

3225 MAIN STREET • P.O. BOX 226
BARNSTABLE, MASSACHUSETTS 02630



CAPE COD
COMMISSION

(508) 362-3828 • Fax (508) 362-3136 • www.capecodcommission.org

DECISION OF THE CAPE COD COMMISSION
PROPOSED DESIGNATION
FERTILIZER MANAGEMENT DISTRICT OF CRITICAL PLANNING CONCERN (DCPC)

Date of Decision: August 29, 2013

Date DCPC Nomination was
Accepted for Consideration: July 25, 2013

Location of District: Barnstable County, Massachusetts

Type of District: Fertilizer Management District

BACKGROUND

In 2012, the Legislature amended Chapter 128 of the General Laws to vest exclusive jurisdiction in the Department of Agricultural Resources (MDAR) to “maintain authority to regulate and enforce the registration and application of plant nutrients put on or in soil to improve the quality or quantity of plant growth, including, but not limited to, fertilizer, manure and micronutrients in the Commonwealth.” One of the exceptions to MDAR’s exclusive jurisdiction carved from the legislation is for regulations adopted under the Cape Cod Commission Act, so long as the regulations are completed by January 1, 2014.

A District of Critical Planning Concern (DCPC) is the means authorized in the Cape Cod Commission Act to adopt enforceable municipal regulations.

Upon receipt of the proposed nomination of the Fertilizer Management District of Critical Planning Concern, the Commission provided notice of the same by mail to the Cape Delegation, Assembly of Delegates, the County Commissioners, the Cape Town Administrators, the Cape Town Clerks, as well as the Cape Building Inspectors, Boards of Selectmen, Planning Boards, Boards of Appeals, Conservation Commissions and Boards of Health, the Governor’s Committee, and other interested parties. The Cape Cod Commission also provided notice by publication in the following papers, on the following dates:

- a. Cape Cod Times on 7/25/13
- b. Barnstable Patriot on 7/26/13
- c. Register Newspapers on 7/25/13
- d. Cape Codder Newspapers on 7/26/13
- e. Falmouth Enterprise on 7/26/13
- f. Bourne Enterprise on 7/25/13
- g. Mashpee Enterprise on 7/26/13
- h. Sandwich Enterprise on 7/26/13
- i. Cape Cod Chronicle on 7/25/13
- j. Provincetown Banner on 7/25/13

On July 25, 2013, the Cape Cod Commission self-nominated and accepted for consideration the Fertilizer Management DCPC nomination. In its Statement of Purpose and Reasons for Acceptance, the Commission certified that all classes and types of development were excluded from a moratorium on the issuance of local development permits during the period in which the DCPC designation and Implementing Regulations would be pursued, and that any municipality could continue to grant development permits for all development within the nominated district, subjecting to existing laws and regulations.

Upon acceptance of the nomination for consideration, the Commission provided notice of the same to the Town Clerks of all 15 towns in Barnstable County.

A diverse group of stakeholders met at Commission offices to discuss, among other things, guidelines for eventual Implementing Regulations on August 14 & 20, 2013.

A subcommittee of the Commission held a duly- noticed public hearing on August 21, 2013 to receive public testimony and materials on the proposed designation under consideration to report to the full Commission, which hearing was continued to a full Commission meeting on August 29, 2013.

TABLE 1: Materials Submitted for the Record	
<i>Materials from Cape Cod Commission</i>	<i>Date Sent</i>
Email from Jessica Wielgus (JW) to Patty Daley (PD) and Bill Veno, Martha's Vineyard Commission re: Falmouth Nitrogen Control Bylaw	5/9/13
Email from PD to George Meservey re: Orleans Fertilizer Bylaw	5/16/13
Email from Kerri Driscoll (KD) to Mary Owen (UMass Extension) re: Fertilizer Regulations	5/24/13
Memo to Boards of Selectmen and Barnstable Town Council re: Proposed Nomination Fertilizer Management District of Critical Planning Concern	7/1/13
Email from Jon Idman (JI) to Bethany Card at DEP re: Fertilizer Regulations / MGL Ch. 128	7/10/13
Email from JI to Lee Corte-Real re: MDAR Fertilizer Regulations / MGL Ch. 128	7/12/13
Email from JI to Bethany Card re: UMass Contact for Fertilizer Regulations	7/12/13
Email from Tom Cambareri to Carole Ridley re: Updated Fertilizer Management Plan	7/15/13
Email from JI to Mary Owen re: BMPs, Hearings, UMass Extension	7/23/13
Email from JI to Karen Greene re: Proposed Fertilizer DCPC Nomination and	7/24/13

Regulations	
Email from JI to Mark London re: Fertilizer DCPC Nomination	7/24/13
Email from KD to A.M. Wilson Associates re: Request for Copy of Fertilizer DCPC Nomination	7/25/13
Email from KD to Paul Revere re: Request for Copy of Fertilizer DCPC Nomination	7/25/13
Email from JI to Phil Boudreau re: Request for Copy of Fertilizer DCPC Nomination	7/25/13
Email from Elizabeth Taylor to JI re: Request for Electronic Copy of Meeting Materials	7/25/13
Email from JI to Elizabeth Taylor re: Request for Electronic Copy of Meeting Materials	7/25/13
Meeting Outline and PowerPoint from July 25, 2013 Public Meeting	7/25/13
Email from KD to Elizabeth Taylor cc: JI re: Request for Electronic Copy of Meeting Materials	7/26/13
Email from PD to Bill Clark re: Public Hearing notice	7/29/13
Email from JI to Steve Heywood re: Nantucket BMPs	7/31/13
Email from Gail Hanley (GH) to Janice O'Connell re: Hearing Notice for 8/21 Public Hearing	8/2/13
Email from KD to Subcommittee re: public hearing schedule	8/2/13
Email from KD to Brian Herrington, Government Affairs Manager, Scotts re: public hearing notice	8/6/13
Email from KD to Steve Heywood re: public hearing notice	8/6/13
Email from KD to Courtney Gavin, Sunshine Committee re: public hearing notice	8/6/13
Email from KD to Donald Liptack, Bill Veno, Tom Cambareri, John Waterbury, Brian Herrington, Ed Nash, Laura Kelley, Leo Cakounes, Carole Ridley, Don Keeran, Bill Clark, Stephen Spear, Mary Owen, Lauren McKean, Steve Heywood, Rick Lawlor, Sue Leven, Mark Nelson, Dan Helman, & George Meservey re: Stakeholder Meeting	8/6/13
Email from KD to Ed Nash re: Stakeholder Meeting	8/6/13
Email from KD to Richard Waldo (Provincetown Deputy Director of Public Works) re: Stakeholder Meeting	8/7/13
Email from KD to Donald Liptack re: Stakeholder Meeting	8/7/13
Email from KD to Laura Kelley (Littlefield Landscapes) re: Public Hearing Notice	8/7/13
Email from KD to Scott Horsley re: Public Hearing Notice	8/7/13
Email from JI to Brian Herrington re: Stakeholder Meeting	8/7/13
Email from KD to Karen Connelly (MA Association of Landscape Professionals) re: Stakeholder Meeting	8/7/13
Email from KD to W Michael Sullivan cc: Rick Lawlor re: DCPC Nomination	8/7/13
Email from JI to Brian Herrington re: 208 plan & MEP reports	8/8/13
Email from JI to Jay McGrail re: Horsley Witten Report	8/8/13
Email from KD to Stephen Mann re: Stakeholder Meeting	8/9/13
Emails from KD to Kevin Young re: Stakeholder Meeting	8/9/13
Email from KD to David Stott re: Stakeholder Meeting	8/9/13
Email from KD to Bruce McIntyre re: Public Hearing Notice	8/9/13
Email from KD to Bill Clark re: DCPC Nomination Materials	8/9/13
Email from KD to Michael Cummings re: Stakeholder Meeting	8/12/13
Fax from Harold Mitchell to JI with attached letter from Tom Fair (Fairway Lawn and Tree Service) re: Fertilizer DCPC opposition	8/15/13

Email from KD to Sue Phelan re: Horsley Witten Draft “Cape Cod Pesticide and Fertilizer-Use Inventory”	8/15/13
Email from KD to Donald Liptack, Bill Veno, Tom Cambareri, John Waterbury, Brian Herrington, Ed Nash, Laura Kelley, Leo Cakounes, Carole Ridley, Don Keeran, Bill Clark, Stephen Spear, Mary Owen, Lauren McKean, Steve Heywood, Rick Lawlor, Sue Leven, Mark Nelson, Dan Helman, George Meservey, Karen Connelly, Sheri Caseau, Kevin Young, Brian Wick, Gina Zirkle, Ed DeWitt & Geraldine Camilli re: Stakeholder Meeting with attached attendee list	8/15/13
Email from KD to Geraldine Camilli re: Stakeholder Meeting with attached attendee list	8/15/13
Email from KD to Russell Norton re: Stakeholder Meeting with attached attendee list	8/15/13
Email from KD to Jim Knieriem re: Stakeholder Meeting with attached attendee list	8/15/13
Emails from JI to Bill Veno re: Stakeholder Meeting	8/19/13
Email from JI to Mark Nelson re: Stakeholder Meeting	8/20/13
Email from KD to Leo Cakounes, Mary Owen, Steve Heywood, Bob Mann, Brian Wick, Tom Fair, Ed Nash, Russell Norton, Dan Helman, Mark Nelson, Carole Ridley, Len Short, Don Keeran, Kevin Young, Steve Spear, Brian Herrington, Bill Clark and Bill Veno re: Draft Fertilizer DCPC Decision	8/21/13
Email from KD to Ed Nash re: Draft Fertilizer DCPC Decision	8/21/13
Email from KD to Carole Ridley re: UMass BMPs	8/21/13
Hearing Outline, Attendance Sheet & PowerPoint from 8/21/13 Public Hearing	8/21/13
Email from GH to Town Clerks re: continued public hearing notice	8/23/13
Memo from KD to Subcommittee with attached draft decision and correspondence	8/23/13
Memo from KD to Commission Members with attached draft decision and correspondence	8/23/13
Email from JI to Brian Herrington re: Fertilizer DCPC meetings	8/26/13
Email from KD to Don Hearn re: continued public hearing notice	8/28/13
Email from KD to Commission Members with attached draft 8/21/13 public hearing minutes	8/28/13
Email from Harold Mitchell to KD re: draft public hearing minutes	8/28/13
Email from KD to Don Keeran re: draft decision	8/29/13
Email from JW to Carole Ridley re: Fertilizer DCPC questions	8/29/13
Hearing Outline, Attendance Sheet & PowerPoint from 8/29/13 Public Hearing	8/29/13
<i>Materials from Public Agencies/Towns/State/Federal</i>	<i>Date</i>
Email from Bill Veno to Patty Daley (PD) re: Fertilizer Regulations and MGL Ch. 128	5/8/13
Email from Margaret Hurley, Director of the Municipal Law Unit, Office of the Attorney General to Jessica Wielgus (JW) re: Falmouth Nitrogen Control Bylaw	5/9/13
Email from Margaret Hurley to JW re: Attorney General’s Office Decision on Falmouth Nitrogen Control Bylaw	5/15/13
Email from George Meservey to PD re: Orleans Fertilizer Bylaw	5/16/13
Memo from Mark London and Bill Veno, and Michael Loberg (Tisbury Board of Health) to PD re: Massachusetts Fertilizer Bill – Next Steps	7/1/13
Email from Bethany Card to JI re: NEIWPC Regional Turf Initiative	7/10/13
Email from Bill Veno to PD re: Local Fertilizer Regulations and MGL Ch. 128	7/12/13
Email from Bill Veno to PD re: Conference Call on Local Regulation of Fertilizer	7/16/13
Email from Bill Veno to JI re: Follow-Up to Conference Call on Local Regulation of Fertilizer	7/17/13

Email from Bill Clark to PD re: UMass Extension Contact	7/23/13
Email from Lauren McKean to JI re: CCNS Support of Fertilizer Management DCPC	7/24/13
Email from Mary Owen to JI re: UMass Extension Assistance with Fertilizer Regulations	7/24/13
Email from Karen Greene to JI re: Request for Copy of Nomination and Fertilizer DCPC	7/24/13
Letter from George Price, Jr. (Superintendent, Cape Cod National Seashore) re: Strong Support of Fertilizer DCPC	7/25/13
Email from Rick Lawlor to JI re: request to receive hearing notices	7/29/13
Email from Rick Lawlor to JI re: notice and stakeholder meetings	8/5/13
Email from Jay McGrail (Hingham, MA Golf Superintendent) to KD re: Horsley Witten Pesticide Fertilizer Report	8/8/13
Email from Jay McGrail to JI cc: KD re: Horsley Witten Report and Stakeholder Meeting	8/8/13
Email from Stephen Mann (Golf Course Superintendent Town of Brewster) to KD re: Stakeholder Meeting	8/9/13
Email from Stephen Spear (NRCS-USDA) to KD re: Stakeholder Meeting	8/9/13
Email from Mary Owen to JI & KD re: UMass Turf Soil and Nutrient Management Documents	8/9/13
Email from Bill Veno to KD re: Stakeholder Meeting	8/12/13
Email from Bruce McIntyre (Barnstable Golf Superintendent) to KD re: Stakeholder Meeting	8/12/13
Email from Michael Cummings (Dennis Golf Superintendent) to KD re: Stakeholder Meeting	8/12/13
Email from Bill Veno to KD re: Stakeholder Meeting Follow-Up	8/19/13
Email from Bill Veno to JI cc: KD re: Stakeholder Meeting Follow-Up	8/19/13
Email from Bill Veno to JI re: Stakeholder Meeting Follow-Up	8/20/13
Letter from Robert Harris, Brewster Golf Commission Chair, re: opposition to proposed Fertilizer DCPC	8/20/13
Letter from Joyce Mason, Mashpee Town Manager, to Jack McCormack re: Mashpee Board of Selectmen's support for Fertilizer DCPC	8/27/13
Letter from Mary Owen re: UMass Educational Resources with attached Elements for a Nutrient Management Plan for Turf, Best Management Practices for Land and Landscape Turf, and Best Management Practices for Soil and Nutrient Management in Turf Systems	8/29/13
Materials from Rick Lawlor: Flash Drive with pictures of Cape lawns; "Phosphorus Availability in Root Zones as Affected by Fertilizer Type", GCM August 2013	8/29/13
<i>Materials from the Public</i>	<i>Date</i>
Email from Steve Heywood, Bartlett Tree Experts to Sharon Rooney (SR) re: Fertilizer Use Publications	6/1/13
Email from Paula Myles to CCC re: Fertilizer Regulations	6/10/13
Email from Carole Ridley to Tom Cambareri (TC) re: Pleasant Bay Alliance Watershed Work Group Meeting and Agenda	6/21/13
Memo to File from Kerri Driscoll (KD) re: Call and Voicemail from Brian Herrington, Manager of Government Affairs for the Northeast Region for The Scotts Company	7/2/13
Email from Courtney Gavin, Sunshine Committee to Andrew Gottlieb cc: Patty Daley (PD) re: Proposed Fertilizer Regulations	7/8/13
Email from Carole Ridley to TC with Attached Pleasant Bay Fertilizer Management Plan and Municipal Policy	7/15/13

Email from Sue Phelan to PD re: Organic Land Management Template	7/17/13
Email from Patrick Hogan to Paul Niedzwiecki (PN) re: Alternative Sod	7/30/13
Email from Steve Heywood to JI re: Nantucket BMPs	7/31/13
Email from Brian Herrington (Scotts) to KD re: Public Hearing and Scotts Nutrient Pollution Efforts	8/6/13
Email from Mark Nelson to KD re: automatic reply for Stakeholder Meeting	8/6/13
Email from Steve Heywood to KD re: Stakeholder Meeting	8/6/13
Email from Brian Herrington to KD re: Stakeholder Meeting	8/6/13
Email from Ed Nash to KD re: Stakeholder Meeting	8/7/13
Email from Laura Kelley to KD re: Stakeholder Meeting	8/7/13
Email from Ed DeWitt (APCC) to KD re: Stakeholder Meeting	8/7/13
Email from Don Keeran (APCC) to KD re: Stakeholder Meeting	8/7/13
Email from Brian Herrington to JI re: Stakeholder Meeting and DCPC Materials	8/7/13
Emails from W Michael Sullivan (URI) to KD re: DCPC Nomination Materials	8/7/13
Email from Leo Cakounes to KD re: Stakeholder Meeting	8/8/13
Email from Don Hearn (Golf Course Superintendents Association of New England) to KD re: Stakeholder Meeting	8/8/13
Email from Charles Bramhall (Harrell's) to KD re: Stakeholder Meeting	8/8/13
Email from Patrick Hogan (Sodco & RIGCSA) to KD re: Stakeholder Meeting	8/9/13
Email from Karen Connelly (MA Association of Lawn Care Professionals) to KD re: Stakeholder Meeting	8/9/13
Email from David Stott (Chequessett Yacht & Country Club) to KD re: Stakeholder Meeting	8/9/13
Email from Kevin Young (Golf Course Superintendents Association of Cape Cod) to KD re: Stakeholder Meeting	8/9/13
Email from Brian Wick (Cape Cod Cranberry Growers Association) to KD re: Stakeholder Meeting	8/9/13
Email from Brian Wick to KD re: Stakeholder Meeting	8/9/13
Email from Mark Nelson to KD re: Stakeholder Meeting	8/12/13
Email from Ron Beaty to PD, Kristy Senatori, Andrea Adams and Nancy Hossfeld re: Fertilizer DCPC Public Hearing	8/12/13
Email from Sue Phelan to KD re: Horsley Witten Draft "Cape Cod Pesticide and Fertilizer-Use Inventory"	8/15/13
Email from Carole Ridley to KD re: Stakeholder Meeting	8/15/13
Email from Geraldine Camilli to KD re: Stakeholder Meeting	8/15/13
Email from Ronald Beaty to Front Desk, Patty Daley, Gail Hanley, Nancy Hossfeld, Jon Idman, Anne McGuire, Andrea Adams, Sharon Rooney, Kristy Senatori and David Still re: Fertilizer DCPC opposition	8/15/13
Email from Karen Connelly to KD re: Stakeholder Meeting Follow-Up and Nutrient Management Study	8/19/13
Email from Mark Nelson to JI re: Stakeholder Meeting	8/20/13
Letter from Michael Pajolek re: opposition to proposed Fertilizer DCPC	8/20/13
Letter from David Marren (Bartlett Tree Expert Company) re: support for proposed Fertilizer DCPC and considerations for regulations	8/20/13
Email from Carole Ridley to KD re: UMass BMPs	8/21/13
Email from Brian Wick to JI and KD with attached comment letter re: opposition to proposed Fertilizer DCPC and agriculture exemption	8/21/13
Letter from Kevin Doyle (Golf Course Superintendents Association of America) re: consideration of golf turf management	8/21/13

Letter from Brian Herrington re: Fertilizer DCPC considerations	8/21/13
Letter from Dan Helman (Cape Cod Landscape Association) re: Fertilizer DCPC considerations	8/21/13
Letter from Beverly Kane (Mashpee Environmental Coalition) re: support for the proposed Fertilizer DCPC	8/21/13
Letter from Michael Talbot (Talbot Ecological Land Care) re: support for the proposed Fertilizer DCPC	8/21/13
Materials from Richard Bradley (SuperScape Landscape & Irrigation) re: Urban Nutrient Management	8/21/13
Letter from Bill and Karen Goggins re: support for the proposed Fertilizer DCPC	8/22/13
Letter from Thomas Delaney, Director of Government Affairs, Professional Landcare Network re: Fertilizer DCPC considerations	8/26/13
Emails from Brian Herrington to JI cc: KD re: Fertilizer DCPC Meetings	8/26/13
Email from Don Hearn to KD re: continued public hearing notice	8/28/13
Email from Carole Ridley to KD re: DCPC questions	8/28/13
Letter from Thomas Gonzalski, The Turf Co. Cape Cod, re: opposition to Fertilizer DCPC	8/29/13
Email from Don Keeran to JI and KD re: draft decision	8/29/13
Email from Ronald Beaty to CCC Front Desk re: opposition to Fertilizer DCPC	8/29/13
Email from Hamik (hamik3@gmail.com) re: support for Fertilizer DCPC	8/29/13
Email from Carole Ridley to JW cc: KD with attached letter from Pleasant Bay Alliance re: support for Fertilizer DCPC	8/29/13
Letter from Paul Fulcher re: Orleans Fertilizer Management Policy	8/29/13
Letter from Charles Bramhall, Harrell's, re: opposition to Fertilizer DCPC	8/29/13
Letter from Sandra Quinn Larsen re: support for Fertilizer DCPC	8/29/13
Letter from Sue Phelan, GreenCape, re: support for Fertilizer DCPC and Organic Land Management – Model Policy/Regulations	8/29/13
Letter from Mark Perkins re: opposition to Fertilizer DCPC	8/29/13
Letter from Michael Talbot, Talbot Ecological Land Care, re: support for Fertilizer DCPC	8/29/13
Letter from Stephen Boksanski, Green Industry Alliance of Massachusetts, re: considerations and recommendations for Fertilizer DCPC	8/29/13
Letter from Karen Connelly, Massachusetts Association of Lawn Care Professionals re: considerations for Fertilizer DCPC implementing regulations	8/29/13
Letter from Elizabeth Ferranti re: suggestions for fertilizer regulations	8/29/13

RECORD MATERIALS

- Cape Cod Commission GIS Maps entitled:
 - “Fertilizer Management DCPC District Boundary;”
 - “Approximate Managed Lawn Areas by Land Use Type;”
 - “Total Fertilizer Nitrogen Load (lb/yr);”
 - “Nitrate Concentrations in Cape Cod Public Supply Wells;”
 - “Total Nitrogen Load to Watershed from Fertilizer;”
 - “Tropic Status as an Indicator of Phosphorus’ Effect on Fresh Water Bodies”
- MEP Reports <http://www.oceanscience.net/estuaries/reports.htm>
- Horsley Witten, Draft “Cape Cod Pesticide and Fertilizer-Use Inventory” (June 2013)
- 1978 208 Report

- Cape Cod Commission Technical Bulletin 91-001 – Nitrogen Loading
- Cape Cod Commission “Cape Cod Pond and Lake Atlas, Final report, May 2003”
- Pie chart “Cape-wide Controllable Nitrogen Loads” based on MEP report averages

BOUNDARY OF AREA PROPOSED FOR DESIGNATION

The proposed district is county-wide, to the extent of the corporate Barnstable County land boundary, including the land area of all 15 Cape Cod towns comprising Barnstable County. The boundary is as shown on the map entitled “Fertilizer Management DCPC District Boundary,” incorporated by reference herein and appended as Exhibit A.

PURPOSE AND REASONS FOR DESIGNATION

Pursuant to Sections 10 & 11 of the Cape Cod Commission Act (“Act”), the Cape Cod Commission may propose designation of areas which are of critical value to Barnstable County to preserve and maintain as districts of critical planning concern (DCPC). Such areas are of critical value to preserve and maintain due to, among other things, the presence of significant natural, coastal, and recreational resources and substantial areas of sensitive ecological conditions. DCPCs may cover areas located in more than one municipality.

EXISTING LAND USE PROBLEMS ASSOCIATED WITH PROPOSED DISTRICT

Cape Cod’s coastal waterbodies and embayments, watersheds and ponds are significant, ecologically sensitive resources, which do not follow town boundaries. The volume of nitrogen entering Cape Cod’s coastal waters and freshwater ponds has increased over the last several decades as the area population has increased. Excess nitrogen within an embayment can result in eutrophication, significant algae growth, loss of eelgrass, diminishing shellfisheries, ponds choked with algae, and decreasing dissolved-oxygen concentrations—occasionally leading to massive fish and shellfish kills, odor, and frequent violation of water quality standards. Coastal waterbodies and freshwater ponds around the Cape are showing the stress of excess nitrogen, with effects that impair their natural functions and their recreational appeal.

Water quality testing for the Massachusetts Estuaries Project (MEP) has clearly documented that many of Cape Cod’s waterbodies have impaired water quality and ecological damage due to nitrogen loading in their watersheds. A major source of nitrates, a type of nitrogen that may be found in drinking water, is run-off from fertilizer application into water bodies, which in turn supply the aquifer. Excess nitrates threaten drinking water resources.

ANTICIPATED ADVANTAGES OF IMPLEMENTING REGULATIONS

Nitrogen from fertilizer in the groundwater or as runoff is an important and controllable source of nitrogen loading, with the greatest amount coming from residential fertilizer use. A recent, draft study of fertilizer use by Horsley and Witten estimates that nearly six million pounds of fertilizer is used annually on Cape Cod, with nearly 4.3 million pounds associated with residential use.

Managing fertilizer use and application through education, Best Management Practices, and enforceable regulations will help towns achieve cost-effective and efficient nitrogen reduction. Regulating fertilizer application is one of the more straight-forward, easily-implemented and cost-effective ways to help address the broader nitrogen loading issues on Cape Cod. In fact, the relative percentage of nitrogen contribution to impaired watersheds associated with fertilizer use becomes greater as wastewater problems are ultimately addressed. Even today, according to watershed modeling based on MEP reports, fertilizer contribution to nitrogen loading is as great as 26% in certain impaired watersheds.

There is a need for a special, coordinated system of planning and regulations to manage fertilizer use and application in the proposed district, which is likely to be effective in protecting or otherwise meeting the objectives of the proposed district by preserving or maintaining the resources intended to be protected by the Act.

Without special fertilizer management regulations in place in the proposed district, inappropriate fertilizer use and application could continue to contribute to degradation of Cape Cod's water resources. Evidence suggests that fertilizer management regulations could help protect, maintain and repair Cape Cod's water quality.

The opportunity to adopt local fertilizer management regulations through a DCPC is especially important now that the county and towns' ability to regulate this area has been restricted. The Attorney General has advised that recently enacted amendments to Chapter 128 of the General Laws give the Massachusetts Department of Agricultural Resources (MDAR) exclusive authority to regulate and enforce fertilizer application in the Commonwealth. MDAR's regulations are not anticipated to be released for public comment until late fall 2013, and are anticipated to deal with phosphorus rather than nitrogen management.

Implementing Regulations adopted pursuant to the Fertilizer Management DCPC would preserve the towns' ability to regulate fertilizer use and application now and in the future, in light of these recently enacted amendments to M.G.L. Chapter 128. Unless a town adopts Implementing Regulations consistent with the DCPC designation, the town will be subject to state law, with no local control over fertilizer management. When the state does ultimately promulgate fertilizer regulations, they may not address some of the unique local and regional issues concerning nutrient management that exist on Cape Cod.

GUIDELINES FOR IMPLEMENTING REGULATIONS

Implementing Regulations shall be consistent with this proposed designation generally and the following section specifically, which section shall serve as guidelines. Though the Implementing Regulations would be adopted town by town, the Commission strongly recommends a consistent, regional approach to regulation, considering, among other things, that towns share watersheds. Accordingly, it is anticipated that all towns within the proposed district would adopt fertilizer management regulations, consistent with the DCPC designation, based on model regulations developed by the Commission with input from the towns, stakeholders, the University of Massachusetts Amherst Extension, and the Massachusetts Department of Agricultural Resources. Pursuant to the MGL Chapter 128 amendments, regulations must be done in conjunction with the

University of Massachusetts-Amherst Extension. UMass has recently developed and released updated nutrient management Best Management Practices (BMPs), with which any Implementing Regulations would have to be consistent.

It is anticipated that the model regulations, and thus ultimately Implementing Regulations, would be primarily directed to nitrogen and adopted at duly noticed public hearings of local Boards of Health in the form of Board of Health regulations.

DISTRICT OF CRITICAL PLANNING CONCERN GUIDELINES

Any Implementing Regulations shall have considered the following:

1. **Timing of the Fertilizer Application.** A proposed regulation should include a shortened time period during which the application of fertilizer is allowed. A proposed regulation should also consider limited exceptions to that shortened time period. A proposed regulation should prohibit the application of fertilizer immediately before or during heavy rain events.
2. **Location of the Fertilizer Application.** A proposed regulation should identify locations where the application of fertilizer is not allowed, potentially including, but not limited to, water resource areas and impervious surfaces.
3. **Manner of the Fertilizer Application.** A proposed regulation should limit the quantity and frequency of fertilizer applications. These restrictions should be based on the type of product used, the turf type, and the use of the turf area. With respect to the type of product used, a proposed regulation should, at a minimum, address the use of slow-release fertilizer and water-insoluble fertilizer. A proposed regulation should also consider limited exceptions to the quantity and frequency requirements.
4. **Education.** A proposed regulation should provide for education and outreach.
5. **Certification.** A proposed regulation should provide for a certification program that could potentially allow for flexibility from the requirements contained in the proposed regulation.
6. **Exemptions.** A proposed regulation should include an exemption for commercial agriculture and horticulture as well as for the application of lime. A proposed regulation should consider additional exemptions, potentially including, but not limited to, golf courses, athletic fields, and gardens. If a proposed regulation includes a distinction for professional/licensed/certified applicators, an exemption for those that are certified should be considered.
7. **Compliance with UMass Best Management Practices.** A proposed regulation should be consistent with the requirements and guidance outlined in the "UMass Best Management Practices for Soil & Nutrient Management in Turf Systems" document and potentially adopt the BMPs within the proposed regulation.

A copy of the publication “Elements of a Nutrient Management Plan for Turf,” recently prepared by the UMass Turf Extension program, is attached hereto and incorporated herein, to provide further guidance on the development of a model regulation/ Implementing Regulations consistent with this proposed designation.

CONCLUSION

Based on the foregoing, the Cape Cod Commission finds that there are critical concerns in proposed district that warrant designation, based on the values and purposes intended to be protected and maintained under the Act, and the Commission hereby proposes all of Barnstable County for designation as a Fertilizer Management District of Critical Planning Concern.

Executed this 29th day August, 2013

John McCormack
John McCormack, Chair

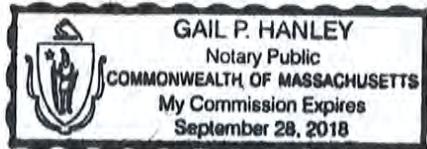
COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss

August 29, 2013

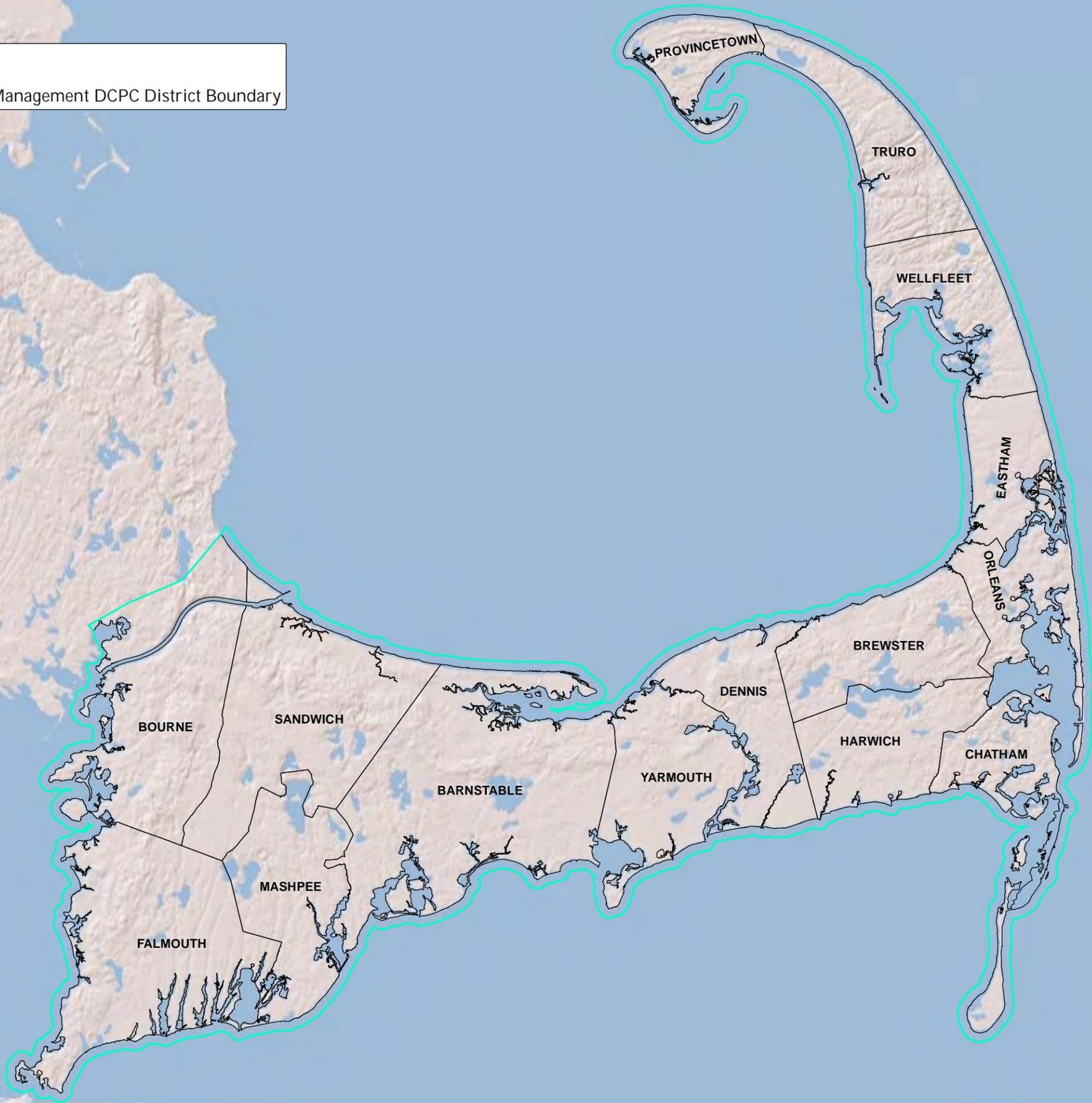
Before me, the undersigned notary public, personally appeared John McCormack, in his capacity as Chairman of the Cape Cod Commission, whose name is signed on the preceding document, and such person acknowledged to me that he signed such document voluntarily for its stated purpose. The identity of such person was proved to me through satisfactory evidence of identification, which was [] photographic identification with signature issued by a federal or state governmental agency, [] oath or affirmation of a credible witness, or [] personal knowledge of the undersigned.

SEAL



Gail P. Hanley
Notary Public
My Commission Expires:
9-28-18

Legend
 Fertilizer Management DCPC District Boundary



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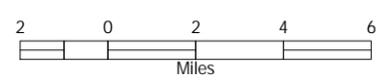
Fertilizer Management DCPC District Boundary

User: sgoulet

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Note: The Fertilizer Management DCPC District Boundary includes the fifteen (15) towns which comprise Barnstable County.

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The information depicted on these maps is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel level analysis. It should not substitute for actual on-site survey, or supersede deed research.

ELEMENTS OF A NUTRIENT MANAGEMENT PLAN FOR TURF

Development and implementation of a nutrient management plan (NMP) are critical to the proper management of the turf with environmental protection and enhancement as priorities. A nutrient management plan should address not only sound agronomic practices as they relate to the function of the turf, but also the protection of natural resources, particularly water. The following guidelines outline the components of a nutrient management plan, and are adaptable to a wide variety of turf management systems.

In the case of lawn turf management, the components of an NMP are covered in greater detail in Section 7 of UMass Extension's *Best Management Practices for Lawn & Landscape Turf* manual. This manual can be accessed online at <http://extension.umass.edu/turf/publications-resources/best-management-practices>. Although the focus of the manual is lawn and landscape turf, much of the included information is also applicable to the management of other types of turf such as high value playing surfaces or very low maintenance turf areas.

A complete NMP should include:

- Site analysis and mapping.
 - Identification and mapping of environmentally sensitive areas as well as areas at high risk for off-site movement of nutrients.
 - Mapping of specific buffer zones delineated in environmentally regulated areas such as but not limited to Zone I wellheads, wetlands and certain coastal zones, and for protection of environmental resources.
 - Mapping, including measured square footage or acreage, of areas being fertilized or receiving nutrient containing materials.
 - Soil tests to determine chemical and physical condition of the soil and to ascertain recommendations for adjustments.

- Determination of:
 - need for nutrient inputs based on soil testing, turf function and quality desired, and proximity to environmentally sensitive sites.
 - lowest rate of input of nitrogen, phosphorus and other nutrients that will produce dense turf cover and promote deep rooting.
 - form (source) of nutrients appropriate for the management plan and the use of the turf on the site.
 - appropriate placement of fertilizer and nutrient containing materials.
 - frequency of fertilizer and nutrient containing material applications based on the nitrogen characteristics of each material.
 - timing of fertilizer applications so that maximum nutritional availability corresponds with periods of active turfgrass growth:

- fertilizer and other nutrient containing materials should not be applied before spring green-up or when turf is dormant.
 - fertilizer and other nutrient containing materials should not be applied when the ground is frozen.
 - fertilizer and other nutrient containing materials should not be used as de-icers.
- Considerations for phosphorus (P):
 - determination of phosphorus (P) levels by soil test, and where and when application of phosphorus containing materials may and may not be allowed.
 - application of phosphorus containing fertilizers and other nutrient containing materials, regardless of the source of nutrients or the purpose of the application, should not exceed levels recommended by a soil test.
 - accounting of all phosphorus inputs into the management program and turf system. These may include, for example: fertilizers; turfgrass clippings retained in the system; composts, compost derivatives and other organic amendments; topdressings and other materials.
 - ample available P is critical to the success of turf establishment, renovations and major repairs. Levels of P applied in conjunction with such activities should be adequate for rapid turfgrass germination, growth and development.
 - Considerations for nitrogen (N):
 - determination of nitrogen (N) fertilization need based on turfgrass species, time of year, turf vigor and plant response, and frequency of turf use.
 - determination of nitrogen rate based on turf needs as influenced by turf function and use as well as by presence of and proximity to environmentally sensitive areas, keeping N level to the lowest possible level required to realize management objectives while protecting the environment.
 - use of slow release sources of N as often as possible based on management objectives.
 - accounting of all N inputs into the management program and turf system. These may include, for example: fertilizers; retained turfgrass clippings; composts, compost derivatives and other organic amendments; topdressings; corn gluten used as an herbicide or fertilizer; and carryover N from prior seasons.
 - Implementation of cultural practices that maximize nutrient uptake by plants, reduce nutrient waste and reduce off-site movement of nutrients.

These practices include:

- minimization of bare soil and maintenance of dense turf cover to reduce erosion, prevent runoff and increase nutrient retention within the turf/ soil system.

- implementation of practices that result in rapid establishment of turf following new planting or repairs.
 - application of fertilizer and other nutrient containing materials only to turf, avoiding designated environmentally sensitive areas.
 - application of fertilizer and other nutrient containing materials in a manner that prevents entry into surface waters or conduits such as catch basins that lead to surface waters or other environmentally sensitive areas.
 - application of fertilizer and other nutrient containing materials so as not to fall on hardscapes such as driveways, sidewalks and roadways as well as non-vegetated surfaces. Should materials inadvertently land on such surfaces they should be removed promptly and handled properly.
 - handling of turfgrass clippings in an appropriate manner:
 - retention of clippings within the turf system whenever possible.
 - management of turfgrass clippings so that they are not allowed to enter surface waters or conduits such as catch basins that lead to surface waters.
 - clippings that are removed should be composted or handled in a manner that does not pose a threat to the environment.
 - mowing at the highest end of the proper mowing height range for the grasses and cultivars present, and for the use of the turf, with the goal of maintaining turf density and maximizing rooting.
 - irrigation practices that promote infiltration and plant uptake, that do not lead to runoff and leaching, and that encourage deep and extensive turfgrass rooting.
 - relief of compaction through appropriate cultural practices such as core aeration.
- Implementation of proper storm water management techniques aimed at reducing off-site movement of soil and nutrients.
 - Detailed application records for inputs of fertilizer and nutrient-containing materials.

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