

CAPE COD COMMISSION REPORTER



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The newsletter of the regional planning and regulatory agency serving Barnstable County since 1990.

Chatham Comprehensive Wastewater Management Plan Approved

The Town of Chatham is the first Cape Cod community to have an approved Comprehensive Wastewater Management Plan (CWMP) that will achieve compliance with federal standards to restore marine water quality.

On October 29, 2009, the Cape Cod Commission, with 11 voting members present, voted unanimously to approve with conditions the Development of Regional Impact (DRI; project ENF98004) application of the town for the CWMP.

In 2002, Chatham was one of the first Cape Cod towns to engage the Massachusetts Estuaries Project (MEP) to better document the health and scientifically determine the critical nitrogen loads for the town's marine waters. The MEP staff produced several technical reports since 2003 that documented the nitrogen thresholds that the US Environmental Protection Agency then codified into Total Maximum Daily Load (TMDL) standards under the Federal Clean Water Act.

Large areas of Chatham need to have more than 50 percent of the nitrogen load to watersheds removed to comply with the TMDLs; some need 100 percent of the load to be removed. Doing so will result in the restoration and natural distribution of eelgrass as a habitat for shellfish

and fin fish; the prevention of algae blooms; the protection of benthic, or bottom-dwelling, ecological communities; and the maintenance of dissolved-oxygen concentrations that protect estuarine environments.

The Chatham CWMP provides a strategy for wastewater management and reductions in nitrogen loading to restore and protect the town's marine embayments. The plan also addresses other areas of concern, including high groundwater, failing wastewater systems, and industrial/commercial areas. The DRI decision includes an "Adaptive Management Plan" to accommodate the 30-year, two-phase project implementation and allow the town some flexibility to respond to changing conditions over the long time frame.

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LEFT: Little Mill Pond in Chatham, one of the water bodies whose water quality will greatly improve through implementation of the town's recently approved Comprehensive Wastewater Management Plan.

Photo: Nancy Hossfeld/CCC

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Chatham wastewater plan, from page 1...

During Phase 1 of CWMP implementation (from 2010 to 2030), Chatham will construct facilities for immediate wastewater and nitrogen management needs, sewerage about 72 percent of the town. The town will start with an upgrade to its existing wastewater treatment facility and installation of a major sewer “backbone” along Route 28 that will include seven new pumping stations and more than 10 miles of sewer pipes. The Phase 1 work targets the area of town where 100 percent of nitrogen needs to be removed to meet the TMDL standards.

During Phase 2 (from 2030 to 2040), Chatham will extend sewers to the rest of town.

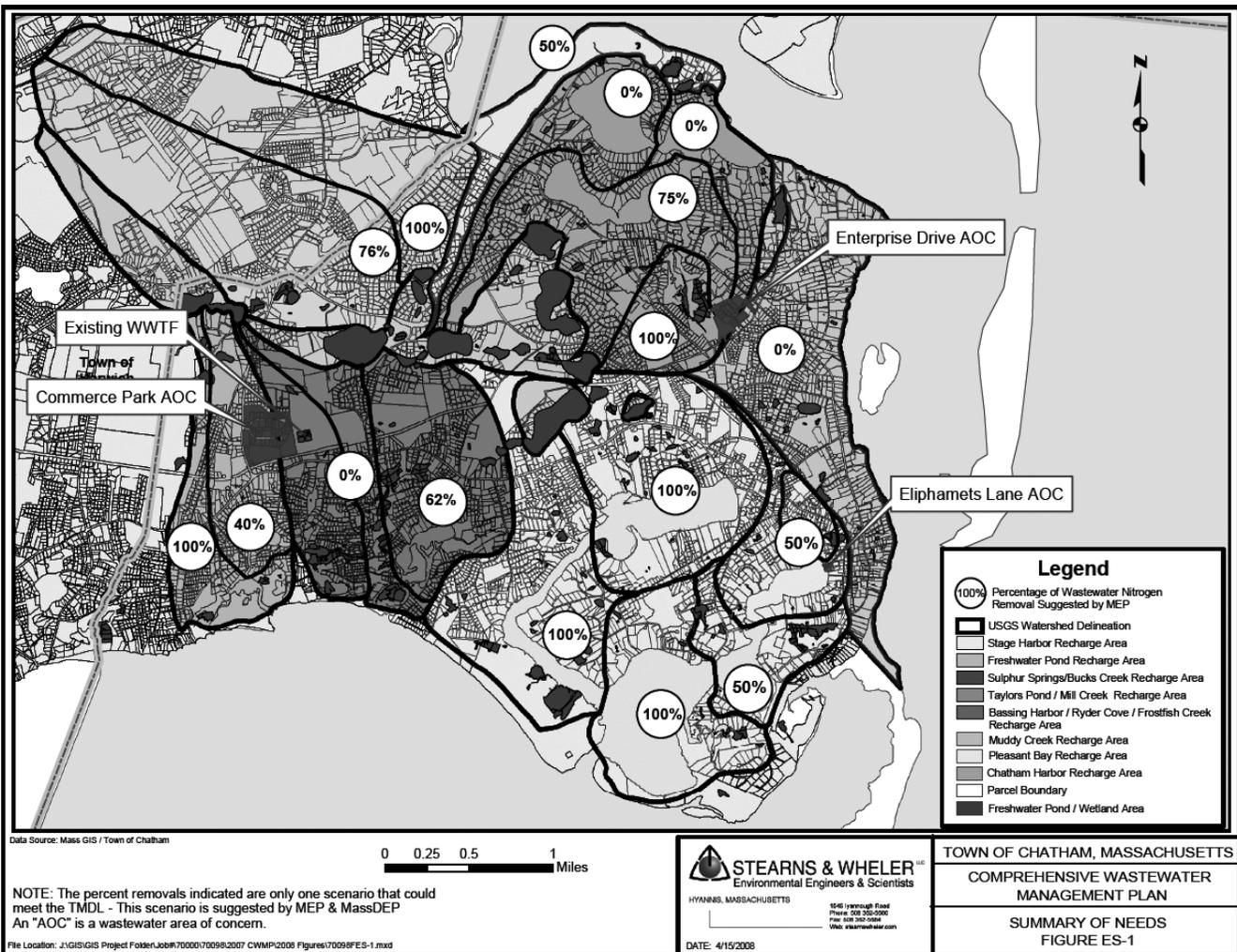
Chatham Town Meeting approved the initial implementation phase earlier this year.

The Board of Selectmen has chosen to pay for the project’s capital costs through property taxes. Chatham will take advantage of a zero-percent-interest loan from the Massachusetts State Revolving Fund, made possible through state legislation in 2008 that was championed by Senator Robert O’Leary and

other members of the Cape Cod legislative delegation. The town also plans to use federal stimulus funds from the American Recovery and Reinvestment Act of 2009. No project betterment costs will be assessed, but homeowners will incur a cost for hook-up to the system and will receive a monthly bill to cover operations and maintenance.

The CWMP has undergone extensive state and regional regulatory review since 1998, including Draft and Final Environmental Impact Reports. The

Figure from the Chatham Comprehensive Wastewater Management Plan: The white circles indicate the percentage of nitrogen removal suggested by the Massachusetts Estuaries Project as a way to meet TMDL water-quality standards in Chatham.



Secretary of the Massachusetts Executive Office of Energy and Environmental Affairs certified the latter report as adequately and properly complying with the Massachusetts Environmental Policy Act (MEPA) on July 17, 2009, which established the starting date for the regional DRI review process.

The Cape Cod Commission held a number of public hearings and meetings about the DRI between August and October 2009. During the review, the Commission considered the potential impacts the CWMP would have on natural, historic/archaeological, and water resources.

The CWMP will protect drinking water from Chatham's nine public supply wells, the water quality of Chatham's 44 freshwater ponds, and the ecology of Chatham's extensive estuaries and marine resource areas.

The Adaptive Management Plan's purpose is to ensure the achievement of the CWMP goal to restore impaired marine water quality and habitat. Among other requirements, the Adaptive Management Plan requires the town:

- to submit implementation progress reports;
- to document capital expenditures;
- to monitor compliance with groundwater discharge permits;
- to monitor and report on estuary water quality;
- to summarize any habitat assessments completed in Chatham; and,
- to target nutrient management through nonstructural methods, as appropriate.

Chatham must submit a draft Adaptive Management Plan to the Cape Cod Commission within one year and a final within two years.

The DRI approval is valid for seven years, and the town may seek an extension or renewed approval. Minor changes may be approved at the staff level. If proposed changes affect TMDL compliance or the findings and conditions of this DRI approval, the town must pursue those changes through the formal DRI modification process.

The Chatham Comprehensive Wastewater Management Plan is available online from the town Health and Environment Department web site: www.chatham-ma.gov/public_documents/Chatham-Ma_CWMPPlan/CWMP

To download a PDF file of the DRI decision, visit the Regulatory section of the Cape Cod Commission's Web site: www.capecodcommission.org/regulatory

County EDC Grant Helps Create Renewable Energy Teaching Center

Thanks to donations of supplies and labor plus an infusion of grant money from the Massachusetts Technology Collaborative, Barnstable County's Cape Cod Economic Development Council (EDC), and others, Cape Cod Regional Technical High School in Harwich has a new renewable energy teaching center.

A dedication ceremony in early November celebrated the new center. Former EDC Administrator Dan Dray, now an economic development officer with the Cape Cod Commission, attended the ceremony. Dray reports that the center is tied in with the school's new tri-generation system. Real-time data-acquisition equipment is inside the building, paid for with a \$25,000 grant from the EDC. The school also has a small bio-diesel production facility inside the center. Dray calls the new center "a great teaching tool."

According to a school web site (capecodtech.us/renewable/welcomeCenter/welcomeCenter.html), the center has three objectives:

"First, it will provide hands on and visual working systems related to renewable energy education for our students at Cape Cod Tech. Second, it will function as a hands-on classroom for work force training and continuing education. And thirdly, the REC will be open to the public for tours to increase the awareness of renewable energies."



Cape Cod Tech's new renewable energy teaching center. Photo: Dan Dray/CCC

Cape Transportation Board Election Results

The Cape Cod Metropolitan Planning Organization (MPO), which is responsible for directing transportation planning and policy and for allocating federal transportation funds on Cape Cod, has completed the town representatives election for 2009.

In addition to the standing members listed below, town selectmen from each of three subregions of the Cape elect a representative to serve on the MPO. The subregions are (A) Bourne, Falmouth, Mashpee, and Sandwich; (B) Brewster, Chatham, Dennis, Harwich, and Yarmouth; and (C) Eastham, Orleans, Provincetown, Truro, and Wellfleet. As a result of the recent election, the three subregion representatives are:

- Subregion A – Wayne Taylor (reelected)
- Subregion B – Lawrence Cole (reelected)
- Subregion C – Aimee Eckman (newly elected)



Standing and *ex officio* Membership

Standing members of the MPO include representatives from the Massachusetts Executive Office of Transportation, Massachusetts Highway Department, Barnstable County Commissioners, Cape Cod Commission, Cape Cod Regional Transit Authority, and the Town of Barnstable.

Orleans, Provincetown CCC Reps Depart

The Cape Cod Commission representatives from the towns of Provincetown and Orleans resigned from their posts in late October.

Roslyn Garfield (below, left) has represented Provincetown since May 2004. Frank Hogan (below, right) has represented Orleans since April



MPO *ex officio* members include representatives from the Federal Highway Administration; Federal Transit Administration; US Army Corps of Engineers; National Park Service/ Cape Cod National Seashore; Woods Hole, Martha's Vineyard, and Nantucket Steamship Authority; and the Cape Cod Joint Transportation Committee.

More Information

Information related to the work of the Cape Cod MPO is posted on the web site: www.gocapecod.org/tip

Questions may be addressed to Cape Cod Commission Senior Transportation Planner Priscilla Leclerc.

2002. In addition to serving on the full board and subcommittees that reviewed specific Development of Regional Impact (DRI) projects, both also served on the standing Regulatory Committee, Hogan in the past as chair and recently as vice chair. He also served on the standing Executive Committee.

Cape Cod Commission members and staff are grateful for the dedicated public service of Garfield and Hogan and wish them both well in the future.

At the time this publication went to press, neither town's board of selectmen had appointed a new representative to the Commission.

Effectively Managing Coastal Floodplain Development

Two former Barnstable County coastal specialists have finalized a new model bylaw and technical report to help communities manage development in coastal floodplains.

James F. O'Connell (first from his position with Barnstable County's Cooperative Extension and the Woods Hole Oceanographic Institution's Sea Grant Program in Massachusetts, then from his position as coastal processes specialist with the University of Hawaii Sea Grant College Program) and Stacey Justus, former coastal resource specialist for the Cape Cod Commission, collaborated on a two-part project to produce the model regulation.

The bylaw with the accompanying technical report is now available on the web site: www.capecodcommission.org/bylaws

"The regulation is grounded in sound floodplain management

and coastal processes science," Justus noted in a recent e-mail to the Commission. Experts in the field of coastal floodplain development extensively peer-reviewed drafts of the bylaw.

The document presents a model land use regulation that advances the protection of the natural and beneficial functions of the shoreline and coastal floodplain. It also facilitates appropriate uses of public and private property located within the coastal floodplain.

"We believe and hope the bylaw will be a valuable contribution to coastal floodplain management," O'Connell said in a recent e-mail. The preface to the technical report explains more about the genesis of the project:

"The initial roots of this...began in 1998 when the Cape Cod Commission...

developed a model floodplain district bylaw. Many of the standards promoted in that early model bylaw were generated by the Massachusetts Coastal Floodplain Task Force, a group of public and private coastal resource managers, private consultants and coastal scientists... The Task Force released Scientific Recommendations for Performance Standards for Land Subject to Coastal Storm Flowage, 1995. However, since the development of the Commission's 1998 model bylaw many precedent-setting floodplain

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CCC Fiscal 2009 Annual Report

The Cape Cod Commission's annual report for Fiscal Year 2009 is available as a 36-page, color PDF file now on the web site: www.capecodcommission.org/annualreport/

The report highlights the agency's regional activities, events and workshops, and services provided to each Cape town. It also provides financial information, that is, revenues and expenses in

the Cape Cod Environmental Protection Fund as well as separate mitigation funds collected on behalf of and available to towns as a result of Development of Regional Impact reviews.

All data are relevant to the period July 1, 2008 through June 30, 2009.

Two versions are provided on the web site: one, a low-resolution file suitable for on-

screen viewing, and the other, a high-resolution file better suited to high-quality printing.



Printed copies of the report may also be requested from the Commission (phone 508-362-3828 or e-mail frontdesk@capecod-commission.org).

Model bylaw, from page 5...

cases have been decided by the courts, as well as additional research conducted relating to the importance of the physical function of the coastal floodplain, including predicted impacts as a result of relative sea-level rise. New legal and technical understanding of floodplain management necessitated the need to fully revisit that model. Additionally, there is a need to construct a model that could be consulted nationally.

The authors note that historically, coastal floodplain management in the US has focused on structural measures, such as dikes, levees, and seawalls, and on post-disaster recovery. More recently, the focus has been toward developing disaster-resistant buildings and pre-disaster mitigation

planning. The report emphasizes: *“Prohibiting development in specific, limited areas, and permitting appropriately sited and constructed development while preserving the natural and beneficial functions of coastal floodplains is a balance to achieve.”*

The technical report that accompanies the bylaw covers a variety of subjects, including the life expectancies of buildings in coastal floodplains; the probability of flooding, storm damage, and coastal erosion over time; and the need for standards that are stronger than currently required.

Also examined are projected sea-level rise and increased coastal flood and surge elevations and how to accommodate those factors

when considering the elevation, heights, and widths of buildings.

In developing the model bylaw, O’Connell and Justus made an extensive review of existing coastal floodplain bylaws and a variety of regulations, including several from Cape Cod and other Massachusetts coastal communities, Maine, Virginia, and North Carolina. The report advises communities on how to use the new model bylaw and includes this cautionary note:

“The value of this report will ultimately lie in the adoption of local floodplain bylaws and the hope that this product will assist communities in the development of a regional or local bylaw that fits their particular geographic area.”

USGS Observation Well Data

The groundwater-level measurements below are taken monthly by the Cape Cod Commission’s staff from nine US Geological Survey (USGS) index wells. The data are also online at: www.capecodcommission.org/wells.htm

October 2009

Location	Well Number	Level*	Record High*	Record Low*	Departure from Average**	
					Monthly	Overall
Barnstable	A1W 230	(not available this month)	20.5	26.6	(not available)	(not available)
Barnstable	A1W 247	23.4	20.5	28.6	1.6	1.0
Brewster	BMW 21	10.1	6.9	13.6	0.3	0.0
Chatham	CGW 138	24.6	20.9	26.6	-0.7	-1.6
Mashpee	MIW 29	8.0	5.6	10.0	1.1	0.4
Sandwich	SDW 252	47.0	45.8	48.2	0.5	0.2
Sandwich	SDW 253	49.5	45.8	55.1	0.9	0.6
Truro	TSW 89	12.0	10.2	13.0	0.4	0.0
Wellfleet	WNW 17	11.4	7.3	12.8	-0.3	-0.9

* Feet below land surface. ** Feet above mean sea level. † New monthly high. †† New record high.



Craigville Beach DCPC

On November 4, 2009, the Barnstable County Assembly of Delegates voted to designate the Craigville Beach District of Critical Planning Concern (DCPC). The Barnstable Town Council approved a resolution to nominate the district on September 3, 2009, and the Cape Cod Commission voted to accept the nomination on October 1.

The DCPC is bounded on the south by Nantucket Sound. The district encompasses about 445 acres; open water constitutes about 65 of those acres.

The town now has one year to develop and adopt regulations that protect the resources identified in the DCPC designation.

Cape Cod Commission • DRI Status Report

Developments of Regional Impact (DRIs) currently under consideration by the Cape Cod Commission are listed below. A check mark (✓) are listed below. A check mark (✓)

in front of a project's name indicates that Commission regulatory activity is scheduled for that project in the next month. Details about those

activities are listed in the calendar on the back cover and as hearing notices in the Regulatory section of the Web site: www.capecodcommission.org

DRI Projects in the CCC Regulatory Queue

BARNSTABLE

- **Barnstable Municipal Airport Terminal Access Design Change**—proposed access/egress changes, including realignment of access road from Route 132 and elimination of proposed entrance near rotary. Scope of review limited to transportation issues. CCC accepted the applicant's withdrawal of the DRI on 10/29/09.

BOURNE

No DRI projects at this time.

BREWSTER

- ✓ • **Windrift Acres**—proposed 22-lot residential subdivision on 55 acres of land in West Brewster.

CHATHAM

- **Chatham Comprehensive Wastewater Management Plan**—proposed comprehensive strategy (Comprehensive Wastewater Management Plan, Draft Environmental Impact Report, and Final Environmental Impact Report) for wastewater management in Chatham for a 20-year planning period, with a perspective on ultimate build-out conditions for the town. Joint MEPA/CCC review. Extension agreement to 6/18/10. CCC voted to approve the DRI with conditions on 10/29/09.

DENNIS

No DRI projects at this time.

EASTHAM

No DRI projects at this time.

FALMOUTH

- **South Coast Watersheds Comprehensive Wastewater Management Plan**—proposed Comprehensive Wastewater Management Plan to address water quality problems of Little, Great, Green, Bourne, and Eel ponds, and Waquoit Bay. Joint MEPA/CCC review.

- **The Golf Club at Cape Cod/Ballymeade**—proposed construction of an 18-hole golf course on approximately 183.41 acres within Ballymeade Estates. Extension agreement to 9/29/13.

HARWICH

No DRI projects at this time.

MASHPEE

- **Holland Mills Well and Pumping Station**—proposed installation of new public water supply well/pump station. Joint MEPA/CCC review.
- **Mashpee Commons**—proposed master plan. Extension agreement to 2/1/10.
- **Mashpee Watershed Plan**—proposed watershed nitrogen management plan.

ORLEANS

- **Orleans Comprehensive Wastewater Management Plan**—proposed draft Comprehensive Wastewater Management Plan that identifies and evaluates three alternative plans for wastewater treatment and disposal. Joint MEPA/CCC review.

PROVINCETOWN

- **Provincetown Airport Capital Improvements Plan**—proposed safety and facility improvements to the Provincetown Municipal Airport. Joint MEPA/CCC review.

SANDWICH

- **Sandwich Beach Nourishment and Dredging**—proposed beach nourishment and maintenance dredging. Joint MEPA/CCC review.

TRURO

No DRI projects at this time.

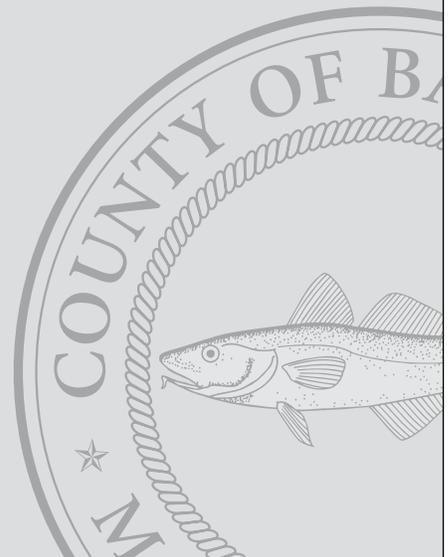
WELLFLEET

- **Herring River Tidal Restoration Project**—proposed reestablishment of

tidal flow to the 1,100-acre Herring River estuary and floodplain. Joint MEPA/CCC review.

YARMOUTH

- **Cape Wind Energy Project**—proposed wind energy facility in Nantucket Sound, with 130 wind towers transmitting power via an underground cable with a proposed Yarmouth landfall. Joint MEPA/CCC review. MEPA issued FEIR certificate on 3/29/07. CCC denied the project without prejudice on procedural grounds on 10/18/07. Cape Wind Associates petitioned the state Energy Facilities Siting Board (EFSB) for a "Certificate of Environmental Impact and Public Interest" on 11/21/07. EFSB held a hearing in mid November 2008 and issued a final decision to grant the certificate on 5/27/09. CCC filed a petition to appeal that decision on 6/12/09.
- **Parker's River Marine Park**—proposed marine park on the 22-acre site of the former Yarmouth drive-in theater. Joint MEPA/CCC review.



Commission Meetings and Events

Cape Cod Commission meetings and hearings are open to the public. Call (508) 362-3828 to confirm times and check for last-minute changes.

Standing Committees

Regulatory, Planning, and Executive committee meetings held at the Commission offices. Call for times.

Monday, November 30
Monday, December 14

Full Commission Meetings

Held at the Barnstable County Assembly of Delegates Chamber at 3 p.m., unless otherwise noted.

Thursday, December 3
Thursday, December 17

Regulatory Calendar

- **November 24:** HEARING OFFICER: Windrift Acres (Brewster project), 10 a.m., CCC
- **December 3:** CCC MEETING: 3 p.m., Assembly of Delegates Chamber, Barnstable. Agenda tentative; please call to confirm.
- **December 17:** CCC MEETING: 3 p.m., Assembly of Delegates Chamber, Barnstable. Agenda tentative; please call to confirm.

Other Events

- **Office Closings:** All Barnstable County offices will close at 12 noon on Wednesday, November 25, for the Thanksgiving holiday. Offices will reopen on Friday, November 27.



Cape Cod Commission

• FISCAL YEAR 2010 OFFICERS •

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John D. (J.D.) Harris

Vice Chair:

Royden Richardson

Secretary:

Elizabeth Taylor

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Falmouth:

(vacant)

Harwich:

Robert Bradley

Mashpee:

Ernest Virgilio

Orleans:

(vacant)

Provincetown:

(vacant)

Sandwich:

Sue Pommrehn

Truro:

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Mark Harding

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