Attachment 1

March 5, 2013

Commissioners
Delaware River Basin Commission
25 State Police Drive
P.O. Box 7360
West Trenton, NJ 08628-0360

Re: Petition by the Delaware Riverkeeper, the Delaware Riverkeeper Network, the Delaware River Shad Fishermen's Association and the Lehigh River Stocking Association, Inc., to:

1) immediately upgrade the designated uses of Zones 3, 4, and River Miles 78.8 to 70.0 of Zone 5 to include propagation of resident fish and other aquatic life;

2) immediately upgrade the designated uses of Zones 2 through 5 to include spawning and nursery habitat for anadromous fish; and

3) upgrade all applicable stream quality objectives necessary to preserve these uses; including setting immediate interim standards for dissolved oxygen and setting a 3 year time limit for the establishment of permanent dissolved oxygen and nutrient objectives.

Dear Commissioners:

The Delaware Riverkeeper, the Delaware Riverkeeper Network, the Delaware River Shad Fishermen's Association, and the Lehigh River Stocking Association, Inc., hereby petition the Delaware River Basin Commission (DRBC) to upgrade the designated use of Delaware River Estuary Zones 3, 4, and River Miles 78.8 to 70.0 of Zone 5 to include propagation of fish and other aquatic life. Data collected by the Public Service Electric and Gas Company (PSEG) clearly demonstrate the occurrence of fish propagation within these Zones of the Estuary. Additionally, the designated use of Zones 2 through 5 should be amended to include spawning and nursery habitat for anadromous fish. The propagation of anadromous fish in these Zones is demonstrated by the PSEG data as well as by recent research on the Atlantic sturgeon. As explained below, these upgrades in recognition of existing usage are necessary in order to effectuate the purposes of the Delaware River Basin Compact ("Compact") as well as DRBC's antidegradation policy for interstate waters. These upgrades will also bring DRBC into conformance with the antidegradation mandates of the Clean Water Act, thereby avoiding state, federal and/or interstate conflicts over the designated and existing uses of these Delaware River

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waters. Existing stream quality objectives (most importantly for dissolved oxygen) should be modified to accommodate and preserve the newly incorporated designated uses (collectively, "fish propagation uses"). In addition, DRBC should set immediate interim standards for dissolved oxygen and setting a 3 year time limit for the establishment of permanent dissolved oxygen and nutrient objectives.

While DRBC has undertaken a process to consider needed upgrades to the designated uses of Delaware Estuary waters and associated stream quality objectives, the 3 to 5 year trajectory for this consideration is unjustified and unnecessary in light of existing data documenting the current uses of Zones 2 thru 5. While additional knowledge may be justified for assessing some resulting stream quality objectives, an immediate upgrade in use designations and dissolved oxygen stream quality objectives are already supported and mandated by existing data, information, uses and water quality needs regarding aquatic life of the Delaware Estuary.

I. The Unification of Existing and Designated Uses Is Necessary to Effectuate the Purposes of the Compact as well as DRBC's Antidegradation Policy for Interstate Waters

Following the entry of a consent decree in New Jersey v. New York, 347 U.S. 995 (1954), the States of New York, New Jersey, Pennsylvania, and Delaware and the federal government negotiated the Compact, which entered into force in 1961. The Compact created the DRBC to conserve and manage the resources of the Delaware River. In forming the Compact, the parties agreed that "the conservation, utilization, development, management, and control of the water and related resources of the Delaware River Basin under a comprehensive multipurpose plan [would] bring the greatest benefits and produce the most efficient service in the public welfare." Compact, Second Whereas Clause (introducing a Comprehensive Plan). One such envisioned benefit was the propagation of fish and game. See Compact, Third Whereas Clause. Indeed, DRBC considers fish propagation benefits so significant that, rather than merely allowing such benefits to slowly accrue, DRBC actively seeks to safeguard fish resources in the Basin. Water Code § 2.200.1 ("The quality of Basin waters shall be maintained in a safe and satisfactory condition for...wildlife, fish and other aquatic life."); see also id. § 3.10.2.B.2.

In developing water quality standards, DRBC begins by setting designated uses for each zone. Stream quality objectives and effluent limitations are then developed using the designated uses as a baseline. Id. § 3.10.2.A ("Water uses shall be paramount in determining stream quality objectives which, in turn, shall be the basis for determining effluent quality requirements."); id. § 3.10.3.C ("It is the policy of the Commission to designate numerical stream quality objectives for the protection of aquatic life for the Delaware River Estuary and Bay (Zones 2 through 6) which correspond to the designated uses of each zone." (emphasis added)).

Because stream quality objectives and effluent limitations are calibrated to protect the designated, rather than actual, uses of each zone, existing uses will not receive protection unless those uses are formally adopted as designated uses. It is therefore necessary that DRBC 1) upgrade the designated uses of Zones 3, 4, and River Miles 78.8 to 70.0 of Zone 5 to include propagation of resident fish and other aquatic life, and 2) upgrade the designated uses of Zones 2 through 5 to include spawning and nursery habitat for anadromous fish.

Further, movement to upgrade the designated uses for these Zones would effectuate DRBC's antidegradation policy for interstate waters:

> It is the policy of the Commission to maintain the quality of interstate waters, where existing quality is better than the established stream quality objectives, unless it can be affirmatively demonstrated to the Commission that such change is justifiable as a result of necessary economic or social development or to improve significantly another body of water. In implementing this policy, the Commission will require the highest degree of waste treatment determined to be practicable. No change will be considered which would be injurious to any designated present or future use.

Id. § 3.10.3.A.1. As demonstrated by the actual occurrence of fish propagation, the waters of Estuary Zones 2 through 5 are necessarily of a quality sufficient to allow for resident and anadromous fish propagation. See Appendix A.[1] Yet as stated above, because stream quality objectives and effluent limitations are calibrated to protect the designated, rather than actual, uses of each zone, the existing quality of these Zones may only be protected by upgrading their designated use to include fish propagation. Significantly, neither need for "economic or social development" nor need to "improve significantly another body of water" exists to justify a degradation of water quality—as may occur under current water quality standards—in this instance. Certainly, neither the DRBC nor any other party has made an affirmative demonstration to that effect.

An upgrade in the designated uses of Zones 2 through 5 will also effectuate the purposes of the Compact:

> to promote interstate comity . . . to provide for cooperative planning and action by the signatory parties with respect to such water resources; and to apply the principle of equal and uniform treatment to all water users who are similarly situated and to all users of related facilities, without regard to established political boundaries.

Compact § 1.3(e); see also id. § 3.1 ("[The Commission] shall adopt and promote uniform and coordinated policies for water conservation, control, use and management in the basin."); id. Fifth Whereas Clause.

Under the Clean Water Act and its implementing regulations, "[s]tates . . . are responsible for reviewing, establishing, and revising water quality standards." 40 C.F.R. § 131.4. At minimum, each state's water quality standards must include "[u]se designations consistent with the

[1] Appendix A includes a series of tables documenting the presence of ichthyoplankton within the Delaware River Estuary. These tables are excerpted from the 2002-2004 PSEG Annual Reports. Public Service Enterprise Group, Biological Monitoring Program, 2002 Annual Report 4-74, 4-89 to 4-104; Public Service Enterprise Group, Biological Monitoring Program, 2003 Annual Report 4-73, 4-88 to 4-103; Public Service Enterprise Group, Biological Monitoring Program, 2004 Annual Report 4-74, 4-89 to 4-104.

provisions of sections 101(a)(2) and 303(c)(2) of the [Clean Water] Act"[2] as well as "[a]n antidegradation policy consistent with [40 C.F.R.] § 131.12."[3] 40 C.F.R. § 131.6(a), (d). "Where existing water quality standards specify designated uses less than those which are presently being attained, the State shall revise its standards to reflect the uses actually being attained." 40 C.F.R. § 131.10(i) (emphasis added).[4]

Insofar as the DRBC was created to help the Basin states work cooperatively to achieve their common goal of protecting the water resources of the Delaware River and tributary streams, and has increasingly helped the Basin states work cooperatively to achieve the mandates of federal law, upgrading the designated uses of these Delaware River waters so as to protect existing uses also ensures the Basin states are able to most effectively achieve the anti-degradation mandates of the federal Clean Water Act.

Although the Basin states presently defer to DRBC in setting water quality standards for the mainstem Delaware River and Bay,[5] if DRBC fails to upgrade the designated uses (and, as appropriate, associated stream quality objectives) for Zones 2 through 5, the Basin states must do so themselves for those portions of the Estuary and River within their state boundaries.[6] In so doing, the states may set divergent standards, thereby frustrating the purposes of the Compact as stated in Section 1.3(e). See WQR § 1.10.3.B ("Where applicable state standards require higher quality water than these Standards and Regulations, state standards will be controlling."). It is therefore imperative that DRBC upgrade the designated uses of Zones 2 through 5 to reflect their existing uses.

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[2] Section 101(a)(2) provides: "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983." Section 303(c)(2)(A) provides: "Whenever the State revises or adopts a new standard, such revised or new standard shall be submitted to the Administrator. Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act [33 USCS §§ 1251 et seq.]. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation."

[3] 40 C.F.R. § 131.12(a) provides, in relevant part: "The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following: (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."

[4] States must further "adopt those water quality criteria that protect the designated use." 40 C.F.R. § 131.11(a).

[5] See 7-7000-7401 Del. Admin. Code § 4.4; N.J. Admin. Code § 7:9B-1.13(a); id. § 7:9B-1.14(h); id. § 7:9B-1.15(a); 25 Pa. Code § 93.2(b); id. § 93.9(b).

[6] 40 C.F.R. § 131.10(i); see also 7-7000-7401 Del. Admin. Code § 5.1; N.J. Admin. Code § 7:9B-1.5(d)(1); id. § 7:9B-1.11(e); 25 Pa. Code § 93.4a(b); 25 Pa. Code § 93.4c(a)(1)(i).

II. Designated and Existing Uses of DRBC Zones 2 Through 5

A. Designated Uses Exclude Propagation of Resident and / or Anadromous Fish

The DRBC has designated the following uses in Zones 2 through 5:

Table 1: Designated Uses by Zone

DRBC Zone	Corresponding River Miles	Water Uses to be Protected (Designated Use)
2	133.4 – 108.4	Maintenance and propagation of resident fish and other aquatic life; passage of anadromous fish; wildlife
3	108.4 – 95.0	Maintenance of resident fish and other aquatic life; passage of anadromous fish; wildlife
4	95.0 – 78.8	Maintenance of resident fish and other aquatic life; passage of anadromous fish; wildlife
5	78.8 – 48.2	Maintenance of resident fish and other aquatic life; propagation of resident fish from R.M. 70.0 to R.M. 48.2; passage of anadromous fish; wildlife

WQR §§ 3.30.2 – 3.30.5. Fish propagation is excluded as a designated use in Zones 3, 4, and River Miles 78.8 – 70.0 of Zone 5. Moreover, River Miles 70.0 – 48.2 of Zone 5 are designated for the propagation of resident fish only; propagation of anadromous fish is omitted. Indeed, no portion of Zones 2 through 5 is designated as spawning and nursery habitat for anadromous fish.

B. Fish Propagation Is an Existing Use Throughout Zones 2 Through 5

Since 1995, PSEG of New Jersey has conducted ongoing ecological monitoring as required under a condition of the New Jersey Pollutant Discharge Elimination System (NJPDES) permit for the discharge of cooling water from the Salem Generating Station. Public Service Electric and Gas, Biological Monitoring Program, 2002 Annual Report 1-1. The 2001 renewal of the Salem Generating Station NJPDES permit provided for continuation and expansion of these studies. Id. Between 2002 and 2004, PSEG collected detailed data on ichthyoplankton abundance in the Delaware River Estuary, clearly demonstrating the occurrence of fish propagation within Delaware River Estuary Zones 2 through 5.[7] Because the period from 2002

[7] PSEG has chosen to divide the Delaware River Basin into different zones than the ones used by the DRBC. DRBC Zone 2 includes PSEG Zones 13, 14, and a section of Zone 12. DRBC Zone 3 includes sections of PSEG Zones 11 and 12. DRBC Zone 4 includes PSEG Zone 10 and sections of Zones 9 and 11. DRBC Zone 5 includes PSEG Zone 8 and sections of Zones 7 and 9. DRBC river miles 70.0 – 78.8 correspond to sections of PSEG Zones 8 and 9. Compare Public Service Enterprise Group, Biological Monitoring Program, 2004 Annual Report 4-105 (providing map of PSEG Zones and also displaying major tributaries to the Delaware River), with River Mileage System, DRBC, http://www.state.nj.us/drbc/basin/river/ (last updated Oct. 28, 2011) (displaying selected river miles on map of Delaware River including major tributaries), and Map Depicting Delaware River Main Stem Interstate Water Quality Zones, DRBC, http://www.state.nj.us/drbc/library/documents/maps/InterstateZones-MainStem.pdf (last visited Aug. 16, 2012) (displaying DRBC Zones and associated River Miles); see also River Mileage System Spreadsheet, DRBC, http://www.state.nj.us/drbc/library/documents/StreamMileageJuly2007.pdf (last visited Aug.

to 2004 is representative of Estuary water quality throughout the last decade,[8] the ichthyoplankton data collected during those years consequently provides a representative depiction of fish propagation in the Delaware River Basin over the last decade.

The data collected by PSEG show that multiple species, including striped bass, white perch, American shad, and other *Alosa* spp., were consistently propagating within the Delaware River Basin during 2002, 2003, and 2004. Eggs, yolk sac larvae, and post-yolk sac larvae of these species were, with minor exceptions, present in all relevant DRBC Zones during this three-year period. Other species propagating within the Estuary include alewife, Atlantic menhaden, and *Morone* spp. Post-yolk sac larvae were collected for the Atlantic menhaden and *Morone* spp. in all three years. Atlantic menhaden eggs were collected in 2003. Further, yolk sac larvae and post-yolk sac larvae were found for the Atlantic silverside in all three years. Because several of the species surveyed by PSEG are anadromous, the PSEG dataset supports upgrades in designated use to both propagation of resident fish and other aquatic life, and spawning and nursery habitat for anadromous fish. See Appendix A; Table 2.

16, 2012) (listing major and minor tributaries as well as other features and providing corresponding river mileage for each).

[8] See Appendix B for documentation of mean dissolved oxygen levels by year. These graphs are excerpted from PSEG Annual Reports between 2000 and 2009 (2000, p. 5-17; 2001, p. 5-24; 2002, p. 5-26; 2003, p. 5-25; 2004, p. 5-25; 2005, p. 5-26; 2006, p. 5-22; 2007, p. 5-22; 2008, p. 5-26; 2009, p. 5-29). Dissolved oxygen levels may be used as a proxy for overall water quality. All PSEG Annual Reports are included on the DVD enclosed with this petition.

Table 2: Evidence of Propagation by Species and PSEG Zone

	2002								2003								2004							
	Z7	Z8	Z9	Z10	Z11	Z12	Z13	Z14	Z7	Z8	Z9	Z10	Z11	Z12	Z13	Z14	Z7	Z8	Z9	Z10	Z11	Z12	Z13	Z14
Alewife	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
Alosa spp.			X	X	X	X	X	X			X	X	X	X	X	X	X		X	X	X	X	X	X
Amer. shad			X	X	X	X	X	X			X	X	X	X	X	X			X	X	X	X	X	X
Atl. croaker			X																					
Atl. menhaden	X	X	X	X	X	X		X	X			X	X				X	X	X	X	X	X		
Atl. silverside	X	X	X						X	X	X		X				X	X	X					
Bay anchovy	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Blueback herring								X			X			X										
Bluefish																								
Clupeidae	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Morone spp.	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X
Spot																								
Striped bass	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Weakfish	X	X		X					X	X		X					X	X				X		
White perch	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

X – Eggs, yolk sac larvae, post-yolk sac larvae, and/or undetermined larvae detected
* All data drawn from PSEG-generated tables provided in Appendix A

Additional data demonstrate that the anadromous Atlantic sturgeon is also spawning in the Delaware River. Delaware Department of Natural Resources and Environmental Control (DNREC) personnel captured thirty-four young-of-year Atlantic sturgeon during the fall of 2009. Proposed Listing Determinations for Three Distinct Population Segments of Atlantic sturgeon in the Northeast Region, 75 Fed. Reg. 61,872, 61,875 (proposed Oct. 6, 2010) (to be codified at 50 C.F.R. pts. 223-24).[9] Moreover, researchers have noted the existence of a haplotype unique to Atlantic sturgeon spawned in the Delaware River.[10] This haplotype could not have survived absent the persistence of Atlantic sturgeon reproduction in the Delaware River. Although Atlantic sturgeon eggs have not yet been detected, suitable spawning habitat (requiring freshwater and a hardbottom substrate) exists between Marcus Hook (rm 78) and Tinicum Island (rm 85) as well as between Tinicum Island and the mouth of the Schuylkill River (rm 92); suitable habitat is also believed to exist between the mouth of the Schuylkill and Trenton (rm 131).[11] Available tracking data on juvenile and adult Atlantic sturgeon establishes the Marcus Hook area as critical nursery habitat and a likely spawning site.[12]

In sum, the PSEG dataset and recent Atlantic sturgeon data together demonstrate that resident and anadromous fish are propagating throughout Zones 2 through 5 of the Estuary and therefore support an upgrade to the designated uses for those Zones.

III. The Dissolved Oxygen Stream Quality Objectives for Zones 2 Through 5 Are Insufficiently Protective of Fish Propagation Uses and Must Be Revised to Reflect a 24-hour Minimum of 6.5 mg/l

Because stream quality objectives are calibrated to protect designated rather than actual uses, DRBC must reevaluate all presently enumerated stream quality objectives for Zones 2 through 5 in conjunction with upgrading their designated uses to include 1) propagation of resident fish and other aquatic life, and 2) spawning and nursery habitat for anadromous fish. Although all stream quality objectives should be reviewed, data suggests that the dissolved oxygen stream quality objectives in particular are inadequately protective.

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[9] The final rule listing the New York Bight Distinct Population Segment of Atlantic sturgeon as endangered was published in February 2012. Threatened and Endangered Status for Distinct Population Segments of Atlantic sturgeon in the Northeast Region, 77 Fed. Reg. 5880 (Feb. 6, 2012) (codified at 50 C.F.R. pts. 223-24).

[10] Delaware DNREC, Award No. NAI0NMF4720030, Semi-annual Progress Report 28 (June 2011); Matthew Fisher, Delaware DNREC, Atlantic Sturgeon Final Report: State Wildlife Grant, Project T-4-1 10 (2011); Dewayne A. Fox & Matthew W. Breece, Del. State Univ., NOAA Award NA08NMF4050611, Atlantic sturgeon (Acipenser oxyrinchus oxyrinchus) in the New York Bight DPS: Identification of Critical Habitat and Rates of Interbasin Exchange 13 (2010).

[11] See Philip C. Simpson & Dewayne A. Fox, Del. State Univ., Completion Report: Award NA05NMF4051093, Atlantic sturgeon in the Delaware River: Contemporary Population Status and Identification of Spawning Areas (2006).

[12] See Fisher, supra note 10, at 15-16 (noting usage of Marcus Hook by late stage juveniles); Fox & Breece, supra note 10, at 25, 29-30 (suggesting spawning in the vicinity of Marcus Hook may have been overlooked); Delaware DNREC, Award No. NAI0NMF4720030, Semi-annual Progress Report 3 (Jan. 2012) (noting capture of 48 young-of-year at Marcus Hook).

Table 3: Dissolved Oxygen Stream Quality Objectives by Zone

DRBC Zone	Corresponding River Miles	Dissolved Oxygen Stream Quality Objective
2	133.4 – 108.4	24-hour average concentration shall not be less than 5.0 mg/l; during the periods from April 1 to June 15, and September 16 to December 31, the dissolved oxygen shall not have a seasonal average less than 6.5 mg/l.
3	108.4 – 95.0	24-hour average concentration shall not be less than 3.5 mg/l; during the periods from April 1 to June 15, and September 16 to December 31, the dissolved oxygen shall not have a seasonal average less than 6.5 mg/l.
4	95.0 – 78.8	24-hour average concentration shall not be less than 3.5 mg/l; during the periods from April 1 to June 15, and September 16 to December 31, the dissolved oxygen shall not have a seasonal average less than 6.5 mg/l.
5	78.8 – 48.2	24-hour average concentration shall not be less than 1) 3.5 mg/l at R.M. 78.8, 2) 4.5 mg/l at R.M. 70.0, and 3) 6.0 mg/l at R.M. 59.5; during the periods from April 1 to June 15, and September 16 to December 31, the dissolved oxygen shall not have a seasonal average less than 6.5 mg/l in the entire zone.

WQR §§ 3.30.2 – 3.30.5. The present limits set for Zones 3 through 5 permit 24-hour average concentrations of 3.5 mg/l. However, low dissolved oxygen levels are known to significantly affect fish populations, reducing growth and increasing mortality rates. Ichthyoplankton and juveniles are particularly vulnerable to these effects, necessitating an increase in minimally acceptable dissolved oxygen concentration limits to accommodate fish propagation uses. See, e.g., David H. Secor & Troy E. Gunderson, Effects of Hypoxia and Temperature on Survival, Growth, and Respiration of Juvenile Atlantic Surgeon, Acipenser oxyrinchus, 96 Fishery Bulletin 603 (1998) (indicating high mortality in juveniles exposed to low dissolved oxygen levels (~3.0 mg/l), particularly in association with higher temperatures (~26°C)); Atl. States Marine Fisheries Comm'n, Amendment 2 to the Interstate Fishery Management Plan for Shad and River Herring (River Herring Management) 7-24 (2009) (indicating 5.0 mg/l as minimum dissolved oxygen level tolerable by several alewife life-stages). The minimally acceptable 24-hour average concentration throughout Zones 2 through 5 should be revised upward to 6.5 mg/l so as to adequately preserve fish propagation uses.

While the DRBC may want to embark a more detailed scientific analysis for setting permanent dissolved oxygen objectives, an interim standard should be immediately set. The minimum interim standard should be a minimum 5.0 mg/l. This will ensure that all dockets under consideration during the more rigorous analysis for the setting of a permanent objective are achieving a more realistic standard for the protection and propagation of resident and anadromous species and will give present and future dischargers notice that needed upgrades should be anticipated, planned for and installed as soon as possible.

Conclusion

For the foregoing reasons, the Delaware Riverkeeper, the Delaware Riverkeeper Network, the Delaware River Shad Fishermen's Association, and the Lehigh River Stocking Association, Inc., petition DRBC to 1) immediately upgrade the designated uses of Zones 3, 4, and River Miles 78.8 to 70.0 of Zone 5 to include propagation of resident fish and other aquatic life, 2) immediately upgrade the designated uses of Zones 2 through 5 to include spawning and nursery habitat for anadromous fish, and 3) upgrade all applicable stream quality objectives necessary to preserve these uses; including setting immediate interim standards for dissolved oxygen and setting a 3 year time limit for the establishment of permanent dissolved oxygen and nutrient objectives.

Thank you for your consideration of this petition.

Sincerely,

Maya K. van Rossum, the Delaware Riverkeeper, Delaware Riverkeeper Network
Charles Furst, President, Delaware River Shad Fishermen's Association
Matt MacConnell, President, Lehigh River Stocking Association

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Appendix A

2002 PSEG Data 1

2003 PSEG Data 19

2004 PSEG Data 37

2002 PSEG Data

Table 4-31
PSEG Estuary Enhancement Program
Total abundance of ichthyoplankton and macrozooplankton target species collected by zone,
April-July 2002

Species (Taxon)	All Zones	Zone													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Alewife	9,416	0	0	0	0	24	2	12	420	806	1,313	1,520	3,971	1,185	163
Alosa spp.	7,595	0	0	0	0	0	0	0	0	15	164	1,522	4,270	622	1,002
American Shad	3,402	0	0	0	0	248	0	0	0	206	235	186	587	1,832	108
Atlantic Croaker	398	0	0	32	0	6	77	129	107	34	12	1	0	0	0
Atlantic Menhaden	54,935	27,476	19,912	5,979	757	244	122	139	54	171	31	12	36	0	2
Atlantic Silverside	2,178	33	314	463	796	294	78	154	44	2	0	0	0	0	0
Bay Anchovy	1,559,283	622,648	187,411	229,712	460,652	25,231	31,439	1,769	223	170	18	1	8	1	0
Blueback Herring	9	0	0	0	0	0	0	0	1	0	5	0	1	1	1
Bluefish	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Clupeidae	13,310	210	0	10	0	100	10	60	481	3,264	2,593	1,109	783	3,160	1,530
Morone spp.	9,800	0	0	0	0	0	339	622	702	1,553	3,886	1,315	1,079	303	1
Spot	8	1	6	0	0	0	0	1	0	0	0	0	0	0	0
Striped Bass	62,365	0	0	0	0	82	1,414	3,139	15,388	40,294	1,657	75	54	261	1
Weakfish	252,079	108,015	115,672	22,272	5,350	355	379	34	1	0	1	0	0	0	0
White Perch	51,406	0	2	0	0	2,841	5	116	934	4,315	8,081	12,179	13,059	5,359	4,515
Total Ichthyoplankton	2,026,186	758,384	323,317	258,468	467,556	29,425	33,865	6,175	18,355	50,830	17,996	17,920	23,848	12,724	7,323
Gammarus spp.	1,402,330	5,721	18,978	40,376	27,676	53,968	6,987	38,483	148,450	286,162	327,735	161,421	122,040	103,442	60,891
Neomysis americana	16,374,338	4,197,218	1,835,105	6,128,577	1,994,753	1,887,271	174,046	134,028	22,241	984	8	5	57	30	15

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Table 4-39 (page 1 of 2)

PSEG Estuary Enhancement Program
Mean density (#/1000 m^3) by sampling event (collected in Zone 7) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.91	0.00	0.00	0.00	15.26	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	18.14	114.68	6.90	12.94	7.17	3.40	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	14.65	57.41	11.47	0.00	2.63	42.02	3.66	0.00	0.00
juvenile	4.15	3.55	0.00	11.46	10.11	2.45	3.76	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07
yolk sac larvae	6.80	0.00	0.00	13.02	0.00	3.54	29.38	8.45	0.00
post-yolk sac larvae	13.32	0.00	1.49	4.70	2.34	32.30	21.74	43.35	3.56
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	6.65	0.00	0.00	0.00	24.47	0.00	0.00	27.51	1.19
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	166.49	0.00	3.90	0.00	0.00	227.49	510.47	370.01	220.07
juvenile	15.20	3.86	3.90	0.00	0.00	0.00	49.87	16.67	47.27
adult	18.63	41.52	34.00	25.85	42.84	0.00	3.66	0.00	1.19
undetermined larvae	26.19	0.00	0.00	0.00	0.00	0.00	0.00	209.48	0.00
Blueback herring									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4-39 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 7) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.14	0.00	0.00	1.14	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	3.35	0.00	0.00	2.30	6.52	17.16	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	5.51	0.00	0.00	7.11	25.98	11.03	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	86.37	0.00	0.00	661.76	2.26	26.97	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.14	0.00	0.00	1.14	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	22.81	5.92	5.01	134.24	36.22	1.08	0.00	0.00	0.00
yolk sac larvae	82.03	2.37	7.99	323.21	320.40	2.31	0.00	0.00	0.00
post-yolk sac larvae	317.59	0.00	0.00	236.32	1,809.49	490.31	4.62	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	37.75	0.00	0.00	0.00	302.03	0.00	0.00	0.00	0.00
Weakfish									
egg	0.14	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.00
yolk sac larvae	0.28	0.00	0.00	0.00	2.26	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.89	0.00	0.00	0.00	0.00	1.09	6.03	0.00	0.00
juvenile	2.93	2.89	0.00	0.00	0.00	0.00	20.56	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	1.64	1.18	0.00	5.74	6.17	0.00	0.00	0.00	0.00
post-yolk sac larvae	14.78	0.00	0.00	1.14	7.67	105.65	3.76	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total IP	869	233	75	1,442	2,625	967	658	675	274
***Gammarus* spp.**	5,257	2,736	221	7,106	15,039	5,612	9,608	1,162	572
Neomysis americana	18,395	8,808	26,684	2,249	67,371	1,671	13,674	17,079	9,625

Note: Event 1 occurred April 9-18.
Event 2 occurred April 23-May 2.
Event 3 occurred May 6-21.
Event 4 occurred May 22-30.
Event 5 occurred June 7-18.
Event 6 occurred June 24-29.
Event 7 occurred July 8-17.
Event 8 occurred July 23-30.

*The "All Events" column contains the mean density for all events combined. It is not he total across each row.

Table 4-40 (page 1 of 2)

PSEG Estuary Enhancement Program
Mean density (#/1000 m^3) by sampling event (collected in Zone 8) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	107.71	0.00	4.08	8.37	839.58	9.65	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	29.47	40.51	172.09	4.18	7.01	9.91	2.06	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	12.70	29.11	58.02	0.00	0.00	2.21	12.24	0.00	0.00
juvenile	1.94	0.00	0.00	6.28	4.67	2.48	2.06	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	4.18	2.28	0.00	2.58	0.00	0.00	2.06	10.45	16.88
post-yolk sac larvae	6.70	0.00	8.47	2.09	0.00	0.00	16.31	17.12	9.64
juvenile	0.82	0.00	6.58	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	43.51	0.00	17.55	0.00	0.00	0.00	65.12	119.28	146.16
juvenile	15.17	0.00	38.58	0.00	0.00	0.00	20.48	2.07	60.23
adult	3.01	4.56	7.56	11.93	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.29	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4-40 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 8) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	18.61	0.00	0.00	9.99	131.97	6.91	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	112.32	0.00	0.00	0.00	652.81	245.74	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	207.54	0.00	0.00	0.00	615.88	1,044.43	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	2,111.79	34.46	227.75	16,437.24	194.90	0.00	0.00	0.00	0.00
yolk sac larvae	1,682.94	2.28	983.27	11,685.59	792.38	0.00	0.00	0.00	0.00
post-yolk sac larvae	208.66	0.00	7.86	495.62	935.02	193.72	37.05	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.41
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	34.23	32.18	61.42	129.06	48.98	2.21	0.00	0.00	0.00
post-yolk sac larvae	218.65	0.00	10.36	15.80	861.61	842.98	18.42	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.58	0.00	0.00	0.00	4.67	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total IP	4,821	148	1,604	28,809	5,089	2,360	176	149	235
***Gammarus* spp.**	40,420	2,040	23,397	20,899	75,881	135,009	35,174	12,113	18,849
Neomysis americana	6,391	53	63	230	65	263	22	15,918	34,509

Note: Event 1 occurred April 9-18.
Event 2 occurred April 23-May 2.
Event 3 occurred May 6-21.
Event 4 occurred May 22-30.
Event 5 occurred June 7-18.
Event 6 occurred June 24-29.
Event 7 occurred July 8-17.
Event 8 occurred July 23-30.

*The "All Events" column contains the mean density for all events combined. It is not he total across each row.

Table 4-41 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 9) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.11	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	89.26	2.52	21.26	75.56	515.45	79.28	19.17	0.87	0.00
juvenile	0.22	0.00	0.00	0.00	0.00	0.00	0.88	0.87	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.72	0.00	5.75	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.45	0.00	0.00	0.00	0.00	0.00	0.00	3.56	0.00
juvenile	0.43	0.00	0.00	0.00	0.00	0.00	0.00	3.45	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.22	0.00	0.00	0.00	1.76	0.00	0.00	0.00	0.00
yolk sac larvae	15.61	0.00	0.00	0.00	0.00	124.92	0.00	0.00	0.00
post-yolk sac larvae	5.50	0.00	0.00	0.00	0.00	44.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.10	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	3.48	0.83	10.76	10.89	3.78	0.84	0.75	0.00	0.00
adult	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	15.39	9.13	63.32	1.83	0.00	35.78	12.09	0.95	0.00
juvenile	2.56	0.00	0.00	4.35	8.56	0.00	1.48	6.09	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.18	0.00	0.00	0.00	0.00	0.00	1.48	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	11.81	0.00	0.00	0.00	0.00	0.00	5.94	15.77	72.79
juvenile	6.46	0.00	0.00	0.00	0.00	0.00	5.16	0.00	46.56
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.00
Blueback herring									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4-41 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 9) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	64.93	0.85	4.08	324.58	134.45	59.26	7.65	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	291.44	0.00	0.81	362.67	1,380.64	587.37	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	164.20	0.00	0.00	439.18	287.32	579.28	1.75	6.03	0.00
Spot									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	2,724.59	9.91	290.49	21,200.22	294.33	1.75	0.00	0.00	0.00
yolk sac larvae	1,437.35	0.00	6,272.87	4,465.36	759.66	0.89	0.00	0.00	0.00
post-yolk sac larvae	233.00	0.00	18.95	699.48	968.38	146.53	61.56	3.41	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	46.32	0.00	0.00	0.00	370.59	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	5.54	29.92	0.81	7.97	5.59	0.00	0.00	0.00	0.00
yolk sac larvae	41.32	59.23	63.31	122.40	66.69	18.88	0.00	0.00	0.00
post-yolk sac larvae	412.92	0.00	155.68	255.37	491.29	2,092.69	247.35	60.02	0.92
juvenile	0.21	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total IP	5,575	113	6,911	27,970	5,288	3,771	365	102	121
***Gammarus* spp.**	31,177	344	9,596	42,369	73,441	72,400	26,912	11,301	13,050
Neomysis americana	108	0	11	0	2	3	1	0	846

Note: Event 1 occurred April 9-18.
Event 2 occurred April 23-May 2.
Event 3 occurred May 6-21.
Event 4 occurred May 22-30.
Event 5 occurred June 7-18.
Event 6 occurred June 24-29.
Event 7 occurred July 8-17.
Event 8 occurred July 23-30.

*The "All Events" column contains the mean density for all events combined. It is not he total across each row.

Table 4-42 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 10) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	148.02	0.93	121.50	523.93	313.12	172.65	22.41	0.00	0.00
juvenile	0.12	0.00	0.00	0.00	0.00	0.00	0.90	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	3.71	4.53	16.13	5.39	2.90	0.00	0.00	0.00	0.00
yolk sac larvae	14.53	0.00	33.74	55.04	24.53	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.02	0.00	0.00	0.00	0.00	0.00	7.96	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.13	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	12.15	0.00	0.00	0.00	26.04	66.77	0.00	1.92	0.00
post-yolk sac larvae	13.68	0.00	0.00	8.52	38.76	41.86	2.65	9.25	0.00
juvenile	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.12	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	1.42	0.00	2.79	3.24	1.96	0.85	0.00	1.91	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	3.04	0.72	16.51	0.96	3.75	0.00	1.80	0.00	0.00
juvenile	0.56	0.00	0.00	0.00	0.00	0.00	0.00	4.39	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.66	0.00	0.00	0.00	0.00	5.17	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.05	0.00	0.00	0.00	0.00	0.00	0.88	1.79	6.88
juvenile	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2.24
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.58	0.00	0.00	0.00	0.00	1.65	0.00	2.86	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4-42 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 10) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	29.87	0.72	17.05	22.00	7.26	172.83	8.94	8.40	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	248.38	0.00	0.00	476.68	365.28	1,045.83	0.00	2.82	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.64	0.00	0.00	12.79	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	428.68	0.00	0.00	140.35	1,523.19	1,680.19	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	11.81	1.72	0.00	83.19	7.22	0.00	0.00	0.00	0.00
yolk sac larvae	5.21	0.00	31.57	5.39	1.94	0.00	1.76	0.00	0.00
post-yolk sac larvae	124.96	0.00	15.43	140.56	489.99	323.99	4.68	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	46.63	0.00	0.00	0.00	363.72	0.00	0.00	0.00	0.00
Weakfish									
egg	0.11	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	31.91	72.45	4.69	128.26	37.48	6.05	0.00	0.00	0.00
yolk sac larvae	67.08	32.14	280.52	76.60	97.37	33.75	2.84	0.00	0.00
post-yolk sac larvae	836.10	0.00	543.80	211.97	3,562.74	1,586.83	477.57	137.76	1.12
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.09	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total IP	2,034	114	1,084	1,897	6,867	5,139	532	173	10
***Gammarus* spp.**	37,561	279	28,261	20,251	105,818	42,128	33,840	48,501	17,369
Neomysis americana	1	0	0	0	0	3	0	3	0

Note: Event 1 occurred April 9-18.
Event 2 occurred April 23-May 2.
Event 3 occurred May 6-21.
Event 4 occurred May 22-30.
Event 5 occurred June 7-18.
Event 6 occurred June 24-29.
Event 7 occurred July 8-17.
Event 8 occurred July 23-30.

*The "All Events" column contains the mean density for all events combined. It is not he total across each row.

Table 4-43 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 11) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	1.10	0.00	0.00	0.00	8.81	0.00	0.00	0.00	0.00
post-yolk sac larvae	164.16	1.85	1,019.88	63.55	14.21	189.62	17.50	6.69	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	2.64	0.00	0.00	0.00	21.14	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	53.05	5.90	270.24	144.06	2.60	1.61	0.00	0.00	0.00
yolk sac larvae	103.16	0.00	710.45	53.48	51.50	9.85	0.00	0.00	0.00
post-yolk sac larvae	13.32	0.00	0.00	0.00	83.07	0.00	23.52	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	3.84	0.00	0.00	0.00	30.72	0.00	0.00	0.00	0.00
yolk sac larvae	7.43	0.00	1.84	3.39	0.88	53.34	0.00	0.00	0.00
post-yolk sac larvae	7.72	0.00	1.86	25.03	5.16	28.77	0.00	0.96	0.00
juvenile	0.11	0.00	0.00	0.00	0.88	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.21	0.00	0.00	1.65	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.11	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.98	3.53	4.32	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.36	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4-43 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 11) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	2.53	0.00	0.00	0.00	20.26	0.00	0.00	0.00	0.00
post-yolk sac larvae	13.66	0.00	8.66	1.65	3.55	63.09	13.37	18.12	0.86
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	97.61	0.00	2.45	247.29	205.51	290.17	0.00	3.83	1.71
***Morone* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	48.48	0.00	0.00	0.00	0.00	387.83	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	86.65	0.00	0.00	263.51	0.00	429.69	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	1.68	2.59	0.00	1.71	5.23	3.94	0.00	0.00	0.00
yolk sac larvae	0.53	0.00	0.00	0.00	1.74	1.64	0.85	0.00	0.00
post-yolk sac larvae	5.80	0.00	3.65	21.11	11.01	4.93	0.00	5.68	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	59.86	73.73	8.35	322.06	48.55	26.21	0.00	0.00	0.00
yolk sac larvae	121.15	27.43	602.28	16.71	252.13	63.84	6.79	0.00	0.00
post-yolk sac larvae	1,056.64	2.90	1,208.16	309.89	627.21	6,061.54	107.66	134.88	0.86
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	30.93	0.00	0.00	2.46	244.97	0.00	0.00	0.00	0.00
Total IP	1,884	118	3,843	1,478	1,639	7,616	170	173	4
***Gammarus* spp.**	17,688	226	6,505	27,186	17,182	21,073	9,048	35,832	24,455
Neomysis americana	1	0	0	1	4	0	0	0	0

Note: Event 1 occurred April 9-18.
Event 2 occurred April 23-May 2.
Event 3 occurred May 6-21.
Event 4 occurred May 22-30.
Event 5 occurred June 7-18.
Event 6 occurred June 24-29.
Event 7 occurred July 8-17.
Event 8 occurred July 23-30.

*The "All Events" column contains the mean density for all events combined. It is not he total across each row.

Table 4-44 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 12) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	1.46	0.00	0.00	12.01	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	428.22	0.68	3,005.00	14.46	273.29	201.18	15.82	0.97	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	181.19	159.69	501.05	813.67	11.37	0.00	0.00	0.00	0.00
yolk sac larvae	256.94	3.22	1,788.97	28.11	278.24	8.39	0.00	0.00	0.00
post-yolk sac larvae	19.19	0.00	0.00	0.00	149.82	0.00	3.55	3.96	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	5.13	17.47	13.81	0.00	10.78	0.00	0.00	0.00	0.00
yolk sac larvae	7.96	0.00	20.88	17.28	27.11	0.00	0.00	0.00	0.00
post-yolk sac larvae	46.75	0.00	99.70	206.15	34.61	39.10	0.00	5.28	0.00
juvenile	0.11	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	2.59	0.00	0.00	21.26	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	4.30	0.00	0.00	0.00	0.00	35.28	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.83	0.00	0.00	0.00	0.00	0.00	0.89	0.74	4.35
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4-44 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 12) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	21.50	0.00	0.00	0.00	76.76	44.04	30.21	6.26	17.27
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	62.53	0.00	0.00	12.06	271.17	226.77	0.00	2.74	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	123.89	0.00	0.00	99.10	630.65	286.16	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	1.55	0.00	9.39	0.86	2.46	0.00	0.00	0.00	0.00
yolk sac larvae	1.07	0.00	6.13	0.00	0.00	0.00	2.66	0.00	0.00
post-yolk sac larvae	3.14	0.00	0.00	2.56	1.63	18.92	2.66	0.00	0.00
juvenile	0.11	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	208.49	465.31	64.08	1,087.85	92.38	0.00	0.00	0.00	0.00
yolk sac larvae	210.20	215.45	827.35	31.95	403.03	244.07	1.78	0.00	0.00
post-yolk sac larvae	1,009.17	0.00	2,619.90	174.91	2,539.05	2,017.48	734.86	186.31	2.21
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total IP	2,596	862	8,956	2,522	4,802	3,121	794	206	25
***Gammarus* spp.**	12,881	63	3,610	19,525	10,469	1,609	8,185	37,121	20,869
Neomysis americana	7	0	0	0	0	53	0	3	0

Note: Event 1 occurred April 9-18.
Event 2 occurred April 23-May 2.
Event 3 occurred May 6-21.
Event 4 occurred May 22-30.
Event 5 occurred June 7-18.
Event 6 occurred June 24-29.
Event 7 occurred July 8-17.
Event 8 occurred July 23-30.

*The "All Events" column contains the mean density for all events combined. It is not he total across each row.

Table 4-45 (page 1 of 2)

PSEG Estuary Enhancement Program
Mean density (#/1000 m^3) by sampling event (collected in Zone 13) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	128.71	0.95	700.15	1.61	86.00	220.23	11.26	8.92	9.06
juvenile	0.20	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	6.41	11.60	10.47	0.00	0.00	29.17	0.00	0.00	0.00
yolk sac larvae	61.63	5.21	417.04	38.94	0.00	31.00	0.84	0.00	0.00
post-yolk sac larvae	0.46	0.00	0.00	0.00	0.00	0.00	3.66	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	15.96	0.00	117.97	0.00	5.38	4.32	0.00	0.00	0.00
yolk sac larvae	30.43	0.00	201.12	16.71	14.71	10.91	0.00	0.00	0.00
post-yolk sac larvae	153.90	0.00	847.10	153.97	146.09	78.25	0.00	5.77	0.00
juvenile	0.20	0.00	0.00	0.00	0.00	0.00	0.00	1.62	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	3.46	0.00	0.00	0.00	0.00	27.67	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.79	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4-45 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 13) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	88.50	0.00	38.10	0.00	669.88	0.00	0.00	0.00	0.00
post-yolk sac larvae	43.03	0.00	41.08	0.00	145.55	100.18	32.95	5.48	31.01
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	207.96	0.00	19.13	0.00	202.70	1,429.00	5.75	7.10	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	32.72	0.00	0.00	0.00	0.00	261.75	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	0.33	0.00	0.00	0.80	1.82	0.00	0.00	0.00	0.00
yolk sac larvae	25.34	0.00	0.00	202.68	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.52	0.00	0.00	0.00	0.00	1.72	1.64	0.83	0.00
juvenile	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	32.05	8.70	2.73	2.63	14.94	227.44	0.00	0.00	0.00
yolk sac larvae	302.72	13.43	324.64	52.93	1,712.02	314.69	1.62	0.00	0.00
post-yolk sac larvae	251.45	0.00	939.96	7.57	199.01	662.85	122.21	78.50	1.51
juvenile	0.42	0.00	0.00	0.00	0.00	0.00	0.00	3.33	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total IP	1,387	40	3,659	478	3,198	3,399	180	115	42
***Gammarus* spp.**	10,254	70	491	2,349	3,073	13,273	5,673	28,595	28,509
Neomysis americana	3	0	0	3	17	0	0	1	2

Note: Event 1 occurred April 9-18.
Event 2 occurred April 23-May 2.
Event 3 occurred May 6-21.
Event 4 occurred May 22-30.
Event 5 occurred June 7-18.
Event 6 occurred June 24-29.
Event 7 occurred July 8-17.
Event 8 occurred July 23-30.

*The "All Events" column contains the mean density for all events combined. It is not he total across each row.

Table 4-46 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 14) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	17.26	0.00	58.20	0.00	49.95	21.47	1.71	2.59	4.19
juvenile	0.11	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	45.50	15.63	348.34	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	57.77	0.00	174.07	22.27	182.85	82.95	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.73	0.00	1.79	0.80	3.28	0.00	0.00	0.00	0.00
post-yolk sac larvae	11.01	0.00	60.01	10.72	0.00	16.40	0.00	0.91	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.20	0.00	0.78	0.80	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.10	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4-46 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 14) for each life stage of each target species caught during the Delaware Baywide Ichthyoplankton Effort, April-July 2002

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	13.37	0.00	105.28	0.00	1.70	0.00	0.00	0.00	0.00
post-yolk sac larvae	31.28	0.00	25.42	0.00	183.95	7.07	0.00	1.83	32.81
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	116.88	0.00	0.00	0.00	749.24	184.20	0.00	1.60	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.11	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	226.20	28.66	0.00	0.00	1,780.93	0.00	0.00	0.00	0.00
yolk sac larvae	260.00	13.41	77.55	260.63	1,394.46	333.95	0.00	0.00	0.00
post-yolk sac larvae	3.35	0.00	8.94	0.00	0.00	4.87	6.02	6.09	0.85
juvenile	0.11	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00
adult	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total IP	784	58	860	295	4,347	651	10	14	38
***Gammarus* spp.**	6,677	152	142	2,862	1,182	2,128	38,793	4,328	3,825
Neomysis americana	2	0	0	4	5	3	0	0	0

Note: Event 1 occurred April 9-18.
Event 2 occurred April 23-May 2.
Event 3 occurred May 6-21.
Event 4 occurred May 22-30.
Event 5 occurred June 7-18.
Event 6 occurred June 24-29.
Event 7 occurred July 8-17.
Event 8 occurred July 23-30.

*The "All Events" column contains the mean density for all events combined. It is not he total across each row.

2003 PSEG Data

Table 4-31
PSEG Estuary Enhancement Program
Total abundance of ichthyoplankton and macrozooplankton target species collected by zone,
April-July 2003

Species (Taxon)	All Zones	Zone 1	2	3	4	5	6	7	8	9	10	11	12	13	14
Alewife	18,803	0	0	1	0	0	1	4	339	1,205	2,368	4,191	4,624	4,755	1,315
Alosa spp.	13,536	0	0	0	0	0	0	0	0	75	566	4,157	2,138	3,284	3,316
American Shad	5,412	0	0	1	0	0	0	0	0	29	58	730	1,888	2,357	349
Atlantic Croaker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atlantic Menhaden	20,387	15,672	2,532	1,108	1,028	17	10	1	0	0	1	18	0	0	0
Atlantic Silverside	182	9	20	10	33	72	31	2	2	2	0	1	0	0	0
Bay Anchovy	1,633,701	793,044	457,387	184,678	162,628	13,390	4,519	877	16,820	334	13	5	1	2	3
Blueback Herring	143	0	0	0	0	0	1	1	0	52	4	56	20	2	7
Bluefish	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Clupeidae	15,295	19	14	19	0	2	4	24	1,314	1,737	2,399	3,073	2,837	2,409	1,444
Morone spp.	139,869	0	0	0	0	2	33	438	135,386	2,629	872	377	102	4	26
Spot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striped Bass	238,493	0	0	0	0	30	98	2,640	229,043	3,393	2,299	863	106	15	6
Weakfish	7,886	4,346	1,220	894	409	729	154	101	32	0	1	0	0	0	0
White Perch	78,028	0	0	0	0	0	0	93	58,624	3,425	4,586	5,482	3,651	1,025	1,142
Total Ichthyoplankton	2,171,736	813,090	461,173	186,711	164,099	14,242	4,851	4,181	441,560	12,881	13,167	18,953	15,367	13,853	7,608
Gammarus spp.	4,579,228	7,758	42,441	117,231	8,055	14,154	152,085	718,923	1,149,274	1,124,586	455,517	331,142	345,261	72,103	40,698
Neomysis americana	16,894,133	2,911,771	3,302,514	2,976,626	2,063,021	2,208,869	3,009,064	356,871	59,900	2,076	24	32	63	3,199	103

Table 4-39 (page 13 of 28)
PSEG Estuary Enhancement Program
Mean density (#/1000 m^3) by sampling event (collected in Zone 7) for each life stage
of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.58	0.00	0.00	0 00	4.62	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic Croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.13	0.00	0.00	0 00	1.05	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.13	0.00	0.00	0 00	0.00	0.00	1.02	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.13	0.00	0.00	0 00	0.00	0.00	1.07	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.12	0.00	0.00	0 00	0.00	0.98	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	113.13	0.00	0.00	0 00	0.00	0.00	0.00	221.16	683.86
juvenile	0.65	0.00	0.00	0 00	0.00	0.98	0.00	0.00	4.23
adult	1.23	0.00	0.00	2.16	5.62	0.98	0.00	0.00	1.07
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.12	0.00	0.00	0 00	0.00	0.00	0.98	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-39 (page 14 of 28)

PSEG Estuary Enhancement Program
Mean density (#/1000 m^3) by sampling event (collected in Zone 7) for each life stage
of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.28	0.00	0.00	0 00	0.00	2.21	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.48	0.00	0.00	3 82	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	11.30	0.00	0.00	0 00	0.00	17.67	0.00	72.74	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	65.03	0.00	0.00	517.90	0.00	2.33	0.00	0.00	0.00
yolk sac larvae	156.75	0.00	0.00	1,216.26	36.85	0.00	0.93	0.00	0.00
post-yolk sac larvae	110.79	0.00	0.00	0 00	404.35	163.13	69.19	247.33	2.31
juvenile	1.95	0.00	0.00	0 00	0.00	0.00	1.07	7.56	6.94
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	11.77	0.00	0.00	0 00	0.00	0.00	0.00	0.00	94.15
juvenile	2.21	0.00	0.00	0 00	0.00	0.00	0.00	0.00	17.65
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	2.77	0.00	0.00	22.14	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	9.24	0.00	0.00	17.57	2.38	44.71	4.01	5.28	0.00
juvenile	0.38	0.00	0.00	0 00	0.00	0.00	1.96	1.09	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	489	0	0	1,780	455	233	80	555	810
***Gammarus* spp.**	92,262	4,943	1,400	33,023	15,424	123,673	441,296	70,765	47,570
Neomysis americana	46,393	23	622	152,879	8,860	27,273	241	49,527	131,715

Note: Event 1 occurred April 1-14.
Event 2 occurred April 15-24.
Event 3 occurred May 6-15.
Event 4 occurred May 19-27.
Event 5 occurred June 2-10.
Event 6 occurred June 17-25.
Event 7 occurred July 1-15.
Event 8 occurred July 15-25.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-40 (page 15 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 8) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	99.45	0.00	0.00	67.55	561.83	85.58	37.57	43.10	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic Croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.52	0.00	0.00	0 00	0.00	0.00	0.00	0.00	4.18
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.61	0.00	0.00	0 00	0.00	0.00	0.00	4.86	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	5,050.46	0.00	0.00	0 00	0.00	0.00	0.00	39,824.23	579.47
juvenile	29.93	0.00	0.00	0 00	0.00	0.00	0.00	0.00	239.47
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-40 (page 16 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 8) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	16.92	0.00	0.00	0 00	57.93	9.51	37.57	25.86	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.08	0.00	0.00	0 00	0.00	0.00	0.00	8.62	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	109.12	0.00	0.00	858.56	9.65	4.75	0.00	0.00	0.00
yolk sac larvae	286.34	0.00	0.00	1,949.17	196.84	9.51	135.24	0.00	0.00
post-yolk sac larvae	66,035.43	0.00	0.00	0 00	8,522.94	1,779.38	393.41	517,579 36	8.35
juvenile	3,117 02	0.00	0.00	0 00	0.00	0.00	0.00	24,892.30	43.89
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	5.01	0.00	0.00	0 00	0.00	0.00	0.00	0.00	40.10
juvenile	4.58	0.00	0.00	0 00	0.00	0.00	0.00	0.00	36.63
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	1.65	0.00	8.54	4.67	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	11.94	0.00	0.00	95 52	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	10,859 30	0.00	0.00	180.86	1,847.08	2,813.33	2,137.51	79,874.76	20.88
juvenile	6,845.10	0.00	0.00	0 00	0.00	0.00	0.00	54,758.32	2.44
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	92,474	0	9	3,156	11,196	4,702	2,741	717,011	975
***Gammarus* spp.**	340,119	379	8,804	21,183	1,032,951	666,243	534,997	329,003	127,394
Neomysis americana	18,206	0	152	660	0	14	18	131	144,671

Note: Event 1 occurred April 1-14.
Event 2 occurred April 15-24.
Event 3 occurred May 6-15.
Event 4 occurred May 19-27.
Event 5 occurred June 2-10.
Event 6 occurred June 17-25.
Event 7 occurred July 1-15.
Event 8 occurred July 15-25.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-41 (page 17 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 9) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	138.98	0.00	1.22	35.22	141.46	512.20	0.00	394.19	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	3.82	0.00	30.41	2.48	0.00	3.00	0.00	0.00	0.00
yolk sac larvae	3.10	0.00	8.39	16.61	0.00	0.87	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	1.69	0.00	0.00	0 00	0.00	0.00	0.00	0.00	13.22
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	2.20	0.00	0.00	0 98	0.00	9.54	1.62	5.05	0.00
juvenile	0.97	0.00	0.00	0 00	0.00	0.00	0.81	2.58	4.14
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic Croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.22	0.00	0.00	0 00	0.00	0.87	0.00	0.83	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.41	0.00	0.00	0 00	0.00	0.86	2.37	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	28.49	0.00	0.00	0 00	0.00	0.00	0.00	0.00	222.22
juvenile	6.37	0.00	0.00	0 00	0.00	0.00	0.00	0.00	49.71
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.54	0.00	0.00	0 00	0.00	0.00	0.00	0.00	4.17
juvenile	5.00	0.00	0.00	0 00	0.00	0.00	0.86	0.00	38.13
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-41 (page 18 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 9) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.12	0.00	1.22	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	19.09	0.00	0.00	5.47	62.65	30.38	0.00	50.39	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	9.25	0.00	0.00	0 00	0.00	0.00	0.86	71.28	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	203.68	0.00	15.49	17.64	1,546.21	10.75	1.73	0.00	0.00
yolk sac larvae	35.81	0.00	0.00	39.40	47.52	188.37	3.17	0.83	0.00
post-yolk sac larvae	156.43	0.00	0.00	0 00	629.54	400.41	1.59	181.05	7.54
juvenile	8.88	0.00	0.00	0 00	0.00	0.00	0.81	2.51	65.96
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	66.07	0.00	489 00	121.63	0.99	1.50	0.00	0.00	0.00
yolk sac larvae	12.19	0.00	1.22	49 96	1.93	42.23	0.00	0.00	0.00
post-yolk sac larvae	305.69	0.00	0.00	153.79	502.50	526.59	2.47	1,141.23	57.79
juvenile	12.36	0.00	0.00	0 00	0.00	0.00	0.00	18.09	78.35
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	1,021	0	547	443	2,933	1,728	16	1,868	541
***Gammarus* spp.**	125,130	51	170	1,296	84,806	323,908	31,622	124,799	409,394
Neomysis americana	211	0	8	12	0	1	1,621	1	6

Note: Event 1 occurred April 1-14.
Event 2 occurred April 15-24.
Event 3 occurred May 6-15.
Event 4 occurred May 19-27.
Event 5 occurred June 2-10.
Event 6 occurred June 17-25.
Event 7 occurred July 1-15.
Event 8 occurred July 15-25.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-42 (page 19 of 28)
PSEG Estuary Enhancement Program
Mean density (#/1000 m^3) by sampling event (collected in Zone 10) for each life stage
of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	266.61	0.00	0.85	226.13	1,172.29	279.81	391.76	60.43	1.63
juvenile	0.10	0.00	0.00	0 00	0.00	0.00	0.00	0.83	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	6.66	8.13	9.48	19.28	12.32	4.04	0.00	0.00	0.00
yolk sac larvae	56.03	0.00	3.51	432.14	9.12	1.78	0.00	1.68	0.00
post-yolk sac larvae	0.20	0.00	0.00	0 00	0.00	0.00	0.00	0.00	1.61
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.11	0.00	0.00	0 85	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.86	0.00	0.00	1 84	0.00	5.04	0.00	0.00	0.00
post-yolk sac larvae	5.24	0.00	0.00	5 55	6.77	21.18	3.48	4.96	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic Croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.11	0.00	0.00	0 85	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.33	0.00	0.00	0 00	0.00	0.00	0.00	0.00	10.67
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.41	0.00	0.00	0 00	0.00	0.00	0.00	0.84	2.41
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-42 (page 20 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 10) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	33.57	0.00	0.00	60.38	100.03	17.44	57.21	21.65	6.50
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.98	0.00	0.00	7 86	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	61.80	0.00	0.00	7 36	472.22	14.81	0.00	0.00	0.00
yolk sac larvae	30.51	0.00	0.00	67.15	112.17	3.16	59.18	2.45	0.00
post-yolk sac larvae	169.76	0.00	0.00	0 00	1,253.39	9.49	87.03	8.20	0.00
juvenile	0.10	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.81
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.11	0.00	0.00	0 00	0.00	0.89	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	39.25	2.44	78.70	182.98	46.67	3.23	0.00	0.00	0.00
yolk sac larvae	27.02	0.00	0.00	104.84	48.50	27.49	15.66	19.62	0.00
post-yolk sac larvae	435.81	0.00	0.00	375.76	497.04	174.95	2,245.69	166.14	26.89
juvenile	0.21	0.00	0.00	0 00	0.00	0.00	0.00	0.00	1.71
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	1,137	11	93	1,493	3,731	563	2,860	287	52
***Gammarus* spp.**	47,626	17	49	1,437	29,494	55,213	54,786	16,458	223,553
Neomysis americana	3	0	1	6	4	6	1	0	3

Note: Event 1 occurred April 1-14.
Event 2 occurred April 15-24.
Event 3 occurred May 6-15.
Event 4 occurred May 19-27.
Event 5 occurred June 2-10.
Event 6 occurred June 17-25.
Event 7 occurred July 1-15.
Event 8 occurred July 15-25.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-43 (page 21 of 28)

PSEG Estuary Enhancement Program
Mean density (#/1000 m^3) by sampling event (collected in Zone 11) for each life stage
of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	489.53	0.00	2.53	1,190.32	652.02	1,773.00	195.43	98.70	4.24
juvenile	0.84	0.00	0.00	0 00	0.00	0.00	0.00	6.72	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	38.23	0.00	67.47	220.53	14.46	3.41	0.00	0.00	0.00
yolk sac larvae	451.06	0.86	5.69	3,564.95	17.62	19.38	0.00	0.00	0.00
post-yolk sac larvae	2.11	0.00	0.00	0 00	0.00	0.00	0.00	0.00	16.85
juvenile	0.11	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.86
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.46	0.00	0.86	0 94	1.89	0.00	0.00	0.00	0.00
yolk sac larvae	24.79	0.00	0.00	85.65	10.35	102.29	0.00	0.00	0.00
post-yolk sac larvae	53.40	0.00	0.00	47.96	12.62	302.40	34.09	29.21	0.90
juvenile	1.67	0.00	0.00	0 00	0.00	0.00	0.82	6.72	5.83
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic Croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	2.19	0.00	0.00	17.52	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.12	0.00	0.00	0 00	0.99	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.23	0.00	0.00	0 00	0.00	1.87	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.30	0.00	0.00	0 00	0.00	0.00	0.00	0.00	2.43
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	5.86	0.00	0.00	0 00	0.00	0.00	0.00	0.81	46.08
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-43 (page 22 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 11) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	93.78	0.00	0.00	490.12	78.59	67.45	19.02	16.59	14.92
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	37.01	0.00	0.00	5.72	212.39	75.17	2.76	0.00	0.00
yolk sac larvae	11.85	0.00	0.00	57 36	32.43	0.00	3.29	1.68	0.00
post-yolk sac larvae	54.83	0.00	0.00	4 23	410.40	17.30	0.00	5.15	1.57
juvenile	0.32	0.00	0.00	0 00	0.00	0.00	0.00	0.00	2.59
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	35.91	0.00	14.15	199.47	63.83	6.96	2.87	0.00	0.00
yolk sac larvae	107.42	0.00	0.00	212.88	27.22	549.69	53.67	15.94	0.00
post-yolk sac larvae	481.82	0.00	0.00	737.81	415.33	874.48	1,073.22	686.82	66.89
juvenile	0.32	0.00	0.00	0 00	0.00	0.00	0.00	0.00	2.58
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	1,894	1	91	6,835	1,950	3,793	1,385	868	166
***Gammarus* spp.**	36,059	17	57	284	7,707	51,249	45,484	6,034	177,643
Neomysis americana	4	0	0	11	3	4	1	0	10

Note: Event 1 occurred April 1-14.
Event 2 occurred April 15-24.
Event 3 occurred May 6-15.
Event 4 occurred May 19-27.
Event 5 occurred June 2-10.
Event 6 occurred June 17-25.
Event 7 occurred July 1-15.
Event 8 occurred July 15-25.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-44 (page 23 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 12) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	551.20	0.00	0.00	1,175.42	2,924.89	269.47	13.55	20.81	5.43
juvenile	0.34	0.00	0.00	0 00	0.00	0.00	0.00	2.72	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	132.57	0.00	72 85	714.61	269.34	3.75	0.00	0.00	0.00
yolk sac larvae	105.92	0.00	0.80	422.71	102.72	312.89	8.25	0.00	0.00
post-yolk sac larvae	2.56	0.00	0.00	0 00	0.00	0.00	0.00	0.00	20.48
juvenile	0.33	0.00	0.00	0 00	0.00	0.00	0.00	0.00	2.63
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	57.00	0.00	2.60	393.43	32.18	23.65	4.13	0.00	0.00
yolk sac larvae	35.36	0.00	0.00	148.89	102.27	29.06	2.64	0.00	0.00
post-yolk sac larvae	121.75	0.00	0.00	326.52	287.40	163.26	88.77	36.49	71.52
juvenile	1.77	0.00	0.00	0 00	0.00	0.00	0.00	3.42	10.77
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic Croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.11	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.90
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.11	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.89
juvenile	2.13	0.00	0.00	0 00	0.00	0.00	0.00	0.00	17.02
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-44 (page 24 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 12) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	42.58	0.00	0.80	127.93	179.19	11.71	17.05	0.00	9.06
juvenile	0.10	0.00	0.00	0 00	0.00	0.00	0.00	0.83	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	9.88	0.00	2.60	0 81	20.66	8.61	46.32	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.79	0.00	0.00	0 00	5.86	3.12	0.83	0.92	3.58
juvenile	0.11	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.88
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	37.91	0.00	13 86	102.56	166.41	16.85	3.58	0.00	0.00
yolk sac larvae	70.26	0.00	0.00	170.82	284.08	46.69	47.72	12.81	0.00
post-yolk sac larvae	303.47	0.00	0.00	89.32	570.07	243.91	3.65	756.08	764.76
juvenile	1.11	0.00	0.00	0 00	0.00	0.00	0.00	0.00	8.85
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	1,478	0	94	3,673	4,945	1,133	236	834	917
***Gammarus* spp.**	38,349	11	27	197	1,958	18,549	11,924	9,393	264,730
Neomysis americana	7	0	1	50	1	3	0	1	0

Note: Event 1 occurred April 1-14.
Event 2 occurred April 15-24.
Event 3 occurred May 6-15.
Event 4 occurred May 19-27.
Event 5 occurred June 2-10.
Event 6 occurred June 17-25.
Event 7 occurred July 1-15.
Event 8 occurred July 15-25.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-45 (page 25 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 13) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	473.65	0.00	0.00	899.97	2,795.45	6.06	35.08	26.57	26.08
juvenile	0.21	0.00	0.00	0 00	0.00	0.00	0.00	1.67	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	11.84	3.28	0.00	8.49	8.57	38.49	35.91	0.00	0.00
yolk sac larvae	316.59	0.00	1.85	1,490.09	828.03	178.40	34.36	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	30.01	0.00	24.17	83.14	39.78	29.65	63.34	0.00	0.00
yolk sac larvae	65.40	0.00	0.00	355.28	136.02	6.66	24.41	0.81	0.00
post-yolk sac larvae	144.85	0.00	0.00	356.29	550.95	5.03	144.27	71.59	30.71
juvenile	1.67	0.00	0.00	0 00	0.00	0.00	0.00	4.38	8.99
adult	0.11	0.00	0.00	0 00	0.00	0.00	0.00	0.86	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic Croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.23	0.00	0.00	0 00	0.00	0.00	0.00	0.00	1.82
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.21	0.00	0.00	0 00	0.00	0.00	0.00	0.00	1.72
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-45 (page 26 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 13) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.21	0.00	0.00	1.71	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	17.91	0.00	0.00	4 36	88.18	2.05	10.56	7.47	32.10
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.64	0.00	0.00	0 00	0.00	0.00	0.00	5.16	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	1.39	0.00	0.00	0 00	0.00	8.22	2.89	0.00	0.00
yolk sac larvae	0.11	0.00	0.87	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.24	0.00	0.00	0 00	0.00	0.00	0.98	0.00	0.97
juvenile	0.11	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.85
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	19.70	0.00	0.00	26 84	48.13	77.04	5.57	0.00	0.00
yolk sac larvae	52.69	0.00	0.00	149.69	133.34	3.00	85.97	49.53	0.00
post-yolk sac larvae	37.71	0.00	0.00	0 00	20.40	0.00	1.97	40.75	238.59
juvenile	0.22	0.00	0.00	0 00	0.00	0.00	0.00	0.00	1.53
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	1,176	3	27	3,376	4,649	355	445	209	343
***Gammarus* spp.**	8,056	18	23	273	2,691	1,055	3,548	6,166	50,676
Neomysis americana	357	3	0	33	0	9	10	1	2,804

Note: Event 1 occurred April 1-14.
Event 2 occurred April 15-24.
Event 3 occurred May 6-15.
Event 4 occurred May 19-27.
Event 5 occurred June 2-10.
Event 6 occurred June 17-25.
Event 7 occurred July 1-15.
Event 8 occurred July 15-25.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-46 (page 27 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 14) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	130.83	0.00	0.00	16.93	855.79	1.88	6.09	1.89	19.07
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	22.79	0.00	27.63	100.71	0.98	24.04	3.48	25.48	0.00
yolk sac larvae	326.41	0.00	0.00	368.68	1,598.65	637.25	6.71	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	1.93	0.00	0.00	3.48	2.45	7.53	1.95	0.00	0.00
yolk sac larvae	1.26	0.00	0.00	1 98	7.15	0.00	0.00	0.94	0.00
post-yolk sac larvae	34.74	0.00	0.00	0 00	231.82	1.02	0.87	9.29	34.95
juvenile	2.58	0.00	0.00	0 00	0.00	0.00	0.00	0.90	19.70
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic Croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.34	0.00	0.00	0 00	0.00	0.00	0.00	0.00	2.74
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.78	0.00	0.00	0 00	0.00	0.00	0.00	0.00	6.25
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-46 (page 28 of 28)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 14) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2003

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	2.40	0.00	0.00	0 87	17.37	0.00	0.00	0.94	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	0.49	0.00	0.00	0 00	0.00	0.00	3.90	0.00	0.00
yolk sac larvae	0.12	0.00	0.00	0 00	0.00	0.00	0.00	0.97	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.12	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.92
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	63.03	0.00	0.00	162.80	205.40	37.71	98.32	0.00	0.00
yolk sac larvae	59.72	0.00	0.00	9.43	131.84	7.19	139.88	189.45	0.00
post-yolk sac larvae	4.43	0.00	0.00	0 87	30.08	1.79	0.00	0.90	1.79
juvenile	0.33	0.00	0.00	0 00	0.00	0.00	0.00	0.00	2.67
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	652	0	28	666	3,082	718	261	231	88
***Gammarus* spp.**	4,603	27	41	281	4,445	1,071	894	4,531	25,530
Neomysis americana	12	0	1	87	1	3	0	0	3

Note: Event 1 occurred April 1-14.
Event 2 occurred April 15-24.
Event 3 occurred May 6-15.
Event 4 occurred May 19-27.
Event 5 occurred June 2-10.
Event 6 occurred June 17-25.
Event 7 occurred July 1-15.
Event 8 occurred July 15-25.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

2004 PSEG Data

Table 4-31
PSEG Estuary Enhancement Program
Total abundance of ichthyoplankton and macrozooplankton target species collected by zone,
April-July 2004

Species (Taxon)	All Zones	Zone 1	2	3	4	5	6	7	8	9	10	11	12	13	14
Alewife	11,446	0	0	0	0	0	0	0	48	494	825	3,058	3,044	3,736	241
Alosa spp.	2,625	0	0	0	0	0	0	1	0	22	236	579	1,129	411	247
American Shad	9,986	0	0	0	0	0	0	0	0	11	115	675	4,917	3,354	914
Atlantic Croaker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atlantic Menhaden	10,492	6,523	556	2,651	713	9	15	11	2	6	1	4	1	0	0
Atlantic Silverside	434	5	48	85	97	110	56	25	7	1	0	0	0	0	0
Bay Anchovy	3,442,828	2,077,045	599,828	454,225	256,313	47,477	5,526	1,296	308	424	131	181	45	23	6
Blueback Herring	57	0	0	0	0	0	0	0	2	11	11	10	10	4	9
Bluefish	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Clupeidae	18,444	16	0	1	1	3	0	34	255	1,005	2,066	4,017	6,782	3,863	401
Morone spp.	6,379	0	0	0	0	0	2	850	911	734	689	1,022	1,672	462	37
Spot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striped Bass	5,516	0	0	0	0	0	2	2,093	1,512	819	727	169	173	18	3
Weakfish	268,077	173,031	16,539	75,172	2,316	383	125	489	20	0	0	0	2	0	0
White Perch	39,151	0	0	0	0	0	3	72	279	2,291	2,973	8,433	17,189	6,088	1,823
Total Ichthyoplankton	3,815,437	2,256,620	616,972	532,134	259,441	47,982	5,729	4,871	3,344	5,818	7,774	18,148	34,964	17,959	3,681
Gammarus spp.	15,221,738	12,067	31,995	6,616	13,286	2,782	30,196	660,928	909,299	2,167,754	3,279,099	2,672,131	1,368,475	1,885,920	2,181,190
Neomysis americana	7,740,007	1,371,508	1,321,988	1,100,494	1,428,339	1,708,711	556,992	219,896	31,973	72	21	2	0	1	10

Table 4-39 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 7) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.15	0.00	1.17	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.50	0.00	0.00	0 00	12.01	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	2.68	0.00	0.00	0 00	6.05	1.21	0.00	14.15	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.43	0.00	0.00	0 00	1.08	0.00	2.40	0.00	0.00
Bay anchovy									
egg	1.95	0.00	0.00	0 00	10.82	4.74	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	160.95	0.00	0.00	0 00	0.00	296.11	623.87	236.28	131.37
juvenile	10.20	0.00	0.00	0 00	0.00	0.00	0.00	21.07	60.57
adult	1.73	0.00	0.00	3.41	6.94	0.00	2.28	1.24	0.00
undetermined larvae	4.22	0.00	0.00	0 00	0.00	33.80	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-39 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 7) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.13	0.00	0.00	0 00	0.00	0.00	1.07	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	4.37	0.00	0.00	0 00	34.93	0.00	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	115.68	0.00	0.00	10.49	893.27	21.69	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	207.86	0.00	1,661.87	1 03	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.15	0.00	0.00	1 21	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	70.39	0.00	0.00	0 00	469.63	86.88	6.62	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	54.00	0.00	0.00	0 00	0.00	89.86	320.14	11.95	10.05
juvenile	15.98	0.00	0.00	0 00	0.00	2.74	121.84	1.24	2.02
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	0.96	0.00	4.13	0 00	0.00	3.58	0.00	0.00	0.00
yolk sac larvae	1.46	0.00	11.69	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	6.72	0.00	0.00	0 00	53.74	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.73	1.11	3.51	1 21	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	662	1	1,682	17	1,488	541	1,078	286	204
***Gammarus* spp.**	88,366	20,702	104,348	80,379	295,645	19,429	27,749	39,543	119,132
Neomysis americana	30,200	43,982	68	303	613	27,333	25,747	104,242	39,310

Note: Event 1 occurred April 1-15.
Event 2 occurred April 19-27.
Event 3 occurred May 3-7.
Event 4 occurred May 13-20.
Event 5 occurred June 1-8.
Event 6 occurred June 14-25.
Event 7 occurred July 1-10.
Event 8 occurred July 19-28.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-40 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 8) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	14.07	0.00	0.00	0 00	112.53	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.57	0.00	0.00	0 00	2.41	0.00	2.11	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.63	0.00	0.00	0 00	0.00	5.97	0.00	4.75	2.30
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	72.76	0.00	0.00	0 00	0.00	266.91	128.51	138.34	48.35
juvenile	4.51	0.00	0.00	0 00	0.00	0.00	0.00	11.08	25.02
adult	0.56	0.00	0.00	0 00	0.00	4.46	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.50	0.00	0.00	0 00	0.00	3.98	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-40 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 8) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	4.97	0.00	0.00	0 00	37.51	0.00	0.00	2.22	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	69.81	0.00	0.00	0 00	558.51	0.00	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	273.54	0.00	0.00	930.43	1,222.13	35.73	0.00	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	384.47	0.00	3,063.62	12.10	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.59	0.00	0.00	0 00	4.69	0.00	0.00	0.00	0.00
post-yolk sac larvae	57.36	0.00	0.00	0 00	292.08	148.00	18.80	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	4.17	0.00	0.00	0 00	0.00	1.99	29.83	1.58	0.00
juvenile	1.02	0.00	0.00	0 00	0.00	0.00	6.61	1.58	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	14.17	0.00	110 94	2.42	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	66.96	0.00	0.00	19.36	463.98	45.20	7.15	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.31	0.00	0.00	0 00	0.00	2.47	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	972	0	3,175	964	2,694	515	193	160	76
***Gammarus* spp.**	267,270	2,330	5,104	111,964	1,566,651	45,625	101,271	153,411	151,805
Neomysis americana	7,137	2	0	5	0	20,097	1,313	35,672	10

Note: Event 1 occurred April 1-15.
Event 2 occurred April 19-27.
Event 3 occurred May 3-7.
Event 4 occurred May 13-20.
Event 5 occurred June 1-8.
Event 6 occurred June 14-25.
Event 7 occurred July 1-10.
Event 8 occurred July 19-28.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-41 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 9) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	58.57	0.00	0.00	146.62	321.91	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	0.30	0.00	2.42	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	1.69	0.00	0.81	10.89	1.83	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.40	0.00	0.00	0 00	0.00	2.36	0.00	0.82	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.11	0.00	0.00	0 91	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.85	0.00	0.00	0 00	6.80	0.00	0.00	0.00	0.00
juvenile	0.30	0.00	0.00	0 00	0.00	0.84	0.82	0.00	0.76
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.33	0.00	0.00	0 00	0.00	1.94	0.00	0.70	0.00
juvenile	0.31	0.00	0.00	0 00	0.00	1.60	0.86	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.10	0.00	0.83	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	34.93	0.00	0.00	0 00	0.00	0.00	72.14	139.83	67.45
juvenile	6.14	0.00	0.00	0 00	0.00	0.00	0.00	19.40	29.74
adult	0.20	0.00	0.00	0 00	0.00	1.58	0.00	0.00	0.00
undetermined larvae	1.24	0.00	0.00	0 00	0.00	0.00	9.90	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	1.15	0.00	0.00	0 00	0.00	4.47	1.60	0.83	2.27
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-41 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 9) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.20	0.00	1.61	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	57.79	0.00	0.00	2.72	458.93	0.00	0.00	0.69	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	59.57	0.00	0.00	177.88	289.26	9.39	0.00	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	78.07	0.00	0.00	51.29	62.46	486.19	24.59	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	4.96	0.00	0.00	33.87	5.83	0.00	0.00	0.00	0.00
yolk sac larvae	17.82	0.00	0.00	24 07	118.47	0.00	0.00	0.00	0.00
post-yolk sac larvae	68.68	0.00	0.00	198.13	33.70	288.57	28.34	0.69	0.00
juvenile	0.36	0.00	0.00	0 00	0.00	0.00	0.80	2.08	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	12.27	1.63	66 82	28 83	0.92	0.00	0.00	0.00	0.00
yolk sac larvae	13.32	0.00	7.54	26 98	72.08	0.00	0.00	0.00	0.00
post-yolk sac larvae	229.24	0.00	0.00	410.19	646.44	745.08	31.31	0.00	0.90
juvenile	1.76	0.00	0.00	0 00	0.00	1.67	2.51	7.61	2.26
adult	0.44	0.00	0.00	0 90	0.00	0.97	1.64	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	651	2	80	1,113	2,019	1,545	174	173	103
***Gammarus* spp.**	227,946	371	2,264	146,756	68,591	375,855	996,070	129,995	103,663
Neomysis americana	8	0	0	4	3	24	1	31	0

Note: Event 1 occurred April 1-15.
Event 2 occurred April 19-27.
Event 3 occurred May 3-7.
Event 4 occurred May 13-20.
Event 5 occurred June 1-8.
Event 6 occurred June 14-25.
Event 7 occurred July 1-10.
Event 8 occurred July 19-28.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-42 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 10) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	95.33	0.00	6.32	232.24	444.68	77.92	1.50	0.00	0.00
juvenile	0.66	0.00	0.00	0 00	0.00	0.00	1.50	3.79	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	11.78	0.97	4.27	5 55	83.47	0.00	0.00	0.00	0.00
yolk sac larvae	10.97	0.00	10 96	69 37	7.47	0.00	0.00	0.00	0.00
post-yolk sac larvae	2.96	0.00	0.00	0 00	0.00	22.16	1.55	0.00	0.00
juvenile	0.34	0.00	0.00	0 00	0.00	2.69	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.82	0.00	0.00	4.64	1.92	0.00	0.00	0.00	0.00
post-yolk sac larvae	10.02	0.00	0.00	1 83	52.76	25.55	0.00	0.00	0.00
juvenile	1.52	0.00	0.00	0 00	0.00	9.60	1.61	0.91	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.78	0.00	0.00	6 22	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.12	0.00	0.00	0 00	0.00	0.00	0.00	0.94	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	13.70	0.00	0.00	0 00	0.00	0.00	31.82	74.36	3.39
juvenile	1.28	0.00	0.00	0 00	0.00	0.00	0.00	8.51	1.70
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	1.11	0.00	0.00	0 00	0.00	4.07	4.84	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-42 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 10) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	27.55	0.00	0.00	0 00	162.32	58.05	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	211.37	0.00	0.00	78.85	1,230.10	361.52	3.11	17.35	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.11	0.00	0.00	0 00	0.00	0.00	0.86	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	75.29	0.00	0.00	3.60	207.55	364.80	26.40	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	1.35	0.00	2.69	5.43	2.67	0.00	0.00	0.00	0.00
yolk sac larvae	2.44	0.00	0.00	0 93	18.60	0.00	0.00	0.00	0.00
post-yolk sac larvae	72.44	0.00	0.00	0 00	18.43	547.13	12.06	1.92	0.00
juvenile	0.42	0.00	0.00	0 00	0.00	0.00	1.67	0.94	0.74
adult	0.09	0.00	0.00	0 00	0.00	0.00	0.75	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	18.04	0.00	56.78	17.66	69.06	0.84	0.00	0.00	0.00
yolk sac larvae	29.79	0.00	9.45	86.74	142.16	0.00	0.00	0.00	0.00
post-yolk sac larvae	281.37	0.00	0.00	123.09	928.74	1,164.68	34.43	0.00	0.00
juvenile	1.69	0.00	0.00	0 00	0.00	0.00	4.23	9.33	0.00
adult	0.34	0.00	1.83	0 00	0.00	0.90	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	874	1	92	636	3,370	2,640	126	118	6
***Gammarus* spp.**	346,700	153	910	5,471	29,167	1,406,435	612,808	357,946	360,711
Neomysis americana	2	0	0	19	0	0	0	0	0

Note: Event 1 occurred April 1-15.
Event 2 occurred April 19-27.
Event 3 occurred May 3-7.
Event 4 occurred May 13-20.
Event 5 occurred June 1-8.
Event 6 occurred June 14-25.
Event 7 occurred July 1-10.
Event 8 occurred July 19-28.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-43 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 11) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	345.47	0.00	0.00	530.14	1,991.79	232.83	9.00	0.00	0.00
juvenile	0.29	0.00	0.00	0 00	0.00	0.00	2.29	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	50.42	0.00	13.12	71 39	318.88	0.00	0.00	0.00	0.00
yolk sac larvae	8.45	0.00	20.78	35.44	11.39	0.00	0.00	0.00	0.00
post-yolk sac larvae	5.97	0.00	0.00	0 00	0.00	36.39	8.64	2.70	0.00
juvenile	0.41	0.00	0.00	0 00	0.00	3.30	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	0.53	0.00	0.94	3 28	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	23.94	0.00	0.00	39 02	152.46	0.00	0.00	0.00	0.00
post-yolk sac larvae	44.95	0.00	0.00	54.13	189.01	114.96	1.53	0.00	0.00
juvenile	3.68	0.00	0.00	0 00	0.00	26.44	3.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	2.03	0.00	0.00	16.25	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.44	0.00	0.00	0 00	0.00	0.00	0.00	3.56	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	19.58	0.00	0.00	0 00	0.00	0.00	7.80	142.96	5.91
juvenile	0.46	0.00	0.00	0 00	0.00	0.00	0.00	3.68	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.19	0.00	0.00	0 00	0.00	0.00	1.51	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	1.05	0.00	0.00	0 00	0.00	1.73	2.35	1.79	2.56
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-43 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 11) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	89.55	0.00	0.00	1.72	672.24	42.43	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	365.15	0.00	0.00	423.98	1,956.91	522.46	17.85	0.00	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.30	0.00	0.00	0 00	0.00	10.36	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	105.71	0.00	0.00	18.92	347.43	124.58	354.75	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	3.68	0.00	2.80	0 00	26.67	0.00	0.00	0.00	0.00
yolk sac larvae	6.59	0.00	0.00	0 00	52.75	0.00	0.00	0.00	0.00
post-yolk sac larvae	8.89	0.00	0.00	0 00	29.95	37.42	3.76	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	125.17	0.00	213.79	60.17	702.39	25.04	0.00	0.00	0.00
yolk sac larvae	38.30	0.00	11.63	56.68	237.19	0.86	0.00	0.00	0.00
post-yolk sac larvae	749.09	0.00	0.00	144.19	2,337.82	3,217.20	290.97	1.72	0.82
juvenile	0.43	0.00	0.00	0 00	0.00	2.53	0.88	0.00	0.00
adult	0.11	0.00	0.00	0 00	0.00	0.00	0.00	0.85	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	2,002	0	263	1,455	9,027	4,399	704	157	9
***Gammarus* spp.**	275,895	24	94	2,134	26,508	879,973	316,597	607,005	374,829
Neomysis americana	0	0	0	2	0	0	0	0	0

Note: Event 1 occurred April 1-15.
Event 2 occurred April 19-27.
Event 3 occurred May 3-7.
Event 4 occurred May 13-20.
Event 5 occurred June 1-8.
Event 6 occurred June 14-25.
Event 7 occurred July 1-10.
Event 8 occurred July 19-28.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-44 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 12) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	329.30	0.00	0.00	455.82	1,847.67	310.44	20.43	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	104.06	8.94	95 58	618.37	109.62	0.00	0.00	0.00	0.00
yolk sac larvae	11.76	0.00	34 04	44.45	15.55	0.00	0.00	0.00	0.00
post-yolk sac larvae	3.62	0.00	0.00	0 00	0.00	0.00	26.43	2.56	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	56.27	0.00	360.78	75.11	14.24	0.00	0.00	0.00	0.00
yolk sac larvae	82.71	0.00	14 34	238.18	409.14	0.00	0.00	0.00	0.00
post-yolk sac larvae	377.74	0.00	0.00	404.67	2,206.86	398.93	9.74	0.84	0.86
juvenile	1.98	0.00	0.00	0 00	0.00	15.83	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	16.80	0.00	0.00	134.39	0.00	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.10	0.00	0.00	0 00	0.00	0.00	0.00	0.78	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	4.36	0.00	0.00	0 00	0.00	0.00	4.38	22.70	7.76
juvenile	0.59	0.00	0.00	0 00	0.00	0.00	0.00	4.73	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	1.13	0.00	0.00	0 00	0.00	0.00	0.00	5.39	3.61
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-44 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 12) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	43.47	0.00	0.00	0 00	282.41	23.84	41.48	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	722.74	0.00	3.17	355.47	5,043.41	315.83	59.75	4.30	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	187.00	0.00	0.00	0 00	765.54	562.43	168.06	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	7.76	0.00	0.87	0 00	61.20	0.00	0.00	0.00	0.00
yolk sac larvae	2.92	0.00	0.00	0 00	23.32	0.00	0.00	0.00	0.00
post-yolk sac larvae	8.72	0.00	0.00	0 00	7.84	53.48	8.44	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.20	0.00	0.00	0 00	0.00	0.00	1.60	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	64.09	7.61	127.11	266.03	111.99	0.00	0.00	0.00	0.00
yolk sac larvae	127.49	0.00	57 52	172.55	789.85	0.00	0.00	0.00	0.00
post-yolk sac larvae	1,712 93	0.00	0.00	55.28	5,862.90	6,929.56	850.37	5.34	0.00
juvenile	0.11	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.92
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	3,868	17	693	2,820	17,552	8,610	1,191	47	13
***Gammarus* spp.**	150,966	13	66	1,728	16,547	205,377	212,560	375,652	395,787
Neomysis americana	0	0	0	0	0	0	0	0	0

Note: Event 1 occurred April 1-15.
Event 2 occurred April 19-27.
Event 3 occurred May 3-7.
Event 4 occurred May 13-20.
Event 5 occurred June 1-8.
Event 6 occurred June 14-25.
Event 7 occurred July 1-10.
Event 8 occurred July 19-28.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-45 (page 1 of 2)

PSEG Estuary Enhancement Program
Mean density (#/1000 m^3) by sampling event (collected in Zone 13) for each life stage
of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	383.80	0.00	0.86	55.21	932.75	1,744.32	337.25	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	38.58	2.48	3.76	300.77	1.61	0.00	0.00	0.00	0.00
yolk sac larvae	7.65	0.00	9.36	25.10	26.76	0.00	0.00	0.00	0.00
post-yolk sac larvae	3.12	0.00	0.00	0 00	0.00	0.00	18.62	6.31	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	20.69	0.00	95 56	62.69	7.28	0.00	0.00	0.00	0.00
yolk sac larvae	43.26	0.00	0.79	248.60	90.41	6.31	0.00	0.00	0.00
post-yolk sac larvae	222.60	0.00	0.00	199.67	423.55	1,124.90	31.74	0.95	0.00
juvenile	2.49	0.00	0.00	0 00	0.00	15.96	3.10	0.87	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	69.93	0.00	0.00	184.71	0.00	374.74	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	2.23	0.00	0.00	0 00	0.00	0.00	0.64	14.08	3.11
juvenile	0.21	0.00	0.00	0 00	0.00	0.00	0.00	0.86	0.78
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.42	0.00	0.00	0 00	0.00	0.00	0.00	0.00	3.34
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-45 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 13) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	100.31	0.00	0.00	1 00	0.00	552.37	68.31	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	295.21	0.00	0.00	33.33	1,019.08	1,087.04	216.78	5.45	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.10	0.81	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	47.75	0.00	0.00	0 00	5.01	344.11	31.97	0.95	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	0.67	0.00	4.44	0 00	0.90	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	1.13	0.00	0.00	0 00	0.00	0.00	9.02	0.00	0.00
juvenile	0.12	0.00	0.00	0 00	0.00	0.00	0.00	0.95	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	36.08	1.65	62 56	220.88	3.52	0.00	0.00	0.00	0.00
yolk sac larvae	123.57	0.00	10.45	88.57	875.27	14.28	0.00	0.00	0.00
post-yolk sac larvae	462.94	0.00	0.00	3 98	18.50	3,272.34	408.70	0.00	0.00
juvenile	0.12	0.00	0.00	0 00	0.00	0.00	0.00	0.95	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	1,863	5	188	1,425	3,405	8,536	1,126	31	7
***Gammarus* spp.**	194,590	4	42	683	6,413	53,148	72,689	407,494	1,016,248
Neomysis americana	0	0	0	0	0	0	0	1	0

Note: Event 1 occurred April 1-15.
Event 2 occurred April 19-27.
Event 3 occurred May 3-7.
Event 4 occurred May 13-20.
Event 5 occurred June 1-8.
Event 6 occurred June 14-25.
Event 7 occurred July 1-10.
Event 8 occurred July 19-28.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Table 4-46 (page 1 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 14) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Alewife									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	24.21	0.00	0.00	20.32	34.10	104.82	29.61	0.00	0.00
juvenile	0.10	0.00	0.00	0 00	0.00	0.00	0.77	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
***Alosa* spp.**									
egg	7.65	21.84	7.53	33 89	0.77	0.00	0.00	0.00	0.00
yolk sac larvae	18.63	0.00	0.96	47.47	96.88	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.38	0.00	0.00	0 00	0.00	0.00	2.97	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
American shad									
egg	2.54	0.00	17 25	2 58	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	3.48	0.00	0.00	22.11	5.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	84.21	0.00	0.00	5.13	14.86	605.23	31.63	0.00	0.00
juvenile	1.89	0.00	0.00	0 00	0.00	10.95	3.05	0.71	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.60	0.00	0.00	0 00	4.71	0.00	0.00	0.00	0.00
Atlantic croaker									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic menhaden									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Atlantic silverside									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bay anchovy									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.54	0.00	0.00	0 00	0.00	0.00	0.00	4.23	0.00
juvenile	0.10	0.00	0.00	0 00	0.00	0.00	0.00	0.80	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Blueback herring									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	1.00	0.00	0.00	0 00	0.00	0.00	0.00	7.06	0.77
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Bluefish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00

Table 4-46 (page 2 of 2)

PSEG Estuary Enhancement Program

Mean density (#/1000 m^3) by sampling event (collected in Zone 14) for each life stage of each target species caught during he Ichthyoplankton Effort, April-July 2004

Species (Taxon) by Life Stage	All Events*	April		May		June		July	
		Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8
Clupeidae									
egg	0.21	0.00	0.00	0 00	0.00	0.00	0.00	1.60	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	2.99	0.00	0.00	2 54	0.83	16.17	3.80	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	37.03	0.00	0.00	21.99	66.95	138.68	59.82	1.42	0.00
***Morone* spp.**									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	3.46	0.00	0.00	0 00	0.00	4.59	22.43	0.00	0.00
Spot									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Striped bass									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.19	0.00	0.00	0 00	0.00	0.70	0.77	0.00	0.00
juvenile	0.09	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.74
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Weakfish									
egg	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
post-yolk sac larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
juvenile	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
adult	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
White perch									
egg	26.63	1.03	82.12	114.31	8.35	2.09	0.00	0.00	0.00
yolk sac larvae	154.12	0.00	0.94	422.81	773.60	4.76	0.00	0.00	0.00
post-yolk sac larvae	13.19	0.00	0.00	0 00	0.00	92.59	8.01	1.51	0.77
juvenile	0.45	0.00	0.00	0 00	0.00	0.00	0.00	3.55	0.00
adult	0.10	0.00	0.00	0 00	0.00	0.00	0.00	0.75	0.00
undetermined larvae	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00
Total IP	384	23	109	693	1,006	981	163	22	2
***Gammarus* spp.**	220,169	12	203	373	1,408	7,988	28,266	477,485	1,201,589
Neomysis americana	1	6	0	1	0	0	1	1	2

Note: Event 1 occurred April 1-15.
Event 2 occurred April 19-27.
Event 3 occurred May 3-7.
Event 4 occurred May 13-20.
Event 5 occurred June 1-8.
Event 6 occurred June 14-25.
Event 7 occurred July 1-10.
Event 8 occurred July 19-28.

*The "All Events" column contains the mean density for all events combined. It is not the total across each row.

Appendix B

2000 PSEG Data 1

2001 PSEG Data 3

2002 PSEG Data 5

2003 PSEG Data 7

2004 PSEG Data 9

2005 PSEG Data 11

2006 PSEG Data 13

2007 PSEG Data 15

2008 PSEG Data 17

2009 PSEG Data 19

2000 PSEG Data

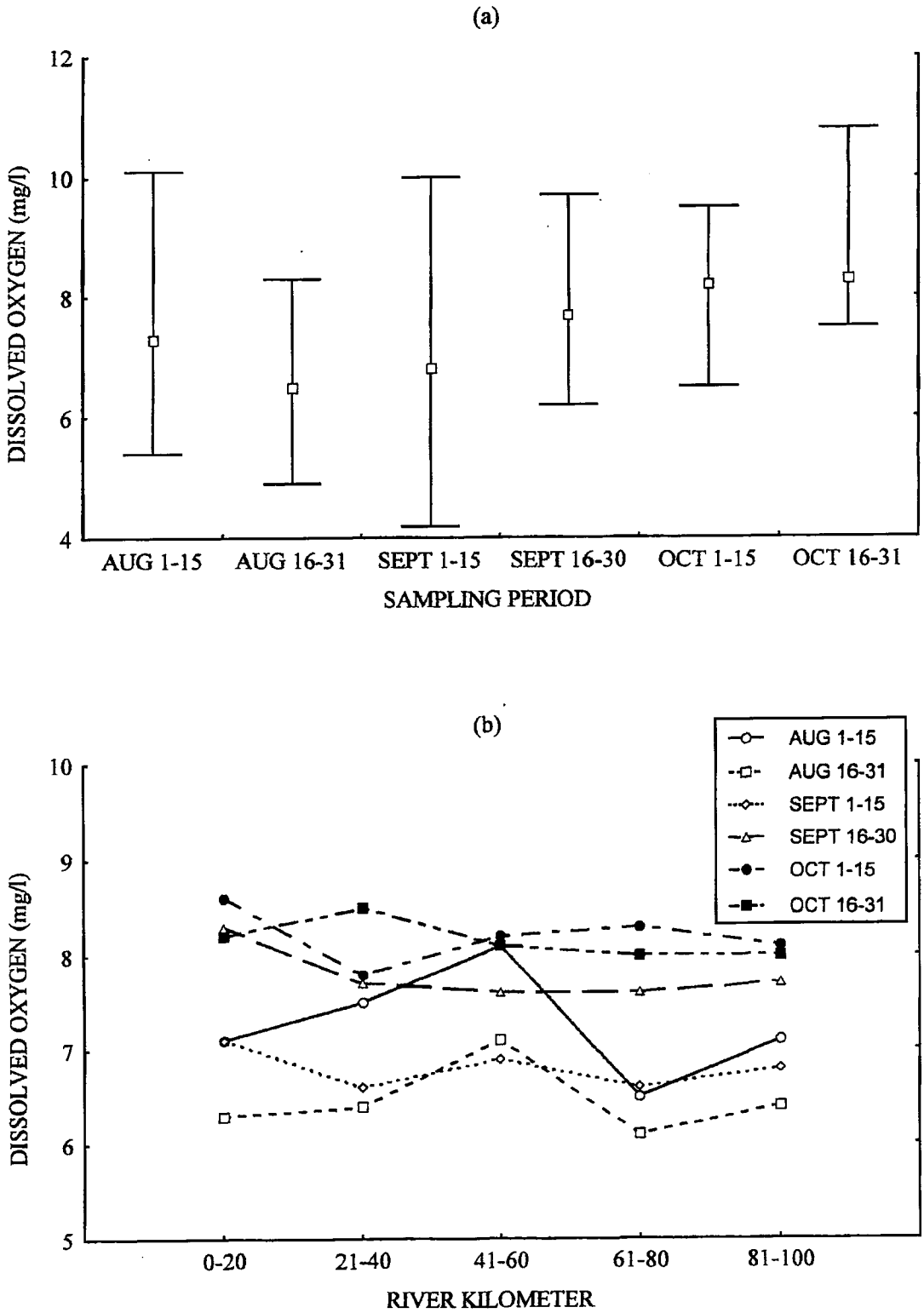


Figure 5-4. Mean dissolved oxygen by sampling period (a) showing minimum and maximum values, by river kilometer (b) as observed during the 2000 baywide seine survey.

2001 PSEG Data

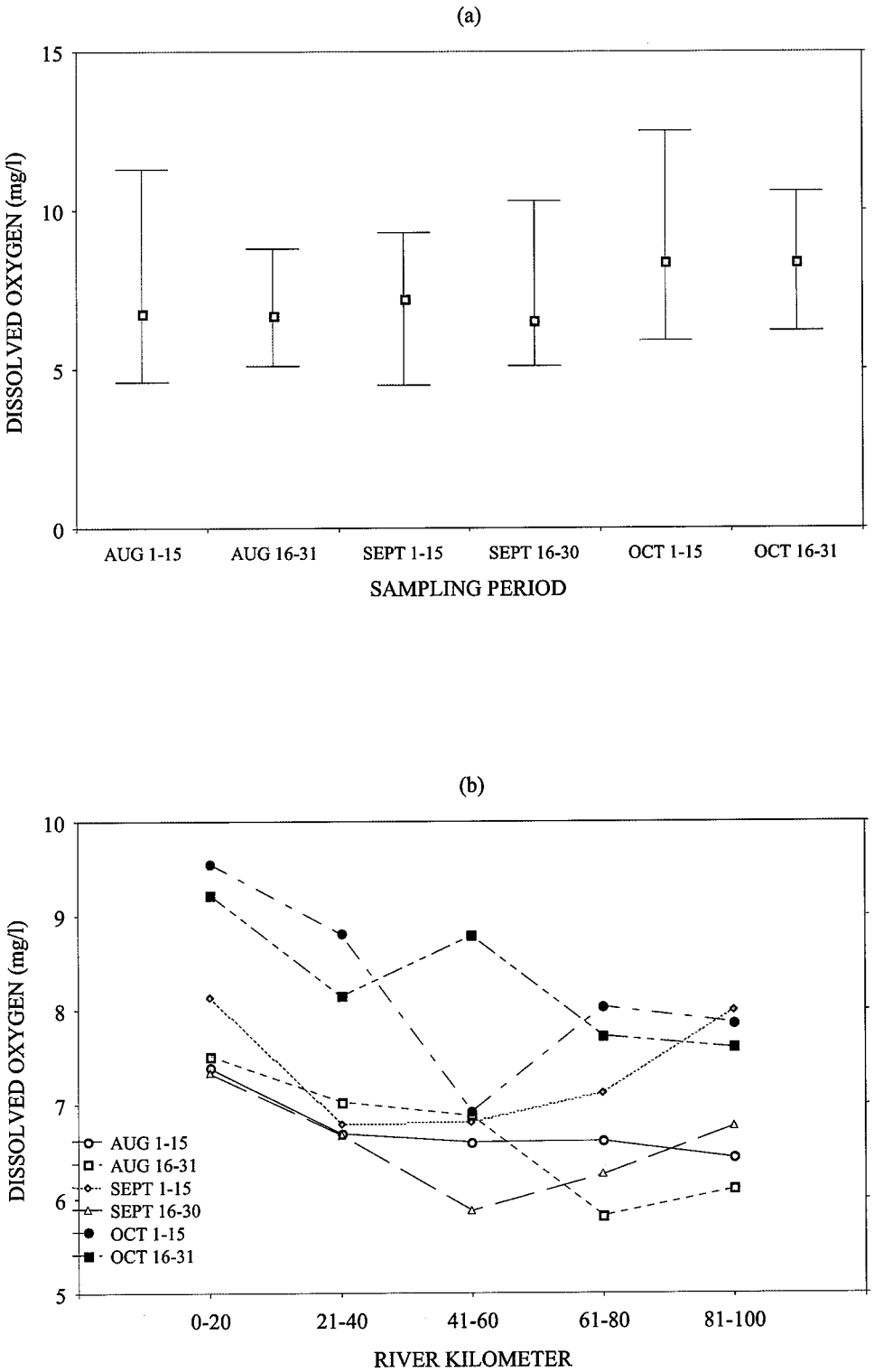


Figure 5-4. Mean dissolved oxygen by sampling period (a) showing minimum and maximum values, by river kilometer (b) as observed during the 2001 baywide seine survey.

2002 PSEG Data

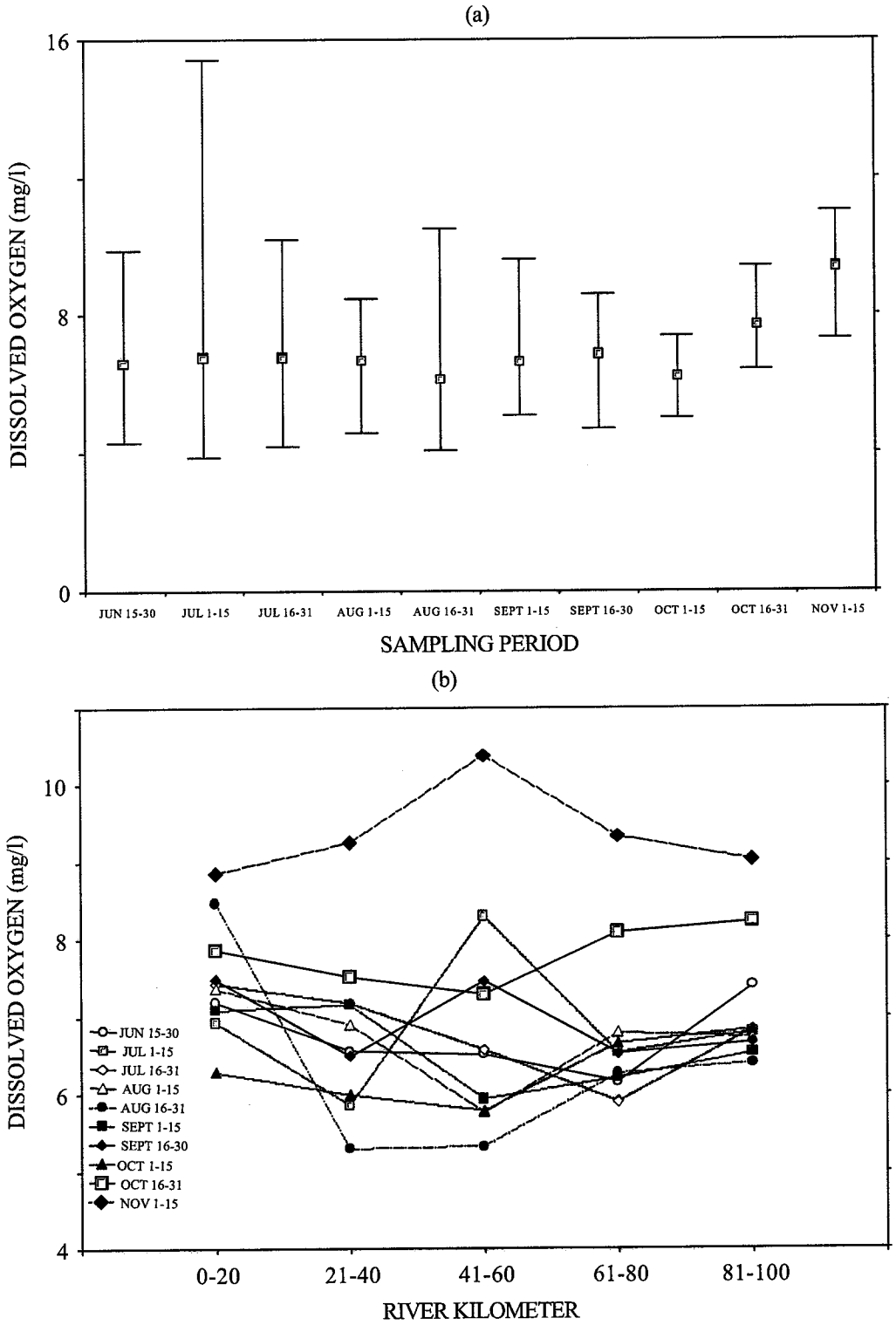


Figure 5-4. Mean dissolved oxygen by sampling period (a) showing minimum and maximum values, by river kilometer (b) as observed during the 2002 baywide seine survey.

2003 PSEG Data

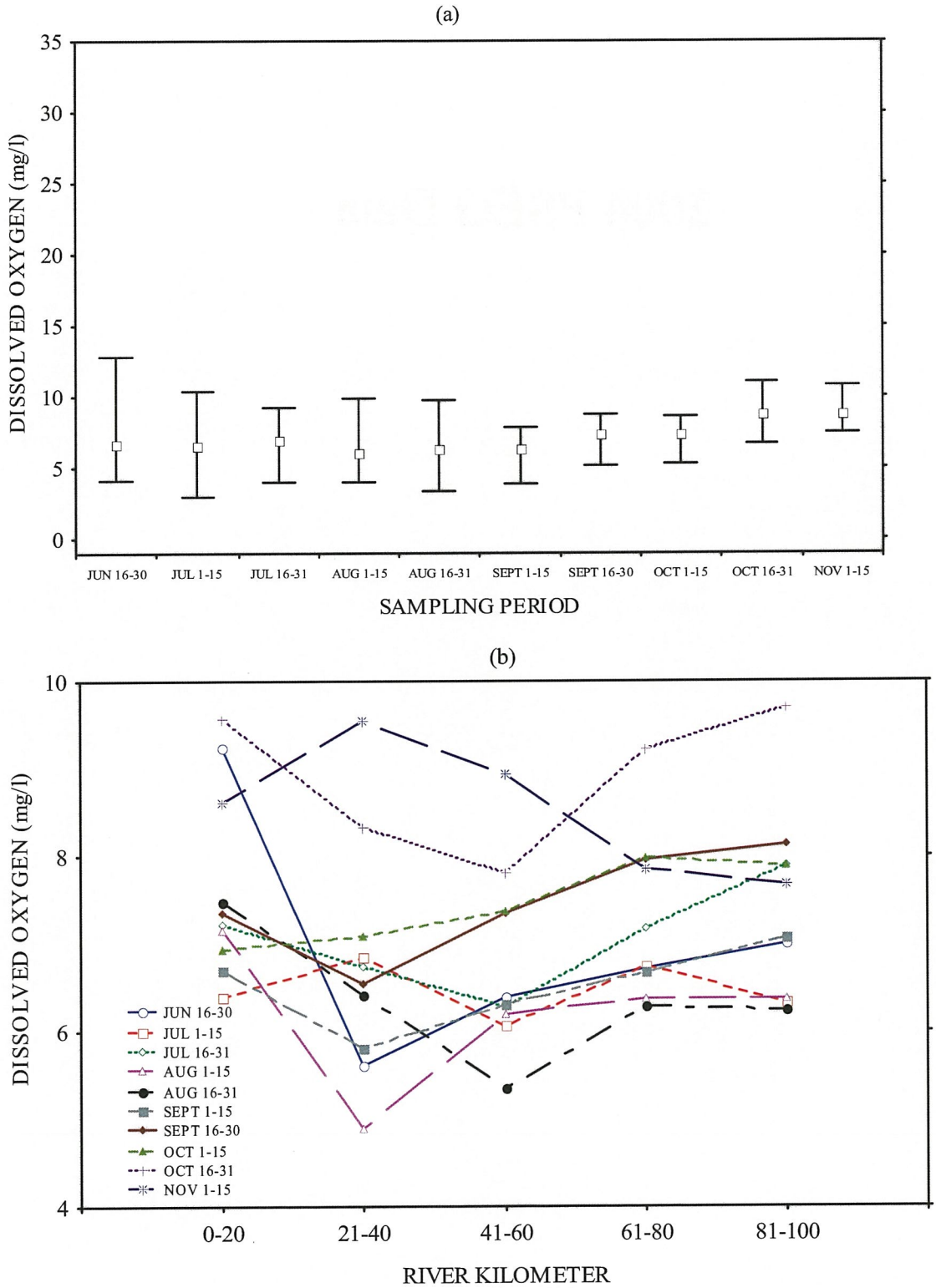


Figure 5-4. Mean dissolved oxygen by sampling period (a) showing minimum and maximum values, by river kilometer (b) as observed during the 2003 baywide seine survey.

2004 PSEG Data

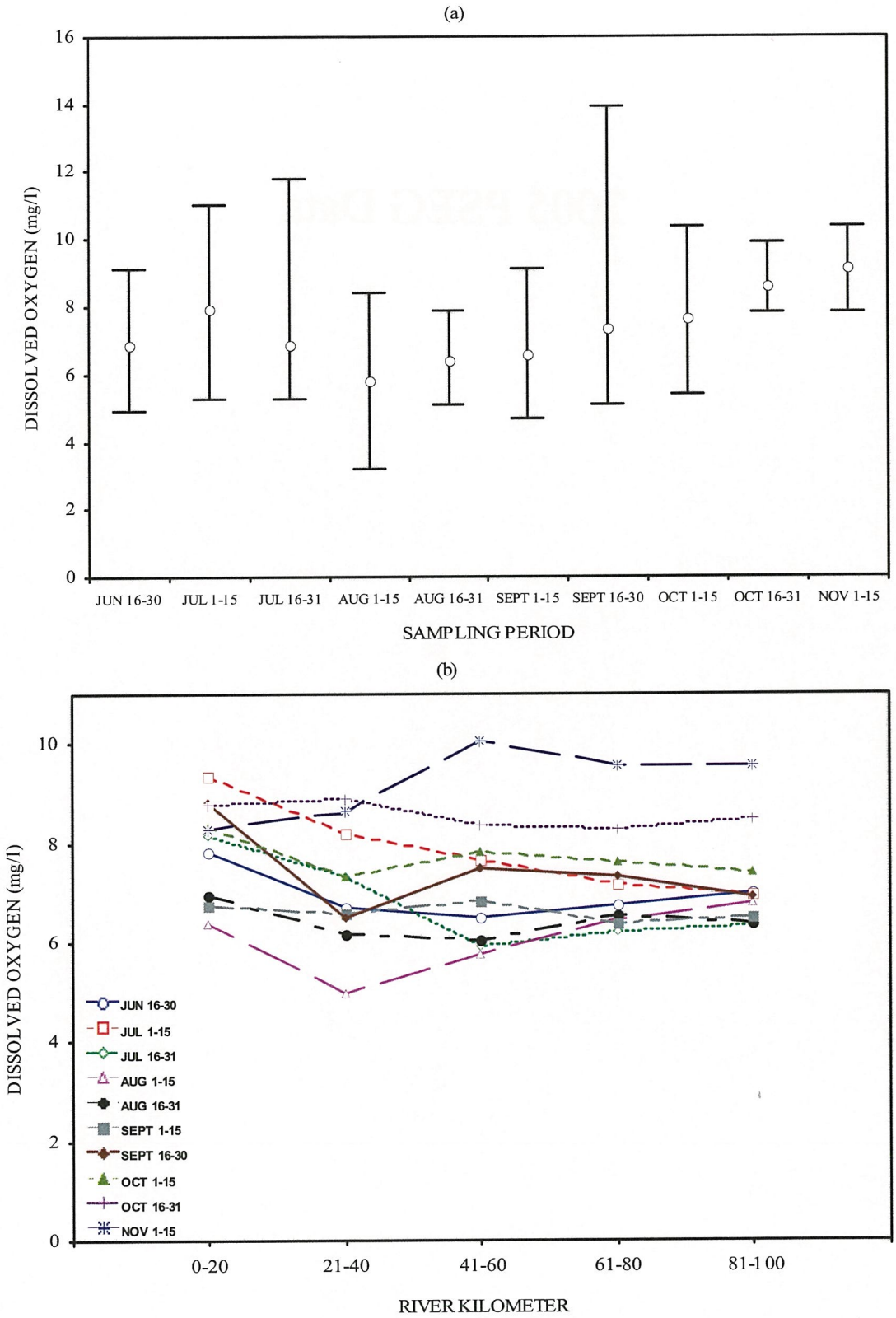


Figure 5-4. Mean dissolved oxygen by sampling period (a) showing minimum and maximum values, by river kilometer (b) as observed during the 2004 baywide seine survey.

2005 PSEG Data

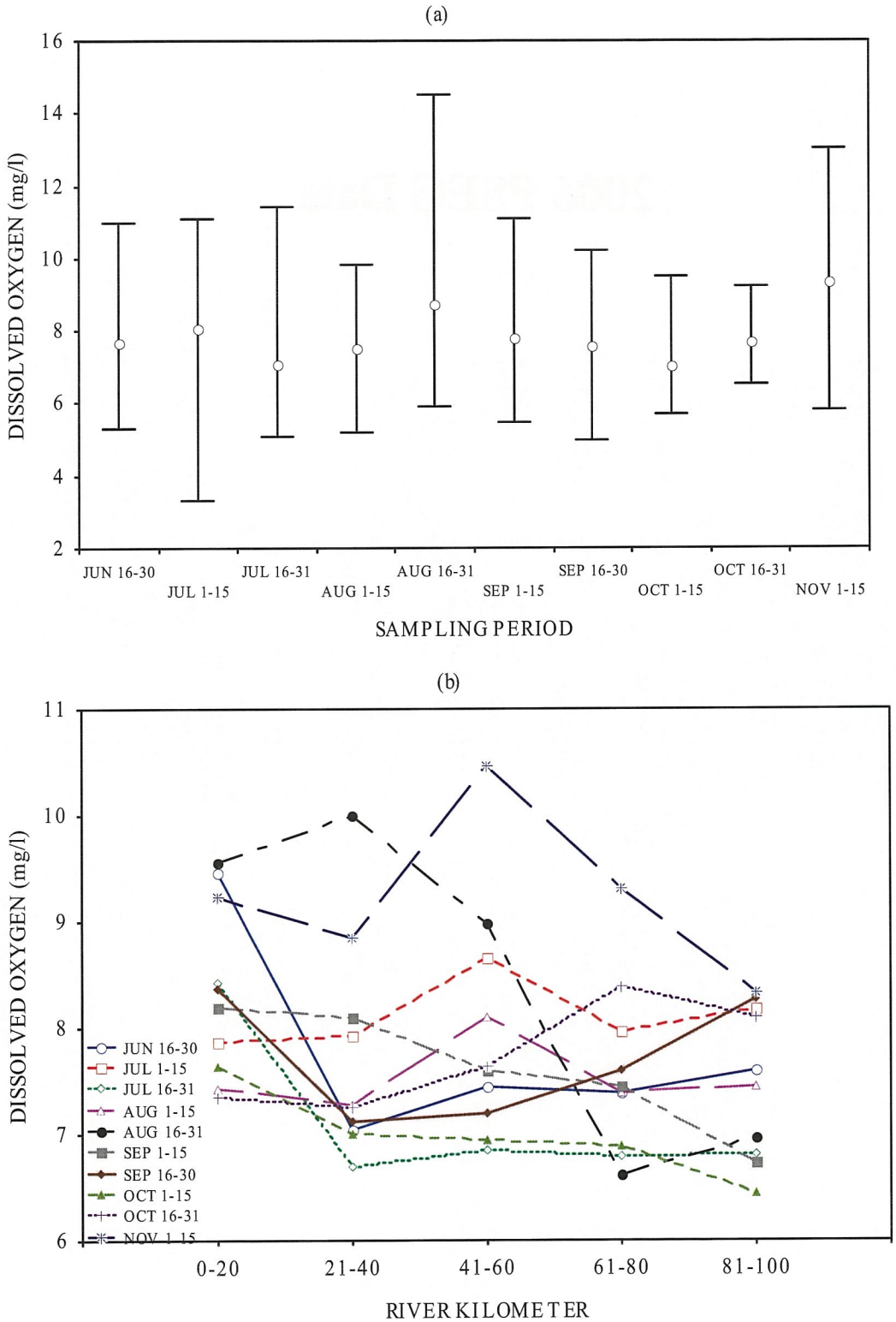
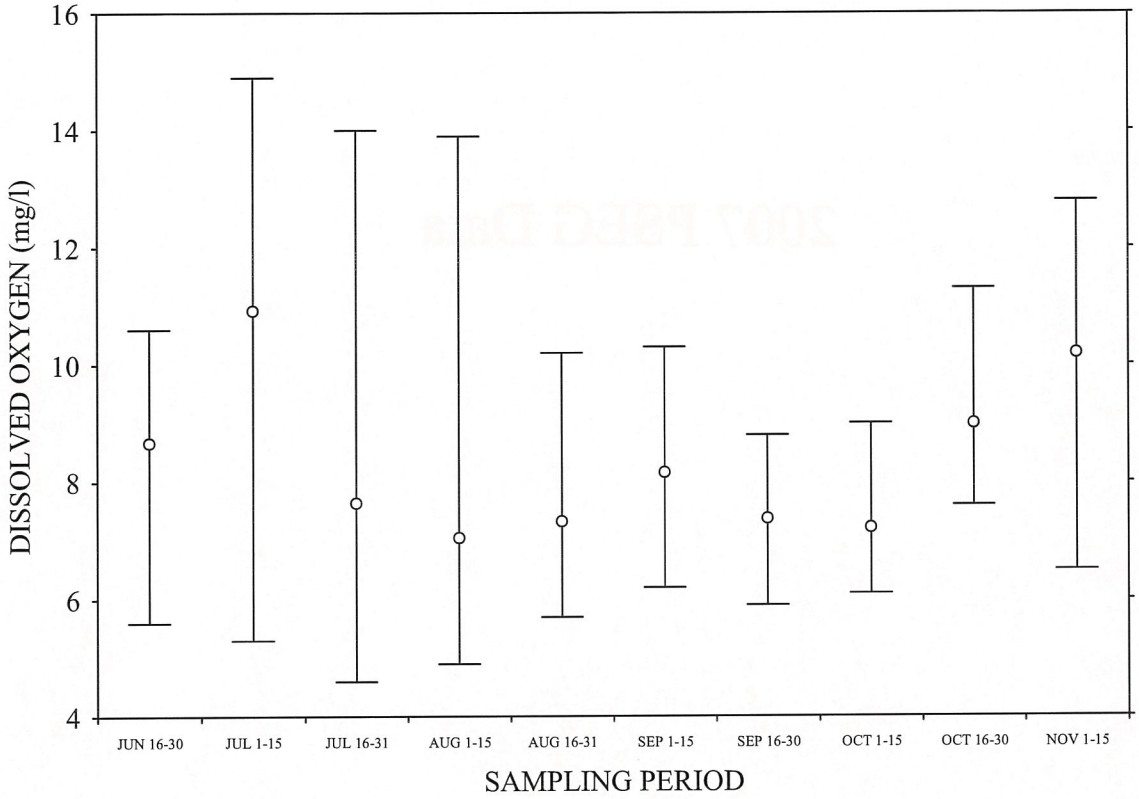


Figure 5-4. Mean dissolved oxygen by sampling period (a) showing minimum and maximum values, by river kilometer (b) as observed during the 2005 baywide seine survey.

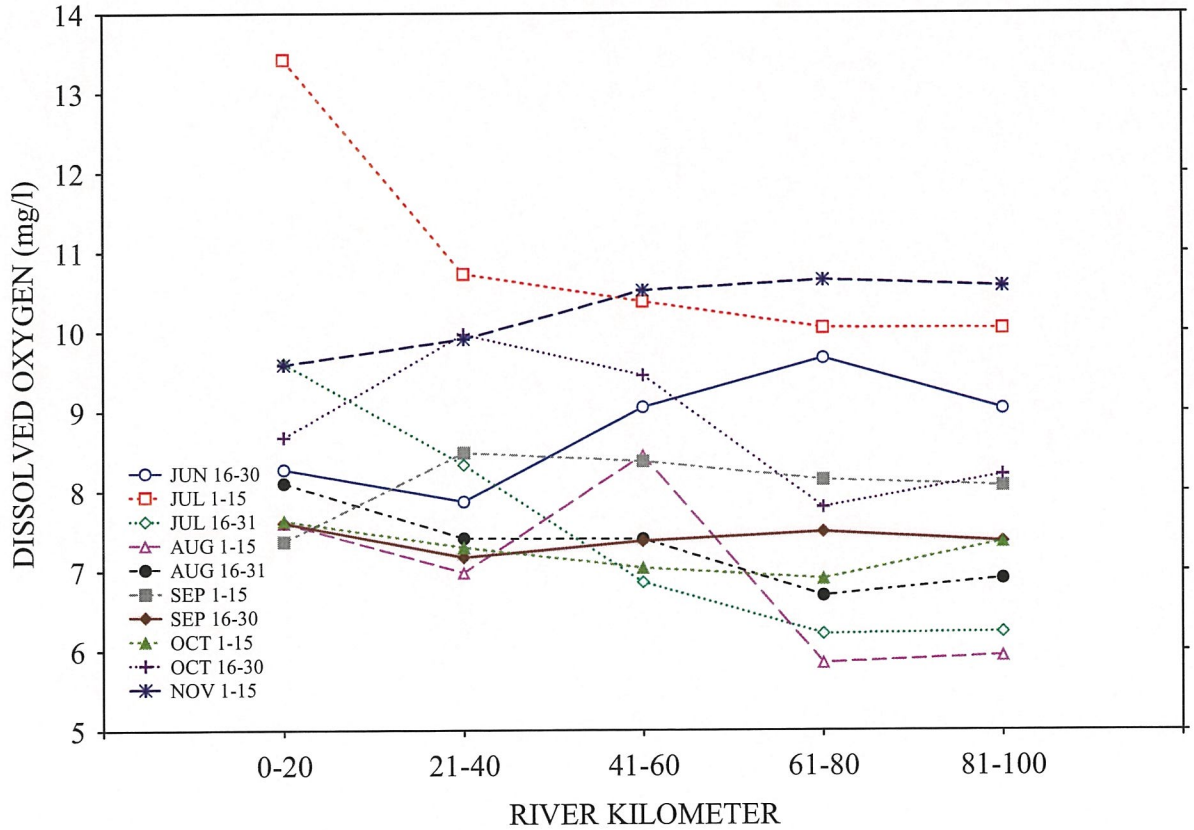
2006 PSEG Data

Figure 5-3. Mean salinity by sampling period (a) showing minimum and maximum values, and by river kilometer (b) as observed during the 2006 baywide seine survey.

(a)



(b)



2007 PSEG Data

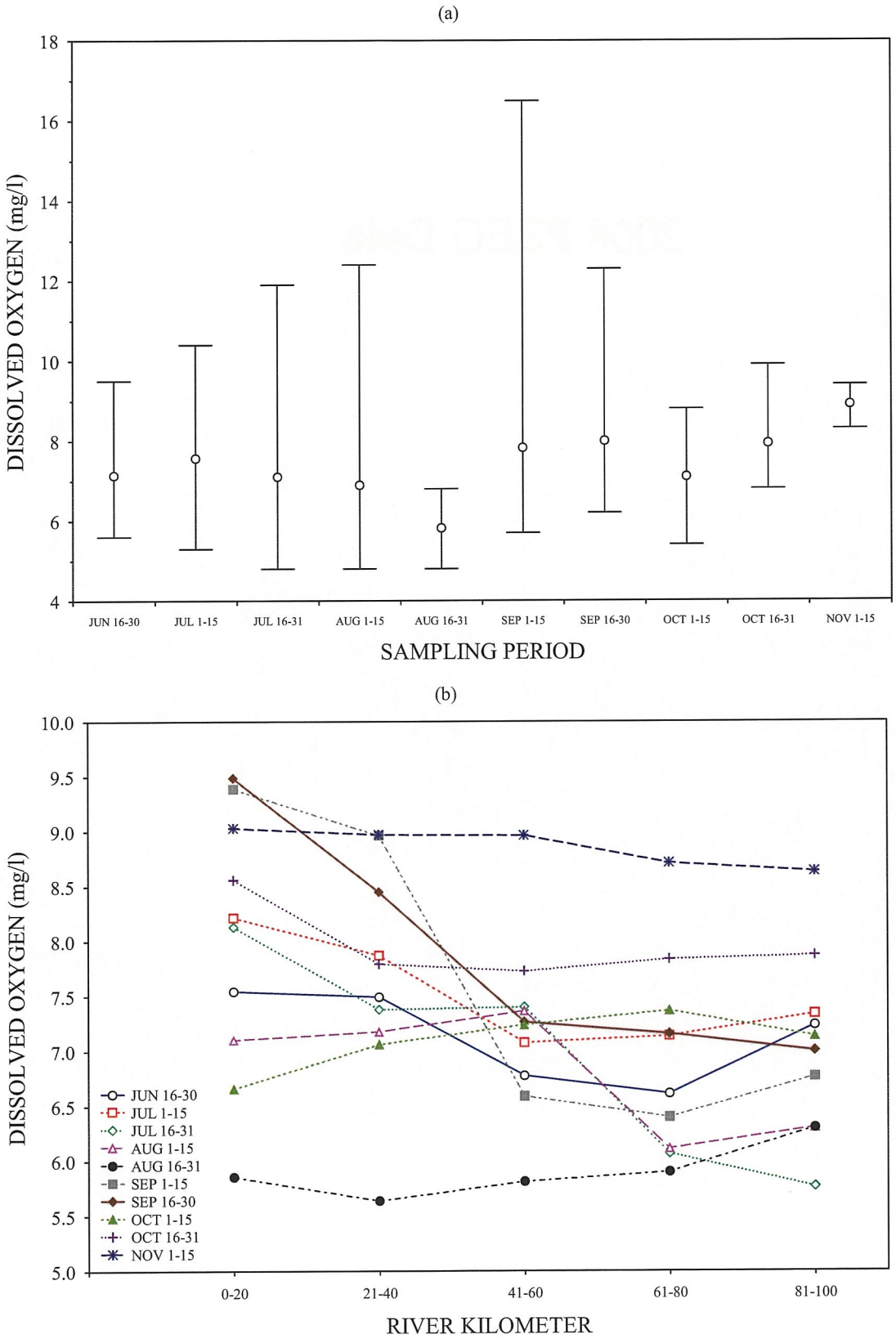


Figure 5-4 Mean dissolved oxygen by sampling period (a) showing minimum and maximum values, by river kilometer (b) as observed during the 2007 baywide seine survey.

2008 PSEG Data

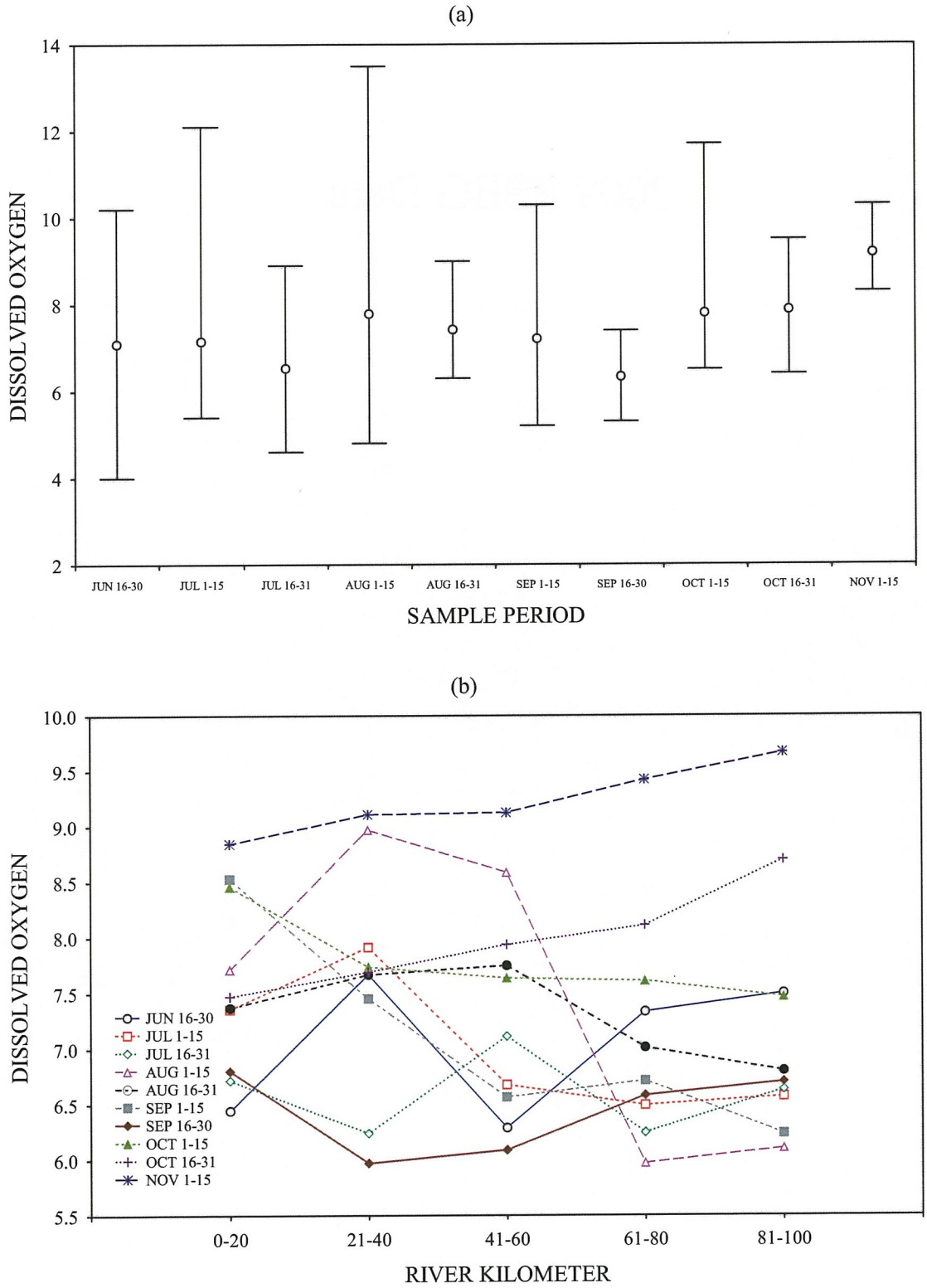


Figure 5-4 Mean dissolved oxygen by sampling period (a) showing minimum and maximum values, by river kilometer (b) as observed during the 2008 baywide seine survey.

2009 PSEG Data

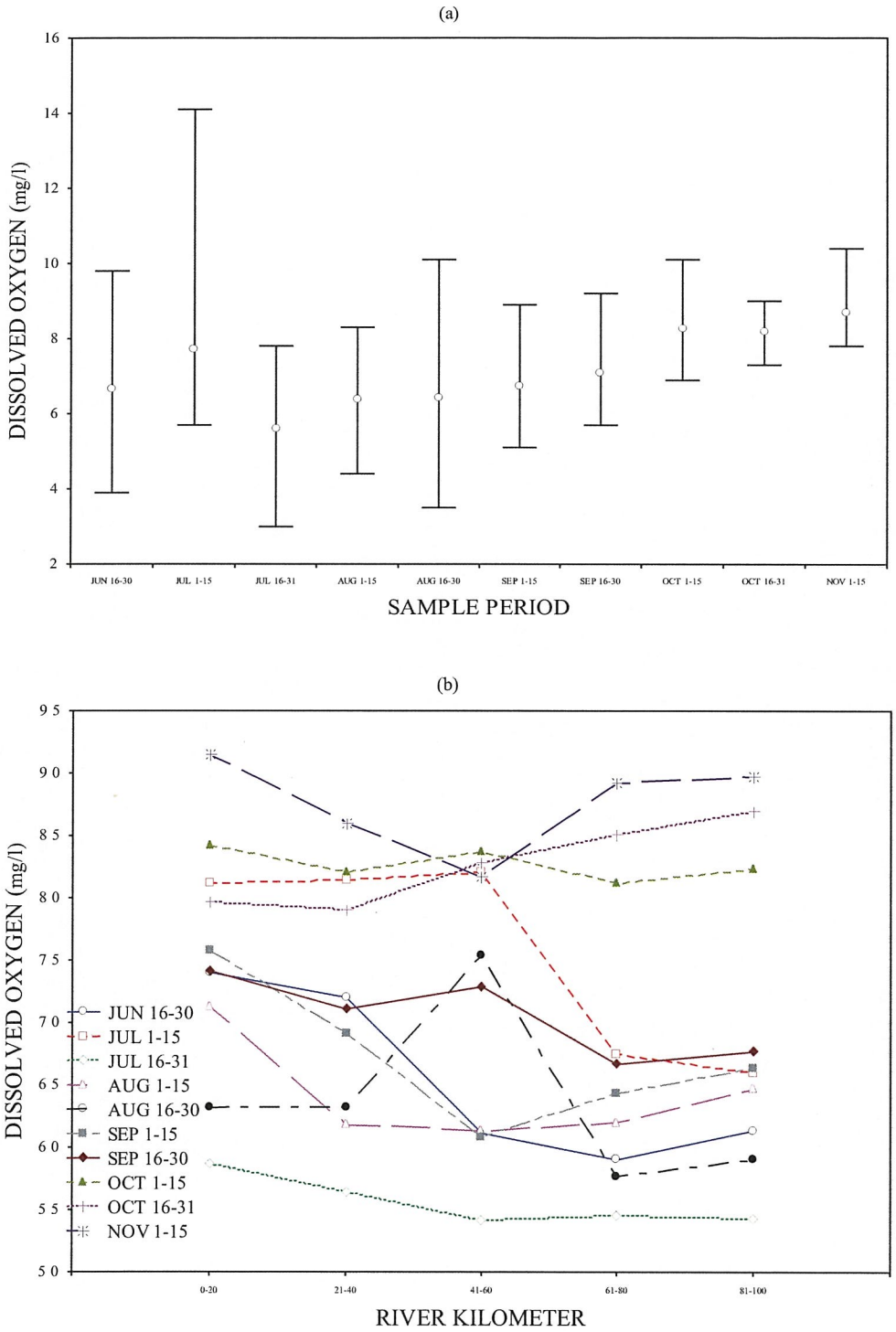


Figure 5-4 Mean dissolved oxygen by sampling period (a) showing minimum and maximum values, by river kilometer (b) as observed during the 2009 baywide seine survey.