						
21	2	1984	Y	13																	6.39		6.39	52.67						
21	2	1984	Y	14																	13.27		13.27	46.81						
21	2	1984	Y	16																	1.96		1.96	127.33						
21	2	1984	Y	21																	8.84		8.84	73.17						
21	2	1984	Y	25																	9.33		9.33	106.82						
21	2	1984	Y	28																	5.9		5.9	90.74						
21	2	1984	Y	34																	9.33		9.33	188.79						
21	2	1984	Y	35																	5.9		5.9	125.84						
21	2	1984	Y	37																	6.39		6.39	108.31						
21	2	1984	Y	42																	9.82		9.82	79.03						
21	2	1984	Y	ESERV																	7.86		7.86	61.46						
21	2	1984	Y	0 SHR																	5.9		5.9	27.79						
22	2	1984	Y	4																						32.5				
22	2	1984	Y	7																						22.5				
22	2	1984	Y	13																						32.5				
22	2	1984	Y	14																						27.5				
22	2	1984	Y	16																						32.5				
22	2	1984	Y	21																						32.5				
22	2	1984	Y	25																						32.5				
22	2	1984	Y	28																						27.5				
22	2	1984	Y	34																						32.5				
22	2	1984	Y	35																						32.5				
22	2	1984	Y	37																						27.5				
22	2	1984	Y	42																						32.5				
22	2	1984	Y	ESERV																						27.5				
22	2	1984	Y	0 SHR																						27.5				
24	2	1984	Y	4																						27.5				
24	2	1984	Y	7																						32.5				
24	2	1984	Y	13																						32.5				
24	2	1984	Y	14																						27.5				
24	2	1984	Y	16																						27.5				

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
24	2	1984	Y	21																					32.5				
24	2	1984	Y	25																					32.5				
24	2	1984	Y	28																					32.5				
24	2	1984	Y	34																					27.5				
24	2	1984	Y	35																					32.5				
24	2	1984	Y	37																					27.5				
24	2	1984	Y	42																					32.5				
24	2	1984	Y	ESERV																					27.5				
24	2	1984	Y	0 SHR																					27.5				
27	2	1984	Y	4														8.	9.353	4.33	24.11	28.44		51.12			29.6	7.1	18.3
27	2	1984	Y	4																							29.6	7.1	18.3
27	2	1984	Y	4																					32.5				
27	2	1984	Y	7								29.5	28.5	23.5	23.										32.5				
27	2	1984	Y	7																							26.8	7.7	8.9
27	2	1984	Y	7														7.9	23.741	5.77	14.91	20.68		34.08			26.8	7.7	8.9
27	2	1984	Y	8																							36.7	8.6	13.8
27	2	1984	Y	11																							21.8	5.1	16.4
27	2	1984	Y	12																							65.9	16.	30.3
27	2	1984	Y	13																					27.5				
27	2	1984	Y	13																							37.4	8.1	24.6
27	2	1984	Y	13														7.9	23.741	4.33	16.27	20.59		48.02			37.4	8.1	24.6
27	2	1984	Y	14														8.	23.741	2.89	15.13	18.02		15.49			30.8	2.5	12.3
27	2	1984	Y	14																							30.8	2.5	12.3
27	2	1984	Y	14																					32.5				
27	2	1984	Y	15																							37.1	10.	43.1
27	2	1984	Y	16																							41.4	8.3	27.
27	2	1984	Y	16														8.2	8.633	14.44	17.02	31.47		61.96			41.4	8.3	27.
27	2	1984	Y	16																					32.5				
27	2	1984	Y	17																							31.7	9.4	36.6
27	2	1984	Y	18																							23.7	5.3	12.8
27	2	1984	Y	19																							25.6	7.5	17.2
27	2	1984	Y	20																							27.3	5.9	11.8
27	2	1984	Y	21																							39.7	5.3	14.
27	2	1984	Y	21																					32.5				
27	2	1984	Y	21														7.9	16.547	13.	4.89	17.89		46.47			39.7	5.3	14.
27	2	1984	Y	22																							42.1	4.8	16.7
27	2	1984	Y	25																							20.2	6.	13.2
27	2	1984	Y	25																					32.5				
27	2	1984	Y	25														8.4	35.252	5.77	18.68	24.45		44.92			20.2	6.	13.2
27	2	1984	Y	28														8.3	35.971	8.67	5.25	13.93		51.12			20.1	6.6	14.6
27	2	1984	Y	28																					27.5				
27	2	1984	Y	28																							20.1	6.6	14.6
27	2	1984	Y	29																							20.2	5.6	9.9
27	2	1984	Y	32																							35.8	9.	21.3
27	2	1984	Y	33																							20.1	6.8	12.6

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
27	2	1984	Y	34																							40.2	9.4	19.7
27	2	1984	Y	34														8.1		17.986	17.33	12.4	29.73		133.21			40.2	9.3	19.7
27	2	1984	Y	35																						27.5				
27	2	1984	Y	35																						32.5				
27	2	1984	Y	35																								25.7	5.4	12.5
27	2	1984	Y	36														7.9		19.494	11.56	17.55	29.11		34.08			25.7	6.5	12.5
27	2	1984	Y	37																								47.9	6.7	21.9
27	2	1984	Y	37																								27.3	6.5	13.2
27	2	1984	Y	37														8.2		29.496	8.67	21.87	30.54		61.96			27.3	6.5	12.1
27	2	1984	Y	38																						32.5				
27	2	1984	Y	39																								55.	36.1	75.7
27	2	1984	Y	40																								36.1	21.9	73.7
27	2	1984	Y	42																								148.7	142.2	454.5
27	2	1984	Y	42														8.		28.058	10.12	19.25	29.36		51.12			64.2	56.7	332.5
27	2	1984	Y	42								28.	28.	23.	23.													64.2	56.7	332.5
27	2	1984	Y	50																						27.5				
27	2	1984	Y	ESERV																								29.5	30.6	82.1
27	2	1984	Y	ESERV														8.1		92.086	14.44	16.71	31.16		63.51			29.5	30.6	82.1
27	2	1984	Y	0 SHR																						27.5				
27	2	1984	Y	0 SHR														8.		35.252	10.12	16.42	26.53		37.18			42.1	4.8	16.7
29	2	1984	Y	4																						27.5				
29	2	1984	Y	7																						40.				
29	2	1984	Y	13																						37.5				
29	2	1984	Y	14																						37.5				
29	2	1984	Y	16																						35.				
29	2	1984	Y	21																						32.5				
29	2	1984	Y	25																						37.5				
29	2	1984	Y	28																						40.				
29	2	1984	Y	34																						37.5				
29	2	1984	Y	35																						32.5				
29	2	1984	Y	37																						37.5				
29	2	1984	Y	42																						42.5				
29	2	1984	Y	ESERV																						45.				
29	2	1984	Y	0 SHR																						7.5				
5	3	1984	Y	4																						32.5				
5	3	1984	Y	7								28.5	28.5	24.	23.5											32.5				
5	3	1984	Y	13																						27.5				
5	3	1984	Y	14																						32.5				
5	3	1984	Y	16																						27.5				
5	3	1984	Y	21																						32.5				
5	3	1984	Y	25																						27.5				
5	3	1984	Y	28																						32.5				
5	3	1984	Y	34																						27.5				
5	3	1984	Y	35																						27.5				
																										27.5				

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
5	3	1984	Y	37																						27.5				
5	3	1984	Y	42								28.5	28.	23.	23.											27.5				
5	3	1984	Y	ESERV																						12.5				
5	3	1984	Y	0 SHR																						27.5				
9	3	1984	Y	4																						37.5				
9	3	1984	Y	7																						37.5				
9	3	1984	Y	13																						37.5				
9	3	1984	Y	14																						37.5				
9	3	1984	Y	16																						37.5				
9	3	1984	Y	21																						42.5				
9	3	1984	Y	25																						37.5				
9	3	1984	Y	28																						37.5				
9	3	1984	Y	34																						32.5				
9	3	1984	Y	35																						37.5				
9	3	1984	Y	37																						42.5				
9	3	1984	Y	42																						37.5				
9	3	1984	Y	ESERV																						37.5				
9	3	1984	Y	0 SHR																						32.5				
13	3	1984	Y	7								31.	30.5	24.	23.5															
13	3	1984	Y	42								29.5	30.	23.	23.															
14	3	1984	Y	4																						32.5				
14	3	1984	Y	7																						27.5				
14	3	1984	Y	13																						47.5				
14	3	1984	Y	14																						27.5				
14	3	1984	Y	16																						32.5				
14	3	1984	Y	21																						32.5				
14	3	1984	Y	25																						42.5				
14	3	1984	Y	28																						37.5				
14	3	1984	Y	34																						27.5				
14	3	1984	Y	35																						32.5				
14	3	1984	Y	37																						37.5				
14	3	1984	Y	42																						32.5				
14	3	1984	Y	ESERV																						7.5				
14	3	1984	Y	0 SHR																						27.5				
15	3	1984	Y	7								28.5	28.	24.	24.															
15	3	1984	Y	42								29.5	28.	23.	23.															
17	3	1984	Y	7								28.5	28.	23.5	24.															
17	3	1984	Y	42								28.	28.	23.	23.															
26	3	1984	Y	4																2.65	7.57		7.57	31.6	37.5		15.2	3.2	15.5	
26	3	1984	Y	7								31.	30.5	24.	24.					2.5	7.15		7.15	15.8	42.5		26.	3.8	15.1	
26	3	1984	Y	13																2.65	5.18		5.18	17.66	37.5		16.9	6.8	20.3	
26	3	1984	Y	14																3.59	20.31		20.31	51.12	42.5		27.4	13.3	34.5	
26	3	1984	Y	16																2.97	15.13		15.13	37.49	37.5		18.2	9.9	24.	
26	3	1984	Y	21																2.65	7.15		7.15	15.8	42.5		31.5	7.7	18.2	
26	3	1984	Y	25																2.97	7.57		7.57	29.43	42.5		15.5	8.7	19.7	

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
26	3	1984	Y	28																2.97	7.15		7.15		19.52	42.5		18.7	8.5	23.1
26	3	1984	Y	34																3.6	25.92		25.92		15.8	37.5		23.7	5.4	27.5
26	3	1984	Y	35																3.28	9.95		9.95		21.69	42.5		36.2	9.3	34.
26	3	1984	Y	37																5.78	26.48		26.48		68.78	37.5		36.2	3.9	16.2
26	3	1984	Y	42								29.5	29.5	23.	23.					4.06	4.2		4.2		17.66	42.5		12.7	5.3	10.1
26	3	1984	Y	ESERV																2.97	4.2		4.2		37.49	37.5		24.	11.	21.4
26	3	1984	Y	0 SHR																4.22	9.39		9.39		23.54	42.5		13.5	8.9	28.3
3	4	1984	Y	4																						27.5				
3	4	1984	Y	7								31.	30.5	24.	23.5											32.5				
3	4	1984	Y	13																						42.5				
3	4	1984	Y	14																						37.5				
3	4	1984	Y	16																						30.				
3	4	1984	Y	21																						50.				
3	4	1984	Y	25																						37.5				
3	4	1984	Y	28																						37.5				
3	4	1984	Y	34																						40.				
3	4	1984	Y	35																						32.5				
3	4	1984	Y	37																						45.				
3	4	1984	Y	42								31.	31.	24.	23.5											32.5				
3	4	1984	Y	ESERV																						17.5				
3	4	1984	Y	0 SHR																										
6	4	1984	Y	4																						27.5				
6	4	1984	Y	7																						37.5				
6	4	1984	Y	13																						32.5				
6	4	1984	Y	14																						20.				
6	4	1984	Y	16																						27.5				
6	4	1984	Y	21																						32.5				
6	4	1984	Y	25																						27.5				
6	4	1984	Y	28																						17.5				
6	4	1984	Y	34																						27.5				
6	4	1984	Y	35																						32.5				
6	4	1984	Y	37																						37.5				
6	4	1984	Y	42																						32.5				
6	4	1984	Y	ESERV																						7.5				
6	4	1984	Y	0 SHR																						27.5				
9	4	1984	Y	4																						27.5				
9	4	1984	Y	7								31.	31.	24.	24.											27.5				
9	4	1984	Y	13																						32.5				
9	4	1984	Y	14																						25.				
9	4	1984	Y	16																						35.				
9	4	1984	Y	21																						22.5				
9	4	1984	Y	25																						32.5				
9	4	1984	Y	28																						32.5				
9	4	1984	Y	34																						27.5				
9	4	1984	Y	35																						22.5				

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
9	4	1984	Y	37																					32.5					
9	4	1984	Y	42								30.	30.	24.	23.5										37.5					
9	4	1984	Y	ESERV																					7.5					
9	4	1984	Y	0 SHR																					30.					
16	4	1984	Y	4																					27.5					
16	4	1984	Y	7								31.	30.5	24.	23.5										27.5					
16	4	1984	Y	13																					22.5					
16	4	1984	Y	14																					20.					
16	4	1984	Y	16																					27.5					
16	4	1984	Y	21																					27.5					
16	4	1984	Y	25																					27.5					
16	4	1984	Y	28																					22.5					
16	4	1984	Y	34																					27.5					
16	4	1984	Y	35																					22.5					
16	4	1984	Y	37																					32.5					
16	4	1984	Y	42								32.	31.5	23.	23.										27.5					
16	4	1984	Y	ESERV																					22.5					
16	4	1984	Y	0 SHR																					32.5					
18	4	1984	Y	4																					25.					
18	4	1984	Y	7																					32.5					
18	4	1984	Y	13																					27.5					
18	4	1984	Y	14																					27.5					
18	4	1984	Y	16																					35.					
18	4	1984	Y	21																					17.5					
18	4	1984	Y	25																					27.5					
18	4	1984	Y	28																					27.5					
18	4	1984	Y	34																					22.5					
18	4	1984	Y	35																					27.5					
18	4	1984	Y	37																					32.5					
18	4	1984	Y	42																					17.5					
18	4	1984	Y	ESERV																					12.5					
18	4	1984	Y	0 SHR																					30.					
23	4	1984	Y	4																1.42	3.64		3.64	36.56	35.		14.6	5.3	17.8	
23	4	1984	Y	7								30.	30.	25.	24.					1.18	4.06		4.06	34.39	32.5		76.8	8.5	27.	
23	4	1984	Y	13																1.42	8.13		8.13	39.03	27.5		29.	5.4	9.2	
23	4	1984	Y	14																1.29	5.74		5.74	41.2	22.5		15.1	9.	27.1	
23	4	1984	Y	16																1.26	3.64		3.64	34.39	32.5		39.9	1.5	19.2	
23	4	1984	Y	21																1.46	3.22		3.22	41.2	32.5		23.3	6.4	17.9	
23	4	1984	Y	25																1.42	4.9		4.9	36.56	32.5		17.5	1.9	27.6	
23	4	1984	Y	28																1.34	3.64		3.64	32.22	27.5		10.8	8.1	18.1	
23	4	1984	Y	34																7.17	8.97		8.97	61.65	22.5		14.4	3.7	4.7	
23	4	1984	Y	35																1.86	5.32		5.32	41.2	27.5		12.5	0.	10.7	
23	4	1984	Y	37																1.62	4.9		4.9	41.2	32.5		15.1	0.	4.1	
23	4	1984	Y	42								30.5	30.	23.	23.					1.7	6.44		6.44	41.2	22.5		25.	4.9	10.7	
23	4	1984	Y	ESERV																2.19	4.48		4.48	50.5	17.5		10.7	6.	3.7	

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
23	4	1984	Y	0 SHR																1.54	4.06		4.06		36.56	40.		9.9	4.8	14.3
25	4	1984	Y	4																						27.5				
25	4	1984	Y	7																						22.5				
25	4	1984	Y	13																						17.5				
25	4	1984	Y	14																						22.5				
25	4	1984	Y	16																						17.5				
25	4	1984	Y	21																						27.5				
25	4	1984	Y	25																						30.				
25	4	1984	Y	28																						40.				
25	4	1984	Y	34																						22.5				
25	4	1984	Y	35																						27.5				
25	4	1984	Y	37																						32.5				
25	4	1984	Y	42																						27.5				
25	4	1984	Y	ESERV																						7.5				
25	4	1984	Y	0 SHR																						40.				
27	4	1984	Y	4																						40.				
27	4	1984	Y	7																						32.5				
27	4	1984	Y	13																						27.5				
27	4	1984	Y	14																						25.				
27	4	1984	Y	16																						27.5				
27	4	1984	Y	21																						27.5				
27	4	1984	Y	25																						37.5				
27	4	1984	Y	28																						40.				
27	4	1984	Y	34																						27.5				
27	4	1984	Y	35																						35.				
27	4	1984	Y	37																						37.5				
27	4	1984	Y	42																						27.5				
27	4	1984	Y	ESERV																						17.5				
27	4	1984	Y	0 SHR																						32.5				
30	4	1984	Y	4																						37.5				
30	4	1984	Y	7								31.	31.	23.	23.											27.5				
30	4	1984	Y	13																						27.5				
30	4	1984	Y	14																						22.5				
30	4	1984	Y	16																						27.5				
30	4	1984	Y	21																						22.5				
30	4	1984	Y	25																						32.5				
30	4	1984	Y	28																						35.				
30	4	1984	Y	34																						32.5				
30	4	1984	Y	35																						32.5				
30	4	1984	Y	37																						42.5				
30	4	1984	Y	42								31.	30.5	23.5	23.											27.5				
30	4	1984	Y	ESERV																						7.5				
30	4	1984	Y	0 SHR																						32.5				
2	5	1984	Y	4																						22.5				
2	5	1984	Y	7																						22.5				

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
2	5	1984	Y	13																					22.5				
2	5	1984	Y	14																					22.5				
2	5	1984	Y	16																					22.5				
2	5	1984	Y	21																					27.5				
2	5	1984	Y	25																					27.5				
2	5	1984	Y	28																					37.5				
2	5	1984	Y	34																					27.5				
2	5	1984	Y	35																					32.5				
2	5	1984	Y	37																					32.5				
2	5	1984	Y	42																					22.5				
2	5	1984	Y	ESERV																					17.5				
2	5	1984	Y	0 SHR																					32.5				
7	5	1984	Y	4																							22.2	10.3	24.5
7	5	1984	Y	7																							14.9	12.9	52.8
7	5	1984	Y	13																							16.9	11.6	18.1
7	5	1984	Y	14																							20.8	7.3	18.9
7	5	1984	Y	16																							54.	24.3	102.4
7	5	1984	Y	21																							26.7	10.2	52.1
7	5	1984	Y	25																							27.	9.6	25.3
7	5	1984	Y	28																							27.5	14.5	60.7
7	5	1984	Y	34																							17.1	4.5	14.9
7	5	1984	Y	35																							15.5	4.2	18.1
7	5	1984	Y	37																							42.7	20.4	59.4
7	5	1984	Y	42																							31.	9.7	20.6
7	5	1984	Y	ESERV																							15.5	3.3	20.6
7	5	1984	Y	0 SHR																							23.5	13.8	23.7
8	5	1984	Y	4																					27.5				
8	5	1984	Y	7								31.	31.	24.	24.										32.5				
8	5	1984	Y	13																					22.5				
8	5	1984	Y	14																					22.5				
8	5	1984	Y	16																					22.5				
8	5	1984	Y	21																					27.5				
8	5	1984	Y	25																					27.5				
8	5	1984	Y	28																					22.5				
8	5	1984	Y	34																					17.5				
8	5	1984	Y	35																					22.5				
8	5	1984	Y	37																					32.5				
8	5	1984	Y	42								32.	31.5	24.	23.										27.5				
8	5	1984	Y	ESERV																					7.5				
8	5	1984	Y	0 SHR																					27.5				
14	5	1984	Y	4																					27.5				
14	5	1984	Y	7								30.	30.	23.5	23.										37.5				
14	5	1984	Y	13																					32.5				
14	5	1984	Y	14																					27.5				
14	5	1984	Y	16																					27.5				

Table 3. Weekly and Twice-Weekly Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-OPHYLL B	CHLOR-OPHYLL C
14	5	1984	Y	21																					32.5				
14	5	1984	Y	25																					27.5				
14	5	1984	Y	28																					37.5				
14	5	1984	Y	34																					32.5				
14	5	1984	Y	35																					35.				
14	5	1984	Y	37																					32.5				
14	5	1984	Y	42								31.	31.	24.	23.5										27.5				
14	5	1984	Y	ESERV																					22.5				
14	5	1984	Y	0 SHR																					27.5				
18	5	1984	Y	4												138.		7.7		12.3	0.	3.22	3.22	223.37			30.8	8.1	28.3
18	5	1984	Y	7												135.		7.9		13.	0.	5.18	5.18	1.86			34.5	23.5	62.7
18	5	1984	Y	13												133.		7.7		15.9	0.	5.6	5.6	9.29			21.8	4.5	15.1
18	5	1984	Y	14												139.		7.6		15.2	0.	5.18	5.18	13.01			23.8	7.	28.9
18	5	1984	Y	16												128.		7.9		16.7	0.	6.02	6.02	5.58			49.1	10.1	35.4
18	5	1984	Y	21												135.		8.8		11.6	0.	8.41	8.41	13.01			25.6	8.	11.3
18	5	1984	Y	25												114.		8.4		3.6	0.	3.92	3.92	13.01			22.5	6.3	15.
18	5	1984	Y	28												122.		8.6		10.8	1.22	2.38	3.6	142.82			24.4	1.5	20.1
18	5	1984	Y	34												138.		8.7		17.4	0.	3.22	3.22	651.51			20.7	4.6	12.3
18	5	1984	Y	35												131.		8.7		10.8	0.	4.34	4.34	44.92			27.7	4.5	26.2
18	5	1984	Y	37												118.		8.7		18.8	0.	5.18	5.18	17.04			43.7	2.5	37.4
18	5	1984	Y	42												114.		8.6		13.	0.	2.8	2.8	69.4			30.6	13.2	36.
18	5	1984	Y	ESERV												115.		8.1		16.	0.	1.96	1.96	14.87			18.	7.8	18.7
18	5	1984	Y	0 SHR												103.		8.4		8.7	0.	4.76	4.76	17.04			26.2	10.	16.5

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
2	8	1983	1835	4	6.6			29.			10.
2	8	1983	2036	4	6.4			28.			10.
2	8	1983	2233	4	6.3			28.			9.5
2	8	1983	37	4	6.3			27.5			9.5
2	8	1983	34	7	6.4			27.			9.5
2	8	1983	1834	7	6.6			28.			10.
2	8	1983	2034	7	6.4			28.			10.
2	8	1983	2231	7	6.2			28.			10.
2	8	1983	2228	13	6.4			27.5			9.5
2	8	1983	31	13	6.4			27.			9.5
2	8	1983	1832	13	6.8			28.5			9.5
2	8	1983	2031	13	6.3			28.			9.5
2	8	1983	2029	14	6.3			27.8			9.5
2	8	1983	2225	14	6.4			27.5			9.5
2	8	1983	29	14	6.2			27.			9.
2	8	1983	1830	14	6.7			29.			9.5
2	8	1983	1829	16	6.7			29.			9.5
2	8	1983	2027	16	6.4			28.			10.
2	8	1983	2224	16	6.4			27.			9.5
2	8	1983	27	16	6.4			27.			9.5
2	8	1983	25	21	6.4			27.			9.5
2	8	1983	1828	21	6.6			29.			9.5
2	8	1983	2025	21	6.2			28.			9.5
2	8	1983	2221	21	6.3			28.			9.
2	8	1983	2202	22	6.4			27.			9.5
2	8	1983	0	22	6.4			26.			9.
2	8	1983	1809	22	6.8			28.8			9.
2	8	1983	2008	22	6.4			26.			10.
2	8	1983	2010	25	6.3			27.			9.5
2	8	1983	2204	25	6.3			27.			9.
2	8	1983	5	25	6.4			26.5			9.
2	8	1983	1812	25	6.8			28.8			9.
2	8	1983	1815	28	6.6			28.8			9.
2	8	1983	2012	28	6.3			27.			9.5
2	8	1983	2207	28	6.4			27.			9.
2	8	1983	9	28	6.5			26.5			9.
2	8	1983	13	34	6.4			27.			9.
2	8	1983	1820	34	6.6			29.			9.
2	8	1983	2015	34	6.3			27.			9.5
2	8	1983	2209	34	6.4			27.			9.5
2	8	1983	2211	35	6.4			27.			9.5
2	8	1983	15	35	6.5			27.			9.
2	8	1983	1821	35	6.7			28.8			9.

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
2	8	1983	2017	35	6.4			27.			9.5
2	8	1983	2019	37	6.4			27.4			9.5
2	8	1983	2213	37	6.4			27.			9.5
2	8	1983	18	37	6.4			27.5			9.
2	8	1983	1823	37	6.7			28.8			9.5
2	8	1983	1824	42	6.6			28.8			9.5
2	8	1983	2021	42	6.3			28.			9.5
2	8	1983	2217	42	6.3			27.9			9.
2	8	1983	21	42	6.4			27.			9.5
3	8	1983	233	4	6.4			28.			9.5
3	8	1983	1027	4	9.4			29.			9.5
3	8	1983	2027	4	8.2			30.			10.
3	8	1983	1426	4	9.3			32.			9.5
3	8	1983	835	4	7.2			27.5			9.
3	8	1983	1835	4	9.5			30.9			10.
3	8	1983	1227	4	9.2			31.			9.5
3	8	1983	624	4	5.8			27.			9.5
3	8	1983	1627	4	11.4			32.			10.
3	8	1983	441	4	6.4			27.5			9.5
3	8	1983	525	4	5.6			27.5			9.5
3	8	1983	2025	7	9.4			30.			10.
3	8	1983	1424	7	11.4			31.9			10.
3	8	1983	1626	7	12.6			32.			10.
3	8	1983	1833	7	11.			30.9			10.
3	8	1983	1225	7	8.4			31.			9.5
3	8	1983	622	7	6.9			27.			9.5
3	8	1983	230	7	6.4			27.5			9.5
3	8	1983	1025	7	9.8			29.			9.5
3	8	1983	523	7	7.4			27.			9.5
3	8	1983	438	7	7.4			27.5			9.5
3	8	1983	833	7	7.8			27.5			9.5
3	8	1983	2022	13	8.			30.			9.5
3	8	1983	1831	13	8.8			30.1			9.5
3	8	1983	1224	13	7.9			31.			9.5
3	8	1983	620	13	5.6			27.			9.
3	8	1983	1624	13	9.2			32.			9.5
3	8	1983	1023	13	8.			29.			9.5
3	8	1983	520	13	5.6			27.			9.
3	8	1983	1422	13	8.5			31.5			9.5
3	8	1983	830	13	6.4			27.5			9.
3	8	1983	435	13	6.2			27.5			9.
3	8	1983	228	13	6.2			28.			9.
3	8	1983	1223	14	7.8			31.			9.5
3	8	1983	432	14	6.			27.5			9.

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
3	8	1983	226	14	6.2			28.			9.
3	8	1983	1022	14	8.4			29.			9.5
3	8	1983	2020	14	7.6			30.			9.5
3	8	1983	1420	14	7.8			31.9			9.5
3	8	1983	828	14	6.8			27.			9.5
3	8	1983	1830	14	8.6			31.			9.5
3	8	1983	518	14	5.4			27.			9.
3	8	1983	619	14	5.8			27.			9.
3	8	1983	1622	14	9.8			32.			9.5
3	8	1983	1621	16	11.3			31.5			10.
3	8	1983	1828	16	9.4			30.5			10.
3	8	1983	2018	16	8.3			30.			10.
3	8	1983	1418	16	9.6			31.5			10.
3	8	1983	826	16	6.8			27.			9.5
3	8	1983	429	16	7.2			27.5			9.5
3	8	1983	1221	16	8.6			30.5			9.5
3	8	1983	617	16	6.6			27.			9.5
3	8	1983	223	16	6.3			27.8			9.5
3	8	1983	1020	16	9.3			29.			9.5
3	8	1983	516	16	7.			27.			9.5
3	8	1983	2015	21	8.2			30.2			9.5
3	8	1983	1416	21	7.7			32.			9.5
3	8	1983	824	21	5.8			27.			9.5
3	8	1983	1827	21	6.9			31.			9.5
3	8	1983	1219	21	7.1			31.			9.5
3	8	1983	615	21	4.8			27.			9.
3	8	1983	1619	21	8.3			32.			9.5
3	8	1983	1017	21	7.2			29.			9.5
3	8	1983	514	21	4.8			27.			9.
3	8	1983	425	21	5.3			27.			9.
3	8	1983	220	21	6.2			28.			9.
3	8	1983	500	22	5.			26.9			9.
3	8	1983	407	22	5.6			26.9			9.
3	8	1983	1209	22	9.			29.			9.5
3	8	1983	1400	22	9.9			30.4			9.5
3	8	1983	203	22	6.4			26.8			9.5
3	8	1983	1000	22	8.			27.			9.
3	8	1983	2000	22	6.6			30.			10.
3	8	1983	605	22	4.8			26.5			9.
3	8	1983	809	22	5.5			26.5			9.5
3	8	1983	1815	22	8.4			30.5			10.
3	8	1983	1606	22	10.8			31.			10.
3	8	1983	2002	25	6.9			30.			9.5
3	8	1983	1817	25	7.8			30.2			9.5

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
3	8	1983	1608	25	8.4			31.			9.5
3	8	1983	1004	25	7.6			27.			9.5
3	8	1983	504	25	5.5			26.5			9.
3	8	1983	1403	25	8.4			30.5			9.5
3	8	1983	811	25	5.8			26.5			9.5
3	8	1983	410	25	6.3			27.			9.
3	8	1983	1210	25	7.9			29.			9.5
3	8	1983	606	25	5.8			26.5			9.
3	8	1983	205	25	6.4			27.			9.
3	8	1983	1610	28	10.3			30.9			9.5
3	8	1983	1006	28	8.			27.			9.5
3	8	1983	2004	28	7.6			30.			9.5
3	8	1983	1405	28	9.			30.			9.5
3	8	1983	813	28	6.1			26.5			9.
3	8	1983	1819	28	8.6			30.			9.5
3	8	1983	1211	28	8.2			29.			9.5
3	8	1983	607	28	5.8			27.			9.
3	8	1983	207	28	6.4			27.			9.
3	8	1983	412	28	6.4			27.			9.
3	8	1983	507	28	5.7			26.9			9.
3	8	1983	509	34	5.9			27.			9.
3	8	1983	1408	34	8.3			30.5			9.5
3	8	1983	1612	34	9.6			30.5			9.5
3	8	1983	415	34	6.4			27.			9.
3	8	1983	1213	34	8.			29.5			9.5
3	8	1983	609	34	6.			27.			9.
3	8	1983	210	34	6.4			27.5			9.
3	8	1983	1009	34	8.			27.9			9.5
3	8	1983	2006	34	7.6			30.			9.5
3	8	1983	1821	34	8.6			30.4			9.5
3	8	1983	816	34	6.2			27.			9.5
3	8	1983	2008	35	7.6			30.			9.5
3	8	1983	1823	35	8.6			30.5			9.5
3	8	1983	1214	35	8.2			29.5			9.5
3	8	1983	610	35	6.2			27.			9.
3	8	1983	1613	35	10.			31.			9.5
3	8	1983	1011	35	8.2			28.			9.5
3	8	1983	510	35	5.9			27.			9.
3	8	1983	1409	35	8.8			30.9			9.5
3	8	1983	817	35	6.3			27.			9.
3	8	1983	418	35	6.4			27.			9.
3	8	1983	212	35	6.3			27.5			9.
3	8	1983	1215	37	8.			29.5			9.5
3	8	1983	1824	37	8.6			30.4			9.5

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
3	8	1983	1615	37	10.			31.			9.5
3	8	1983	1013	37	7.8			27.9			9.5
3	8	1983	2010	37	7.5			30.			9.5
3	8	1983	1411	37	8.7			30.9			9.5
3	8	1983	819	37	5.8			27.			9.5
3	8	1983	420	37	6.1			27.			9.
3	8	1983	511	37	5.4			27.			9.
3	8	1983	612	37	5.4			27.			9.
3	8	1983	215	37	6.3			27.5			9.
3	8	1983	1617	42	10.4			31.			10.
3	8	1983	1825	42	8.4			30.5			10.
3	8	1983	512	42	5.6			27.			9.
3	8	1983	1414	42	8.9			31.			9.5
3	8	1983	821	42	5.8			27.			9.5
3	8	1983	423	42	6.1			27.5			9.
3	8	1983	1217	42	8.1			30.			9.5
3	8	1983	613	42	5.4			27.			9.
3	8	1983	217	42	6.3			27.5			9.
3	8	1983	1015	42	7.7			28.			9.5
3	8	1983	2012	42	7.4			30.			10.
30	8	1983	717	2	2.05			29.1			8.19
30	8	1983	1637	2	9.8			34.			8.62
30	8	1983	1059	2	4.			28.			8.72
30	8	1983	1234	2	7.9			34.5			8.85
30	8	1983	1433	2	8.4			35.			9.19
30	8	1983	849	2	1.6			30.			8.67
30	8	1983	1853	2	6.5			32.5			8.56
30	8	1983	715	3	1.6			29.1			8.54
30	8	1983	1635	3	8.5			32.			8.66
30	8	1983	1057	3	3.8			27.			8.97
30	8	1983	1232	3	9.			33.5			9.18
30	8	1983	1431	3	10.			32.			9.21
30	8	1983	847	3	2.7			29.5			8.9
30	8	1983	1851	3	8.4			32.			8.81
30	8	1983	1055	4	6.1			26.5			9.01
30	8	1983	1230	4	13.4			33.5			9.29
30	8	1983	713	4	1.2			28.7			8.47
30	8	1983	1634	4	12.			32.5			8.98
30	8	1983	1850	4	12.4			32.			9.02
30	8	1983	846	4	5.3			30.			8.9
30	8	1983	1430	4	12.2			33.5			9.452
30	8	1983	1054	6	5.2			27.2			8.9
30	8	1983	1229	6	7.			33.5			9.06
30	8	1983	710	6	2.6			29.5			8.56

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
30	8	1983	1632	6	8.6			32.5			8.61
30	8	1983	1849	6	8.1			32.5			8.72
30	8	1983	845	6	4.9			29.5			8.84
30	8	1983	1429	6	8.5			33.5			9.09
30	8	1983	1053	7	5.1			26.5			9.08
30	8	1983	1630	7	8.6			32.			8.74
30	8	1983	1848	7	9.6			32.5			8.85
30	8	1983	1228	7	8.2			31.5			9.18
30	8	1983	707	7	3.3			29.1			8.7
30	8	1983	844	7	4.1			30.			9.
30	8	1983	1427	7	10.8			32.5			9.18
30	8	1983	1051	9	3.2			27.			9.06
30	8	1983	1628	9	8.2			32.5			8.73
30	8	1983	1847	9	7.6			32.5			8.87
30	8	1983	1226	9	6.4			34.5			9.19
30	8	1983	704	9	0.8			29.4			8.64
30	8	1983	843	9	2.7			30.5			8.92
30	8	1983	1425	9	8.4			32.5			9.14
30	8	1983	1639	R	8.2			33.			8.57
30	8	1983	735	R	2.8			30.7			8.38
30	8	1983	1236	R	7.			32.5			8.98
30	8	1983	1435	R	8.3			35.			8.97
30	8	1983	850	R	3.7			31.			8.77
30	8	1983	1839	R	7.			32.			8.59
30	8	1983	1042	R	4.6			27.2			8.79
30	8	1983	1050	13	3.8			27.			8.82
30	8	1983	1627	13	8.5			32.5			8.52
30	8	1983	702	13	1.8			29.8			8.48
30	8	1983	841	13	3.8			30.			8.72
30	8	1983	1846	13	8.			32.5			8.56
30	8	1983	1224	13	7.			32.			8.93
30	8	1983	1424	13	9.			33.			9.
30	8	1983	700	14	1.4			28.9			8.59
30	8	1983	1048	14	7.3			26.3			8.96
30	8	1983	1625	14	12.6			32.5			8.96
30	8	1983	1422	14	12.4			31.5			9.41
30	8	1983	840	14	4.8			30.			8.9
30	8	1983	1845	14	7.			33.			8.8
30	8	1983	1222	14	11.8			31.5			9.22
30	8	1983	657	16	1.4			29.8			8.2
30	8	1983	1624	16	8.2			32.5			8.32
30	8	1983	1047	16	2.9			26.6			8.51
30	8	1983	1221	16	5.			31.5			8.66
30	8	1983	1421	16	6.8			35.			8.81

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
30	8	1983	839	16	2.8			30.5			8.45
30	8	1983	1844	16	10.3			32.5			8.34
30	8	1983	1220	19	11.2			31.5			9.
30	8	1983	654	19	2.3			30.3			8.52
30	8	1983	1622	19	10.2			33.			8.69
30	8	1983	1045	19	5.9			27.			8.88
30	8	1983	838	19	3.2			30.5			8.43
30	8	1983	1420	19	10.5			33.5			9.14
30	8	1983	1842	19	8.4			32.5			8.71
30	8	1983	1840	21	9.1			32.			8.78
30	8	1983	1218	21	9.6			32.5			9.08
30	8	1983	652	21	3.			30.3			8.65
30	8	1983	1620	21	10.5			33.			8.77
30	8	1983	1044	21	6.6			26.5			8.99
30	8	1983	836	21	4.1			30.5			8.77
30	8	1983	1418	21	11.1			33.			9.23
30	8	1983	1020	22	5.4			26.5			8.76
30	8	1983	1808	22	8.			32.5			9.13
30	8	1983	1200	22	8.2			32.5			8.98
30	8	1983	627	22	3.2			32.1			8.68
30	8	1983	1600	22	12.1			33.5			8.95
30	8	1983	1400	22	10.2			32.			9.44
30	8	1983	819	22	2.9			29.			8.76
30	8	1983	1021	24	5.5			26.5			8.77
30	8	1983	820	24	2.5			30.			8.67
30	8	1983	1810	24	8.			32.5			8.9
30	8	1983	1201	24	7.6			32.5			8.9
30	8	1983	628	24	3.1			32.1			8.54
30	8	1983	1601	24	11.2			32.5			8.73
30	8	1983	1401	24	10.4			32.5			9.16
30	8	1983	1603	25	11.9			32.5			8.69
30	8	1983	1023	25	6.5			26.5			8.74
30	8	1983	821	25	2.9			29.			8.66
30	8	1983	1812	25	8.3			32.5			8.87
30	8	1983	1202	25	9.			32.			8.92
30	8	1983	629	25	3.6			32.			8.51
30	8	1983	1402	25	11.2			32.8			9.09
30	8	1983	1024	26	5.6			26.5			8.77
30	8	1983	1604	26	10.6			32.5			8.72
30	8	1983	1404	26	11.2			33.			9.15
30	8	1983	822	26	1.1			30.			8.69
30	8	1983	1814	26	8.6			32.5			8.88
30	8	1983	1203	26	8.			32.			8.92
30	8	1983	631	26	3.2			30.6			8.52

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
30	8	1983	632	27	3.6			32.			8.56
30	8	1983	1026	27	7.4			26.5			8.98
30	8	1983	1606	27	15.			31.5			8.92
30	8	1983	1405	27	13.2			34.			9.34
30	8	1983	823	27	3.4			30.			8.8
30	8	1983	1816	27	10.3			32.5			9.06
30	8	1983	1204	27	10.			31.5			9.11
30	8	1983	633	28	3.7			32.			8.69
30	8	1983	1607	28	11.8			32.5			8.84
30	8	1983	1028	28	6.4			26.5			8.99
30	8	1983	1205	28	7.8			33.			9.11
30	8	1983	1406	28	10.5			34.5			9.32
30	8	1983	825	28	2.4			29.5			8.86
30	8	1983	1817	28	8.3			32.5			8.85
30	8	1983	1207	29	7.9			31.5			8.95
30	8	1983	634	29	2.9			30.7			8.62
30	8	1983	1609	29	11.6			32.			8.83
30	8	1983	1029	29	6.2			26.5			8.91
30	8	1983	826	29	2.3			30.			8.78
30	8	1983	1407	29	9.3			32.5			9.25
30	8	1983	1819	29	8.			32.5			8.8
30	8	1983	1031	31	5.7			26.			8.73
30	8	1983	1208	31	6.7			33.			8.78
30	8	1983	635	31	3.1			31.6			8.47
30	8	1983	1610	31	9.5			33.			8.48
30	8	1983	1820	31	7.3			32.5			8.53
30	8	1983	827	31	3.			30.			8.63
30	8	1983	1409	31	8.9			32.5			8.42
30	8	1983	1032	34	5.9			26.5			8.87
30	8	1983	1823	34	7.5			32.5			8.04
30	8	1983	1209	34	8.1			34.			9.02
30	8	1983	637	34	4.			29.4			8.62
30	8	1983	1611	34	9.6			33.5			8.71
30	8	1983	1410	34	10.6			34.			9.18
30	8	1983	828	34	2.3			30.			8.78
30	8	1983	1034	35	5.8			26.5			8.91
30	8	1983	1613	35	10.			32.5			8.74
30	8	1983	1825	35	7.3			32.5			8.07
30	8	1983	1211	35	6.9			33.5			9.03
30	8	1983	639	35	3.9			29.4			8.61
30	8	1983	830	35	0.9			30.			8.79
30	8	1983	1411	35	9.4			34.5			9.18
30	8	1983	1614	36	5.			31.5			8.2
30	8	1983	1036	36	3.5			26.5			8.4

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
30	8	1983	831	36	0.8			30.			8.3
30	8	1983	1826	36	4.7			32.5			8.21
30	8	1983	1212	36	3.4			33.5			8.45
30	8	1983	642	36	4.			29.2			8.19
30	8	1983	1412	36	4.8			32.5			8.53
30	8	1983	1037	37	5.7			26.1			8.62
30	8	1983	1616	37	11.2			32.5			8.5
30	8	1983	645	37	4.8			29.4			8.4
30	8	1983	832	37	2.7			30.			8.55
30	8	1983	1828	37	9.3			32.4			8.57
30	8	1983	1213	37	6.7			32.5			8.75
30	8	1983	1413	37	10.			32.5			8.92
30	8	1983	647	38	3.3			29.7			8.89
30	8	1983	1039	38	8.4			26.			9.07
30	8	1983	1617	38	10.5			31.5			8.84
30	8	1983	1414	38	13.6			34.5			9.5
30	8	1983	833	38	3.6			29.5			9.06
30	8	1983	1832	38	9.3			32.5			9.
30	8	1983	1215	38	9.2			31.5			9.33
30	8	1983	650	42	4.3			28.9			8.65
30	8	1983	1619	42	11.			31.5			8.7
30	8	1983	1041	42	7.			26.			8.92
30	8	1983	1216	42	7.6			31.5			9.03
30	8	1983	1416	42	10.			34.5			9.16
30	8	1983	835	42	3.8			30.			8.78
30	8	1983	1833	42	9.			32.			8.74
30	8	1983	2040	13	6.2			32.			8.72
30	8	1983	2230	13	5.3			32.			8.32
30	8	1983	2229	14	6.8			31.5			8.45
30	8	1983	2039	14	8.8			31.5			8.92
30	8	1983	2038	16	6.			31.5			8.48
30	8	1983	2227	16	5.3			31.5			8.07
30	8	1983	2225	21	6.7			31.5			8.43
30	8	1983	2035	21	8.5			32.			8.9
30	8	1983	2204	25	6.8			31.			8.32
30	8	1983	2018	25	7.5			31.			8.69
30	8	1983	2021	28	6.9			31.5			8.91
30	8	1983	2209	28	6.2			31.5			8.42
30	8	1983	2214	34	6.			31.5			8.41
30	8	1983	2026	34	6.9			32.			8.74
30	8	1983	2027	35	6.5			32.			8.76
30	8	1983	2216	35	5.3			31.5			8.44
30	8	1983	2220	37	7.7			31.5			8.32
30	8	1983	2030	37	8.9			32.			8.68

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
30	8	1983	1850	4	12.4			32.			9.02
30	8	1983	2235	4	8.5			31.			8.64
30	8	1983	2045	4	9.9			31.			9.04
30	8	1983	2223	42	7.2			31.5			8.47
30	8	1983	2033	42	8.1			31.5			8.76
30	8	1983	2051	50	7.			31.5			8.63
30	8	1983	2240	50	6.2			31.			8.42
30	8	1983	2042	7	9.4			31.5			9.
30	8	1983	2232	7	6.7			31.5			8.6
31	8	1983	533	13	2.9			30.			8.59
31	8	1983	31	13	4.			31.5			8.41
31	8	1983	737	13	2.9			29.8			8.27
31	8	1983	427	13	3.2			30.5			8.23
31	8	1983	225	13	3.4			30.5			8.36
31	8	1983	630	13	2.8			29.8			8.1
31	8	1983	629	14	3.3			29.5			8.15
31	8	1983	531	14	3.2			30.			8.41
31	8	1983	30	14	4.8			31.			8.49
31	8	1983	735	14	3.5			29.5			8.33
31	8	1983	425	14	3.5			30.5			8.32
31	8	1983	223	14	3.4			30.5			8.46
31	8	1983	222	16	4.2			30.5			8.16
31	8	1983	627	16	3.7			29.5			7.91
31	8	1983	530	16	3.9			29.5			8.28
31	8	1983	28	16	4.3			31.			8.17
31	8	1983	734	16	3.6			29.5			8.4
31	8	1983	424	16	3.8			30.5			8.04
31	8	1983	624	21	4.2			29.5			8.21
31	8	1983	220	21	4.8			30.5			8.46
31	8	1983	420	21	3.8			30.5			8.34
31	8	1983	527	21	4.2			29.5			8.44
31	8	1983	26	21	5.7			31.			8.5
31	8	1983	731	21	4.4			29.5			8.38
31	8	1983	605	25	3.5			29.5			8.11
31	8	1983	708	25	3.4			29.8			8.28
31	8	1983	402	25	4.2			30.5			8.26
31	8	1983	508	25	2.9			29.5			8.35
31	8	1983	10	25	5.2			30.5			8.36
31	8	1983	203	25	4.8			30.5			8.39
31	8	1983	207	28	4.2			30.5			8.5
31	8	1983	407	28	3.8			30.5			8.37
31	8	1983	513	28	3.4			29.5			8.42
31	8	1983	13	28	4.5			31.			8.49
31	8	1983	714	28	3.3			29.5			8.4

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
31	8	1983	610	28	3.4			29.5			8.24
31	8	1983	411	34	3.8			30.5			8.36
31	8	1983	719	34	3.2			29.5			8.38
31	8	1983	615	34	3.2			30.			8.22
31	8	1983	211	34	4.4			30.5			8.34
31	8	1983	17	34	5.			31.5			8.45
31	8	1983	518	34	3.7			30.			8.43
31	8	1983	721	35	3.2			29.5			8.39
31	8	1983	18	35	4.2			31.			8.47
31	8	1983	212	35	3.8			30.5			8.44
31	8	1983	412	35	3.8			30.5			8.37
31	8	1983	519	35	3.6			29.5			8.42
31	8	1983	617	35	3.4			29.5			8.23
31	8	1983	22	37	6.8			31.			8.36
31	8	1983	216	37	3.8			30.5			8.34
31	8	1983	415	37	5.4			30.5			8.26
31	8	1983	521	37	5.3			30.			8.31
31	8	1983	619	37	2.5			29.5			7.78
31	8	1983	725	37	5.2			29.5			8.28
31	8	1983	541	4	3.5			29.5			8.36
31	8	1983	636	4	2.7			29.5			8.19
31	8	1983	743	4	3.			29.5			8.34
31	8	1983	433	4	2.8			30.5			8.33
31	8	1983	231	4	4.3			30.5			8.5
31	8	1983	38	4	5.3			30.5			8.6
31	8	1983	729	42	3.6			29.3			8.34
31	8	1983	622	42	2.5			29.5			8.33
31	8	1983	219	42	4.9			30.5			8.45
31	8	1983	419	42	4.2			30.5			8.48
31	8	1983	525	42	3.9			29.5			8.42
31	8	1983	24	42	5.3			31.			8.61
31	8	1983	440	50							8.35
31	8	1983	548	50	3.2			29.5			8.41
31	8	1983	45	50	5.4			30.5			8.47
31	8	1983	238	50							8.32
31	8	1983	643	50	3.1			28.			8.21
31	8	1983	748	50	2.1			28.9			8.36
31	8	1983	632	7	3.8			29.5			8.27
31	8	1983	228	7	4.5			30.5			8.51
31	8	1983	35	7	4.8			31.			8.55
31	8	1983	739	7	3.9			29.5			8.44
31	8	1983	431	7	4.2			30.5			8.42
31	8	1983	536	7	3.9			29.5			8.44
28	9	1983	2240	13	5.			29.			8.3

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
28	9	1983	638	13	4.7			27.5			8.58
28	9	1983	845	13	4.8			27.5			8.58
28	9	1983	1049	13	6.1			28.5			8.09
28	9	1983	1444	13	6.4			32.5			8.66
28	9	1983	1646	13	7.			31.			8.7
28	9	1983	1840	13	7.6			31.5			8.6
28	9	1983	1246	13	7.5			32.			8.65
28	9	1983	2041	13	6.5			30.			8.
28	9	1983	636	14	4.5			27.5			8.67
28	9	1983	1046	14	6.5			28.			8.24
28	9	1983	842	14	4.9			27.5			8.75
28	9	1983	1644	14	7.1			31.			8.61
28	9	1983	1838	14	7.			31.			8.6
28	9	1983	2039	14	5.6			29.			8.5
28	9	1983	2237	14	4.9			28.5			8.5
28	9	1983	1243	14	7.9			32.			8.59
28	9	1983	1442	14	7.			32.			8.64
28	9	1983	840	16	5.			27.3			8.78
28	9	1983	1043	16	6.6			28.3			8.4
28	9	1983	1835	16	7.2			31.5			8.8
28	9	1983	1241	16	7.8			29.			8.51
28	9	1983	1440	16	6.4			31.			8.49
28	9	1983	633	16	5.4			27.5			8.72
28	9	1983	2234	16	5.2			29.			8.5
28	9	1983	2037	16	6.2			29.5			8.2
28	9	1983	1642	16	7.2			31.			8.61
28	9	1983	1038	21	6.4			28.5			8.35
28	9	1983	1236	21	7.4			30.			8.58
28	9	1983	2230	21	5.4			28.5			8.5
28	9	1983	628	21	4.2			27.			8.4
28	9	1983	834	21	5.			27.			8.48
28	9	1983	2032	21	6.5			29.5			8.1
28	9	1983	1434	21	6.9			32.5			8.56
28	9	1983	1636	21	7.1			31.5			8.6
28	9	1983	1831	21	7.6			30.5			8.6
28	9	1983	601	25	5.2			27.			8.31
28	9	1983	804	25	4.6			27.			8.73
28	9	1983	1006	25	6.4			28.5			8.01
28	9	1983	1205	25	7.9			29.			8.42
28	9	1983	1605	25	6.9			31.			8.45
28	9	1983	1805	25	7.6			30.			8.6
28	9	1983	2004	25	7.2			29.5			8.2
28	9	1983	1405	25	6.1			29.5			8.63
28	9	1983	2204	25	6.			28.			8.3

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
28	9	1983	1412	28	5.8			30.5			8.66
28	9	1983	812	28	4.8			27.			8.76
28	9	1983	608	28	5.2			27.			8.43
28	9	1983	1212	28	7.8			29.			8.55
28	9	1983	1613	28	6.9			31.			8.59
28	9	1983	1811	28	6.			29.			8.5
28	9	1983	1013	28	6.2			28.			8.21
28	9	1983	2211	28	4.5			28.			8.4
28	9	1983	2011	28	5.8			29.			8.3
28	9	1983	614	34	5.8			27.			8.99
28	9	1983	1419	34	6.5			31.			8.72
28	9	1983	1021	34	6.5			28.			8.54
28	9	1983	1220	34	7.8			29.5			8.7
28	9	1983	1620	34	6.8			31.			8.57
28	9	1983	819	34	5.2			27.			8.83
28	9	1983	2018	34	6.4			30.			8.7
28	9	1983	2216	34	5.3			29.			8.3
28	9	1983	1816	34	6.6			31.			8.5
28	9	1983	1222	35	7.9			29.			8.64
28	9	1983	821	35	4.1			27.5			8.69
28	9	1983	1024	35	5.9			28.			8.8
28	9	1983	2218	35	5.3			29.			8.3
28	9	1983	617	35	4.4			28.			8.77
28	9	1983	1818	35	6.6			30.5			8.4
28	9	1983	2021	35	6.			29.			8.8
28	9	1983	1422	35	6.6			30.5			8.69
28	9	1983	1623	35	6.9			31.			8.49
28	9	1983	622	37	5.5			27.			8.65
28	9	1983	826	37	5.			27.			8.49
28	9	1983	1030	37	6.3			28.3			8.45
28	9	1983	1427	37	7.5			31.			8.62
28	9	1983	1628	37	7.1			31.			8.48
28	9	1983	1228	37							8.34
28	9	1983	2025	37	7.			29.5			8.4
28	9	1983	2223	37	6.			28.5			8.4
28	9	1983	1824	37	7.8			36.			8.3
28	9	1983	856	4	4.5			27.3			8.41
28	9	1983	2247	4	4.5			29.			8.2
28	9	1983	648	4	4.3			27.			8.51
28	9	1983	1849	4	6.7			31.			8.5
28	9	1983	1100	4	6.2			28.5			7.9
28	9	1983	1454	4	6.9			32.			8.4
28	9	1983	1656	4	6.9			31.5			8.56
28	9	1983	1257	4	6.2			31.			8.49

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
28	9	1983	2050	4	5.2			29.5			8.6
28	9	1983	2227	42	5.6			28.			8.6
28	9	1983	831	42	4.5			27.			8.21
28	9	1983	1432	42	6.8			30.			8.71
28	9	1983	1035	42	6.2			28.5			8.23
28	9	1983	1828	42	8.8			30.			8.5
28	9	1983	2030	42	6.8			28.5			8.6
28	9	1983	626	42	5.			27.			8.86
28	9	1983	1233	42	7.9			30.			8.67
28	9	1983	1634	42	6.9			31.			8.69
28	9	1983	655	50	2.			27.			8.19
28	9	1983	1304	50	6.1			32.5			8.15
28	9	1983	1703	50	7.			31.			8.25
28	9	1983	1108	50	6.2			28.5			7.67
28	9	1983	1502	50	6.1			32.8			8.07
28	9	1983	2057	50	5.3			30.			8.2
28	9	1983	902	50	4.			27.			8.01
28	9	1983	2254	50	5.7			29.5			7.9
28	9	1983	1856	50	6.			30.5			8.5
28	9	1983	1055	7	5.7			28.3			8.01
28	9	1983	2046	7	5.1			29.5			8.4
28	9	1983	643	7	4.2			27.5			8.75
28	9	1983	850	7	4.3			27.2			8.54
28	9	1983	1252	7	7.9			31.			8.79
28	9	1983	2244	7	4.5			28.5			8.6
28	9	1983	1651	7	6.8			31.			8.77
28	9	1983	1844	7	7.			30.5			8.7
28	9	1983	1450	7	6.8			30.5			8.77
29	9	1983	543	13	5.			27.			8.62
29	9	1983	741	13	4.6			27.			8.49
29	9	1983	439	13	5.			27.5			8.33
29	9	1983	240	13	4.8			27.			8.
29	9	1983	640	13	4.6			27.			8.21
29	9	1983	38	13	5.3			28.5			8.4
29	9	1983	638	14	3.4			26.5			8.48
29	9	1983	36	14	4.7			28.5			8.4
29	9	1983	541	14	3.8			27.			8.58
29	9	1983	437	14	4.			27.5			8.34
29	9	1983	237	14	4.			28.5			8.5
29	9	1983	740	14	3.4			26.5			8.44
29	9	1983	235	16	4.3			28.			8.3
29	9	1983	539	16	4.8			27.			8.69
29	9	1983	636	16	4.2			27.			8.48
29	9	1983	737	16	4.2			27.			8.35

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
29	9	1983	34	16	4.7			28.			8.3
29	9	1983	435	16	4.6			27.5			8.44
29	9	1983	631	21	4.			26.5			8.53
29	9	1983	431	21	4.4			27.5			8.31
29	9	1983	231	21	4.2			28.2			8.
29	9	1983	31	21	4.9			28.5			8.4
29	9	1983	733	21	4.			26.5			8.43
29	9	1983	533	21	4.4			27.			8.69
29	9	1983	605	25	4.5			27.			8.41
29	9	1983	705	25	4.			26.			8.42
29	9	1983	507	25	4.8			27.			8.34
29	9	1983	5	25	5.7			28.			8.2
29	9	1983	205	25	5.4			27.5			8.
29	9	1983	404	25	4.4			27.			8.24
29	9	1983	410	28	4.4			27.5			8.58
29	9	1983	513	28	4.6			27.			8.61
29	9	1983	702	28	4.			26.5			8.61
29	9	1983	211	28	4.2			28.5			8.3
29	9	1983	612	28	4.2			27.			8.41
29	9	1983	11	28	4.7			28.			8.6
29	9	1983	417	34	5.2			27.5			8.56
29	9	1983	618	34	5.			27.			8.25
29	9	1983	717	34	4.6			26.5			8.62
29	9	1983	17	34	5.5			28.			8.5
29	9	1983	217	34	4.8			27.5			8.
29	9	1983	520	34	5.4			27.			8.63
29	9	1983	719	35	4.			26.5			8.52
29	9	1983	219	35	4.5			28.			8.8
29	9	1983	19	35	4.7			29.5			8.4
29	9	1983	521	35	4.8			27.			8.57
29	9	1983	620	35	4.			26.5			8.4
29	9	1983	419	35	4.6			27.5			8.49
29	9	1983	24	37	5.7			28.			8.5
29	9	1983	424	37	5.4			27.			8.38
29	9	1983	526	37	5.4			27.			8.57
29	9	1983	624	37	4.8			27.			8.58
29	9	1983	724	37	4.8			26.5			8.5
29	9	1983	224	37	5.3			28.			8.1
29	9	1983	550	4	3.2			27.			8.39
29	9	1983	748	4	2.8			26.5			8.31
29	9	1983	646	4	3.			27.			8.31
29	9	1983	245	4	3.2			28.1			8.1
29	9	1983	46	4	4.2			28.			8.5
29	9	1983	446	4	3.2			27.5			8.17

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
29	9	1983	730	42	4.4			26.			8.6
29	9	1983	228	42	4.8			28.			8.6
29	9	1983	428	42	4.4			27.			8.53
29	9	1983	531	42	4.8			26.5			8.75
29	9	1983	629	42	4.6			26.			8.3
29	9	1983	28	42	5.4			27.5			8.3
29	9	1983	453	50	2.8			28.			8.05
29	9	1983	51	50	5.5			29.			7.9
29	9	1983	558	50	2.6			27.			8.58
29	9	1983	651	50	2.4			27.			8.49
29	9	1983	253	50	2.8			29.			7.5
29	9	1983	756	50	2.2			26.5			8.04
29	9	1983	644	7	2.8			27.			8.54
29	9	1983	43	7	4.1			28.			8.4
29	9	1983	243	7	3.1			28.5			8.1
29	9	1983	443	7	3.			28.			8.44
29	9	1983	745	7	2.5			26.5			8.56
29	9	1983	547	7	2.8			27.5			8.64
27	10	1983	1639	13	9.9			31.			
27	10	1983	1044	13	8.2						8.83
27	10	1983	2240	13	6.4			29.			8.91
27	10	1983	839	13	4.2						
27	10	1983	1838	13	10.8			29.5			9.27
27	10	1983	639	13	5.						8.32
27	10	1983	2038	13	10.8			30.			
27	10	1983	1637	14	11.2			31.			
27	10	1983	2237	14	6.4			29.			9.13
27	10	1983	1041	14	9.8						9.09
27	10	1983	837	14	5.9						
27	10	1983	1835	14	11.			29.5			9.65
27	10	1983	637	14	5.2						8.67
27	10	1983	2035	14	10.			29.5			
27	10	1983	834	16	5.8						
27	10	1983	1635	16	10.4			31.			
27	10	1983	1039	16	9.8						8.88
27	10	1983	1833	16	10.1			29.5			9.57
27	10	1983	2235	16	6.6			29.			9.17
27	10	1983	2033	16	14.3			30.			
27	10	1983	634	16	4.8						8.58
27	10	1983	829	21	4.6						
27	10	1983	1033	21	7.8						8.92
27	10	1983	1630	21	10.2			31.			
27	10	1983	1830	21	9.			30.			9.56
27	10	1983	2030	21	8.3			29.5			

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
27	10	1983	2230	21	6.4			29.5			9.14
27	10	1983	630	21	3.						8.62
27	10	1983	804	25	4.						
27	10	1983	2204	25	7.2			29.			9.12
27	10	1983	1603	25	11.2			31.			
27	10	1983	1803	25	9.9			30.			9.39
27	10	1983	2004	25	6.9			29.			
27	10	1983	604	25	3.1						8.65
27	10	1983	1005	25	7.						8.84
27	10	1983	810	28	5.5						
27	10	1983	1610	28	13.			31.			
27	10	1983	2211	28	6.6			29.			9.17
27	10	1983	1810	28	11.2			30.			9.78
27	10	1983	2011	28	8.8			29.5			
27	10	1983	609	28	5.2						8.98
27	10	1983	1012	28	10.6						8.88
27	10	1983	616	34	4.						8.74
27	10	1983	1019	34	8.9						8.7
27	10	1983	2018	34	9.2			29.			
27	10	1983	1816	34	13.4			30.			9.64
27	10	1983	815	34	5.						
27	10	1983	2216	34	6.7			29.			9.23
27	10	1983	1617	34	14.			31.			
27	10	1983	618	35	2.5						8.54
27	10	1983	1021	35	3.2						8.48
27	10	1983	2019	35	5.6			29.5			
27	10	1983	1818	35	8.1			30.			9.17
27	10	1983	2218	35	6.5			29.			9.12
27	10	1983	818	35	2.8						
27	10	1983	1619	35	8.2			31.			
27	10	1983	1026	37	6.8						8.76
27	10	1983	2223	37	6.5			29.			8.9
27	10	1983	2023	37	7.4			29.5			
27	10	1983	1823	37	10.			30.			9.55
27	10	1983	623	37	3.1						8.74
27	10	1983	1624	37	10.2			31.			
27	10	1983	822	37	4.5						
27	10	1983	2245	4	6.5			29.			8.84
27	10	1983	1844	4	11.1			29.5			9.27
27	10	1983	2043	4	6.4			29.			
27	10	1983	1646	4	10.5			31.			
27	10	1983	646	4	5.4						8.43
27	10	1983	846	4	5.8						
27	10	1983	1051	4	8.4						8.8

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
27	10	1983	1031	42	8.5						8.93
27	10	1983	2027	42	9.			29.			
27	10	1983	2228	42	6.6			29.			9.17
27	10	1983	1827	42	11.8			30.			9.33
27	10	1983	627	42	4.4						8.9
27	10	1983	827	42	6.						
27	10	1983	1628	42	15.1			30.5			
27	10	1983	655	50	2.9						8.56
27	10	1983	1654	50	10.3			31.			
27	10	1983	1852	50	9.5			29.5			9.45
27	10	1983	2050	50	7.			30.			
27	10	1983	2253	50	6.8			30.			8.66
27	10	1983	852	50	3.7						
27	10	1983	1058	50	7.5						8.66
27	10	1983	643	7	5.2						
27	10	1983	1048	7	9.2						
27	10	1983	2041	7	6.7						
27	10	1983	2243	7	6.5						
27	10	1983	843	7	5.8						
27	10	1983	1842	7	10.8						
27	10	1983	1644	7	12.8						
28	10	1983	742	13	6.3			27.			
28	10	1983	537	13	6.4			27.5			
28	10	1983	242	13	7.			28.			9.16
28	10	1983	440	13	7.6			28.			
28	10	1983	42	13	8.2			28.			
28	10	1983	638	13	6.			28.			
28	10	1983	535	14	7.			27.5			
28	10	1983	438	14	8.4			28.			
28	10	1983	38	14	8.4			28.			
28	10	1983	635	14	6.9			28.			
28	10	1983	239	14	7.2			28.			9.41
28	10	1983	740	14	6.			27.5			
28	10	1983	737	16	5.3			28.			
28	10	1983	435	16	7.6			28.			
28	10	1983	533	16	6.9			27.5			
28	10	1983	633	16	6.2			28.			
28	10	1983	36	16	9.			28.			
28	10	1983	237	16	7.6			28.			9.41
28	10	1983	431	21	7.5			28.			
28	10	1983	629	21	3.2			28.			
28	10	1983	528	21	3.6			27.5			
28	10	1983	30	21	5.7			28.			
28	10	1983	233	21	4.7			28.			9.23

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
28	10	1983	732	21	4.2			28.			
28	10	1983	604	25	4.3			28.			
28	10	1983	704	25	5.2			28.			
28	10	1983	204	25	5.6			28.5			9.15
28	10	1983	403	25	5.3			28.			
28	10	1983	3	25	5.4			28.5			
28	10	1983	503	25	4.8			28.			
28	10	1983	211	28	6.8			28.			9.44
28	10	1983	10	28	7.4			28.			
28	10	1983	410	28	6.2			28.			
28	10	1983	510	28	5.4			27.			
28	10	1983	711	28	6.2			27.5			
28	10	1983	611	28	5.6			27.5			
28	10	1983	16	34	9.4			28.			
28	10	1983	718	34	7.6			28.			
28	10	1983	218	34	6.8			28.			9.35
28	10	1983	516	34	7.6			27.5			
28	10	1983	416	34	8.			28.			
28	10	1983	617	34	7.			27.5			
28	10	1983	19	35	5.2			28.5			
28	10	1983	519	35	4.2			27.5			
28	10	1983	221	35	4.5			28.			9.09
28	10	1983	418	35	4.4			28.			
28	10	1983	720	35	4.4			28.			
28	10	1983	619	35	3.9			28.			
28	10	1983	226	37	5.5			28.5			9.3
28	10	1983	725	37	4.8			28.			
28	10	1983	523	37	4.9			27.5			
28	10	1983	23	37	6.2			28.5			
28	10	1983	424	37	5.3			28.			
28	10	1983	623	37	4.2			28.			
28	10	1983	749	4	6.			28.			
28	10	1983	250	4	6.			28.			9.22
28	10	1983	47	4	6.6			28.			
28	10	1983	543	4	6.2			27.5			
28	10	1983	645	4	5.8			28.			
28	10	1983	446	4	7.			28.			
28	10	1983	526	42	5.8			27.			
28	10	1983	28	42	7.6			28.			
28	10	1983	428	42	6.4			28.			
28	10	1983	230	42	6.			28.			9.44
28	10	1983	627	42	5.						
28	10	1983	729	42	5.5			28.			
28	10	1983	453	50	3.2			28.			

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
28	10	1983	55	50	3.8			28.			
28	10	1983	756	50	2.2			29.			
28	10	1983	550	50	2.2			27.5			
28	10	1983	257	50	3.1			28.			8.85
28	10	1983		50							
28	10	1983	248	7	7.8						
28	10	1983	444	7	8.5						
28	10	1983	541	7	8.6						
28	10	1983	643	7	7.7						
28	10	1983	747	7	7.5						
28	10	1983	45	7	9.2						
30	11	1983	1238	13	8.8			29.5			
30	11	1983	1837	13	7.5			31.			8.9
30	11	1983	2037	13	7.8			27.5			
30	11	1983	838	13	7.9			27.			
30	11	1983	2237	13	7.7			26.			9.22
30	11	1983	1637	13	9.4			28.5			
30	11	1983	640	13	6.4			27.			8.51
30	11	1983	1438	13	9.6			30.			9.55
30	11	1983	1038	13	8.3			28.			8.31
30	11	1983	1834	14	7.6			31.			8.8
30	11	1983	836	14	7.7			26.5			
30	11	1983	1237	14	8.6			30.			
30	11	1983	1037	14	7.9			28.			8.23
30	11	1983	2234	14	7.1			26.5			9.33
30	11	1983	1436	14	8.			30.			9.11
30	11	1983	638	14	5.3			27.			8.26
30	11	1983	1635	14	9.3			28.5			
30	11	1983	2035	14	7.2			27.5			
30	11	1983	635	16	4.			26.			8.17
30	11	1983	1633	16	12.1			28.			
30	11	1983	2232	16	10.			25.5			9.24
30	11	1983	1832	16	8.			31.			9.37
30	11	1983	1236	16	13.3			29.			
30	11	1983	1434	16	12.2			30.			9.71
30	11	1983	2033	16	10.			27.			
30	11	1983	834	16	7.6			26.5			
30	11	1983	1035	16	8.8			27.5			8.54
30	11	1983	1031	21	10.3			28.			8.37
30	11	1983	1429	21	11.2			30.			
30	11	1983	631	21	5.2			26.5			8.34
30	11	1983	1630	21	10.			28.5			
30	11	1983	2028	21	6.1			27.5			
30	11	1983	831	21	7.			27.			

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
30	11	1983	2228	21	3.8			26.5			9.18
30	11	1983	1828	21	9.1			31.5			9.36
30	11	1983	1231	21	11.			30.5			
30	11	1983	1803	25	9.			31.			9.37
30	11	1983	2203	25	8.2			25.			8.92
30	11	1983	805	25	4.7			26.			
30	11	1983	604	25	5.3			26.5			8.4
30	11	1983	1004	25	8.7			27.			8.67
30	11	1983	2004	25	7.6			27.			
30	11	1983	1205	25	8.6			28.			
30	11	1983	1603	25	10.6			29.			
30	11	1983	1405	25	9.9			30.			9.5
30	11	1983	1609	28	9.4			28.5			
30	11	1983	611	28	5.4			26.5			8.51
30	11	1983	2011	28	6.9			27.			
30	11	1983	1212	28	10.3			27.			
30	11	1983	810	28	6.6			26.			
30	11	1983	1412	28	9.8			30.			9.3
30	11	1983	1810	28	9.1			31.			9.15
30	11	1983	2210	28	6.8			25.2			8.96
30	11	1983	1011	28	8.5			26.5			8.65
30	11	1983	1016	34	8.7			27.			8.3
30	11	1983	1417	34	12.6			30.			9.34
30	11	1983	1815	34	8.3			30.			9.13
30	11	1983	618	34	5.7			26.			8.11
30	11	1983	817	34	6.5			26.5			
30	11	1983	2016	34	6.9			27.			
30	11	1983	2215	34	5.4			25.5			9.08
30	11	1983	1616	34	12.1			29.			
30	11	1983	1218	34	9.3			28.			
30	11	1983	2218	35	9.5			25.			9.26
30	11	1983	619	35	5.6			26.			8.38
30	11	1983	1618	35	11.9			28.5			
30	11	1983	1220	35	9.3			28.			
30	11	1983	1018	35	10.3			27.			8.56
30	11	1983	2017	35	7.5			27.			
30	11	1983	819	35	7.			26.			
30	11	1983	1419	35	14.5			30.			9.48
30	11	1983	1818	35	10.5			31.5			9.33
30	11	1983	824	37	5.			26.			
30	11	1983	1224	37	10.4			27.5			
30	11	1983	1822	37	10.5			30.5			9.29
30	11	1983	623	37	4.5			26.			8.11
30	11	1983	1023	37	8.			27.			8.37

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
30	11	1983	2021	37	7.9			27.			
30	11	1983	2222	37	8.			25.5			8.78
30	11	1983	1622	37	12.3			29.			
30	11	1983	1424	37	12.2			29.			9.57
30	11	1983	2246	4	7.4			26.			9.26
30	11	1983	2046	4	7.2			27.			
30	11	1983	1247	4	9.3			29.5			
30	11	1983	649	4	5.4			26.			8.36
30	11	1983	1446	4	11.			30.			9.24
30	11	1983	1646	4	7.9			28.5			
30	11	1983	1846	4	9.2			32.			9.05
30	11	1983	1047	4	8.6			27.5			8.02
30	11	1983	845	4	7.6			26.5			
30	11	1983	2226	42	7.6			26.			9.15
30	11	1983	628	42	4.7			26.			8.11
30	11	1983	2026	42	7.8			27.			
30	11	1983	1229	42	10.5			27.5			
30	11	1983	1427	42	12.6			29.			9.55
30	11	1983	1826	42	5.2			31.			9.25
30	11	1983	1028	42	8.5			27.			8.28
30	11	1983	828	42	5.9			26.5			
30	11	1983	1627	42	9.8			29.			
30	11	1983	1653	50	4.3			28.5			
30	11	1983	852	50	4.			26.			
30	11	1983	1054	50	4.9			28.			7.52
30	11	1983	1854	50	8.			30.			7.84
30	11	1983	654	50	2.			25.5			7.66
30	11	1983	1454	50	7.			30.5			8.42
30	11	1983	2052	50	4.2			27.			
30	11	1983	1253	50	6.5			30.			
30	11	1983	2254	50	4.2			27.			7.98
30	11	1983	1641	7	11.7			29.			
30	11	1983	1842	7	9.4			31.			9.23
30	11	1983	1042	7	9.3			27.5			8.38
30	11	1983	1242	7	9.8			29.5			
30	11	1983	842	7	8.6			27.			
30	11	1983	644	7	4.5			26.5			8.36
30	11	1983	1442	7	11.6			30.			9.27
30	11	1983	2042	7	7.5			27.			
30	11	1983	2242	7	8.2			26.5			9.4
1	12	1983	639	13	5.4			20.5			8.95
1	12	1983	239	13	9.4			21.			9.
1	12	1983	442	13	7.2			20.5			
1	12	1983	39	13	7.5			26.			

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
1	12	1983	840	13	5.8			21.			
1	12	1983	37	14	7.			26.5			
1	12	1983	439	14	6.1			20.5			
1	12	1983	838	14	5.4			21.			
1	12	1983	637	14	5.			20.5			8.68
1	12	1983	237	14	8.1			21.			8.73
1	12	1983	635	16	4.7			20.2			8.89
1	12	1983	235	16	8.4			22.			8.96
1	12	1983	35	16	7.5			26.			
1	12	1983	835	16	5.			21.			
1	12	1983	437	16	6.5			22.5			
1	12	1983	831	21	4.5			21.			
1	12	1983	433	21	6.3			22.			
1	12	1983	30	21	7.2			26.			
1	12	1983	230	21	8.4			22.5			8.85
1	12	1983	631	21	4.7			20.5			8.6
1	12	1983	4	25	8.2			26.			
1	12	1983	405	25	6.8			21.			
1	12	1983	604	25	4.8			21.			8.45
1	12	1983	804	25	5.1			21.			
1	12	1983	205	25	8.6			23.5			8.59
1	12	1983	210	28	8.8			22.5			8.69
1	12	1983	411	28	6.3			22.			
1	12	1983	611	28	4.7			20.5			8.54
1	12	1983	10	28	8.			25.			
1	12	1983	812	28	4.8			20.5			
1	12	1983	16	34	7.6			26.			
1	12	1983	417	34	7.1			21.			
1	12	1983	216	34	8.8			22.			8.73
1	12	1983	817	34	5.			21.			
1	12	1983	618	34	4.8			21.			8.61
1	12	1983	219	35	9.			22.			8.87
1	12	1983	819	35	4.8			21.			
1	12	1983	620	35	5.			21.			8.73
1	12	1983	19	35	7.8			26.			
1	12	1983	419	35	6.5			21.			
1	12	1983	23	37	7.8			26.			
1	12	1983	424	37	6.8			21.			
1	12	1983	624	37	4.2			21.			8.3
1	12	1983	824	37	4.6			21.			
1	12	1983	223	37	7.6			23.			8.42
1	12	1983	648	4	4.8			21.			8.78
1	12	1983	849	4	5.			21.			
1	12	1983	247	4	8.8			20.5			8.97

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
1	12	1983	449	4	6.3			21.			
1	12	1983	47	4	7.4			26.			
1	12	1983	228	42	7.8			22.			8.75
1	12	1983	629	42	4.5			20.5			8.69
1	12	1983	828	42	4.3			21.			
1	12	1983	428	42	6.			21.5			
1	12	1983	28	42	7.1			26.			
1	12	1983	457	50	2.			22.5			
1	12	1983	54	50	2.2			26.5			
1	12	1983	856	50	1.			21.			
1	12	1983	653	50	1.2			21.			7.59
1	12	1983	254	50	2.4			23.			7.81
1	12	1983	845	7	5.6			21.			
1	12	1983	44	7	7.9			26.			
1	12	1983	244	7	9.6			21.			9.11
1	12	1983	445	7	7.3			21.5			
1	12	1983	643	7	5.2			20.5			8.98

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
27	2	1984	600	4	4.2						
27	2	1984	1000	4	5.2						
27	2	1984	1400	4	6.9						
27	2	1984	1800	4	8.2						
27	2	1984	2200	4	8.6						
27	2	1984	600	7	4.						
27	2	1984	1000	7	5.						
27	2	1984	1400	7	7.2						
27	2	1984	1800	7	7.8						
27	2	1984	2200	7	8.8						
27	2	1984	600	13	4.2						
27	2	1984	1000	13	5.						
27	2	1984	1400	13	7.2						
27	2	1984	1800	13	7.3						
27	2	1984	2200	13	9.						
27	2	1984	600	14	4.8						
27	2	1984	1000	14	4.9						
27	2	1984	1400	14	8.1						
27	2	1984	1800	14	7.4						
27	2	1984	2200	14	7.8						
27	2	1984	600	16	5.2						
27	2	1984	1000	16	5.4						
27	2	1984	1400	16	7.6						
27	2	1984	1800	16	8.6						
27	2	1984	2200	16	8.3						
27	2	1984	2200	21	8.9						
27	2	1984	1000	21	5.6						
27	2	1984	1400	21	7.3						
27	2	1984	1800	21	8.2						
27	2	1984	600	21	5.1						
27	2	1984	600	22	4.2						
27	2	1984	1000	22	4.6						
27	2	1984	1400	22	6.5						
27	2	1984	1800	22	8.4						
27	2	1984	2200	22	8.5						
27	2	1984	2200	25	9.						
27	2	1984	1000	25	4.9						
27	2	1984	1400	25	7.3						
27	2	1984	1800	25	8.1						
27	2	1984	600	25	4.8						
27	2	1984	600	28	4.						
27	2	1984	1000	28	4.6						
27	2	1984	1400	28	7.4						

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
27	2	1984	1800	28	7.6						
27	2	1984	2200	28	7.7						
27	2	1984	600	34	4.6						
27	2	1984	1000	34	4.8						
27	2	1984	1400	34	6.4						
27	2	1984	1800	34	8.8						
27	2	1984	2200	34	8.4						
27	2	1984	600	35	4.						
27	2	1984	1000	35	4.5						
27	2	1984	1400	35	6.3						
27	2	1984	1800	35	7.9						
27	2	1984	2200	35	8.4						
27	2	1984	600	37	4.						
27	2	1984	1000	37	5.1						
27	2	1984	1400	37	8.1						
27	2	1984	1800	37	8.2						
27	2	1984	2200	37	8.9						
27	2	1984	600	42	4.2						
27	2	1984	1000	42	5.5						
27	2	1984	1400	42	6.5						
27	2	1984	1800	42	8.4						
27	2	1984	2200	42	8.						
27	2	1984	1800	13	7.3						
27	2	1984	600	13	4.2						
27	2	1984	1000	13	5.						
27	2	1984	1400	13	7.2						
27	2	1984	1400	14	8.1						
27	2	1984	1800	14	7.4						
27	2	1984	600	14	4.8						
27	2	1984	1000	14	4.9						
27	2	1984	1000	16	5.4						
27	2	1984	1400	16	7.6						
27	2	1984	1800	16	8.6						
27	2	1984	600	16	5.2						
27	2	1984	600	21	5.1						
27	2	1984	1000	21	5.6						
27	2	1984	1400	21	7.3						
27	2	1984	1800	21	8.2						
27	2	1984	1000	22	4.6						
27	2	1984	600	22	4.2						
27	2	1984	1400	22	6.5						
27	2	1984	1400	25	7.3						
27	2	1984	600	25	4.8						
27	2	1984	1000	25	4.9						

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
27	2	1984	1000	28	4.6						
27	2	1984	1400	28	7.4						
27	2	1984	600	28	4.						
27	2	1984	600	34	4.6						
27	2	1984	1400	34	6.4						
27	2	1984	1000	34	4.8						
27	2	1984	1000	35	4.5						
27	2	1984	600	35	4.						
27	2	1984	1400	35	6.3						
27	2	1984	1400	37	8.1						
27	2	1984	600	37	4.						
27	2	1984	1000	37	5.1						
27	2	1984	1000	4	5.2						
27	2	1984	1400	4	6.9						
27	2	1984	1800	4	8.2						
27	2	1984	600	4	4.2						
27	2	1984	1000	42	5.5						
27	2	1984	1400	42	6.5						
27	2	1984	600	42	4.2						
27	2	1984	600	7	4.						
27	2	1984	1400	7	7.2						
27	2	1984	1000	7	5.						
27	2	1984	1800	7	7.8						
28	2	1984	200	4	7.2						
28	2	1984	600	4	4.2						
28	2	1984	600	7	4.						
28	2	1984	200	7	6.3						
28	2	1984	200	13	6.6						
28	2	1984	600	13	4.2						
28	2	1984	600	14	4.8						
28	2	1984	200	14	7.2						
28	2	1984	200	16	5.8						
28	2	1984	600	16	5.2						
28	2	1984	600	21	5.2						
28	2	1984	200	21	5.2						
28	2	1984	200	22	7.7						
28	2	1984	600	22	4.						
28	2	1984	600	25	4.2						
28	2	1984	200	25	7.9						
28	2	1984	200	28	7.6						
28	2	1984	600	28	4.8						
28	2	1984	600	34	4.6						
28	2	1984	200	34	5.8						
28	2	1984	200	35	6.3						

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
28	2	1984	600	35	4.						
28	2	1984	600	37	4.						
28	2	1984	200	37	6.7						
28	2	1984	200	42	6.2						
28	2	1984	600	42	4.8						
29	3	1984	600	4	3.8						
29	3	1984	1800	4	7.4						
29	3	1984	1200	4	7.2						
29	3	1984	1400	4	7.4						
29	3	1984	1600	4	8.6						
29	3	1984	1000	4	5.4						
29	3	1984	2200	4	8.4						
29	3	1984	800	4	4.						
29	3	1984	1200	7	7.2						
29	3	1984	800	7	5.2						
29	3	1984	1800	7	7.2						
29	3	1984	2200	7	8.6						
29	3	1984	600	7	3.7						
29	3	1984	1600	7	9.4						
29	3	1984	1000	7	5.2						
29	3	1984	1400	7	7.4						
29	3	1984	1800	13	6.8						
29	3	1984	1400	13	8.4						
29	3	1984	800	13	5.2						
29	3	1984	1000	13	5.4						
29	3	1984	1200	13	6.4						
29	3	1984	600	13	4.						
29	3	1984	1600	13	8.4						
29	3	1984	2200	13	9.						
29	3	1984	800	14	5.4						
29	3	1984	2200	14	7.						
29	3	1984	1400	14	7.4						
29	3	1984	1600	14	8.4						
29	3	1984	1800	14	6.7						
29	3	1984	1200	14	7.4						
29	3	1984	600	14	4.						
29	3	1984	1000	14	6.						
29	3	1984	1400	16	8.2						
29	3	1984	1000	16	5.4						
29	3	1984	2200	16	7.6						
29	3	1984	600	16	3.8						
29	3	1984	800	16	4.2						
29	3	1984	1800	16	8.1						
29	3	1984	1200	16	7.2						

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
29	3	1984	1600	16	8.4						
29	3	1984	2200	21	8.1						
29	3	1984	1600	21	11.4						
29	3	1984	1000	21	5.						
29	3	1984	1200	21	7.						
29	3	1984	1400	21	8.4						
29	3	1984	800	21	5.2						
29	3	1984	1800	21	6.6						
29	3	1984	600	21	4.						
29	3	1984	1000	22	5.						
29	3	1984	600	22	3.6						
29	3	1984	1600	22	12.2						
29	3	1984	1800	22	6.8						
29	3	1984	2200	22	6.						
29	3	1984	1400	22	8.4						
29	3	1984	800	22	4.6						
29	3	1984	1200	22	6.						
29	3	1984	1600	25	10.4						
29	3	1984	1200	25	6.2						
29	3	1984	600	25	3.8						
29	3	1984	800	25	4.2						
29	3	1984	1000	25	4.6						
29	3	1984	2200	25	6.						
29	3	1984	1400	25	8.2						
29	3	1984	1800	25	7.						
29	3	1984	600	28	3.7						
29	3	1984	1800	28	7.						
29	3	1984	1200	28	6.4						
29	3	1984	1400	28	9.4						
29	3	1984	1600	28	11.2						
29	3	1984	1000	28	4.4						
29	3	1984	2200	28	6.8						
29	3	1984	800	28	4.2						
29	3	1984	1200	34	7.2						
29	3	1984	800	34	5.						
29	3	1984	1800	34	6.4						
29	3	1984	2200	34	8.						
29	3	1984	600	34	4.						
29	3	1984	1600	34	11.4						
29	3	1984	1000	34	5.						
29	3	1984	1400	34	8.2						
29	3	1984	1800	35	7.3						
29	3	1984	1400	35	9.4						
29	3	1984	800	35	4.2						

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
29	3	1984	1000	35	5.2						
29	3	1984	1200	35	6.4						
29	3	1984	600	35	3.8						
29	3	1984	1600	35	11.4						
29	3	1984	2200	35	7.8						
29	3	1984	800	37	5.						
29	3	1984	2200	37	7.2						
29	3	1984	1400	37	8.2						
29	3	1984	1600	37	11.4						
29	3	1984	1800	37	7.1						
29	3	1984	1200	37	7.						
29	3	1984	600	37	4.						
29	3	1984	1000	37	5.						
29	3	1984	1400	42	9.2						
29	3	1984	1000	42	5.						
29	3	1984	2200	42	8.						
29	3	1984	600	42	4.2						
29	3	1984	800	42	5.2						
29	3	1984	1800	42	6.						
29	3	1984	1200	42	7.2						
29	3	1984	1600	42	10.4						
30	3	1984	0	4	5.8						
30	3	1984	400	4	5.3						
30	3	1984	600	4	5.2						
30	3	1984	200	4	7.						
30	3	1984	600	7	6.						
30	3	1984	200	7	7.1						
30	3	1984	400	7	5.7						
30	3	1984	0	7	6.2						
30	3	1984	400	13	5.7						
30	3	1984	0	13	6.3						
30	3	1984	200	13	8.						
30	3	1984	600	13	4.5						
30	3	1984	200	14	5.6						
30	3	1984	600	14	4.8						
30	3	1984	0	14	6.4						
30	3	1984	400	14	5.8						
30	3	1984	0	16	5.8						
30	3	1984	400	16	5.2						
30	3	1984	600	16	4.4						
30	3	1984	200	16	5.5						
30	3	1984	600	21	5.2						
30	3	1984	200	21	5.9						
30	3	1984	400	21	6.2						

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
30	3	1984	0	21	6.1						
30	3	1984	400	22	5.2						
30	3	1984	0	22	5.6						
30	3	1984	200	22	5.						
30	3	1984	600	22	4.8						
30	3	1984	200	25	5.8						
30	3	1984	600	25	5.2						
30	3	1984	0	25	6.4						
30	3	1984	400	25	5.6						
30	3	1984	0	28	5.9						
30	3	1984	400	28	5.8						
30	3	1984	600	28	4.3						
30	3	1984	200	28	5.9						
30	3	1984	600	34	4.8						
30	3	1984	200	34	5.2						
30	3	1984	400	34	5.4						
30	3	1984	0	34	6.4						
30	3	1984	400	35	5.3						
30	3	1984	0	35	6.4						
30	3	1984	200	35	5.8						
30	3	1984	600	35	4.1						
30	3	1984	200	37	5.2						
30	3	1984	600	37	4.6						
30	3	1984	0	37	6.7						
30	3	1984	400	37	6.						
30	3	1984	0	42	6.7						
30	3	1984	400	42	5.9						
30	3	1984	600	42	4.5						
30	3	1984	200	42	5.9						
2	5	1984	1600	4	7.8						
2	5	1984	1200	4	5.6						
2	5	1984	1400	4	8.1						
2	5	1984	600	4	5.8						
2	5	1984	1800	4	6.8						
2	5	1984	2200	4	6.6						
2	5	1984	1000	4	6.4						
2	5	1984	1400	7	8.2						
2	5	1984	1200	7	5.6						
2	5	1984	1800	7	6.6						
2	5	1984	2200	7	6.4						
2	5	1984	1000	7	6.5						
2	5	1984	600	7	4.						
2	5	1984	1600	7	7.8						
2	5	1984	1200	13	5.7						

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
2	5	1984	2200	13	6.4						
2	5	1984	1800	13	6.4						
2	5	1984	600	13	3.8						
2	5	1984	1000	13	6.5						
2	5	1984	1600	13	7.9						
2	5	1984	1400	13	8.6						
2	5	1984	1800	14	6.6						
2	5	1984	600	14	5.						
2	5	1984	1000	14	6.7						
2	5	1984	1200	14	6.						
2	5	1984	1400	14	8.2						
2	5	1984	1600	14	8.1						
2	5	1984	2200	14	6.3						
2	5	1984	600	16	5.6						
2	5	1984	2200	16	6.4						
2	5	1984	1400	16	8.4						
2	5	1984	1600	16	7.9						
2	5	1984	1800	16	6.6						
2	5	1984	1200	16	5.9						
2	5	1984	1000	16	7.						
2	5	1984	1400	21	8.9						
2	5	1984	2200	21	5.8						
2	5	1984	1000	21	6.5						
2	5	1984	1200	21	5.5						
2	5	1984	1800	21	6.8						
2	5	1984	600	21	3.4						
2	5	1984	1600	21	8.						
2	5	1984	2200	22	6.2						
2	5	1984	1200	22	6.4						
2	5	1984	1000	22	6.3						
2	5	1984	1600	22	8.8						
2	5	1984	1800	22	7.						
2	5	1984	600	22	5.						
2	5	1984	1400	22	8.9						
2	5	1984	1000	25	6.4						
2	5	1984	1600	25	8.4						
2	5	1984	1800	25	6.8						
2	5	1984	1200	25	6.2						
2	5	1984	1400	25	8.9						
2	5	1984	600	25	5.6						
2	5	1984	2200	25	6.5						
2	5	1984	1600	28	8.8						
2	5	1984	1200	28	6.6						
2	5	1984	1400	28	9.						

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
2	5	1984	600	28	5.2						
2	5	1984	1800	28	6.8						
2	5	1984	2200	28	6.4						
2	5	1984	1000	28	7.						
2	5	1984	1400	34	8.8						
2	5	1984	1200	34	6.6						
2	5	1984	1800	34	6.8						
2	5	1984	2200	34	6.5						
2	5	1984	1000	34	6.8						
2	5	1984	600	34	4.6						
2	5	1984	1600	34	8.4						
2	5	1984	1200	35	6.2						
2	5	1984	2200	35	6.4						
2	5	1984	1800	35	6.8						
2	5	1984	600	35	4.8						
2	5	1984	1000	35	6.7						
2	5	1984	1600	35	9.6						
2	5	1984	1400	35	8.4						
2	5	1984	1800	37	6.8						
2	5	1984	600	37	5.2						
2	5	1984	1000	37	7.4						
2	5	1984	1200	37	6.						
2	5	1984	1400	37	9.1						
2	5	1984	1600	37	8.1						
2	5	1984	2200	37	6.6						
2	5	1984	600	42	4.6						
2	5	1984	2200	42	6.4						
2	5	1984	1400	42	8.8						
2	5	1984	1600	42	8.2						
2	5	1984	1800	42	6.5						
2	5	1984	1200	42	6.2						
2	5	1984	1000	42	6.8						
3	5	1984	600	4	6.6						
3	5	1984	200	4	6.5						
3	5	1984	200	7	6.4						
3	5	1984	600	7	6.2						
3	5	1984	600	13	6.1						
3	5	1984	200	13	6.1						
3	5	1984	200	14	6.4						
3	5	1984	600	14	6.2						
3	5	1984	600	16	6.						
3	5	1984	200	16	6.4						
3	5	1984	200	21	6.2						
3	5	1984	600	21	6.1						

Table 4. Diurnal Measurements. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
3	5	1984	600	22	5.8						
3	5	1984	200	22	6.2						
3	5	1984	200	25	6.4						
3	5	1984	600	25	6.6						
3	5	1984	600	28	6.6						
3	5	1984	200	28	6.3						
3	5	1984	200	34	6.4						
3	5	1984	600	34	6.6						
3	5	1984	600	35	6.5						
3	5	1984	200	35	6.3						
3	5	1984	200	37	6.3						
3	5	1984	600	37	6.7						
3	5	1984	600	42	6.4						
3	5	1984	200	42	6.5						

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	POND	ACTIVITY	SPECIES	POP. WEIGHT	POP. NUMBER	SAMPLE WEIGHT	SAMPLE WT.-#	SAMPLE WT.-SD	SAMPLE LENGTH	SAMPLE LT.-#	SAMPLE LT.-SD	REPROD. WEIGHT	REPROD. NUMBER
26	7	1983	4	STK	VAN	0.093	3103	0.03	12	0.	0.6	12	0.		
26	7	1983	4	STK	STY	0.031	1034	0.03	38	0.	0.6	38	0.		
26	7	1983	7	STK	VAN	0.095	3160	0.03	12	0.	0.6	12	0.		
26	7	1983	7	STK	STY	0.032	1054	0.03	38	0.	0.6	38	0.		
26	7	1983	13	STK	VAN	0.098	3276	0.03	12	0.	0.6	12	0.		
26	7	1983	13	STK	STY	0.033	1092	0.03	38	0.	0.6	38	0.		
26	7	1983	14	STK	VAN	0.09	2987	0.03	38	0.	0.6	38	0.		
26	7	1983	14	STK	STY	0.03	996	0.03	12	0.	0.6	12	0.		
26	7	1983	16	STK	VAN	0.108	3586	0.03	38	0.	0.6	38	0.		
26	7	1983	16	STK	STY	0.036	1195	0.03	12	0.	0.6	12	0.		
26	7	1983	21	STK	VAN	0.097	3224	0.03	38	0.	0.6	38	0.		
26	7	1983	21	STK	STY	0.032	1074	0.03	12	0.	0.6	12	0.		
26	7	1983	25	STK	VAN	0.087	2893	0.03	38	0.	0.6	38	0.		
26	7	1983	25	STK	STY	0.029	964	0.03	12	0.	0.6	12	0.		
26	7	1983	28	STK	VAN	0.092	3050	0.03	38	0.	0.6	38	0.		
26	7	1983	28	STK	STY	0.031	1017	0.03	12	0.	0.6	12	0.		
26	7	1983	34	STK	VAN	0.093	3113	0.03	38	0.	0.6	38	0.		
26	7	1983	34	STK	STY	0.031	1038	0.03	12	0.	0.6	12	0.		
26	7	1983	35	STK	VAN	0.089	2977	0.03	38	0.	0.6	38	0.22		
26	7	1983	35	STK	STY	0.03	992	0.03	12	0.	0.6	12	0.		
26	7	1983	37	STK	VAN	0.092	3066	0.03	38	0.	0.6	38	0.		
26	7	1983	37	STK	STY	0.031	1022	0.03	12	0.	0.6	12	0.		
26	7	1983	42	STK	VAN	0.095	3171	0.03	38	0.	0.6	38	0.		
26	7	1983	42	STK	STY	0.032	1057	0.03	12	0.	0.6	12	0.		
25	8	1983	4	SAM	VAN	1.378	2296	0.6	10	0.8					
25	8	1983	7	SAM	VAN	1.988	2339	0.8	10	0.82					
25	8	1983	13	SAM	VAN	4.606	2424	1.9		1.56					
25	8	1983	14	SAM	VAN	3.051	2211	1.4	10	1.2					
25	8	1983	16	SAM	VAN	4.511	2653	1.7	10	1.4		10			
25	8	1983	21	SAM	VAN	2.195	2385	0.9	10	0.89	0.	10	0.		
25	8	1983	25	SAM	VAN	3.297	2141	1.5	10	1.58	0.	10	0.		
25	8	1983	28	SAM	VAN	2.754	2257	1.2	10	1.17	0.	10	0.		
25	8	1983	34	SAM	VAN	3.156	2304	1.4	10	1.28	0.	10			
25	8	1983	35	SAM	VAN	3.789	2203	1.7	10	1.18	0.	10	0.		
25	8	1983	37	SAM	VAN	3.607	2269	1.6	10	1.33	0.	10	0.		
25	8	1983	42	SAM	VAN	4.505	2347	1.9	10	1.59	0.	10	0.		
9	9	1983	4	SAM	VAN	4.84	2017	2.4	10	1.7	6.27	10	1.92		
9	9	1983	7	SAM	VAN	1.849	2054	0.9	10	1.18	4.1	10	1.62		
9	9	1983	13	SAM	VAN	7.24	2129	3.4	10	2.27	6.75	10	2.46		
9	9	1983	14	SAM	VAN	6.971	1942	3.6	10	2.72	5.6	10	2.74		
9	9	1983	16	SAM	VAN	8.577	2331	3.7	10	2.82	6.69	10	2.51		
9	9	1983	21	SAM	VAN	5.28	2095	2.5	10	1.79	6.27	10	1.88		
9	9	1983	25	SAM	VAN	1.41	1880	0.8	10	0.54	3.75	10	1.26		
9	9	1983	28	SAM	VAN	5.492	1983	2.8	10	1.73	6.11	10	2.6		
9	9	1983	34	SAM	VAN	4.128	2024	2.	10	2.18	5.24	10	2.53		

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	POND	ACTIVITY	SPECIES	POP. WEIGHT	POP. NUMBER	SAMPLE WEIGHT	SAMPLE WT.-#	SAMPLE WT.-SD	SAMPLE LENGTH	SAMPLE LT.-#	SAMPLE LT.-SD	REPROD. WEIGHT	REPROD. NUMBER
9	9	1983	35	SAM	VAN	3.676	1935	1.9	10	1.65	5.94	10	2.34		
9	9	1983	37	SAM	VAN	4.564	1993	2.3	10	2.25	5.24	10	2.78		
9	9	1983	42	SAM	VAN	4.246	2061	2.1	10	2.	6.1	10	2.2		
24	9	1983	4	SAM	VAN	10.656	2215	4.8	10	1.93	7.59	10	2.29		
24	9	1983	7	SAM	VAN	0.053	205	0.3	10	0.72	8.8	10	0.36		
24	9	1983	13	SAM	VAN	4.855	852	5.7	10	2.12	8.74	10	1.44		
24	9	1983	14	SAM	VAN	12.738	1553	8.2	10	4.	9.4	10	2.35		
24	9	1983	16	SAM	VAN	17.128	2560	6.7	10	1.1	9.49	10	0.57		
24	9	1983	21	SAM	VAN	5.426	1225	4.4	10	1.	8.27	10	0.71		
24	9	1983	25	SAM	VAN	8.451	1632	5.2	10	2.49	8.14	10	1.43		
24	9	1983	28	SAM	VAN	7.856	2089	3.8	10	1.86	8.15	10	0.81		
24	9	1983	34	SAM	VAN	10.131	1912	5.3	10	1.73	8.49	10	1.46		
24	9	1983	35	SAM	VAN	6.843	1825	3.8	10	0.8	7.84	10	0.68		
24	9	1983	37	SAM	VAN		1855	5.7	10	0.8	8.99	10	0.46		
24	9	1983	42	SAM	VAN	10.651	2201	4.8	10	1.2	8.41	10	0.45		
9	10	1983	4	SAM	VAN	10.244	2125	4.8	10	1.74	8.32	10	1.33		
9	10	1983	7	SAM	VAN	1.438	205	7.	7	2.41	9.6	7	0.9		
9	10	1983	13	SAM	VAN	10.457	1867	5.6	10	0.99	8.89	10	0.72		
9	10	1983	14	SAM	VAN	10.765	1553	6.9	10	1.77	9.68	10	0.94		
9	10	1983	16	SAM	VAN	16.232	2560	6.3	10	2.39	9.35	10	1.46		
9	10	1983	21	SAM	VAN	6.112	1225	5.	10	2.54	8.37	10	1.5		
9	10	1983	25	SAM	VAN	6.347	1632	3.9	10	0.96	9.27	10	0.77		
9	10	1983	28	SAM	VAN	8.337	2089	4.	10	1.07	8.08	10	0.97		
9	10	1983	34	SAM	VAN	9.175	1912	4.8	10	1.66	8.37	10	1.27		
9	10	1983	35	SAM	VAN	6.916	1825	3.8	10	0.89	8.01	10	0.79		
9	10	1983	37	SAM	VAN	8.811	1855	4.8	10	0.94	8.91	10	0.6		
9	10	1983	42	SAM	VAN	12.258	2201	5.6	10	1.64	9.17	10	1.96		
24	10	1983	4	SAM	VAN	7.333	2215	3.3	10	2.03	8.53	10	2.09		
24	10	1983	7	SAM	VAN	2.536	537	4.7	10	3.6	9.3	10	2.9		
24	10	1983	13	SAM	VAN	7.656	1867	4.1	10	1.81	9.2	10	1.64		
24	10	1983	14	SAM	VAN	8.092	1285	6.3	10	1.5	11.23	10	1.12		
24	10	1983	16	SAM	VAN	9.136	2044	4.5	10	2.53	9.41	10	2.28		
24	10	1983	21	SAM	VAN	4.352	1386	3.1	10	1.8	8.77	10	1.42		
24	10	1983	25	SAM	VAN	4.331	1241	3.5	10	2.38	8.46	10	2.42		
24	10	1983	28	SAM	VAN	5.785	1662	3.5	10	1.2	8.77	10	1.57		
24	10	1983	34	SAM	VAN	7.932	1775	4.5	10	1.82	9.59	10	1.79		
24	10	1983	35	SAM	VAN	6.378	2551	2.5	10	1.5	7.88	10	2.08		
24	10	1983	37	SAM	VAN	5.488	1748	3.1	10	1.85	8.47	10	2.12		
24	10	1983	42	SAM	VAN	7.358	2264	3.2	10	1.56	8.62	10	2.08		
8	11	1983	4	SAM	VAN	8.662	2215	3.9	10	2.01	7.03	10	2.05		
8	11	1983	7	SAM	VAN	3.498	537	6.5	10	0.83	8.9	10	0.52		
8	11	1983	13	SAM	VAN	6.716	1638	4.1	10	0.98	9.3	10	0.61		
8	11	1983	14	SAM	VAN	8.092	1285	6.3	10	1.87	9.48	10	1.45		
8	11	1983	16	SAM	VAN	13.081	2044	6.4	10	2.22	9.23	10	1.27		
8	11	1983	21	SAM	VAN	5.752	1386	4.2	10	2.2	8.34	10	1.61		
8	11	1983	25	SAM	VAN	9.034	1241	7.3	10	2.18	9.67	10	1.43		

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	POND	ACTIVITY	SPECIES	POP. WEIGHT	POP. NUMBER	SAMPLE WEIGHT	SAMPLE WT.-#	SAMPLE WT.-SD	SAMPLE LENGTH	SAMPLE LT.-#	SAMPLE LT.-SD	REPROD. WEIGHT	REPROD. NUMBER
8	11	1983	28	SAM	VAN	6.018	1662	3.6	10	1.61	7.73	10	1.33		
8	11	1983	34	SAM	VAN	8.198	1775	4.6	10	1.34	8.71	10	1.32		
8	11	1983	35	SAM	VAN	9.72	2551	3.8	10	0.92	8.11	10	0.64		
8	11	1983	37	SAM	VAN	9.979	1748	5.7	10	1.69	9.02	10	1.14		
8	11	1983	42	SAM	VAN	11.502	2264	5.1	10	1.46	8.7	10	0.77		
23	11	1983	4	SAM	VAN	9.479	2125	4.5	10	1.86	8.2	10	1.44		
23	11	1983	7	SAM	VAN	9.489	853	11.1	6	2.22	11.3	6	0.61		
23	11	1983	13	SAM	VAN	9.713	1638	5.9	10	1.61	9.33	10	0.98		
23	11	1983	14	SAM	VAN	9.457	1568	6.	10	2.58	8.7	10	1.6		
23	11	1983	16	SAM	VAN	10.843	1721	6.3	10	2.05	9.37	10	1.31		
23	11	1983	21	SAM	VAN	7.612	1644	4.6	10	2.15	9.33	10	0.98		
23	11	1983	25	SAM	VAN	6.038	1200	5.	10	2.143	8.35	10	1.59		
23	11	1983	28	SAM	VAN	7.249	1873	3.9	10	1.36	8.19	10	0.93		
23	11	1983	34	SAM	VAN	7.428	1594	4.7	10	1.76	8.21	10	1.21		
23	11	1983	35	SAM	VAN	8.113	2146	3.8	10	1.18	7.74	10	1.		
23	11	1983	37	SAM	VAN	9.537	2110	4.5	10	2.34	8.08	10	1.89		
23	11	1983	42	SAM	VAN	9.382	1836	5.1	10	1.78	8.58	10	1.06		
8	12	1983	4	SAM	VAN	9.564	2125	4.5	10	1.98	8.31	10	1.52		
8	12	1983	7	SAM	VAN	8.354	853	9.8	28	3.41	10.76	28	1.59		
8	12	1983	13	SAM	VAN	7.468	1491	5.	10	2.2	7.38	10	0.83		
8	12	1983	14	SAM	VAN	9.206	1568	5.9	50	2.7	8.58	50	1.49		
8	12	1983	16	SAM	VAN	11.153	1721	6.5	10	2.32	9.18	10	1.26		
8	12	1983	21	SAM	VAN	7.381	1644	4.5	35	2.88	8.29	35	1.78		
8	12	1983	25	SAM	VAN	5.678	1200	4.7	100	2.49	8.4	100	1.63		
8	12	1983	28	SAM	VAN	6.874	1873	3.7	100	1.43	8.	100	1.25		
8	12	1983	34	SAM	VAN	7.922	1594	5.	100	1.68	8.71	100	1.53		
8	12	1983	35	SAM	VAN	7.92	2146	3.7	100	1.64	7.8	100	0.72		
8	12	1983	37	SAM	VAN	9.038	1591	5.7	100	0.92	8.96	100	0.88		
8	12	1983	42	SAM	VAN	9.933	1836	5.4	100	1.92	8.91	100	1.55		
13	12	1983	4	HAR	VAN	9.641	2191	4.4	30	1.83	8.01	30	1.47		
13	12	1983	4	HAR	STY	0.	0	0.	0	0.	0.	0	0.		
13	12	1983	7	HAR	VAN	9.302	1078	8.6	50	2.82	10.34	50	1.32		
13	12	1983	7	HAR	STY	0.722	54	13.4	20	2.74	11.94	20	1.3		
13	12	1983	13	HAR	VAN	9.706	1881	5.2	49	1.61	7.73	49	1.62		
13	12	1983	13	HAR	STY	0.02	1	18.4	2	7.28	12.5	2	1.41		
13	12	1983	14	HAR	VAN	11.543	1956	5.9	50	2.6	8.63	50	1.53		
13	12	1983	14	HAR	STY	0.	0	0.	0	0.	0.	0	0.		
13	12	1983	16	HAR	VAN	13.401	2049	6.5	50	2.29	9.16	50	1.32		
13	12	1983	16	HAR	STY	0.046	2	22.8	2	6.	14.15	2	0.78		
13	12	1983	21	HAR	VAN	13.49	1955	6.9	50	1.2	9.14	50	0.66		
13	12	1983	21	HAR	STY	0.684	59	11.6	20	2.6	9.91	20	0.61		
13	12	1983	25	HAR	VAN	12.881	1755	7.3	50	2.22	9.78	50	1.13		
13	12	1983	25	HAR	STY	0.178	11	16.2	11	2.44	13.11	11	0.57		
13	12	1983	28	HAR	VAN	10.62	1873	5.7	50	2.43	8.13	50	1.71		
13	12	1983	28	HAR	STY	0.	1	0.	0	0.	0.	0	0.		
13	12	1983	34	HAR	VAN	9.737	1898	5.1	50	2.03	8.99	50	1.33		

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	POND	ACTIVITY	SPECIES	POP. WEIGHT	POP. NUMBER	SAMPLE WEIGHT	SAMPLE WT.-#	SAMPLE WT.-SD	SAMPLE LENGTH	SAMPLE LT.-#	SAMPLE LT.-SD	REPROD. WEIGHT	REPROD. NUMBER
13	12	1983	34	HAR	STY	0.075	2	38.2	2	5.66	17.4	2	0.85		
13	12	1983	35	HAR	VAN	9.899	2727	3.6	50	1.3	8.12	50	1.13		
13	12	1983	35	HAR	STY	0.066	3	22.	3	6.9	14.3	3	1.13		
13	12	1983	37	HAR	VAN	12.085	2120	5.7	50	1.72	9.07	50	1.16		
13	12	1983	37	HAR	STY	0.	1	0.	0	0.	0.	0	0.		
13	12	1983	42	HAR	VAN	11.53	2059	5.6	50	1.6	9.78	50	0.81		
13	12	1983	42	HAR	STY	0.	0	0.	0	0.	0.	0	0.		

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Aguadulce, Panama, Cycle I, Dry Season

DAY	MONTH	YEAR	POND	ACTIVITY	SPECIES	POP. WEIGHT	POP. NUMBER	SAMPLE WEIGHT	SAMPLE WT.-#	SAMPLE WT.-SD	SAMPLE LENGTH	SAMPLE LT.-#	SAMPLE LT.-SD	REPROD. WEIGHT	REPROD. NUMBER
6	2	1984	4	STK	VAN		3103								
6	2	1984	7	STK	VAN		3161								
6	2	1984	13	STK	VAN		3276								
6	2	1984	14	STK	VAN		2987								
6	2	1984	16	STK	VAN		3506								
6	2	1984	21	STK	VAN		3224								
6	2	1984	25	STK	VAN		2914								
6	2	1984	28	STK	VAN		3050								
6	2	1984	34	STK	VAN		3115								
6	2	1984	35	STK	VAN		2977								
6	2	1984	37	STK	VAN		3066								
6	2	1984	42	STK	VAN		3177								
9	3	1984	4	SAM	VAN			0.46			4.1				
9	3	1984	7	SAM	VAN			0.93			1.85				
9	3	1984	13	SAM	VAN			0.7			4.6				
9	3	1984	14	SAM	VAN			0.47			3.6				
9	3	1984	16	SAM	VAN			0.61			4.5				
9	3	1984	21	SAM	VAN			0.8			4.25				
9	3	1984	25	SAM	VAN			0.7			4.14				
9	3	1984	28	SAM	VAN			0.99			5.4				
9	3	1984	34	SAM	VAN			0.75			4.44				
9	3	1984	35	SAM	VAN			0.15			2.85				
9	3	1984	37	SAM	VAN			0.83			0.6				
9	3	1984	42	SAM	VAN			0.28							
24	3	1984	4	SAM	VAN			1.3			5.3				
24	3	1984	7	SAM	VAN			1.51			3.48				
24	3	1984	13	SAM	VAN			1.81			5.7				
24	3	1984	14	SAM	VAN			0.97			4.3				
24	3	1984	16	SAM	VAN			0.81			5.31				
24	3	1984	21	SAM	VAN			1.15			5.19				
24	3	1984	25	SAM	VAN			1.39			5.11				
24	3	1984	28	SAM	VAN			1.63			5.33				
24	3	1984	34	SAM	VAN			0.99			5.47				
24	3	1984	35	SAM	VAN			1.09			5.58				
24	3	1984	37	SAM	VAN			1.3			5.17				
24	3	1984	42	SAM	VAN			1.32			5.32				
8	4	1984	4	SAM	VAN			3.28			6.8				
8	4	1984	7	SAM	VAN			3.18			6.97				
8	4	1984	13	SAM	VAN			2.36			6.7				
8	4	1984	14	SAM	VAN			1.62			5.12				
8	4	1984	16	SAM	VAN			1.82			5.55				
8	4	1984	21	SAM	VAN			1.82			5.55				
8	4	1984	25	SAM	VAN			2.93			6.78				
8	4	1984	28	SAM	VAN			3.81			7.21				
8	4	1984	34	SAM	VAN			1.88			5.56				

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Aguadulce, Panama, Cycle I, Dry Season

DAY	MONTH	YEAR	POND	ACTIVITY	SPECIES	POP. WEIGHT	POP. NUMBER	SAMPLE WEIGHT	SAMPLE WT.-#	SAMPLE WT.-SD	SAMPLE LENGTH	SAMPLE LT.-#	SAMPLE LT.-SD	REPROD. WEIGHT	REPROD. NUMBER
8	4	1984	35	SAM	VAN			2.42			6.				
8	4	1984	37	SAM	VAN			2.31			5.97				
8	4	1984	42	SAM	VAN			2.4			6.14				
23	4	1984	4	SAM	VAN			3.3			7.3				
23	4	1984	7	SAM	VAN			3.4			7.59				
23	4	1984	13	SAM	VAN			3.33			7.53				
23	4	1984	14	SAM	VAN			3.79			7.69				
23	4	1984	16	SAM	VAN			3.92			7.98				
23	4	1984	21	SAM	VAN			5.14			8.52				
23	4	1984	25	SAM	VAN			5.05			8.58				
23	4	1984	28	SAM	VAN			4.73			8.43				
23	4	1984	34	SAM	VAN			2.57			6.4				
23	4	1984	35	SAM	VAN			3.86			7.52				
23	4	1984	37	SAM	VAN			4.25			7.85				
23	4	1984	42	SAM	VAN			3.42			7.28				
8	5	1984	4	SAM	VAN			5.3			8.3				
8	5	1984	7	SAM	VAN			4.6			8.6				
8	5	1984	13	SAM	VAN			5.2			8.				
8	5	1984	14	SAM	VAN			4.9			8.7				
8	5	1984	16	SAM	VAN			3.5			7.8				
8	5	1984	21	SAM	VAN			6.5			9.1				
8	5	1984	25	SAM	VAN			5.6			8.6				
8	5	1984	28	SAM	VAN			5.8			8.9				
8	5	1984	34	SAM	VAN			3.8			7.				
8	5	1984	35	SAM	VAN			5.			8.5				
8	5	1984	37	SAM	VAN			5.8			8.9				
8	5	1984	42	SAM	VAN			5.2			8.				
18	5	1984	4	SAM	VAN		2327	6.6			9.6				
18	5	1984	7	HAR	VAN		2086	5.8			9.2				
18	5	1984	13	HAR	VAN		3047	5.			8.8				
18	5	1984	14	HAR	VAN		1852	6.			9.3				
18	5	1984	16	HAR	VAN		2576	3.5			7.6				
18	5	1984	21	HAR	VAN		1741	7.6			9.6				
18	5	1984	25	HAR	VAN		2564	5.9			8.9				
18	5	1984	28	HAR	VAN		2074	6.6			9.3				
18	5	1984	34	HAR	VAN		2646	4.6			8.3				
18	5	1984	35	HAR	VAN		2024	5.6			8.9				
18	5	1984	37	HAR	VAN		2053	6.3			9.2				
18	5	1984	42	HAR	VAN		2575	6.1			9.5				

Table 6. Plankton and Benthos. Aguadulce, Panama, Cycle I, Dry Season

DAY	MONTH	YEAR	POND#	NET PRODUCTN	GROSS PRODUCTN	BLUE-GREEN	GREEN	DIATOM	OTHER PHYTO.	ROTIFE	CLADOC	COPEPO	OTHER ZOOPL.	MOLLUS	I
13	3	1984	4	0.095833	0.129167										
13	3	1984	7	0.133333	0.2										
13	3	1984	13	0.008333	0.0625										
13	3	1984	14	0.154167	0.2375										
13	3	1984	16	0.133333	0.141667										
13	3	1984	21	0.083333	0.183333										
13	3	1984	22	0.066667	0.183333										
13	3	1984	25	0.033333	0.091667										
13	3	1984	28	0.016667	0.1125										
13	3	1984	34	0.183333	0.275										
13	3	1984	35	0.133333	0.175										
13	3	1984	37	0.075	0.125										
13	3	1984	42	0.083333	0.125										
13	3	1984	50	-0.04167	0.05										
12	4	1984	4	0.025	0.0625										
12	4	1984	7	0.029167	0.066667										
12	4	1984	13	0.054167	0.0875										
12	4	1984	14	0.029167	0.070833										
12	4	1984	16	0.033333	0.041667										
12	4	1984	21	0.029167	0.075										
12	4	1984	22	0.0375	0.0375										
12	4	1984	25	0.05	0.025										
12	4	1984	28	0.066667	0.104167										
12	4	1984	34	0.0625	0.1125										
12	4	1984	35	0.070833	0.166667										
12	4	1984	37	0.05	0.075										
12	4	1984	42	0.054167	0.070833										
12	4	1984	50	0.133333	0.25										
12	5	1984	4	-0.05	0.083333										
12	5	1984	7	-0.04167	0.058333										
12	5	1984	13	-0.03333	0.095833										
12	5	1984	14	-0.03333	0.083333										
12	5	1984	16	-0.025	0.191667										
12	5	1984	21	-0.025	0.1										
12	5	1984	22	-0.01667	0.2										
12	5	1984	25	0.	0.116667										
12	5	1984	28	-0.03333	0.041667										
12	5	1984	34	-0.05	0.054167										
12	5	1984	35	-0.0375	0.054167										
12	5	1984	37	-0.05	0.075										
12	5	1984	42	-0.04167	0.1										
12	5	1984	50	-0.05833	0.025										

Table 6. Plankton and Benthos. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	POND#	NET PRODUCTN	GROSS PRODUCTN	BLUE-GREEN	GREEN	DIATOM	OTHER PHYTO.	ROTIFE	CLADOC	COPEPO	OTHER ZOOPL.	MOLLUS	I
13	3	1984	4	0.095833	0.129167										
13	3	1984	7	0.133333	0.2										
13	3	1984	13	0.008333	0.0625										
13	3	1984	14	0.154167	0.2375										
13	3	1984	16	0.133333	0.141667										
13	3	1984	21	0.083333	0.183333										
13	3	1984	22	0.066667	0.183333										
13	3	1984	25	0.033333	0.091667										
13	3	1984	28	0.016667	0.1125										
13	3	1984	34	0.183333	0.275										
13	3	1984	35	0.133333	0.175										
13	3	1984	37	0.075	0.125										
13	3	1984	42	0.083333	0.125										
13	3	1984	50	-0.04167	0.05										
12	4	1984	4	0.025	0.0625										
12	4	1984	7	0.029167	0.066667										
12	4	1984	13	0.054167	0.0875										
12	4	1984	14	0.029167	0.070833										
12	4	1984	16	0.033333	0.041667										
12	4	1984	21	0.029167	0.075										
12	4	1984	22	0.0375	0.0375										
12	4	1984	25	0.05	0.025										
12	4	1984	28	0.066667	0.104167										
12	4	1984	34	0.0625	0.1125										
12	4	1984	35	0.070833	0.166667										
12	4	1984	37	0.05	0.075										
12	4	1984	42	0.054167	0.070833										
12	4	1984	50	0.133333	0.25										
12	5	1984	4	-0.05	0.083333										
12	5	1984	7	-0.04167	0.058333										
12	5	1984	13	-0.03333	0.095833										
12	5	1984	14	-0.03333	0.083333										
12	5	1984	16	-0.025	0.191667										
12	5	1984	21	-0.025	0.1										
12	5	1984	22	-0.01667	0.2										
12	5	1984	25	0.	0.116667										
12	5	1984	28	-0.03333	0.041667										
12	5	1984	34	-0.05	0.054167										
12	5	1984	35	-0.0375	0.054167										
12	5	1984	37	-0.05	0.075										
12	5	1984	42	-0.04167	0.1										
12	5	1984	50	-0.05833	0.025										

Table 7. Water Quality Characteristics. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	POND#	ALKALIN	HARDNESS	PH	NH3-N	NO2-N	NO3-N	NO2&3-N	TOTAL-P	ORTHO-P	CL-	SALT	SO4	BORON	CALCIUM	COPPER	IRON	MAGNESIU	POTASSIU	SODIUM	ZINC
27	7	1983	4			9.							20440.	32.	2820.	4.73	307.	0.	1.93	1525.	395.	5230.	0.08
27	7	1983	7			9.							20640.	30.	2890.	4.11	314.	0.	2.	1480.	400.	6210.	0.03
27	7	1983	13			9.							20000.	31.	2710.	4.25	224.	0.	0.89	1005.	300.	3330.	0.
27	7	1983	14			9.							19800.	32.	2710.	4.41	289.	0.	1.43	1390.	375.	4840.	0.
27	7	1983	16			9.							20000.	33.	2630.	4.27	301.	0.	1.04	1510.	375.	3560.	0.
27	7	1983	21			9.							18840.	28.	2430.	4.62	267.	0.04	12.	1365.	380.	4580.	0.
27	7	1983	25			9.							20660.	30.	2890.	4.43	287.	0.	1.41	1385.	385.	6940.	0.
27	7	1983	28			9.							20400.	31.	2840.	4.59	321.	0.	2.61	1475.	395.	7260.	0.04
27	7	1983	34										20740.	32.	2870.	4.23	312.	0.	1.45	1585.	410.	8120.	0.02
27	7	1983	35										20540.	33.	2820.	4.66	307.	0.	1.24	1560.	400.	13000.	0.02
27	7	1983	37										20400.	30.	2840.	4.64	280.	0.	2.28	1405.	355.	4970.	0.02
27	7	1983	42										19100.	32.	2500.	4.88	273.	0.	8.15	1475.	395.	9230.	0.02
27	7	1983	ESE										18700.		2560.	10.5	286.	0.04	1.85	1395.	365.	5170.	0.
27	7	1983	O S										18960.	29.	2620.	3.91	299.	0.	3.65	1430.	360.	4580.	0.15
9	12	1983	4										9520.	15.	1170.	3.04	142.	0.	3.37	710.	170.	4180.	0.
9	12	1983	7										8300.	15.	1450.	2.06	122.	0.	1.92	629.	165.	3660.	0.
9	12	1983	13										8900.	16.	948.	2.62	131.	0.	1.27	672.	165.	3890.	0.
9	12	1983	14										7540.	14.	1060.	1.75	121.	0.	1.26	604.	170.	3550.	0.
9	12	1983	16										7900.	13.	927.	2.26	122.	0.	2.93	610.	140.	3470.	0.
9	12	1983	21										6980.	13.	948.	2.22	110.	0.	2.63	539.	145.	3140.	0.
9	12	1983	25										7400.	15.	970.	1.53	115.	0.	2.15	558.	140.	3190.	0.
9	12	1983	28										8020.	14.	927.	2.08	125.	0.	1.58	618.	195.	3590.	0.
9	12	1983	34										7000.	13.	861.	1.95	108.	0.	2.95	541.	135.	3100.	0.
9	12	1983	35										7280.	13.	905.	1.49	111.	0.	2.84	563.	185.	3780.	0.
9	12	1983	37										7900.	15.	948.	1.73	125.	0.	2.63	625.	145.	3590.	0.06
9	12	1983	42										7520.	14.	970.	1.81	113.	0.	2.52	570.	135.	3340.	0.
9	12	1983	ESE										5980.		774.	1.89	95.	0.	5.35	476.	115.	2700.	0.
9	12	1983	O S										8660.	16.	1040.	1.83	135.	0.03	14.7	673.	155.	3940.	0.03

Table 8. Pond Soil Characteristics. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	POND#	CLAY	SILT	SAND	ORGAN. MATTER	WET-PH	SOIL-P	SOIL CA	SOIL MG	SOIL K	SOIL NA	SOIL N	SOIL NH4	SOIL NO3	SOIL CEC	SOIL SALT	SOIL AL	SOIL FE	SOIL ZN	SOIL MN	SOIL CU	SOIL SO4
10	7	1983	4	32.	10.	58.	1.2	6.5	12.	5.9	20.3	1716.	53.			2.6			0.		1.2	48.2	4.	
10	7	1983	7	48.	10.	42.	1.2	7.2	7.	6.4	20.5	1833.	71.			0.6			0.		1.2	39.4	4.6	
10	7	1983	13	44.	12.	44.	1.2	6.4	14.	4.4	20.3	1755.	57.			9.8			0.		1.4	17.2	3.	
10	7	1983	14	42.	8.	50.	0.9	6.5	12.	4.9	17.8	1560.	49.			9.1			0.		1.2	29.8	3.	
10	7	1983	16	46.	10.	44.	1.1	6.9	13.	4.8	18.3	1482.	47.			8.9			0.		1.2	44.4	3.6	
10	7	1983	21	34.	18.	48.	1.5	7.6	7.	10.	21.5	2379.	67.			1.2			0.		1.4	40.8	5.2	
10	7	1983	25	36.	14.	50.	1.	6.9	13.	6.2	22.6	1950.	61.			3.			0.		1.2	32.8	4.2	
10	7	1983	28	34.	10.	56.	1.3	6.8	13.	7.4	25.	2067.	78.			3.			0.		1.	18.8	3.	
10	7	1983	34	28.	14.	58.	1.3	6.9	13.	9.8	25.1	1989.	76.			2.3			0.		1.6	21.2	5.2	
10	7	1983	35	34.	6.	60.	0.7	7.3	15.	5.6	19.6	1911.	66.			3.7			0.		1.4	13.2	4.	
10	7	1983	37	36.	6.	58.	0.7	7.3	13.	7.3	21.4	1911.	70.			4.4					1.6	19.	4.	
10	7	1983	42	30.	10.	60.	0.8	7.6	6.	9.3	19.8	2145.	61.			0.8			0.		1.2	54.6	5.8	
15	12	1983	4				1.1	7.	55.	5.4	15.	1220.	4.						0.					
15	12	1983	7	56.	14.	30.	1.3	7.3	32.	7.8	6.8	920.	4.						0.					
15	12	1983	13				1.5	7.3	16.	6.6	12.2	380.	4.						0.					
15	12	1983	14	60.	14.	26.	0.9	7.5	26.	3.2	10.	900.	11.						0.					
15	12	1983	16	46.	14.	40.	0.8	7.7	23.	5.6	10.4	640.	4.						0.					
15	12	1983	21	56.	16.	28.	1.3	7.6	30.	7.6	6.8	1060.	11.						0.					
15	12	1983	25	36.	20.	44.	1.2	7.8	42.	12.6	7.4	91440.	26.						0.					
15	12	1983	28	44.	20.	36.	1.6	7.9	32.	14.8	5.2	1300.	11.						0.					
15	12	1983	34	32.	20.	48.	0.7	7.8	25.	6.6	11.6	56.	26.						0.					
15	12	1983	35	34.	20.	46.	0.7	7.4	56.	7.6	10.8	1324.	26.						0.					
15	12	1983	37	28.	18.	54.	0.9	7.6	54.	7.2	13.4	1380.	26.						0.					
15	12	1983	42	38.	14.	44.	0.8	8.	30.	5.2	13.2	1560.	26.						0.					

Table 9. Pond Morphometrics. Aguadulce, Panama, Cycle I.

DAY	MONTH	YEAR	POND#	AREA 10 CM	VOLUME 10 CM	AREA 20 CM	VOLUME 20 CM	AREA 30 CM	VOLUME 30 CM	AREA 40 CM	VOLUME 40 CM	AREA 50 CM	VOLUME 50 CM	AREA 60 CM	VOLUME 60 CM	AREA 70 CM	VOLUME 70 CM	AREA 80 CM	VOLUME 80 CM	AREA 90 CM	VOLUME 90 CM
1	7	1983	4	47.	41.	95.	46.	142.	56.	189.	70.	236.	89.	355.	112.	473.	148.	591.	195.		
1	7	1983	7	35.	72.	69.	76.	138.	83.	208.	97.	358.	117.	439.	153.	521.	197.	602.	249.		
1	7	1983	13	34.	73.	67.	77.	134.	83.	201.	97.	357.	117.	446.	153.	535.	197.	624.	251.		
1	7	1983	14	30.	55.	60.	58.	120.	64.	179.	76.	322.	94.	404.	126.	486.	166.	569.	215.		
1	7	1983	16	29.	67.	59.	70.	117.	76.	176.	88.	235.	106.	423.	129.	553.	171.	683.	227.		
1	7	1983	21	38.	69.	75.	73.	150.	81.	226.	96.	379.	118.	457.	156.	536.	202.	614.	255.		
1	7	1983	25	42.	54.	83.	58.	167.	67.	311.	83.	372.	114.	433.	152.	494.	195.	555.	244.		
1	7	1983	28	33.	69.	65.	73.	131.	79.	196.	92.	341.	112.	421.	146.	501.	188.	581.	238.		
1	7	1983	34	42.	74.	83.	78.	166.	86.	249.	103.	335.	128.	421.	161.	507.	203.	593.	254.		
1	7	1983	35	35.	60.	69.	64.	136.	71.	191.	84.	333.	103.	411.	137.	489.	178.	567.	227.		
1	7	1983	37	37.	67.	74.	71.	149.	78.	223.	93.	369.	115.	441.	152.	512.	196.	584.	248.		
1	7	1983	42	33.	66.	66.	69.	133.	76.	199.	89.	350.	109.	435.	144.	519.	187.	604.	239.		

Table 10. Analysis of Nutrients and Lime. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	NUTRIENT TYPE	DRY MATTER %	NUTRIENT N	NUTRIENT P	NUTRIENT K	NUTRIENT ORG-C	NUTRIENT S	LIME NEUT %
12	7	1983	CHICK	12.3	2.1	1.3				

Table 10. Analysis of Nutrients and Lime. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	NUTRIENT TYPE	DRY MATTER %	NUTRIENT N	NUTRIENT P	NUTRIENT K	NUTRIENT ORG-C	NUTRIENT S	LIME NEUT %
23	2	1984	CHICK	10.	2.3	1.4				

Table 11. Nutrient and Lime Inputs. Aguadulce, Panama, Cycle I, Wet Season.

DAY	MONTH	YEAR	POND#	FEED TYPE	FEED QUANTITY	MANURE TYPE	MANURE QUANTITY	INORGAN. TYPE	INORGAN. QUANTITY	LIME TYPE	LIME QUANTITY
12	7	1983	4			CHICK	1000.				
12	7	1983	7			CHICK	1000.				
12	7	1983	13			CHICK	1000.				
12	7	1983	14			CHICK	1000.				
12	7	1983	16			CHICK	1000.				
12	7	1983	21			CHICK	1000.				
12	7	1983	25			CHICK	1000.				
12	7	1983	28			CHICK	1000.				
12	7	1983	34			CHICK	1000.				
12	7	1983	35			CHICK	1000.				
12	7	1983	37			CHICK	1000.				
12	7	1983	42			CHICK	1000.				

Table 11. Nutrient and Lime Inputs. Aguadulce, Panama, Cycle I, Dry Season.

DAY	MONTH	YEAR	POND#	FEED TYPE	FEED QUANTITY	MANURE TYPE	MANURE QUANTITY	INORGAN. TYPE	INORGAN. QUANTITY	LIME TYPE	LIME QUANTITY
23	1	1984	4			CHICK	1000.				
23	1	1984	7			CHICK	1000.				
23	1	1984	13			CHICK	1000.				
23	1	1984	14			CHICK	1000.				
23	1	1984	16			CHICK	1000.				
23	1	1984	21			CHICK	1000.				
23	1	1984	25			CHICK	1000.				
23	1	1984	28			CHICK	1000.				
23	1	1984	34			CHICK	1000.				
23	1	1984	35			CHICK	1000.				
23	1	1984	37			CHICK	1000.				
23	1	1984	42			CHICK	1000.				