

**Hollings Marine Laboratory
Future's Meeting
June 17 – 18, 2008**

Summary Report



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1. OVERVIEW

The Hollings Marine Laboratory (HML) leadership hosted a two-day Futures Retreat on Tuesday June 17 and Wednesday June 18, 2008. The retreat brought together the Executive and Science Boards, along with other representatives from the partner institutions – College of Charleston (CoC), South Carolina Department of Natural Resources (DNR), Medical University of South Carolina (MUSC), National Institute of Standards and Technology (NIST), and National Oceanic Atmospheric Administration (NOAA). To help ensure that the retreat was a success the Strategy and Cultural Transformation center of Acquisition Solutions Inc. (ASI) was engaged to conduct pre-retreat interviews with the Executive and Science Boards and HML scientists; analyze and synthesize the interview data; design the retreat agenda and process; and provide observation and recommendations to support HML's future direction. For a complete listing of attendees, please see Appendix A.

The retreat was the first time in HML's five year history that the entire Partnership – the Executive and Science Boards, partner scientists and stakeholders joined together to recommit to the Partnership, acknowledge the laboratory's accomplishments, and agree to a collective future direction. Equally important, the retreat created a first-time opportunity for Executive Board representatives to have executive-only conversations and for the Executive Board and Science Board to discuss challenges, exchange ideas and dialogue around HML's future. Moreover, these first-time conversations included the thoughts and input of partner scientists and stakeholders.

Overall, participants agreed that the retreat provided the time, space and environment to have long awaited conversations, focus on critical HML concerns, and clarify responsibility for the maintenance and care of the Partnership. Some participants reported that they hoped the retreat would have produced more concrete outcomes, others reported being overjoyed with the retreat experience and holding high expectations for HML.

The agreed upon next steps actions from the retreat are shown in Table 1 below.

Table 1. Next Step Actions

Next Step Actions	Responsibility
1. Meet to align around the best way to drive HML forward and address issues discussed during the Futures Retreat <ul style="list-style-type: none"> a. Funding b. Providing more direction c. Connecting with the Science Board d. Getting the new lab Director 	Executive Board
2. Synthesize the 10-year HML vision proposals and craft a single visioning statement	Executive Board
3. Determine if HML should invite an expert panel to validate/offer key research themes to help position HML as a scientific leader and solidify the laboratory's future.	Executive Board

Next Step Actions	Responsibility
4. Keep institutions focused on partner resource pledges and collective partner actions to address funding concerns: <ol style="list-style-type: none"> a. Work on branding HML and crafting standard talking points b. Support overall infrastructure (e.g., computers) c. Help with service contracts (labor contracts, shipping, supplies, housekeeping, software breaks, etc.,) 	Executive Board
5. Take an aggressive effort to diversify expertise <ol style="list-style-type: none"> a. Focus on epidemiology and social science 	Executive Board

Understanding that ASI has expertise in strategy and organizational change, they were not only responsible for designing and facilitating the retreat, but were charged to do observations and offer recommendations to help move HML forward. Listed below are ASI's insights and suggestions:

Leadership

The Executive Board exists but does not operate like a traditional Board. For example, they have not taken the time to meet, make leadership decisions, and help drive the direction of HML

- Establish executive-only standing meetings/conference calls to build Board cohesion, collectively understand HML issues and concerns, and help offer leadership solution
- Do more partnering, thinking and strategizing with the Science Board to fully define and push HML's science themes and agendas
- Be more transparent and active in how Executive Board members support HML via their homes institutions, including communicating about HML activities and advocating for support

The Science Board has centered its time and energy on HML management and administration versus focusing on HML's science themes and agendas

- Shift the Science Board's focus to concentrating on HML science themes and agenda with input from the Executive Board
- Set-up a sub-committee or another body to address management or administrative issues that impact HML's science
- Be transparent and active about a science succession plan and bringing along the next generation of scientist

Outreach and Communications

HML has been both silent and solely internal around sharing accomplishments, achievements and successes. This internal HML focus does not help the Executive Board promote the lab and its good works.

- Set-up a communications and outreach team or committee that manages the process of developing a brand, crafting the HML story via talking points and presentations, and works with the Executive Board to keep them informed and engaged

2. ACKNOWLEDGING THE CURRENT STATE

The meeting opened with participants interviewing one another around an exceptional partnership experience. They then worked in small groups to identify attributes of exceptional partnership, shared their attribute lists with the larger group, offered upgrades to the consolidated list, and agreed that these attributes would undergird the focus and tone for the two-day retreat. For a list of the exceptional partnership attributes see Appendix B.

While the exceptional partnership conversations helped set the tone, the HML Director helped set the retreat context by sharing his Director's Report Card located in Attachment A. The report card provides a solid overview of HML's science, operations and leadership.

Then the HML's current situation was presented by sharing current state interview themes and a report from the Science Board. The themes of the interviews are presented in Appendix C. The Science Board presentation is located in Attachment B. The ensuing discussion focused on questions of clarification and what resonated or stood out as important. Discussion generally affirmed the interview results as an accurate representation of HML's current state.

The current state session was fruitful, revealing and tough. Participants discussed the highlights of HML life, and the challenges it is facing and will continue to endure unless there is more focused executive and scientific leadership, and committed funding.

3. ARTICULATING A POWERFUL FUTURE STATE

Following the "Acknowledging Our Current" discussion, participants viewed future state data (see Appendix D) and worked in groups with representatives from each partner institution to craft proposals describing HML's image in 10 years. Then, groups shared their proposals and participants offered upgrades and comments to each proposal. The results are captured in Table 2 below.

Table 2. 10-Year Image Proposals and Upgrades

Proposals	Upgrades and Comments
<ul style="list-style-type: none"> • Excellence in understanding the relationship among the health of coastal ecosystems, health of marine organisms and human health • Focusing on three thematic areas in the Science Board report: Ecosystem health and human well being, marine organism health, and marine products • Recognized nationally and internationally • Ability to develop useful and user-friendly tools in different forms • Discovery science • Clear contribution to each partner's objectives • Ability to train the next generation of scientists 	<ul style="list-style-type: none"> • Clarify "discovery science" – a mentality that will attract people; beyond simply developing technologies; new knowledge; understanding mechanisms • Value means something of good value/benefit; providing value/benefit to each of the partners • Consider adding something around an opportunity to do team science • Highlight uniqueness of partnership; where else do you have this kind of thing
<ul style="list-style-type: none"> • [Group shared an image] • Climate change – considered as a stressor on coastal environment • Rapid response to emerging challenges, e.g., contaminants significant in 10 years 	<ul style="list-style-type: none"> • N/A

Proposals	Upgrades and Comments
<ul style="list-style-type: none"> • Preparing the next generation of scientists • Grand scientific challenges – things that are hard, attract great minds, e.g., genotype to phenotype map 	
<ul style="list-style-type: none"> • Establish an international center of excellence for assessing marine environmental quality and linking it to human health and well being • HML should be known for providing an environment with a unique combination of federal, state and academic partners • HML will provide further diversification of each partner's capacity, portfolio and ability • Relevant to local, regional, national and global • Place where individual partners are willing to develop new relationships within and external to the partnership • Shared vision 	<ul style="list-style-type: none"> • Relevant to everybody? Where do you want to take it? Do you have a preference? <ul style="list-style-type: none"> ○ Depends on the partners • Do you want to make this a regional center or a national center? <ul style="list-style-type: none"> ○ Developing tools and new knowledge that must be applicable locally but may be applied at all of those scales ○ The world is flat; hardly anything is restricted locally
<ul style="list-style-type: none"> • Integrating understanding of changes in coastal ecology, health of estuarine biota, and opportunities for marine products with human health outcomes • Relevant research which informs coastal development and natural resource policy towards management solutions and opportunities for enhancement of aquatic ecosystem health and public health • Educate and communicate multidisciplinary coastal and marine science research paradigms establishing tools, methods, standards and technologies for measuring aquatic animal health and human health outcomes 	<ul style="list-style-type: none"> • Does everything have to be related to aquatic animal health or human health? <ul style="list-style-type: none"> ○ That's where we started and it's reasonable within most recent analyses • Concerned about use of word "relevant" – relevance partly in eye of the beholder

After a lively discussion to clarify points and position ideas, meeting participants rallied around the idea that all of the proposals were very similar. Paul Sandifer finally offered the following text as a starting point to move to a final 10-year HML image:

It is known for excellence in understanding relationships among the health of coastal ecosystems, health of marine organisms, and human health

The HML focuses expertise of the five partner institutions in four priority areas:

- ✓ *Ecosystem health and human well being*
- ✓ *Marine organism health*
- ✓ *Marine products*
- ✓ *Interdisciplinary education and training of a new generation of scientists*

Meeting participants agreed that the 10-year image still needed further work, and decided the Executive Board should consider all the proposals presented and craft the final 10-year HML image and share with the Science Board and other key stakeholders.

4. OUTLINING THE BOARDS' ROLES AND RESPONSIBILITIES

After a tour of the new HML building and lunch, meeting participants reconvened for the afternoon sessions. To capitalize on the Executive Board's attendance and the energy from the morning discussions, the original agenda was shifted from discussing research themes to focusing on the Executive Board's and Science Board's roles and responsibilities.

Meeting participants separated into their three role groups – Executive Board, Science Board and Other Caring Voices. The Executive Board and the Science Board each took their turns sitting in the front of the room as others shared their perspectives about their respective roles and responsibilities. The Executive Board openly and honestly expressed that the daily grind of their home institution's make it extremely difficult to uphold their Board responsibilities. In turn, the Science Board expressed their frustration around the lack of input and response from the Executive Board. The Science Board also acknowledged tough schedules and playing dual roles at HML and their home institutions. The complete notes of the discussion are in Appendix E.

5. RECRUITING AND HIRING THE NEXT HML DIRECTOR

The day ended with a conversation around the key concerns and issues around hiring a new HML Director. To help set the context for the conversation, interview data was shared (see Appendix F). Overall, the Science Board wants to ensure they are involved and consulted in the search and hiring of a new Director. One of the key questions raised during this discussion is if the new Director had to be a federal hire. It was explained that the Joint Partnership Agreement (JPA) stipulates that the Director be a federal employee. It was also explained that the JPA can be amended, and it was agreed that that the Executive Board should discuss this offline. Below are the overall highlights of the recruiting and hiring the next HML Director conversation:

- Engage both the Executive and Science Boards:
 - ◆ Reviewing the job announcement prior to being released
 - ◆ Sharing the announcement
 - ◆ Ranking and interviewing the candidates
- Has to qualify as a GS-15
- Need to advertise broadly – science and nature magazines
- Will see progress around hiring the new Director this month
- Selection will be made by 10/15
- There is a one year probation period with this position

Day one of the retreat concluded with a reception and dinner at HML.

6. DEVELOPING A SHORTLIST OF RESEARCH THEMES TO JOINTLY PURSUE

Day two opened with a conversation around the epiphanies and highlights of day one. Overall the meeting participants agreed day one was successful. ASI shared their insights and observations around day one:

- Veterans and neophytes experienced aha moments
- Conversations longing to happen took place
- A broad collective vision for the future was affirmed
- Executive Board promised to put time and hard thinking around strategically moving HML forward
- Commitments around recruiting and hiring the next director were made

Then meeting participants reviewed the interview data about HML's future research themes (see Appendix G). Meeting participants were asked to review the Science Board's report and the interview data and work individually to outline 3 – 5 HML science themes. The criteria that participants had to consider:

- Supports HML's future vision
- Leverages strengths and opportunities (SWOT)
- Connects to the missions of the partner institutions
- Requires strong collaboration by partners
- Likely to get funded, one way or another

After working individually, meeting participants were asked to pair with someone that they do not know well and developed a consensus list of the 3 – 5 HML science themes. Once that was completed the twosomes joined another group and they were asked to repeat the exercise. After the groups struggled with developing a consensus list, the Executive Board members were asked to help scope the problem by sharing the key problems their individual institutions are addressing; how HML could help address those issues; and, who else could offer advice and expertise. For a complete outline of the presentation see Appendix H.

After hearing from the Executive Board members the meeting participants returned to their groups and outlined two key science questions for HML; the next steps to move the science questions forward; who would validate that it is a key concern; and, which HML partners would benefit and participate. Possible next steps included having an expert panel validate the proposed questions. It was agreed that if the external panel approach moved forward it would involve representation from all the partners. Moreover, give HML enough time to further develop an informed internal perspective before engaging external experts. The meeting participants agreed this is a policy issue and needs to be an Executive Board decision. For a complete outline of the discussion see Appendix I.

7. GETTING SMART ON OPERATIONAL ACTIVITIES AND BUDGET

The meeting focus shifted from the HML science to HML operations. The HML Director shared his perspectives and experiences around managing the lab and the budget and described in Attachment C.

After getting a full understanding of managing HML and the budget, meeting participants reviewed interview data around improving operations to enhance HML's science and secure its future. The discussion focused on the lab director role, transitioning scientific leadership to the next generation, establishing a scientific administrative structure, engaging stakeholders and advocates, and the restrictions of working in a federal lab. Overall, the meeting participants were concerned about the budget and that was impacting operations. For a full discussion of the interview data, concerns and issues see Appendix J.

8. DEVELOPING A SOLUTION TO RESEARCH CHALLENGES

After discussing operations, the meeting participants worked with members from their home institution to brainstorm what the Partnership could do collectively to address the funding shortfall and what their home institutions could specifically contribute. After each Partner shared ideas around the collective contributions and the partner contributions, meeting participants used red, yellow and green cards to express their opinions on what should be addressed immediately (green) and what needed further discussion (yellow), and what should not be considered (red). Listed below are the ideas that were identified as needing immediate attention:

- Work on branding HML and talking points
- Support the overall infrastructure (e.g. computers)
- Help with service contracts – supplies, shipping, labor contracts, housekeeping, software breaks with our academic partners
- Take an aggressive effort to diversity the expertise – epidemiology and social science

It was agreed that the Executive Board will work with the Science Board to determine the best way to move forward on the collective solutions, and would also be responsible for ensuring their home institutions followed through on their proposals. For a full discussion of this conversation see Appendix K.

9. COMMUNICATING RETREAT ACCOMPLISHMENTS

The final conversation centered on the retreat highpoints and what needed to be communicated to HML's various stakeholders. Overall, participants remarked on how the retreat reaffirmed the Partnership; provided an opportunity for partners to share what they get and can offer HML; gave the Executive Board the occasion to "drive the ship" and work with the Science Board; generated a collective awareness of operations and budget solutions; and yielded ideas to move HML into the future.

It was agreed that absent Executive Board members, leadership and staff from the Partner institutions, and HML staff needed to hear the retreat messages. Finally, the Executive Board and Science Board would be responsible for delivering the retreat message.



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Appendix B: Exceptional Partnership Attributes

Exceptional Partnership Attributes

- Sense of mission
- Everyone wins – everyone perceives they benefit, gets something out of it (not about competition, not a zero sum game)
- Mutually beneficial
- Right leadership at many levels
- Trust each other
- Strong financial basis where partners realize return on investment
- Determine when partnering is necessary – not forced
- Listen to alternatives
- Clear definition of roles
- No egos – are not a problem in pursuit of partnership
- Network bigger than partnership itself
- Diversity – complementary strengths
- Compelling vision and outreach to communicate that
- Accepting many different perspectives
- Identify and **maintain** shared vision
- Follow through and assessment of successful
- Full buy-in by all partners
- Dynamic agreement capable of adjusting to local and national conditions
- Getting people to follow – empowerment
- Respect
- Communication across all partners and all levels

Appendix C: Current State Interview Themes

HML is a dream come to reality

- It's a marvel that HML is here today
- The potential of this place is unlimited
- Everyone wants it to work

There's a lot to be proud of

- Opening the doors
 - ◆ Ribbon cutting ceremony
 - ◆ Becoming a functional entity
 - ◆ Establishing strategic and day-to-day policies and operating procedures
 - ◆ Being operational and functional every morning at 8 am
- Launching and sustaining the partnership
 - ◆ Unique mixture of federal, state and academia
 - ◆ Sharing space, equipment and people
 - ◆ Building relationships through working together
 - ◆ A paradigm of stick-to-it-ness
- Building collaborative research programs
 - ◆ Fostering new ground breaking capabilities
 - ◆ Rallying to get the Ocean and Human Health center of excellence designation
 - ◆ Starting the NMR program
 - ◆ Establishing a formal marine genomics group
 - ◆ Unraveling the "pfiesteria thing"
 - ◆ Publishing a feature article in the American Chemical Society
 - ◆ Attracting rising stars
 - ◆ Offering real interdisciplinary research for students

Living the dream ain't easy

- Partnering is hard, even under the best of circumstances
- Operating the facility is a complex and costly undertaking with competing demands
- Worry and angst exists around the organization's future
- No one can imagine NOAA would let it fail
- Most are willing to come to the table to figure it out

Specific partnership challenges include...

- Different and sometimes conflicting missions and requirements
 - ◆ Each cannot fully dedicate to the HML mission given their own
 - ◆ Research not concerned with my agency's focus
 - ◆ Different criteria by which people and their work are judged
- Different funding models and ability, willingness to contribute
 - ◆ Inequitable contribution of money
 - ◆ Not everyone has been proactive in bringing resources
 - ◆ Some content in letting NOAA pay the bill
- Unclear commitment from leadership
 - ◆ Lack of active engagement and follow-through by Executive Board
 - ◆ Spotty buy-in from partner institutions
- Potential limitations in the partnership agreement
 - ◆ Perception that this is a NOAA facility and everyone else is a guest
 - ◆ JPA not constructed to allow for integrated leadership to evolve
 - ◆ No roadmap or blueprint for getting things done through five partners
- Is Science Board sufficiently empowered?
 - ◆ Do not have time to do what they must do
 - ◆ Charged with responsibility but no power or resources to implement
 - ◆ Spends too much time on operations rather than the science agenda

Operational challenges are equally daunting

- Funding and credit for accomplishments
 - ◆ Securing funding/resources to carry out the mission
 - ◆ Finding an equitable way to share in the glory and the costs
 - ◆ Inability to transfer funds among partners, complications in exchanging funds
- Workforce recruitment and retention
 - ◆ Finding, keeping and paying for good operations, clerical and contractor staff
 - ◆ Synching demographics of lab with those of other federal, state scientific agencies
 - ◆ Replacing the current director before he retires
- Cultural differences and ingrained patterns of behavior
 - ◆ Melding various cultures and requirements into a single activity
 - ◆ Relying too much on Fred or Fred taking too much responsibility for doing stuff
 - ◆ Using consensus/committee to get anything done

- IT and security requirements and capabilities
 - ◆ Working around NOAA security requirements
 - ◆ Satisfying mandated government IT regulations
 - ◆ Doing the work this building is expected to do with poor computational infrastructure
- Remoteness of the lab and impact on focus and information flow relative to parent organizations

Attending to what we've learned will take us to the future

- When people are committed to a common objective great things get done
- Partnerships take constant care and feeding, and they are worth it
- Some of this care and feeding has to come from leadership
- Working a task together helps build trust and makes partnerships flourish
- Tapping into NOAA's or NIST's strategic objectives is critical and harder than we thought
- With an agreement like a JPA, an immediate mechanism for exchanging money is a must
- Setting explicit expectations upfront makes things easier down the road
- We can't hide under a bushel; we have to let our light shine

Appendix D: Future State Interview Themes

Stronger partnership, healthier world

- Better understanding of our planet, particularly the relationship between healthy ecosystems, healthy communities, good public health and good economics
- Stronger ties to social scientists to develop, implement solutions
- Useful and user-friendly tools, technologies and data sets for decision making
- Improved ecological conditions on the coast for all inhabitants
- Proven model for how government and research establishment can do business
- Clear contributions to each partner's objectives, goals, vision and mission

World-class facility, world-class science

- Outstanding, interdisciplinary, cutting-edge science
 - ◆ International leader around human health and oceans
 - ◆ Excellence in application of molecular marine biology
 - ◆ Established leader on effects of climate change on ecosystem health
 - ◆ Premier source of information and research about ecological effects on chemicals in the environment
 - ◆ A leading light in the world of genomics, particularly ecological applications
 - ◆ One of the top ten labs in the world in ocean and human health kinds of issues
 - ◆ A national resource for the partners, the region and the nation
 - ◆ A magnet for talent inside and outside of our partner institutions with a pipeline of undergrads and grads that are living in the milieu of change
 - ◆ NOAA equivalent to NIH
 - ◆ Partnering with a capital P – an example that other people follow
 - ◆ Productive, responsive and quality operation

Appendix E: Boards’ Roles and Responsibilities

ROLE	PERSPECTIVE		
	Executive Board	Science Board	Other Caring Voices
Executive Board Member	<ul style="list-style-type: none"> • Concerned about summary vs. JPA • Believes it’s doing its job on many of its responsibilities • Has not been sharing satisfaction or dissatisfaction with how HML is running • Shared how each partner’s strategic plan is connected and committed to HML • Recognized that we come to meetings and the Board’s role has been to listen vs. be engaged • Has not taken enough time to work, meet, operate like a board • Made a commitment to have an Executive Board only meeting (prior and/or during the next Board meeting) • Other discussions: <ul style="list-style-type: none"> ○ Is it appropriate to make HML the sum of its parts, or be its own driver w/contributions from the partners ○ Had discussions around how the Board could evaluate the work of HML - may need help developing metrics to assess and evaluate the 	<ul style="list-style-type: none"> • Communication from the Executive Board has been silent • Executive Board get closer to the meeting paradigm of the Science Board • Develop an inter-agency communication • Need strong advocacy from the executive board at the home institution – support to the scientific and political communities • Should be responsible for the solvency of the marine lab • Help overcome that people feel like guest of NOAA • More communication to support each other collectively • Want to be a strategic resource for shaping your scientific budget <p>Q. What do you mean by solvency for the marine lab?</p> <ul style="list-style-type: none"> • It means financial solvency – to keep the doors open and staff available • Offer a process to get inter-partnership commitment to get funding <p>Q. Do not think its appropriate or legal to advocate or sign off for budget requests for other entities</p> <ul style="list-style-type: none"> • May need to reword the JPA language around how state and federal appropriations describe “prepare and submit budgets” 	<ul style="list-style-type: none"> • As you invest in the HML partnership you have expectations of return • Advocacy <ul style="list-style-type: none"> ○ Be an advocate for HML in your home institution ○ Designate someone that can promote outside of your home institutions • Accountability <ul style="list-style-type: none"> ○ Figure out a way to get more funding in HML ○ Endorse the Director’s report card and how to address the red ○ Move to get the new Director in place • Dispute mediation <p>Q. What do you mean by advocacy?</p> <ul style="list-style-type: none"> • It seems appropriate from the JPA it’s the Board’s responsibility to promote the fiscal health of the HML to its leadership, and demonstrate HML’s value • Have the home institution leadership visit HML • Telling us what you need to be good advocates • Explain and highlight how the lab is a benefit to the home institutions and part of the home institution



ROLE	PERSPECTIVE		
	Executive Board	Science Board	Other Caring Voices
	<p>work of HML Executive Board Meeting Only Topics:</p> <ul style="list-style-type: none"> • Scope our roles and responsibilities • Get an understanding of what the Science Board does 	<ul style="list-style-type: none"> • Partners outside of the federal government can speak on behalf of budget requests 	
Science Board Member	<ul style="list-style-type: none"> • Need to understand what the Science Board does 	<ul style="list-style-type: none"> • Implement and develop the science plan from this workshop • Support and develop the 6 research themes via travel, grants, seminars, students, etc. • Integrate these efforts into the 3 themes we identified • Communicate to the executive board at all five institutions • Be advocates for the 6 core areas of expertise inside and outside of HML • Need a succession plan – we're thin and we're not going to be here for the next 20 years <p>Q. Need to answer the question – is the lab an organization where the partners do "their own thing," or is it beyond that?</p> <ul style="list-style-type: none"> • Being a part of HML allows you to do what you do better • It's about pushing our science forward in a collaborative way • Question is premature – we have to figure out the research agenda • This is a biological experiment and we're going to make mistakes <p>Q. What is the next step of the SWOT analysis</p> <ul style="list-style-type: none"> • We hope from this 	<ul style="list-style-type: none"> • Be and an advocate outside of your institution • Improve communications between the Boards • Establish councils throughout the lab • Make sure the councils have representation of the science board • Develop a research strategy • Creating a structure to handle the multidisciplinary proposals • Prioritize and communicate what we need in terms of capacity in relationship to other marine labs • Having a Science Board budget to seed projects <p>Comment: If there is going to be an Executive Board – it decides what hills to conquer, and the Science Board decides how to conquer the hills</p> <ul style="list-style-type: none"> • The Science Board doesn't see its job to dictate what kind of science will be done, but vet all the partners and see where there expertise and interests are. The executive board cannot just come and say – this is what you will do. Unless you need to come in with major funds • Improving communication between the Boards will improve how the Science



ROLE	PERSPECTIVE		
	Executive Board	Science Board	Other Caring Voices
		workshop there will be research and funding plan <ul style="list-style-type: none"> We expect the Executive Board to provide feedback, and help us figure out how it will benefit each partner 	Board prepares and go after grants <ul style="list-style-type: none"> Need to connect what the Science Board is proposing to the strategic goals of the home institutions Q. How does the Science Board incentivize getting funding outside of the home institution

Appendix F: Recruiting the Next HML Director

We want it all – a supernatural being

- Scientifically credible
 - ◆ Well respected, passionate, visionary PhD
 - ◆ Recognized stature in the scientific community
 - ◆ Versed in multiple disciplines and can support them

- Connected and savvy
 - ◆ Recognizes the movers and shakers of the home institutions
 - ◆ Strong connection to the NOAA hierarchy
 - ◆ Understands government and academe
 - ◆ Proven capacity to get center level grants

- Strong results-oriented leader
 - ◆ Forges consensus around a vision
 - ◆ Listens to all the players
 - ◆ Fosters strong follower-ship
 - ◆ Forces decision that keep us on the path
 - ◆ Aligns the science board and the executive board
 - ◆ Develops trust between the partners
 - ◆ Holds partners accountable

- Proven manager
 - ◆ Experience running large and complicated organizations
 - ◆ Focuses on running the lab and capturing opportunities
 - ◆ Can do the science and manage the building

- Other key descriptors
 - ◆ Diplomatic
 - ◆ Charismatic
 - ◆ Salesmanship
 - ◆ Excellent communicator
 - ◆ Solid negotiator
 - ◆ Dynamic, out the box thinker

- ◆ Collaborator
- ◆ Team player
- ◆ Motivator

We want a voice and NOAA to cast a broad net in the process

- Engage representatives from both Boards in writing a clear position description
- Advertise broadly to find the best possible candidate
- Engage the Science Board in the search and screening process and provide the Executive Board with a short list of candidates to interview
- Include leadership from all partners on selection committee
- Align the entire process with NOAA HR
- Entrust NOAA with the final decision

Appendix G: Future Research Themes

Observations

- Articulating a 10-year research agenda appeared hard; blocked by funding concerns
- Most everything named is within the current research framework
- There is no broad alignment on themes or core research areas
- But there is alignment on the need to narrow research focus
- A few were confident that what is happening today is right on track
- Executive Board view not very compelling

Named research foci included...

- Genomics, biology and cutting edge chemistry
- Oceans and human health
- Link between health of coastal ecosystems and human health and well-being
- Genomics and shrimp
- Effects on the non-human components on humans
- Area of natural products dovetailing with botanical issues in Atlantic seaboard
- Somewhere at the intersection of environmental science and human health science
- Coastal development, climate change and natural resources
- Eco-genomics
- Contemporary/emerging issues in the coastal environment and their implications for the health of natural resources, ecosystems and humans
- Marine organism health and model organisms for physiology and drug screening
- Development of new tools, applications and information to enhance decision making
- Discovery science

Appendix H: Problems Partner Institutions Are Addressing

DNR

- We are about four things:
 - ◆ Better decisions
 - ◆ Better resources
 - ◆ Better access to resources
 - ◆ Improved human well being
- We have reached the bottom of the tool bag when it comes to traditional resource management tools are extractive resources
- Want to find ways to link what's happening in the ecosystems to watershed the resources we're managing
- If you want enhanced well being, you have to change behavior
- We're in human behavior modification with respect to some desired outcome for marine resources
- We do four things:
 - ◆ Seek to understand resources, systems, habitats
 - ◆ [didn't say others]
- What could HML do that would provide value?
 - ◆ Understanding linkages and tell the tale of how what homeowners well up the watershed does impact marine vertebrates
 - ◆ We haven't done good enough job telling the story and understanding where resources are
 - ◆ Delineate mortality and communicating that
- Who would you recommend to advise you on what do to?
 - ◆ Atlantic States Marine Fisheries Commission
- Why don't I see anything about water rights or water wars?
 - ◆ Policy issue

NOAA

- Our major issue is developing a coastal enterprise to address rapid coastal development and global climate change on coastal ecosystems
- Things that will help: Ecological forecasts, early warning systems, monitoring and assessment, remediation and restoration, what does a resilient community really mean
- What could HML do that would provide value?
 - ◆ Identify early warning systems of these impacts and contribute to development forecasts and actions we can take to prevent

- ◆ Sentinel animals and habitats
- Who I might recommend:
 - ◆ Russell representing NCOS center and historical data
 - ◆ Kevin Summers or Rich Linthurst from EPA
 - ◆ Steve Weisberg from SCCWRP

NIST

- Areas NIST is focusing on:
 - ◆ Climate change assessment
 - Resolving discrepancies between solar irradiance
 - Role of aerosols in attenuating solar irradiance
 - ◆ Biofuels
 - ◆ Bioscience and health
 - enabling measures of wellness based on complex signatures
 - Sustainability

Comment: Surprised I didn't hear anything about seafood products or seafood production – how we can do it in environmentally sensitive ways and economically feasible

- Not a major initiative of NIST and not a major focus of NOS
- Omission of DNR
- There is an initiative in NMFS
- DNR is not about seafood or protein supply. It's certainly very important
- Points to other potential partners we may want to consider: FDA and USDA
- Are we really competitive in this area?
- Very difficult nut to crack on global level although there are technologies, solutions that could be developed/applied; doing some in South Carolina

CoC

- Least focused of partner agencies in some ways
- Primarily undergraduate with historically liberal arts focus; cover the map today in the same sense any comprehensive university does
- Look at ways in which HML can sharpen our mission and add value to what someone coming to the College of Charleston would find appealing about being there
- Certainly for science faculty this represents critical areas of research

- Colleges and universities typically do not say to faculty here is the problem we want you to go solve it; that's something that comes from the intellect of the scientist not from the administrator or institution
- And they do develop niche areas that become ingrained and then they recruit for them
- Marine biology is one of the strongest areas in CoC and HML is a resource that supports us
- Currently undergoing a strategic planning effort and don't know what will come out of it
- I've talked about where I want to see us go in developing niche areas of research although it hasn't been a big focus for us
- Not in a position to identify people who could guide this; will turn to our scientists
- Have major initiative on bioinformatics and focus in marine genomics with MUSC; also have growth of hazards center out of geology department
- All kinds of ways in which we have strengths and places where there are tie ins
- Talked about engaging social science and economics faculty, and many ways we could that haven't been explored
- Regional communities and State of SC are starting to see the college as a resource rather than just a place where students go
- Need to start thinking about how to engage other faculty and bring people to the table who have expertise we are missing
- Also have discovery informatics program and those kids are supposed to be interns
- Certainly can contribute strong pool of talented young people who come with energy, excitement and a lot to offer

MUSC

- Been focusing on three or four pronged approach to translation initiative or solution: how to move molecular observations making in the lab forward to serve the population we serve
 - ◆ Genomics
 - ◆ Infrastructure -- \$150 million investment in drug discovery
 - ◆ Plans for patient oriented research tower
- Bringing in partners with hospitals and major universities
- Translational infrastructure
 - ◆ CNS – synaptic plasticity, psychiatry, biology of addiction
 - ◆ Cancer – Hollings cancer center, clinical trials, development of new agents
 - ◆ Bioengineering
 - ◆ Cardio vascular engineering
- Drug discovery
 - ◆ Drug screening mechanism
 - ◆ Merged colleges of pharmacy

- ◆ Medicinal chemistry
- Structural biology – NMR expertise
- Small animal imaging – small animal NMR
- Lipidomics and metabolomics
- Mass spec technologies
- Biostatistics and epidemiology
- Areas where we need to work and develop:
 - ◆ Genomics – to realize fruits of other areas need to get up to speed on this
 - ◆ Computational biology
 - ◆ Medicinal chemistry
 - ◆ Botanicals, natural products, anti-cancer – meetings with USDA and Clemson nutraceuticals
 - ◆ Biomarkers
- What HML can do:
 - ◆ Analytical chemistry
 - ◆ Biomarkers
 - ◆ Natural products – drug discovery
 - ◆ Model organisms of disease – sentinel organisms and organisms for understanding disease process
 - ◆ Genomics
 - ◆ Information technology
- Who to bring in to be part of a panel? Not going to give name now; want to ruminate
- Where do endowed chairs fit?
- Scheduled to be out here
- What would bring the most value to MUSC?
 - ◆ Anything in genomics would bring added value
 - ◆ Best philosophy is to bring the best person you can
- Lots of entrepreneurial growth taking place at the university
- Anything (natural product) that comes from marine environment needs to be tested in humans
 - ◆ Relieving effects of chemotherapy



Appendix I: Key Science Questions and Next Steps

Group	Questions/Problems	Next Step(s)	Validators	Partners
1	1. How do we predict, assess the impact of environment stress on ecosystems?	<ul style="list-style-type: none"> Development of new tools, applications and information to address human well being issues 	<ul style="list-style-type: none"> EPA, local stakeholder groups (Coastal Conversation League) 	All
1	2. How do we enhance seafood products that will meet human consumption needs, medical needs and enhance economic development	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> USDA, NMFS, Sea Grant Program 	All
2	1. What are the early warning systems or signals to predict changes due to climate change or other stressors on coastal ecosystems and human health well being that will sustain, protect or support the coast and coastal communities	<ul style="list-style-type: none"> Developing chemical contaminant forecasts for local coastal ecosystems More strategic or aggressive specimen banking Moving from local to regional applications 	<ul style="list-style-type: none"> OSTP, NOAA, EPA, possibly NIST, possibly someone from OHHI advisory board, FDA, DHS, coastal managers 	All
2	2. Can HML develop technologies to develop sustainable sources of high quality seafood	<ul style="list-style-type: none"> Demo project for sustainable seafood 	(Se above)	Everyone but CoC
2	3. Should HML provide solutions in terms of identification or source tracking for chronic or acute contaminant threats (rapid response questions)	<ul style="list-style-type: none"> Strategic specimen banking 	All above plus other parts of NOAA	All
3	1. How do we identify, measure, analyze, model, and integrate relationships	<ul style="list-style-type: none"> Appoint task force or focus committee that would assimilate 	Same usual suspects	All

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Group	Questions/Problems	Next Step(s)	Validators	Partners
	between coastal environment, biota, and human well being	internal input and then define proof of concept question (mercury issue is one possible focus area) – based on strengths of partnership and compelling to really show value <ul style="list-style-type: none"> • Identify priority needs and gaps to get proof of concept done • Go to EB for resources to make it go • Develop concrete plans, timelines and products • Develop and implement outreach plan 		
4	1. What are the impacts of [global] climate change on coastal ecosystems?	<ul style="list-style-type: none"> • Educate ourselves since NIST, NOAA and DNR have programs and mandates and through others • Identify contributions HML could make specifically to make an impact 	NIST, NOAA, DNR, CoC, MUSC, SNRL, DHEC, City of Charleston	All
4	2. What are linkages of human activity on coastal conditions of other systems, including ecosystems and all other systems, to get to an integrated approach	<ul style="list-style-type: none"> • 		
4	3. Need for development of marine technologies and products	<ul style="list-style-type: none"> • 		

Appendix J: Operational Improvement Opportunities

- Transition the leadership of the lab to the next generation
- Establish two lab directors, one operational and one science
- Produce a regular pipeline of usable products, services
- Generate external attention around the lab
- Secure support of senior leadership of partner organizations
- Create strategy for garnering funding from NOAA and Capitol Hill
- Spend more effort engaging policy makers and stakeholders
- Partner with more folks outside HML
- Clarify relationship between Director, Science Board, Executive Board, and NOAA
- Clarify credit for accomplishments made at HML
- Change the funding model

Discussion

- Credit for accomplishments
 - ◆ Recommend that Jack ensure that NCOS gives appropriate credit to those accomplishments coming out of HML
 - HML and all contributing partners are acknowledged
- Two lab directors
 - ◆ Having two creates separate empires
 - ◆ Maybe need one and a deputy
 - ◆ Moving in this direction today
 - ◆ No further action needed
- Transition of Science Board leadership to next generation
 - ◆ Science Board has plan in place and is pretty satisfied with it
 - ◆ Talk about at next Science Board meeting
 - ◆ Put on agenda for review/approval by Executive Board
 - ◆ How important is it to have consistent leadership and meeting participation?
 - Nice
 - Have alternate to which will transition over time
 - Some stuff doing can be delegated to others
 - Have to be there because decisions made effect other partners; time to be briefed if not at meetings takes as much time as attending
 - Having extra people there can broaden thinking

- Establish scientific administrative structure to support research themes and accountability, e.g., come up with concrete plans and deliverables; could be ex members of Science Board
 - ◆ Under the purview of the Science Board
 - ◆ Good procedural thing
 - ◆ Science Board will discuss
- Funding issues/mechanisms – how can we have a separate pot of money to fund things with a little more flexibility
 - ◆ Follow-up with Willie
- Spend more effort engaging policy makers and stakeholders
 - ◆ Identify key people to brief in Department of Commerce, NOAA, NIST
 - ◆ Climate change and energy independence will likely get plus-ups around March 2009 so new administration can wave flag; need to position ourselves to support themes administration is espousing
- Feeling like you're in your mother's house
 - ◆ Deemed export security is a Federal mandate
 - ◆ Our security is as flexible as it can be made
 - ◆ What are the "guest's" concerns?
 - Fred will work list if has them
 - Exec Board has been talking about them
 - Every week it's some new rule, some of which feel capricious
 - We're talking about partner sensitivities
 - NOS needs to be more sensitive and talk some ownership for Hollings and the way other partners feel
 - Maybe some amendments to JPA would help make sure things don't get worse
 - We talked about hiring next director in January and when we talked about it yesterday it felt like the first time
 - My fear is that the next time will be when we meet the new director
 - Executive Board is not making the hire; NOAA is
 - Have no choice but to live by the rules that come down
 - Often reactions to what political types think and do
 - Maybe with right prodding things can be eased off on
 - When attempting to codify JPA we were always explicit that hiring of director would include input from partners
 - Will discuss at next Executive Board teleconference which will happen next week – assuming schedules permit

Appendix K: Solutions to Funding Challenges

REPORTING INSTITUTION	THINGS WE CAN COLLECTIVELY DO	INSTITUTIONAL CONTRIBUTIONS
NIST	<ul style="list-style-type: none"> • Work on the branding and talking points – what we do as HML (Green) • Support the overall (infrastructure – computers (Green) 	<ul style="list-style-type: none"> • Continue to try and be good citizens within the HML community – training workshops and needs assessment activities (what can our collective resources fill) • Hiring students for summer internship in SC and Gaithersburg – NSF will pay for that • Pledge continued support of NIST staff for chemical and bio support – the number will be maintained if not increased • Bringing in new expertise to fill HML competency gaps with post-doc supports • Continue exposure and advocacy activities • Have NIST senior scientist serve as co-PI on grant applications • Commit to having discussions with NOAA on longer term support from NIST (branding is essential to this action)
CoC	<ul style="list-style-type: none"> • Library 	<ul style="list-style-type: none"> • Advocacy • Education and outreach • Maintain the infrastructure for students , graduate – cheap labor • Contribution of faculty time • Housing for students and PIs • Conference facility • Offer staffing for the genomics core and the aquatic core • Maintenance cost for HML • Equipment for the genomics core facility • COEE – raised endowment

REPORTING INSTITUTION	THINGS WE CAN COLLECTIVELY DO	INSTITUTIONAL CONTRIBUTIONS
		money for that – will be one of the FTEs we contribute <ul style="list-style-type: none"> • Expertise in other areas – at social science and economics – trying to connect those folks with the needs we have at HML • Utilize histology lab - pick up service contracts on equipments we're actively • Discovery and infomatics
NOS	<ul style="list-style-type: none"> • Develop a HML foundation – additional advocacy actions and non-profit contributions (Explore the relationship with the MUSC foundation) (Mixed – needs more conversation) • Service contracts – supplies, shipping, labor contracts, housekeeping, software breaks with our academic partners (Green) • Library 	<ul style="list-style-type: none"> • Additional allocations from NCCOS – push that angle • CCEHBR – consolidate admin and IT functions (shipping, receiving, IT, etc.) • Offering HML services as a pass through – services that will allow HML to do some cost recovery (work others samples) • Opportunity to link with ORR and OAR for technical support • Streamline our MOU process
SCDNR	<ul style="list-style-type: none"> • Take an aggressive effort to diversity the expertise – epidemiology and social science (Green) • Consider adding associate/virtual partners – we and others see the value (Mixed – needs more conversation) • Library 	<ul style="list-style-type: none"> • Toilet paper • Influence the direction of research initiatives that can help fund HML – begin to influence the people who help the direction of funding • Help with public outreach, especially in SC raise the awareness of HML • Advocacy and lobbying for HML budgets – powers that be within NOAA • Bring resources via platforms, facilities, vessels, and animals • Utilize histology lab - pick up service contracts on equipments we're actively using
MUSC	<ul style="list-style-type: none"> • Solve it • Library 	<ul style="list-style-type: none"> • Put operational dollars into the Lab • Releasing faculty time for sustainability and • Structural reorganization for centers – be responsible to a center vs. being disconnected • Replace lost faculty

REPORTING INSTITUTION	THINGS WE CAN COLLECTIVELY DO	INSTITUTIONAL CONTRIBUTIONS
		<ul style="list-style-type: none"> • Make a greater commitment to partnership – CoC Marine Genomics • Advocacy • IP expertise, drug discovery • Submit an application to the EPSCORE fund • Intellectual Property • Epidemiology, risk assessment, bioinformatics, systems biology, modeling, public and animal health • Screen marine pharmaceuticals • COEE Chair in marine genomics – graduate students • Expertise in NMR/structural biology • Inter-institutional grant development

Executive Board will:

- Take all the greens with support from the science board and figure it out
- Help home institutions remember what they pledged

Foundation Idea:

How these foundations at NIST and NOAA work

- Raise overhead when you take in private dollars – they feel like they own you

Will a foundation make it easy for the partners pass funds to each other?

- MOU is between two agency
- Have MOU with all expect NIST. The current MOUs are up for renewal next year
- If the funds come into HML can't it pass it on to a partner
- Yes, via an amendment. Overtime, we've learned how to write the scope better

We should focus on what HML needs to do before we go down the road of thinking about becoming a foundation?

- The foundation will give a central advocacy point
- The foundation could drive what you do
- Who will work the foundation, and a lot goes along with that?
- DNR has lots of experience on how not to work with foundations

Associate/Virtual Partners:

- Adding associate/virtual partner could open the door to the EPSCORE
- Adding associate/virtual partners adds to the skill gaps we have – we’ve been doing this already. I think we’re talking about doing it more formally
- The way we currently do things allows us to bring in partners without doing it formally – it avoids shifting our dynamics
- The partnership is already well defined without mudding the waters – we would need guidelines for new partners and lots of thought