

The background features a stylized, painterly illustration of a coastline. The land is depicted in shades of grey and blue, while the water is a mix of light and dark blue. Numerous white, translucent bubbles of various sizes are scattered across the scene, particularly concentrated in the upper left and lower right areas. The overall aesthetic is clean and scientific.

ENSURING PRODUCT SAFETY THROUGH RESEARCH

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EXCELLENT WATER QUALITY IN NC



- STORMWATER CONTROLS AND CONTROLLING SOURCES
- IDENTIFY CAUSES OF CLOSURES
- INFORMED SELECTION FOR AREAS OF LEASES FOR AQUACULTURE

Current monitoring satisfies federal requirements and keeps product safe, but need to be proactive to meet 10x greater market expansion

EMERGING ISSUES

- CLIMATE CHANGE
 - INTENSITY AND FREQUENCY OF LARGE SCALE STORM EVENTS WHICH FAVOR INCREASED LEVELS OF DANGEROUS BACTERIA AND VIRUSES
- RAPID DEVELOPMENT & RESULTANT STORMWATER EXACERBATING WATER QUALITY PROBLEMS ALONG COAST
 - SOME PARTS OF THE NEWPORT RIVER ESTUARY IN CARTERET COUNTY IS CLOSED TO SHELLFISH HARVESTING MORE THAN HALF OF THE YEAR DUE TO STORMWATER RUNOFF
- VIBRIO PARAHAEMOLYTICUS ACTION PLAN IN PLACE, NO VULNIFICUS OUTBREAKS, YET
...RAW CONSUMPTION BURGEONING AND NEED FOR CONTINUED VIGILANCE FOR REDUCTION OF CONSUMER RISK AND TO ENSURE SAFE PRODUCT



RESEARCH CAPABILITIES

- CAPACITY TO WORK COLLABORATIVELY WITH FEDERAL AND STATE AGENCIES AND OYSTER GROWERS TO ESTABLISH PROTECTIVE CONTAMINANT MONITORING PROGRAMS
- TRAIN GROWERS TO PROTECT PRODUCT THROUGH INNOVATIVE GROW-OUT AND PRODUCT TREATMENT APPROACHES
- CONTINUE TO DEVELOP STATE OF THE ART TOOLS FOR DETECTION OF DANGEROUS CONTAMINANTS



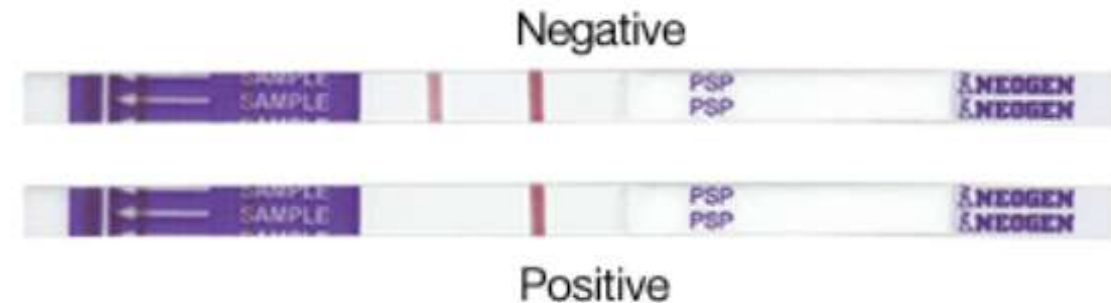


FUTURE OF MONITORING



- BUILD INDUSTRY RELATIONSHIPS FOR DEVELOPMENT OF VIBRIO DIAGNOSTICS
 - DEVELOPMENT OF USER FRIENDLY AND COST EFFECTIVE METHODS
 - RAPID, POINT OF USE MONITORING FOR SHELLFISH PATHOGENS

*CURRENTLY PARTNERING WITH BIOGX FOR MOLECULAR DX
AND NEOGEN FOR AB BASED TESTING*



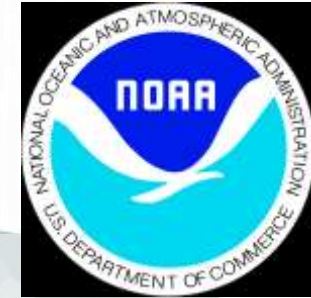
FARMED VS WILD

WHAT ARE VIBRIO PATTERNS LIKE WITH SPECIFIC GROW OUT APPROACHES?

- HOW TO MODIFY TO REDUCE RISK
 - DOES TUMBLING TO REDUCE FOULING ACTUALLY PROMOTE GROWTH OF BACTERIA
 - DOES THE GROW OUT APPROACH/MATERIAL FAVOR PARTICULAR STRAINS OF VIBRIO; INCIDENTAL CONTAMINATION FROM BIRDS PERCHING ON GEAR
- MAPPING STRATEGIES
 - BLEND OUR EXPERTISE TO IDENTIFY BEST ESTUARINE LOCATIONS FOR GROW OUT OPERATIONS



COLLABORATORS



- FEDERAL
 - NOAA BEAUFORT LABORATORY
 - JAMES MORRIS AND KEN RILEY - ECOFORECASTING



- INTER STATE
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