

A Strategic Economic and Environmental Vision for the North Carolina Coast: A Plan to Leverage North Carolina Coastal Assets While Improving the Environment



Tom Looney

Board of Directors

Economic Development

Partnership of North Carolina

North Carolina Coastal Federation



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Roadmap to Success?

Phase One- Collect the facts and identify proof points

- Build business case and develop consensus
- Establish credibility and value proposition
- Get the message out- Secure champions

Phase Two- Establish Support/Ownership

- Executive Branch ,Cabinet Support & Elected officials
- Establish End to End Ownership- Regulation to Distribution

Phase Three- Execution-Metrics/Accountability/Growth

- Run this like a business- help people be successful
- Get maximum return on state natural resources!!!!
- Community & Political Support

Objectives

- Validate the Opportunity
- Identify the Critical Success Factors
- Identify Proof Points & NC Assets
- Identify and Eliminate Barriers to Entry



Did you know?

Opportunity

- **US Annual Consumption** 35,000,000 LBS.
 - **Oyster demand doubling** 5 Years
 - **WW Consumption** 2 Billion lbs.
 - **# East Coast Farms** 1000+
 - **Oyster Brands** 300+
- 

Did you know?

Environmental Effects

- **One Acre Oyster Reef Cleans**
- **Eggs released /oyster /year**
- **Living shoreline reduce**
- **100 Miles oyster reefs can save**

**24M gal/day or
36 Olympic Pools**

1,000,000

88-93% wave action

\$100M Rip Rap

\$150M Bulkhead



Did you know?

North Carolina Assets

- NC Rank Atlantic shoreline **#2**
- Year production peaked **1902**
- Year production Bottomed **1994**

Health

- Oyster (zinc): Good for immune system, bones, acne, rash, and others
- Guinness eating record **187 in 3 minutes in 2003**

EATING & DRINKING

Shuck And Awe

Nothing goes down easier with bubbly, but oysters are so varied and complex these days, a half-shell menu can be downright daunting. Two new books help facilitate a better bivalve experience

BY KATHLEEN SQUIRES

I STARED at the list, stumped. Should I order the one that had a “mild balanced finish?” Or should I go for the one with the notes of “butter, celery, copper and salt?” What about the option that offered a “blast of minerality?” I

Association, measures the rebound via “increased availability, an uptick in the opening of oyster bars and the establishment of oyster festivals across the country.” Even Gulf Coast production is slowly recovering from the 2010 BP oil spill, due to efforts from groups such as the Coalition to Restore Coastal Louisiana.

Two recent books chart the oyster’s resounding comeback and

Hama Hama

WASHINGTON STATE

Clean, crisp, herbaceous. “In the spring, Hama Hama tend to be sweeter; in the winter, brinier. In both seasons, the oysters have a light cucumber/melon finish.” —J.S.



Belon Wild

MAINE

Powerfully savory and metallic. “I get excited about anything wild, as most of the oysters we eat are farmed. I always go for the wild oyster on a menu, if there is one.” —J.S.



Kumamoto

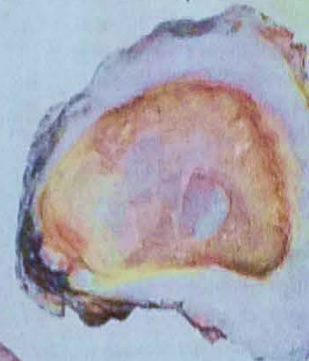
BRITISH COLUMBIA

Sweet, melony, firm, meaty. “In general, West Coast oysters have a meatier quality because of their deep, round

Pemaquid

MAINE

Big, brawny, briny. “We’re seeing oyster farms pop up in Maine like crazy. These Pemaquids tend to be plump, crisp and salty with an earthy finish.” —J.S.



Moonstone

RHODE ISLAND

Rich, beefy, flinty, with a distinctive striped shell. “Be an oyster from a major fishing in the bay. They tend to be salty, like a broth.” —R.

Wall Street Journal

New Study Uses Diet to Help Treat Depression

Following a modified Mediterranean diet helped some patients, researchers found



NEW RESEARCH on treatments for depression presents an intriguing finding: a healthy diet may help depressed patients.

It is part of the nascent field of nutritional psychiatry which uses changes in diet to help treat mood disorders. Researchers are always looking for new treatments for depression and other mental-health disorders because many people don't respond to antidepressant medications and psychological therapies.

The study, published Monday in the journal *BMC Medicine*, found that a third of patients assigned to a group that followed a modified Mediterranean diet met the criteria for remission in 12 weeks, compared with just 8% in a control group. Remission was assessed by a patient's score on a diagnostic questionnaire used by psychiatrists to determine the severity of depression.

A large body of evidence, both observational studies and animal studies, links diet to the risk of developing depression and the prevalence of depression, said Felice Jacka, a professor of psychiatric epidemiology and nutritional psychiatry at Deakin University in Australia and senior researcher on the study. Dr. Jacka is also president of the International Society for Nutritional Psychiatry Research.

Psychiatrists cautioned that the study provides no evidence that diet changes could replace traditional treatments for depression; but it could be beneficial as an add-on treatment.

It may also be an impractical prescription: cooking healthy meals requires motivation and planning, a big demand for depressed patients. Depressed patients have difficulty putting plans into action so would



Eating fish and green vegetables helped some patients. A nutritional psychiatrist gives patients brain-food prescriptions that include eating more of certain foods such as bivalves like oysters.

healthy items. They filled out food diaries and were interviewed by a dietitian every week.

The other half were in a control group that received the social support one would normally get from a dietitian such as one-on-one interaction without making any dietary changes. This helped researchers determine that it was the diet, not the interaction with the dietitian, that caused any changes. The dietary group didn't lose weight and the focus wasn't on weight loss, Dr. Jacka said.

Further research is needed as the study had some limitations, said Dr.

ago and has been on and off medication ever since. The dietary intervention, she said, helped her cut out soft drinks, alcohol, chocolate and processed foods. And she began eating more fish, olive oil, legumes and seeds. "After a couple of weeks I just felt a lot calmer, a lot more centered, and more motivated to actually do something," she said.

Since she completed the 12-week study about 18 months ago she has tried to continue the diet to a lesser degree but still has had to remain on her antidepressant.

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Wall Street Journal

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Critical Success Factors 2015



Mktg/Distribution

Community
Engagement
Tourism
Job Training
Export



Investment

Business Case
Seed Money
Investors
Low Cost Loans
Grants



Education

K12
Community Colleges
Environmental Groups
Local Outreach



Research

Seed Stock
Disease Resistant
Environmental
Impact
Grower
Technology



Regulation

Leasing
Monitoring
Enforcement



Hampton Roads, Virginia harvesters pull in record oyster haul +

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Aquaculture helping to boost Virginia oyster harvest

February 06, 2015

LOTTSBURG—Virginia's oyster harvest rose 25 percent last year, passing the 500,000-bushel mark. The dockside value of that harvest increased to \$22.2 million, with an estimated economic impact of over \$58 million.

Va. Oyster Trail should become boon for region

Details Last Updated on Tuesday, 26 August 2014 15:09
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Hits: 1796

The new Virginia Oyster Trail will help watermen in King George and Westmoreland area residents said



Virginia Gov. Terry McAuliffe announces the creation of the Virginia Oyster Trail on Tuesday, Aug. 19, 2014, at the Executive Mansion in Richmond, Va. The trail links visitors with Virginia oyster purveyors, and restaurants, raw bars and the long-standing watermen culture throughout the Northern Neck, Middle Peninsula and Virginias Eastern Shore. The new tourism project comes as Virginia saw its oyster harvest increase 25 percent to more than 500,000 bushels in 2013, the largest harvest since 1987. (AP Photo/Michael Felberbaum)

Governor Terry McAuliffe cuts ribbon for Virginia Oyster Trail



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Virginia vs North Carolina Oyster Harvest

Bushels

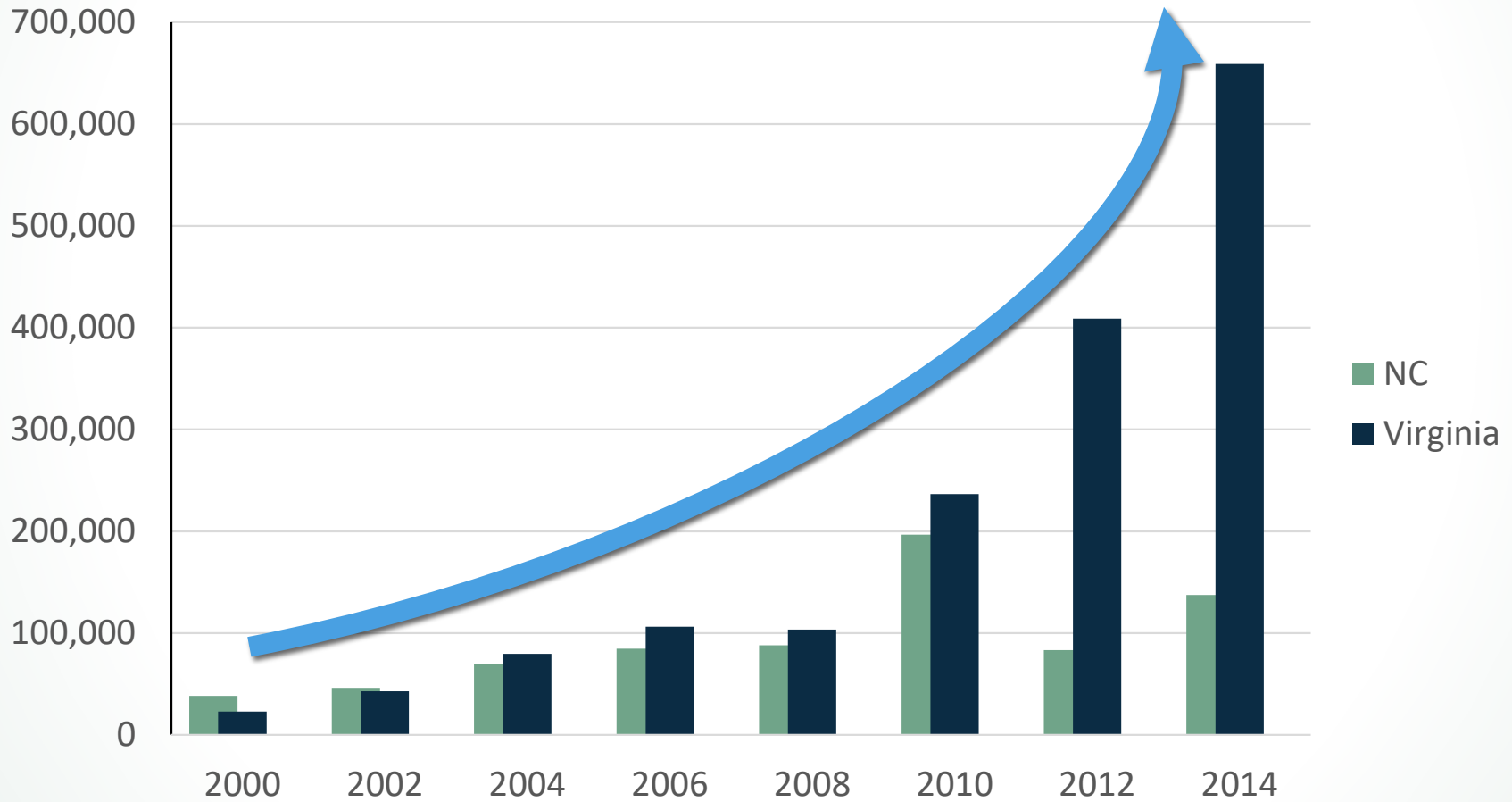
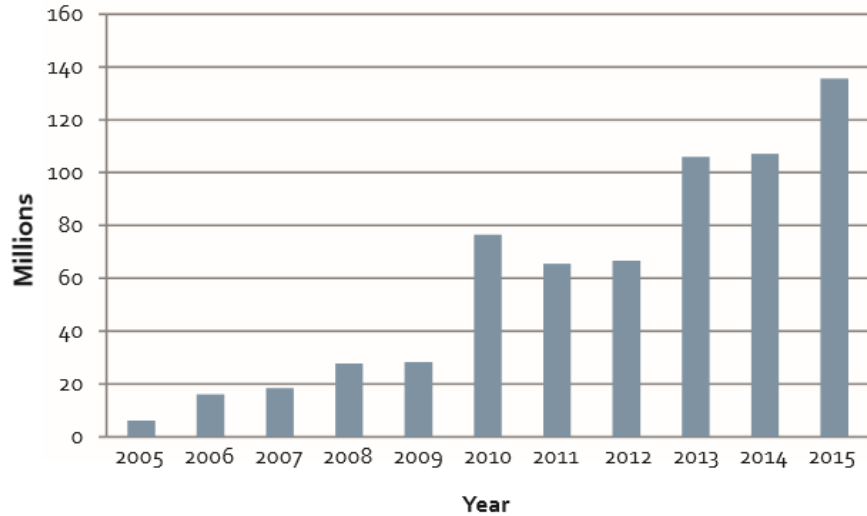


Figure 1. Number of Single Oysters Planted by Virginia Aquaculturists (millions)



Virginia Shellfish Aquaculture Situation and Outlook Report

Figure 2. Number of Aquacultured Market Oysters Sold by Virginia Growers (millions)

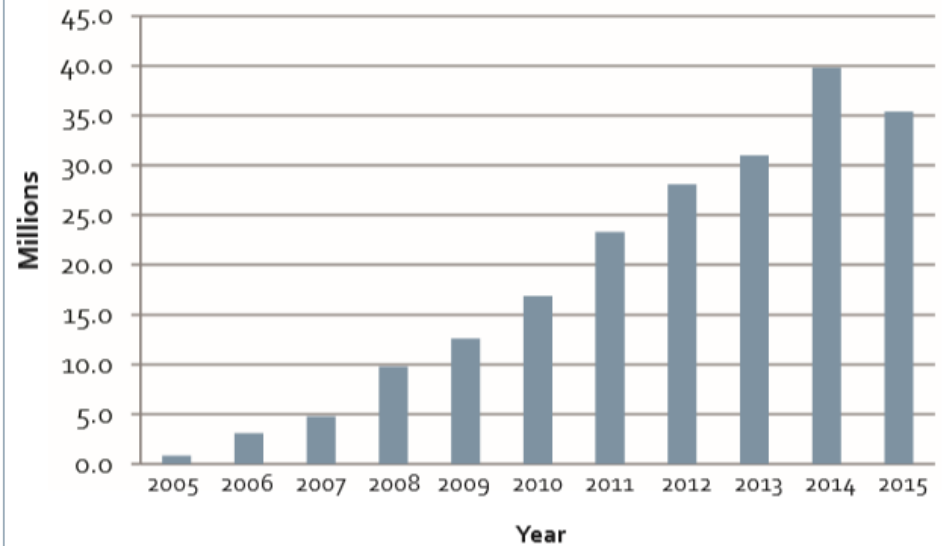
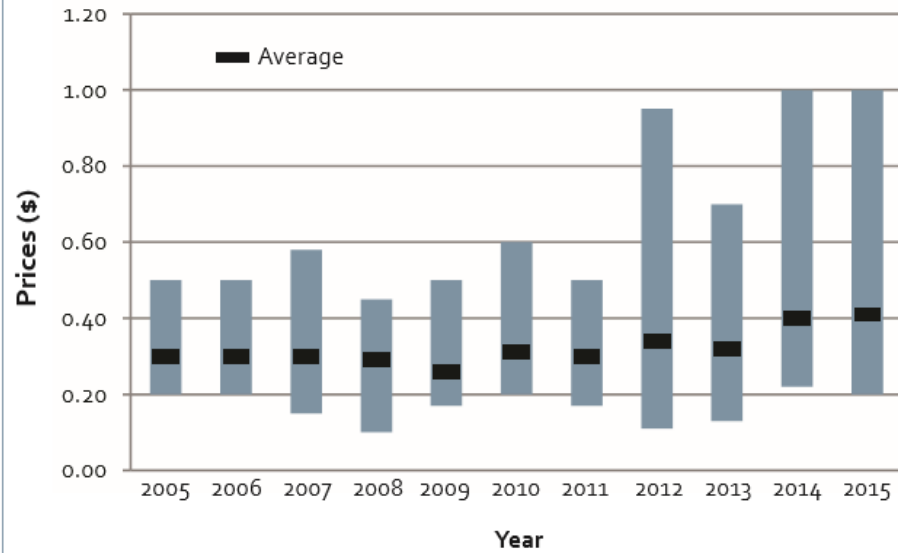


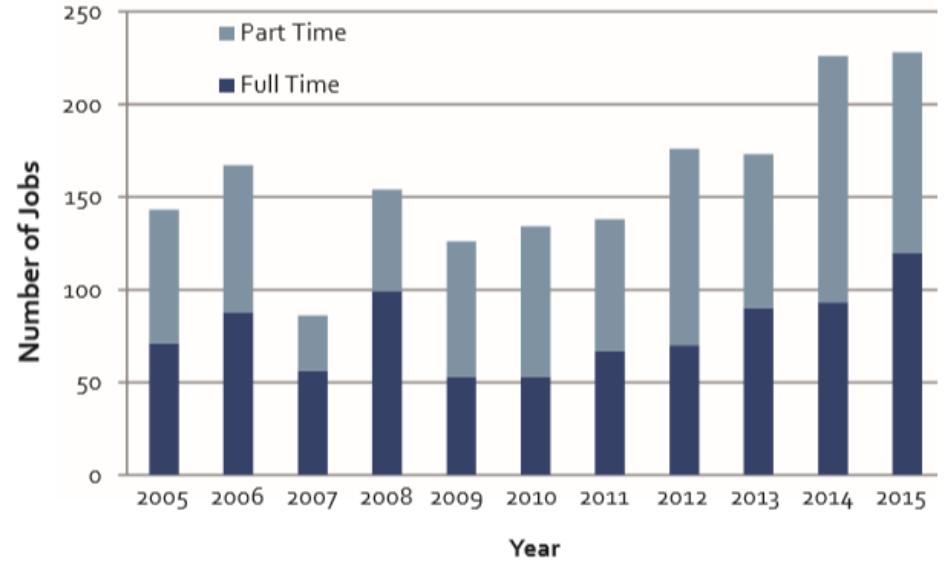
Figure 3. Oyster Prices reported by Virginia Growers



Prices Stable

Jobs Scaling

Figure 5. Virginia Oyster Farm Employment

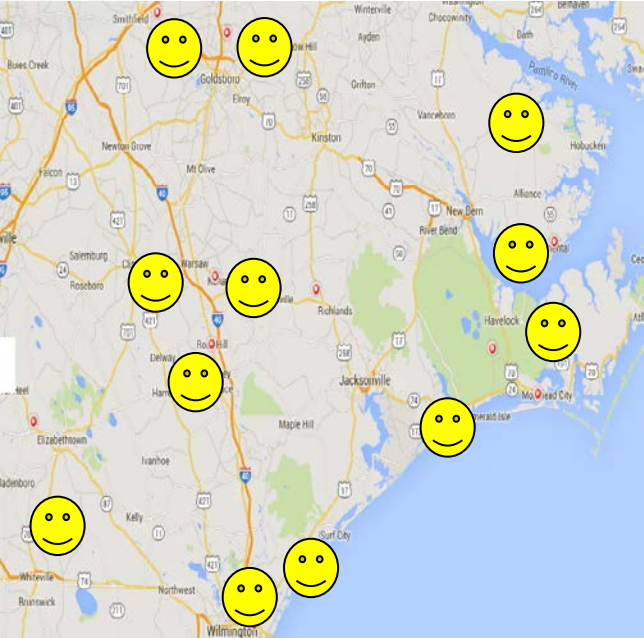


Coastline of the United States

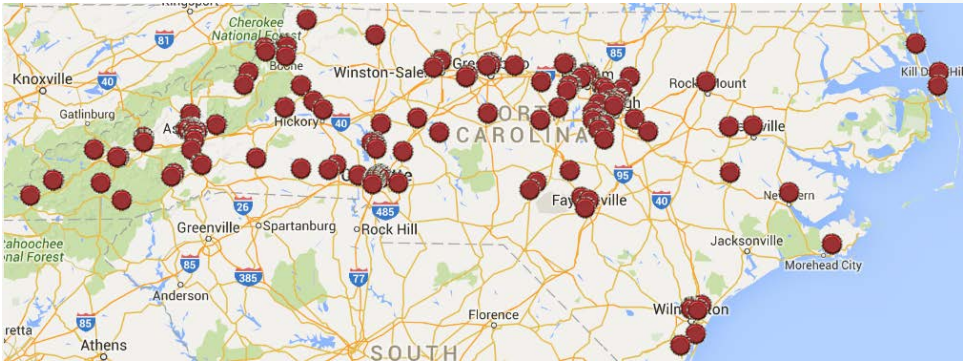
State	Lengths, statute miles	
	General coastline ¹	Tidal shoreline ²
Atlantic Coast:		
Maine	228	3,478
New Hampshire	13	131
Massachusetts	192	1,519
Rhode Island	40	384
Connecticut	—	618
New York	127	1,850
New Jersey	130	1,792
Pennsylvania	—	89
Delaware	28	381
Maryland	31	3,190
Virginia	112	3,315
North Carolina	301	3,375
South Carolina	187	2,876
Georgia	100	2,344
Florida (Atlantic)	580	3,331
Total Atlantic Coast	2,069	28,673



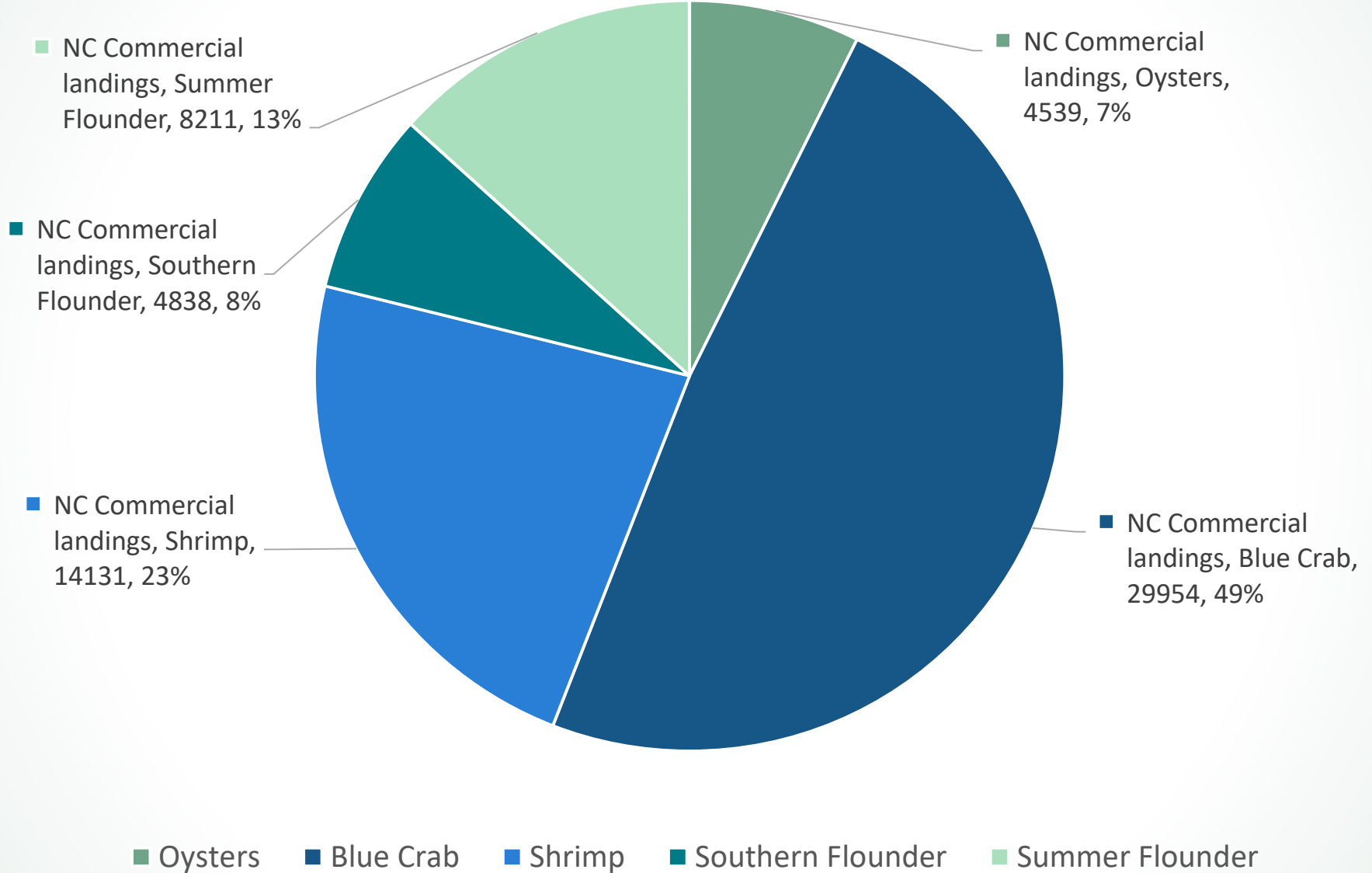
116 Wineries



175 Breweries



NC Commercial Landings \$000



ROY COOPER

GOVERNOR

ANTHONY M. COPELAND

SECRETARY

January 25, 2017

*“the Department of Commerce become engaged in the work of the oyster steering committee...The **department learned the challenges and opportunities within the oyster fisheries** industry.*

Oyster Restoration: A Blueprint for Action 2015-2020

Coastal Restoration and Community Development in NC

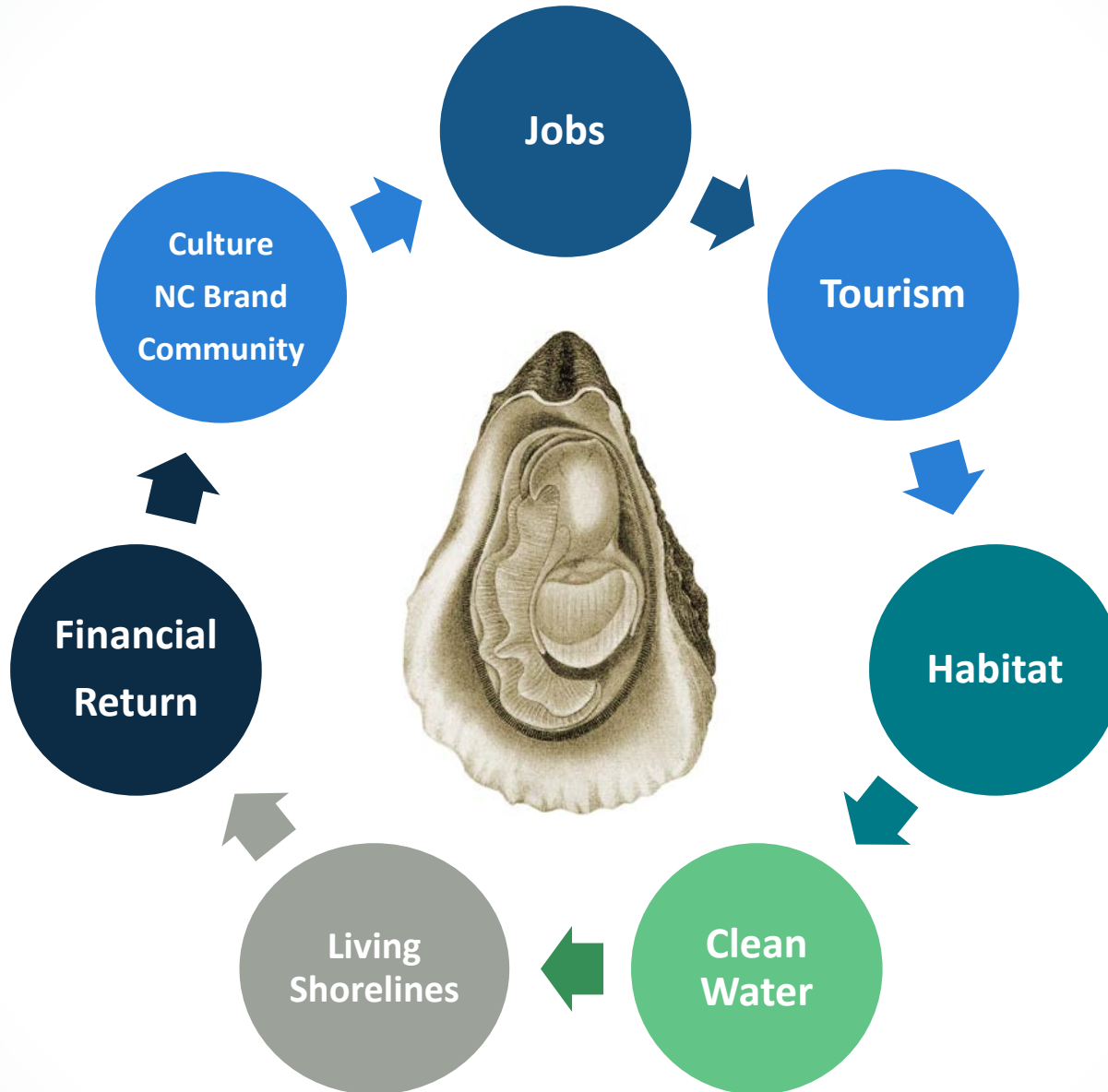
Restoration and Enhancement of Shellfish Habitat and Oyster Propagation in NC

*These reports provide **compelling support for integrating coastal restoration into economic development strategies**... as well as the benefits to the coastal communities for the promotion, growth and proliferation of oysters.*

*...every effort will be made **to incorporate the concepts in these reports into the county and regional plans developed by the agency**...*

*...the **Department will continue to actively participate as a member of the Oyster Steering Committee** to stay closely connected to the activities of the partners.*

The Ultimate Clean Tech NC Oyster



Oysters Triple Bottom Line



Viabile Financial Return

ROI
Profit
Proven Business Case

Jobs

Livelihoods
Culture
Rural Economic Development

Clean Water

Sustainability
Natural Resources
Tourism

Progress 2015-2017



Mktg/Distribution
Tourism Focus
NC Rest Assoc.
Blink-Export



Investment
\$3.0M 2016
\$3.0M 2017
Fish 2.0
Legislative Focus
NC Commerce
Support
Financing Support
Programs



Education
Community Colleges
Environmental Groups



Research
UNC Plan -2018
UNCW –Brood Stock
RTI/DMF Economic Study
Grower Technology



Regulation
Dedicated Budget
Additional Staff
New Lease programs
Coordination w/Agencies
Up-weller management
SAV Changes
New Tools



Financial Support programs

Conservation Fund- Natural Capital Investment Fund

Rural Center- Microenterprise Loan Program

NC Sea Grant- Community Collaborative Research Grant

National Marine Fisheries- Fisheries Finance Program

USDA

Loan program

Rural Business Enterprise Grant

Value Added Producer Grant

Rural Mico-entrepreneur Assistance Program

State Program Needed



42NDST. OYSTER BAR & SEAFOOD GRILL

RESERVATIONS

CONTACT

MENUS

LIVE MUSIC

GIFT CARDS

HALF SHELL SELECTIONS*

We ask for your indulgence while these are shucked to order.

each

Chesapeake, VA - salty and succulent, these oysters embody the word delicacy	2.25
Olde Salts, VA - bold sea-side brinness with a smooth, clean follow-through	2.50
Lucky Suckers, NC - clean ocean flavor with smooth finish.....	2.50
Pirate Pearls, NC - medium salinity with a smooth finish	2.50
Stone Creek, NC - wonderful brinness and clean ocean flavor	2.50
Blue Point, CT - fresh, crisp, firm texture, with a sweet aftertaste	2.65
NC Top Neck Clams (6 or 12)	7.95/15.95

50%



BRASSERIE DU SOLEIL

French Restaurant

Raw Bar Selection

Jarret Bay (NC)	\$2
Beau Soleil (Canada)	\$3
Archer Channel (NC)	\$3
Fanny Bay (Canada)	\$3
Fanny Bay (Canada)	\$3

50%



OYSTER BAR & WINE BAR CAFÉ

A chalkboard menu for oysters. The title "OYSTERS on the HALF" is written in white chalk. On the left side, "RAW" is written vertically in white, and "STEAMED" is written vertically in red. A "\$4" is written at the bottom left. The menu lists various oyster varieties with their prices in white and red chalk.

Oyster Variety	Price
Bodie Island (OBX)	\$20
Hatteras salts (OBX)	\$24
Stones Bay (NC)	\$26
Pamlico Bounty (NC)	\$24
Carolina Pearl (NC)	\$20
Tangier Island (VA)	\$24
Wicomico's Finest (VA)	\$20
Blackberry Point (VA)	\$20
Nandua salts (VA)	\$24
Ruby salts (VA)	\$24
Choptank Sweets (MD)	\$20
Pink Ribbon (CT)	\$36

60%

Coastal North Carolina



Napa Valley of Oysters (Coastal Assets)



Silicon Valley Aquaculture & Coastal Restoration Technology (UNC/Duke/NC State/CCC/UNCW)



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