



LCA Science Board
U.S. Geological Survey
New Orleans Office @ Big Branch Wildlife Refuge
61389 Hwy 434, Lacombe, LA 70445

Report from the Science Board Meeting
June 27-28, 2006, New Orleans, Louisiana
Submitted to the Program Management Team, August 7, 2006

Meeting Particulars:

The first meeting of the newly appointed Science Board for the Louisiana Coastal Area Ecosystem Restoration Program (LCA Program) was held at the New Orleans District Office of the U.S. Army Corps of Engineers (USACE) on June 27 and 28, 2006. All but one (Dr. William Dietrich) of the eleven members of the Board (Appendix 1) were in attendance for all or part of the meeting. In addition to hearing presentations and having discussions, members of the Board embarked on a helicopter aerial overflight of regions of the coastal area east and south of New Orleans.

The purpose of this first meeting was to:

- provide an opportunity to meet and interact with key participants in the LCA ecosystem restoration process;
- provide a forum for the State and USACE to share information about the current state of affairs and their future plans, directions and activities; and
- elect a Science Board chair, define expectations for the Board, create an agenda and schedule for the next year.

The agenda for the meeting is provided in Appendix 2. Board members reviewed their expertise and interests and clarified the charge to the Board. The Board also heard presentations on the background, status and reporting structure of LCA; the status of project execution and the formation of a Science and Technology Program Office; modeling to support program planning; barrier island monitoring; the impacts of the 2005 hurricanes on coastal environments; new thinking about coastal restoration that is being prompted by those storms; and new, integrated planning approaches mandated by Congress (Louisiana Coastal Protection and Restoration Project) and the Louisiana Legislature (Master Plan). Powerpoint files of the presentations made to the Board are posted at <ftp://ftp.dnr.state.la.us/pub/Large%20Data%20Requests/>. Over lunch Board members also had a discussion about the Science Board's role with Brigadier General Robert Crear, commander of the USACE Mississippi Valley Division.

Informal minutes of the Science Board meeting were produced and are on file. This report summarizes the outcomes from the perspective of the Science Board. Key points are highlighted in boldface.

Charge and Scope of Board Activities

- 1 The LCA Program Science Plan specifies the following roles and responsibilities of the Science Board:
 - a) ensure the application of rigorous scientific principles and processes to the LCA Program;
 - b) provide national perspective and oversight of general scientific processes and structure of the LCA Program in support of the Science and Technology (S&T) Program Office;
 - c) review the science program and projects funded by the S&T Program Office;
 - d) review the structure of the various committees constituted under the S&T Program for balance, rigor, and use of authoritative science;
 - e) review and improve the process for integrating the S&T Program activities with the LCA Program;
 - f) report to the S&T Program Director and the Project Management Team (PMT) regarding the effectiveness of the S&T Program in meeting the science and information needs of the restoration program and provide recommendations for improvement of the process;
 - g) provide reviews of how effectively the PMT is incorporating the output of the S&T Program and the recommendations of the Science Board into the overall LCA Program and recommendations for improvement of the process;
 - h) produce a written report every year on the state of the science across the entire LCA Program which will be included in the S&T Program Annual Report and prepare specific letter reports as necessary and appropriate; and
 - i) as asked, testify on their evaluations before the Legislature and Congress.
- 2 When the Science Plan was initially developed, the intent was that the Science Board address only the ecosystem restoration elements of the LCA Program, however, both the State and USACE are, under legislative direction, integrating ecosystem restoration and hurricane protection. **The Science Board is under the clear impression that both the State and USACE (as conveyed by Randy Hanchey and Dan Hitchings) would now like the Board to provide scientific oversight for this integrated protection and restoration program.**
- 3 The Science Board does not have suitable expertise in all dimensions of hurricane protection, including risk analysis, appraisal of economic costs and benefits; and the design and construction of protection works. **Thus, it is the Board's understanding that its oversight will extend principally to the environmental consequences of hurricane protection infrastructure and the effective integration of protection and ecosystem restoration.**

- 4 The co-chairs of the PMT specifically asked the Board to address the following:
 - a) Is there realistic hope of dealing with subsidence processes? In addition to natural processes that contribute to subsidence, a number of man-made works (e.g., levees, navigation channels, etc.) have altered the system such that it is no longer a natural system. With this in mind, how can we restore such a system?
 - b) Is the science base for this endeavor really adequate? Are we doing the right science, and is the science really independent and objective? Because the science must also be responsive to the needs of the program, is this an impossible task?
- 5 The Science Board discussed its role in review of science programs and projects with agency representatives. **It was mutually concluded that the Board would focus at the programmatic level and not be involved in reviewing individual science proposals. Rather the Board will provide oversight on the study priorities and the processes for selecting proposals, including external peer review.**
- 6 Pending Senate amendments (as subsequently passed by the Senate on July 19) to the Water Resources Development Act (WRDA) includes provisions that direct the Secretary of the Army to enter into a contract with the National Academy of Sciences (NAS) to (a) carry out a study to identify the cause of any degradation of the LCA ecosystem that occurred as a result of an activity approved by the Secretary and the sources of the degradation [§ 1003 (k) (1)], and (b) perform an external review of the demonstration program authorized for the LCA Program [§ 1003 (p) (3)]. If these provisions are enacted into law, **the USACE should work with the Congress and the NAS to clarify the roles and relationships of the Science Board and any NAS review committees.**

Organization and Operations of the Science Board

- 1 **The Board unanimously elected Donald Boesch as its chair.** Dr. Boesch agreed to accept this responsibility with the understanding that the Board would reconsider its leadership at the end of one year.
- 2 The Board discussed the potential and need for adding members to the Science Board. It identified conflict resolution, economics, risk assessment and organizational management as areas of possible expertise needs, but decided to make no recommendations for expanding the Board at this time.
- 3 **The Board is concerned about the unsettled nature of the roles of the USGS, USACE and State related to the S&T Program Office and, specifically, the Science Board. It urges that these matters are resolved so that timely scheduling of Board meetings and logistical arrangements are ensured and that office staffing quickly proceeds.**
- 4 The Science Board is committed to conducting its activities in as open and transparent manner as appropriate. **The Board requests that a Science Board website be established as soon as possible that would provide information on**

Board activities and provide information resources for access by the Board and other interested parties. A pass code protected part of the site could be used for sensitive information and work products.

- 5 Heeding the lessons learned by the National Technical Review Committee (Orth et al., 2005. *Ecological Engineering* 25:253-267), the Science Board plans to allow sufficient time in the latter part of each of its meetings to capture in writing key points to meet its advisory and review responsibilities. **The Board intends to submit a report to the S&T Program Director and PMT after each of its meetings that clearly identifies conclusions, recommendations, questions and requests. The Board requests that a feedback mechanism is established so that the Science Board receives timely feedback on these items.**
- 6 Task groups of the Science Board may be formed as appropriate to address certain narrowly prescribed issues and may require separate meetings, including participation in reviews, workshops or conferences.
- 7 The S&T Program plan calls for a written report every year on the state of the science across the entire LCA Program which will be included in the S&T Program Annual Report. The Board will work with the S&T Program Director on the timing of that annual report and plan its written report accordingly.

Important Tasks on Horizon

There are a number of major developments in the near-term that merit the careful attention of the Science Board, including:

- 1 **Establishment of the S&T Program Office and appointment of a Director.** Subsequent to the Board's 2006 meeting, Dr. Boesch communicated the Board's concerns about keeping open the prospect of an interagency or intergovernmental appointment of the Director. This is a key position and requires the appointment of the best available scientific leader.
- 2 **The Louisiana Coastal Protection and Restoration Program (LCPR) and State Master Plan.** The Science Board should be kept abreast of the development of this important planning and provide review and advice on an ongoing basis.
- 3 **Post-WRDA Developments.** With the recent passage of the bill by the Senate, the enactment of a 2006 Water Resources Development Act seems likely. Based on the Senate amendments, such an act would authorize the LCA Program and, specifically, a coastal Louisiana science and technology program. It would also authorize the five near-term projects included in the Chief's report, while allowing changes to them, as well as a demonstration program. It would establish a multi-agency Coastal Louisiana Ecosystem Protection and Restoration Task Force and a Louisiana Water Resources Council and would require the aforementioned National Academy of

Sciences studies. All of these developments have significant implications for the role and responsibilities of the Science Board that must be more clearly understood.

Subsequent Meetings

- 1 The LCA Program Science Plan stipulates that the Science Board initially meet quarterly unless experience dictates a greater or lesser meeting frequency. The Science Board believes that because of the need for members to learn more about the LCA and because of the flurry of planning activities three additional meetings will be required before June 2007.
- 2 **Dates have been tentatively identified for meetings on September 19-20 and December 13-14 or 14-15, 2006.** The December dates would allow members to attend the Restore America's Estuaries meeting in New Orleans.
- 3 There are some particular issues that the Board would like to see covered at September's meeting. Others may, of course, be proposed by the PMT or S&T Program Director:
 - a) **Conduct an "LCA 101" short course in the causes and consequences of Louisiana ecosystem deterioration and the rationale of restoration strategies** as background for less experienced Board members to provide context for the LCA Program. Dr. Boesch has agreed to lead this, drawing on Louisiana experts as necessary.
 - b) **Review and comment on the 2006 Louisiana Coastal Protection and Restoration Preliminary Technical Report to Congress.** This was unavailable at the June 2006 meeting but released shortly thereafter. The Science Board will provide comments on this report in terms of the scientific basis of this preliminary report for ongoing LCPR planning. The report has been distributed to Board members and a subgroup comprised of Drs. Bailey, Boesch, Dean, and Wells will prepare and distribute a draft analysis prior to the meeting. The Board requests presentations that provide overview and update of this report and continuing LCPR planning.
 - c) **Update on State Master Plan development.**
 - d) **Impact of WRDA 2006 on the LCA Program.**
 - e) **Presentations and discussions on hurricane protection systems currently being planned, specifically the Morganza-to-Gulf project and the storm barrier system east of New Orleans.** Some scientists have expressed concerns about the impacts of these projects on coastal ecosystems. The Board would like to hear those concerns and how designs will address them.
 - f) **Synopsis of performance of CWPPRA and other restoration projects, including the degree to which they achieved objectives and survived hurricanes.**

- g) Update on the S&T Program, including functions and role of the S&T Program Office, appointment of Director, staffing plans, functioning committees, and ongoing activities and schedules.**

Appendix 1

LCA Program Science Board

Dr. Donald Boesch, *Chair*

President

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Executive Director

Dr. Dawn Lavoie
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Appendix 2

Agenda
LCA Program Science Board
New Orleans
June 27-28

Meeting Purpose:

- To provide an opportunity for us to meet and interact with key participants in the LCA ecosystem restoration process;
- To provide a forum for the State and USACE to share information about the current state of affairs and their future plans/directions/activities;
- To elect a Science Board chair, define expectations for the Board, create an agenda and schedule for the next year.

Tuesday

8:30AM

- Introductory remarks, Introductions, Charge to the Science Board – Dawn Lavoie (15 minutes)
- LCA background and status: the State perspective – Randy Hanchey, LA DNR (30 minutes)
- LCA structure and reporting – USACE – Dan Hitchings, USACE (30 minutes)

The discussions by Randy and Dan will provide an overall LCA briefing including the history, current status and future plans. They will put into perspective the roles of the various committees, the S&T Program Office and the Science Board; the inter-relationships between LCA and the S&T program; LaCPR and the State's Master Plan; the \$100M funding to jumpstart ecosystem restoration. At this time, we will have an open Q&A/discussion period (30 minutes)

10:15 *Break (15 minutes)*

- Project Execution – Troy Constance, USACE (20 minutes)
- LACPR/STATE Master Plan Execution – Edmund Russo, USACE (20 minutes)
- S&T Program Office and project update – Buddy Clairain, USACE/Rick Rayne, LA DNR (20 minutes)

12:00 *Lunch (Cannon's at 4141 St. Charles Avenue) with General Crear*

1:30 –2:00 Synopsis of changing restoration philosophy in Louisiana – Denise Reed, UNO

2:00 –3:10 Major Projects

- CLEAR Modeling - Robert Twilley, LSU (30 minutes includes Q&A)
- Barrier Island Monitoring – Darin Lee, LA DNR/Mark Kulp, UNO (20 minutes includes Q&A)
- Hurricane Damage Assessment – Greg Steyer, USGS (20 minutes includes Q&A)

3:10 -3:30 Break

3:30 -

- Working session: -
 1. Elect a chairperson
 2. Define issues to be addressed by the Science Board
 3. Define expectations and output required of the Science Board
 4. Create a schedule and agenda for the year

Wednesday

8:30 – 11:30 Aerial (helicopter) tour of the wetlands hosted by USACE, N.O. District (tentative, requires approval)

12:00 – 2:00 Working lunch and wrap-up