APPENDIX D
SUMMARY OF NPDES PERMITTING INFORMATION
CAPE COD COASTAL DRAINAGE AREAS

Table D1. Individual NPDES permits in the Cape Cod coastal drainage area.

PERMITTEE	NPDES #	SEGMENT
Aquaculture Research Corp.	**MA0005576**	**MA96-35**
Aquaculture Research Corporation (ARC) is authorized (MA0005576 issued May 1975) to discharge from their facility at Chapin Beach Road, Dennis, an estimated maximum daily flow of 0.000028 MGD of culture wastewater containing shellfish waste and phytoplankton from the marine shellfish hatchery via outfall #001 to Chase Garden Creek. The facility employs a continuous flow-through seawater system for producing , culturing, and holding shellfish seed including hard clams (*Mercenaria mercenaria*) and American oysters (*Crassostrea viginica*) as well as culturing algae to feed the shellfish seed. Tanks, ranging in size from 100 to 6,600 gallons, are fed by filtered seawater pumped from the holding pond filled at high tide by water from Chase Garden Creek). Annual seed production is less than 1,000 pounds per year. The effluent discharges directly to the facility's boat slip off of Chase Garden Creek. Although a draft permit was developed and sent out for public comment in April 2009, an applicability determination pursuant to 40CFR Section 122.24 for the facility was made by EPA which concluded that an NPDES permit is not required for this facility. Evaluations for discharge impacts caused by heat, chlorine, and hydrochloric acid were all determined to be insignificant given the current operating conditions at the facility. Therefore **ARC's NPDES permit MA0005576 was terminated by EPA effective 11 August 2010.**		

PERMITTEE	NPDES #	SEGMENT
Chatham Pier Fish Market, Inc.	**MA0040215**	**MA96-10**
Chatham Pier Fish Market, Inc. (formerly Nickerson Fish & Lobster, Inc.) is authorized (MA0040215 issued May 2005) to discharge from the facility at 45 Barcliff Ave Ext., Chatham, a maximum daily flow of 0.08 MGD of flow-through water from lobster and shellfish holding tanks via outfall #001to Chatham Harbor. A new draft permit has been developed for this facility but is not yet final.		

PERMITTEE	NPDES #	SEGMENT
Division of Fisheries and Wildlife Sandwich State Fish Hatchery	**MA0110027**	**MA96-86**
The Division of Fisheries and Wildlife is authorized (MA0110027 issued September 2007) to discharge treated fish culture water from the Sandwich State Fish Hatchery, (flow to be reported only) via outfall #001 to Dock Creek. The facility's whole effluent toxicity limits are $LC_{50} \geq$ 100% and C-NOEC = 100% effluent when formalin is in use using *Menidia beryllina* and *Arbacia punctulata* test species on a quarterly basis. The Total Residual Chlorine (TRC) limit is 0.0075 mg/L average monthly and 0.013 maximum daily. No toxicity testing reports have been submitted to MassDEP DWM for this facility.		

PERMITTEE	NPDES #	SEGMENT
Woods Hole Oceanographic Institution	**MA0005916**	**None MA96 (Cape Cod Coastal Drainage Area)**
The Woods Hole Oceanographic Institution is authorized (MA0005916 issued September 2007 to discharge a flow of 0.79 average monthly and maximum daily of report only MGD treated effluent via outfall #001 to Vineyard Sound. The facility's acute whole effluent toxicity limits are $LC_{50} \geq$ 100% effluent using *Mysidopsis bahia* and *Menidia beryllina* test species on a quarterly basis. Up to three tests per year may be suspended if there has been no change in the operational process that may effect the discharge or if there has been no introduction of new chemical additives to the facility's culture water since the previous passing acute toxicity test. Effluent No acute whole effluent toxicity to either *M. bahia* or *M. beryllina* was detected in the tests conducted between May 2006 and March 2010 (n=13 test events where all LC_{50}s were $\geq$100% effluent)). Ammonia-nitrogen concentrations reported in the whole effluent toxicity reports between May 2006 and March 2010 ranged from <0.02 to 0.12 mg/L (n=13).		

PERMITTEE	NPDES #	SEGMENT
Sandwich Public Schools	**MA0101656**	**MA96-86**
Sandwich Public Schools was authorized (MA0101656 issued in February 2002 to discharge from the Henry T. Wing School, a flow of 0.0144 average monthly and maximum daily of report only MGD treated effluent via outfall #001 to Dock Creek to Cape Cod Bay. The permit was inactivated by EPA in June 2005 because the facility now has a groundwater discharge. The facility's whole effluent toxicity limits were $LC_{50} \geq$ 100% and C-NOEC$\geq$ 100% effluent using *Mysidopsis bahia, Arbacia punctulata,* and *Menidia beryllina* test species on a quarterly basis. The Total Residual Chlorine (TRC) limit was 0.0075 mg/L average monthly and 0.013 maximum daily. Effluent The effluent exhibited variable levels of acute and/or chronic toxicity to the test organisms in the 13 test events conducted between May 2002 and May 2004. LC_{50}s ranged from 22.6 to >100% effluent (5 tests indicated acute whole effluent toxicity) while CNOECs ranged from <6.25 to 100% effluent (10 test events indicated chronic whole effluent toxicity). Ammonia-nitrogen concentrations reported in the whole effluent toxicity reports between May 2002 and May 2004 ranged from 21 to 44 mg/L (n=13) and Total Residual Chlorine (TRC) concentrations were variable ranging from $\leq$0.05 mg/L (n=9) to as high as 3.5 mg/L (n=4 measurements >0.05 mg/L).		

STORMWATER

The NPDES Phase II General Permit program requires NPDES permit coverage for stormwater discharges from small municipal separate storm sewer systems (MS4s), and construction activity disturbing one acre or more of land in a mapped "urbanized area" defined and delineated by the US Bureau of Census in 2000 http://www.epa.gov/npdes/pubs/fact2-2.pdf. Large and medium MS4s (populations over 100,000) were permitted during Phase I of the NPDES stormwater program. Under EPA's Phase II program, the definition of "municipal" includes Massachusetts communities, U.S. military installations, state or federal owned facilities such as hospitals, prison complexes, state colleges or universities and state highways. An MS4 is a system that: discharges at one or more a point sources; is a separate storm sewer system (not designed to carry combined stormwater and sanitary waste water); is operated by a public body; discharges to the Waters of the United States or to another MS4; and, is located in an "Urbanized Area". The NPDES Phase II General Permit requires operators of regulated MS4s to develop and implement a stormwater management program that prevents harmful pollutants from being washed or dumped directly into the storm sewer system which is subsequently discharged into local waterbodies. Certain Massachusetts communities were automatically designated (either in full or part) by the Phase II rule based on the urbanized area delineations from the 2000 U.S. Census.

As a result of the census mapping, 12 of the 15 communities in the Cape Cod Coastal Drainage Area were located either totally or partially in the regulated Urbanized Area (See below Figure D1). Municipalities that are totally regulated must implement the requirements of the Phase II permit in the entire town, while communities that are partially regulated need to comply with the Phase II permit only in the mapped Urbanized Areas. Twelve of the Cape Cod drainage area communities applied to EPA and MassDEP for coverage under the Phase II stormwater general permit, issued on 1 May 2003. EPA issued stormwater general permits to Cape Cod Coastal Drainage Area municipalities. After administrative review and, in coordination with MassDEP, a thorough review of the communities' stormwater management program during the five-year permit term will be conducted. Phase II stormwater general permits expire on 1 May 2008 but remain in effect until a new permit is issued (Domizio 2004). USEPA and MassDEP will reissue the Phase II general permit later in 2008. All communities must re-apply for coverage under the updated general permit. The updated general permit will likely require some monitoring within the MS4 Phase II area including outfalls and receiving waters and the general permit will require a more detailed and better defined Illicit Discharge Detection and Elimination Program (IDDEP). For detailed community maps see http://www.epa.gov/region01/npdes/stormwater/ma.html

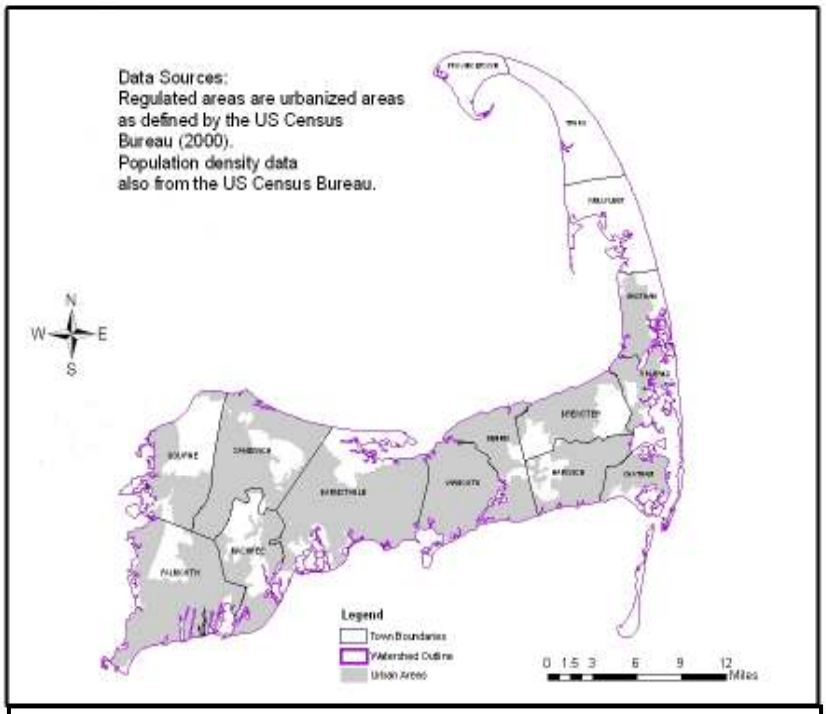

Figure D1. Urbanized Areas in the Cape Cod Coastal Drainage Area.

TableD2. NPDES Phase II stormwater permit information for the Cape Cod Coastal Drainage Area Communities.

Community	Permit #	Permit Issued	Mapped Regulatory area in community
Orleans	MAR041146	1/7/2004	Partial
Mashpee	MAR041129	9/25/2003	Partial
Harwich	MAR041120	9/22/2003	Partial
Eastham	MAR041110	9/12/2003	Partial
Brewster	MAR041096	9/12/2003	Partial
Barnstable	MAR041090	8/28/2003	Partial
Chatham	MAR041101	9/2/2003	Partial
Dennis	MAR041103	9/4/2003	Partial
Falmouth	MAR041114	9/8/2003	Partial
Yarmouth	MAR041176	9/9/2003	Total
Sandwich	MAR041155	9/25/2003	Partial
Bourne	MAR041094	8/28/2003	Partial

Information for other general NPDES permittees are available online at:
http://cfpub.epa.gov/npdes/stormwater/noi/noisearch.cfm.

LITERATURE CITED

Domizio, L. 2004. *Stormwater permitting information Phase II Communities*. Massachusetts Department of Environmental Protection, Division of Watershed Management, Worcester, MA. Personal Communication.