MINUTES
CHIEF OF ENGINEERS' ENVIRONMENTAL ADVISORY BOARD MEETING
Alexandria, Virginia
17 June 2005

1. The Chief of Engineers, **LTG Carl Strock**, called the Environmental Advisory Board (EAB) to order at 0910 hours, 17 June 2005 at the Radisson Hotel Old Town, Alexandria, Virginia. The following EAB members were present:

- **Dr. George Crozier**, Executive Director, Dauphin Island Sea Lab;
- **Dr. Stephen Farber**, Director, Environmental Management and Policy Program, University of Pittsburgh Graduate School of Public and International Affairs
- **Dr. Michael Donahue**, (title), URS Corporation;
- **Dr. Theodore Hullar**, Director, Higher Education Program, Atlantic Philanthropic Service Company, Inc.;
- **Mr. Kenneth Babcock**. Director of Operations, Ducks Unlimited Southern Regional Office;
- **Dr. Mohamed Dahab**, Professor and Chair, Department of Civil Engineering, University of Nebraska:
- **Dr. Denise Reed**, Professor, Department of Geology and Geophysics, University of New Orleans.

Also present were: **Mr. Steve Stockton**, Deputy Director of Civil Works; **Ms. Pat Rivers, Chief,** Southwestern Division Regional Integration Team and of the Environment Community of Practice (CoP); and **Mr. Norm Edwards**, Executive Secretary for the EAB.

2. **WELCOMING REMARKS**

Mr. Edwards noted the meeting was being conducted under Federal Advisory Committee Act (FACA) rules.

LTG Strock welcomed everyone and emphasized that the business meeting of the EAB was open to the public. A quorum of the Board existed to conduct an official meeting. He expressed some disappointment at the small public turnout, especially on the part of environmental and economic interest groups. Only one representative from the public was in attendance.

LTG Strock reiterated the need for more attendance from outside the Corps, given the importance of the Corps to water resources and the environment. LTG Strock noted that this is a key outreach activity, and encouraged the EAB to consider it in their recommendations regarding Outreach and Partnering. He also restated his commitment to this process and this Board, saying that "this is part of my corporate conscience. The Chief tied the Board's activities into Civil Works (CW) Strategic Plan, particularly Goals 1 and 2 – incorporating stakeholder interests throughout watersheds and integrating across federal agency and stakeholder responsibilities; and, a commitment to ecosystem restoration including aquatic ecosystem restoration. He added that (interaction with the Board) allows him to take time out of his schedule and focus on critical issues.

3. DISCUSSION ON ECOSYSTEM RESTORATION TOPICS

Mr. Babcock, Board Chairman led member introductions. He said that the working sessions of board over the last couple of days were very productive, and thanked the Corps staff for their support. He wants (the Board) to be part of the Corps moving forward as a leader in ecosystem restoration. He noted more awareness of the Strategic Plan, built on the Environmental Operating Principles (EOPs), and acknowledged the letter from the Chief setting an overarching charge to the Board on Ecosystem restoration and endorsing seven topics as part of that theme for the EAB to address.

Dr. Donahue introduced and then facilitated presentations of the 7 topics (sub-themes). He said that work outlines had been drafted to proceed in developing each of the seven topical white papers over next six months or so.

ADAPTIVE MANAGEMENT

Dr. Crozier thanked Ms. Lynn Martin (Institute for Water Resources (IWR)) for her assistance on this topic. Ecosystem restoration is extraordinarily complex and technical, especially given resource constraints and uncertainties, and it requires a mindset that favors flexibility. He said there is a need to build flexibility into Corps in order to embrace adaptive management. He added that he has learned more about the Corps over the last 6 months then over his entire career. Dr. Crozier feels that EC 1105-2-409 does answer some questions about adaptive management that were raised in the working meeting in Tucson. He applauds this Engineering Circular and would welcome seeing it move toward an Engineering Regulation. Flexibility is absolutely critical, but adaptive management is really needed; a long-term commitment to adaptive management is necessary in the Corps decision-making process. Dr, Crozier said they are looking at specific recommendation for work shops and case studies to define and promote adaptive management. The Corps can take a leadership role in this.

Dr. Reed said this will require a change to the decision making process. It's Important to recognize and use the 4 accounts; the planning process should not be deterministic and we should not think about only a single desired outcome. Adaptive management will allow us to see a range of possibilities and outcomes. We need to look at ranges of successful outcomes.

LTG Strock said he embraces and is committed to adaptive management as Carl Strock. But as Chief, he needs to comply with authorities, regulations, and limited resources. Need to look at how to use mitigation as a mechanism to promote adaptive management process. EC 409 does sign up Corps to adaptive management. Adaptive management is not linear, trial and error; we can look at balancing the four accounts over time. Look at the U.S. Fish & Wildlife Service definition; our definition is much more broadly related across water resource needs, not just the environment. Example is what we are trying to do with the Upper Mississippi River study. Extending locks to 1200' may not be economical, so we are also looking at non-structural and procedural methods. It is pursuing parallel paths (non-structural solutions such as scheduling, using switch boats);

provides information without losing time but with the opportunity to compare alternative courses of action. Problems are that some see adaptive management as never getting to defined goals. Others will see this as an open checkbook for scientific study and experimentation. It's about managing risk and uncertainty.

Mr. Stockton: Every project is authorized by Congress and expecting a certain level of "precision." Need to look at defining projects as having a range of outputs. Need to look at promises and commitments at the front end of project authorization. So range of target outputs can't be too wide. This will provide opportunity to be sensitive to changing societal needs and values.

OUTREACH AND PARTNERING

Dr. Hullar said that adaptive management is doing good work with others; it cannot be implemented by just one agency. Susquehanna River and Chesapeake Bay management involves working with all across the watershed. It's important to see the Corps as a central partner in bringing all the elements together and in creating new avenues of communication and coordination. The Corps is a key, and perhaps central partner in certain venues of the environment; it has a national leadership role. "Engagement" is different then partnering; it has a bigger and more enriching context. Need to focus on engagement as a broader goal. Outreach is mechanism to goal of engagement. Create an environment/culture to reach out and engage others in collaborating for water resource management. Dr. Hullar suggested the need for a strategic review of all stakeholders rather than tactical; it should be progressive and problems-based. Aim to establish ownership for entire lifecycle of project.

Mr. Stockton felt that assuming leadership role for Corps is part of needed cultural change as we look at our traditional roles and operational process. The issues are how to solve problems synergistically with others with a flat budget and how to lead without being so out in front or "directing."

Dr. Hullar believes the Corps role can be to foster active listening and good 'followership'. He suggested that the Chief call up counterparts in three agencies and say that you want to have a conversation at their agency.

Mr. Babcock stated that there is no organization that has as big a history as the Corps in influencing the environment. This is usually viewed as negative. But outreach can help to document that the goal is to promote positive impacts. Being the leader doesn't always mean being in charge or having the most money, but at the same time, one doesn't become a leader by declaring it so. It takes building relationships and understanding, which takes time. Leadership may involve facilitating a dialogue and bringing all the needed resources to the table.

Dr. Reed noted that this is not necessarily an efficient process, and it may result in a longer process for feasibility analysis. But there is efficiency in outcome. Rethink your

process as opposed to trying to squeeze outreach into your current process. It will involve trade-offs.

LTG Strock agreed that engaging more stakeholders makes the process more complex and can drag out the process. It will create tension and frustration in process. There is animosity directed toward the Corps, and some make it high theater to generate controversy. Naysayers will promote the 10 worst, but what are our 10 best projects? The Corps can lead from behind, can convene the dialogue. A good example is the interagency Partnership for Stewardship across 7 resource agencies where the leadership role rotates across agencies. The National Park Service currently has the leadership role. We can still play a role in influencing the agenda.

Dr. Hullar admitted it is a messy process, and not linear. Leadership can be facilitative or directed; the leadership style should be situationally determined. The Corps needs to think through the affective characteristics of a hierarchical structure.

LTG Strock said strategic identification of stakeholders is a key step. Personnel moves in Corps Headquarters can help to revitalize some of our efforts. There are linkages between adaptive management and outreach, as well as other sub-themes.

Dr. Crozier considers the National Estuary Program, Gulf of Mexico, etc, as regional programs that are wrestling with this issue of identifying stakeholders; they also have good stakeholder lists.

LTG Strock noted that other Corps Advisory Boards such as the Coastal Engineering Research Board (CERB) help to advise him on national issues. CERB will engage with NOAA and link to the National Ocean Policy groups; it will add science to this effort. His charge to CERB is to look at the connection between coastal zone and ocean as an example of how we can achieve these goals of outreach. We should benchmark these successful efforts and link them.

Mike Donahue said that he sits on a NOAA Ecosystem Review Task Force, which is meeting the next week in D.C. He'll act as an EAB/Corps liaison to them.

RESTORATION AUTHORITY GAPS

Dr. Donahue. The Corps has various roles in large scale ecosystem restoration projects (Everglades, the Louisiana Coastal Area, Great Lakes). The goal is to optimize Corps ecosystem restoration role and assure it has the authorities to do that. The EAB wants to first identify Corps roles and then look at how authorities support or block those activities. Different definitions of ecosystem restoration exist, and there is confusion over what it means. The EAB wants to look at those and several projects as guide for determining Corps role. Our method is to work systematically and use a case study approach to find out what works and what doesn't.

Dr. Hullar noted our focus on the Corps, but said we also need to look at authorities of others to mix and match. **LTG Strock** cautioned that there are prohibitions against

mixing Corps and other agencies' funds for common goals, and asked who is going to do this. Does the EAB have the resources to do this? **Dr. Donahue** responded that we do need resources to do this. We are an advisory board, and will need assistance to do this. We will provide recommendations about resource requirements as an advisory board. **LTG Strock** replied that he will take that advice and turn it over to our staff.

Mr. Babcock recalled a quote that said "Ecosystem management is not only more difficult then we think, it is more difficult then we can think." There is more uncertainty in ecosystem restoration than other area so we need to do research to gain understanding. Also patience as it takes time to restore ecosystems. One needs to be committed to this.

LTG Strock quoted Eisenhower: "The plan is not important, the planning is what is important." The process gives you the flexibility needed to achieve the goals, and this is why adaptive management is important. **Dr. Donahue** quoted Patton: "A good plan violently executed today is better then a perfect plan executed tomorrow."

REGULATORY ISSUES

Mr. Babcock said that Dr. Courtney Hackney is the EAB lead for this topic, but was unable to attend this meeting. There have been past reports looking into this, by the National Research Council (NRC) and U.S. Government Accountability Office (GAO). The Corps has already taken steps to address some of the report's recommendations proactively (e.g., the National Mitigation Action Plan, improved guidance, ways to improve consistency across Corps districts in a single state). Looking at promoting consistency and assigning lead districts per states are some of the positive steps in this direction. A transparent and consistent process is needed. Mr. Babcock questioned how the Corps has implemented the NRC findings He is aware of some solutions, but would like to know if there are more; several questions were identified in report. Mr. Babcock also feels it is important for the Corps to educate the public on why regulation is necessary.

Mr. Stockton termed Regulatory as our 'loss leader' program, but it fosters a lot of Congressional interest (80% of our projects involve it). Some of the public/interest groups want more time for review and process of permitting, while others feel the current process is adequate. We need to apply more of a systems approach to the Regulatory program (e.g., Special Area Management Plans, Habitat Conservation Plans). Regulatory is a way we can force dialogue, a great vehicle to bring people to the table. But we should not assume that cheaper and faster processing time is better because some of the public wants time to digest the issues.

Dr. Hullar cited the example of the Lake Ontario study, which involved two Corps Districts (Buffalo and New York), and 4-6 New York state agency districts. He said the Corps Districts each have different dredging/permitting policies. Different marinas have shoaling problems because of where they are located. It's a regional sediment management problem, and a good opportunity to invite key interests to talk about it with the States/Corps.

Mr. Stockton said it makes a lot of sense to apply a degree of consistency regionally and to perhaps develop a general permit to address the broad environmental issues. Babcock agreed that permitting by region rather then as individual actions has a lot of merit. We want to promote that view.

Dr. Reed backed the idea of promoting consistency across missions and the regulation process. Look at permitting activities that compromise efforts at ecosystem restoration. She does not think the word is getting out that regulatory actions need to be looked at in the context of other ecosystem restoration mission efforts.

LTG Strock said that regulatory is a frustrating area; (the Corps) is viewed as either an obstructionist or rubber-stamper. Statistics don't always show cases where we explain what will fly or not; some people withdraw their permit request when we explain what's doable or we try to reshape the outcome to promote environmental benefits. Regarding mitigation, **LTG Strock** said the Corps mitigates 31% of its projects; this means that 69% of the time we avoid need for compensatory mitigation We think these are good statistics, but avoidance is often not recognized and this statistic is used against us. To say that the Corps only mitigates on 31 % of its projects does not mean that we fail to mitigate on 69% -- rather that we avoided the need for mitigation or minimized negative environmental impacts. **Ms. Rivers** added that Goal 2 in the Civil Works Strategic Plan includes military and civil works regulatory efforts in addition to ecosystem restoration.

LTG Strock mentioned the Cook County decision (SWANCC), which related to isolated water bodies and migratory birds. A rule making discussion is needed but still under discussion; there remains inconsistency in this area. The problem is that the decision led us to anticipate that a rule was going to be made so we told the field not to issue guidance, but we're still awaiting a rule and now lack guidance.

INDEPENDENT SCIENTIFIC REVIEW

Dr. Dahab said that this is an area where science and practice (engineering) need to be on the same learning curve; the frontiers of science are often being approached. Dr. Dahab reminded that the EAB presented recommendations on this topic to LTG Robert Flowers in the past, and the also mentioned the NRC report which helped to guide EAB recommendations. There is a need for independent peer review of large, controversial, and complex projects. It needs to be embedded into the project development process as part of project life cycle from pre- to post-project implementation, engaging multidisciplinary teams, etc. The Board reviewed the recent peer review EC developed by Corps and how it built upon recommendations of the Board. The EAB would like to review in about a year how the EC evolves and would like to have available for consideration data on how it is implemented.

Mr. Stockton endorsed this approach, i.e., looking at data elements 12-18 months out. But we need to define now what data is needed, as well as looking to the Planning Centers of Expertise (PCX) to help in this process.

Dr. Dahab suggested looking at what projects are so reviewed, how projects are identified, and how the review process evolved, using a case study approach **Dr. Hullar** agreed, and thought the Board could look at this as part of the next working meeting (October). We can start now.

Dr. Reed reminded that the EC only relates to new projects, not to existing projects. We could look at project management plans that are developed over the next 12-18 months, and see how they incorporated review, but we would not have review results to examine. What is critical is how the decision is made to go to an external peer review process. Terms like 'large', 'complex', and 'controversial' will need to be defined by the Centers of Expertise. Data may need to be collected on criteria for making the decision.

LTG Strock said the key is insuring independence of the reviewers; there is a wide divergence of professional views, and one can pick and choose who agrees with you. The public needs to have confidence that reviews are truly independent.

Dr. Dahab suggested going to an independent source to select the review team, like the National Academies. **LTG Strock** supports the collection of data, and noted that the next WRDA bill may require independent review so we would need to revisit this topic once WRDA is in place.

ENVIRONMENTAL BENEFITS

Dr. Reed said the team is looking to develop a conceptual framework and metrics for defining environmental benefits. Need to look at what the Corps is trying to achieve with ecosystem restoration, what are the Federal objectives with ecosystem restoration, and what these objectives might be for 21st century. Dr. Reed asked how appropriate a single ecosystem restoration metric might be. Based on the EOPs, there is a need to look at sustainability via impaired hydro-geomorphic processes, and the restoration of them, versus the biological outcome. Need to consider environmental metrics as well as socio-economic measures.

LTG Strock stated that the Federal objective should be driving this, rather then the Corps. We respond to the needs of the nation, but there is some room to influence the Corps/Federal relationship. He cited the recent Executive Order to go beyond "no net loss" of wetlands to look at a "net gain" of wetlands. Thus we look at Corps projects to enhance and create wetlands in order to be responsive to the Executive Order; we need to incorporate into what we do. LTG Strock agreed that objective should be to look at natural processes to engineer solutions that sustain ecosystems. He asked how the National Ecosystem Restoration brings in the Executive Order?

Mr. Stockton agreed that we do need a better definition of National Ecosystem Restoration objectives. He felt that we cannot focus on a single outcome, but need a richer array of measures and outcomes. The challenge is to define, measure, and

communicate the metrics. Measures must take complexity into account but speak to the lay public in a common sense way.

Dr. Reed recognized the challenge in identifying suitable and meaningful metrics. She suggested looking at what other agencies are doing relative to Executive Order, and in general how they define output metrics, giving some examples.
LTG Strock said this Board can help by looking to OMB and the Council on Environmental Quality and get some clarification of the Executive Order and its intentions.

ECOSYSTEM RESTORATION PERFORMANCE MEASURES

Dr. Farber said that in answer to a question on why the Environmental Benefits Assessment topic and Performance Measures topic are separate, that the two are certainly linked, but each serves a slightly different function. He noted that the focus on performance measures is primarily OMB-driven. Our (Corps) performance measures focus on aquatic ecosystems. As opposed to those agencies whose missions are terrestrial based such as Forest Service and Bureau of Land Management. Traditional measures such as acreage are not appropriate for aquatic systems; they can be misleading. OMB is strongly focused on acres or dollars/acre, but these are just not appropriate. Measures should be enhancement based, focusing on enhancement of biotic processes and structures; measure results vs. impacts. These may work well internally, but may not be appropriate externally. The focus should be on results and not impact acreage. Measures also need to be transparent and economically translatable. Performance and benefit analysis are coupled**.** Workshops with the right people might help bring some of these ideas together.

Mr. Stockton. OMB sees the world differently; we have a difficult time communicating in the same language and values as OMB and others regarding ecosystem restoration outputs and performance. It may be helpful to bring different groups together to share different objectives and perspectives.

LTG Strock strongly supported the idea for workshop and symposium to identify performance objectives, and asked Mr. Stockton to think about this; we should focus on how to determine success in this arena. We have been good at coming up with quantifiable performance measures within the Navigation business line, through joint sessions with industry and stakeholders to define the measures. Need to do the same within the Ecosystem Restoration area and extend these workshops to all of the Civil Works Business Lines (programs). Existence value (of ecosystems) is a measure that has recognition outside the Corps. How do we assign monetary value? We need to broaden the discussion to qualitative aspects.

Dr. Farber maintains that there are ways to quantify qualitative processes and systems.

4. CONCLUSION

Mr. Babcock posed the notion of natural systems as 'victims of succession'; benefits and performance measures should be linked to successional stage, as they may vary accordingly. He cited the example of the Wetland Reserve Program, where benefits are not realized until later successional stages. May never be able to go to OMB and quantify these, but if we can get multiple Federal agencies telling OMB the same story it might work. The Corps can facilitate discussions and debate about this as it can look beyond a specific area or interest. Think about having 7-8 resource agencies go to OMB together to protest the simplification of ecosystem results as a single quantitative indicator. Must realize that ecosystems are dynamic and change over time.

Dr. Donahue noted that the Board will work towards formal paper development on each of these topics for the last meeting of this year and resource needs will be identified.

Dr. Hullar said the EAB is in the advice business, and has a good client in the Corps. He reiterated LTG Strock's endorsement and commitment to adaptive management and the course the Board is taking. He also heard a commitment to bring in other experts as part of this process.

LTG Strock responded that both he and his predecessor have endorsed the commitment of the Corps Commander to adaptive management, but reiterated the constraints that must be recognized.

Dr. Hullar said they do need staff commitments (resources) to move this forward, to do our papers; **LTG Strock** said staff will be made available.

Mr. Babcock told the Chief to let the board know if there are other directions he would like us to consider.

LTG Strock said that there are connections among the seven sub themes, and as such the Board needs to think about connections among these issues since they are all related.

Mr. Babcock responded that by the time the EAB finishes this process, it may end up communicating this as seven topics or three integrated into one or three topics.

5. PUBLIC COMMENT

There were no comments from the public.

6. CLOSING REMARKS AND ADJOURNMENT

LTG Strock thanked the Institute for Water Resources, Engineer Research and Development Center, Corps Headquarters, and Office of the Assistant Secretary of the Army for Civil Works staff for attending. He said this is a wonderful process and

important to him and his staff. He mentioned that IWR would invite him over for good provocation sessions, and said we should link that process with this process. A valuable role for the Board is to help (the Chief) think through and answer the tough questions asked of him. LTG Strock noted the recommendations of the Board, and that he owes more formal responses to them when we next meet.

Ms. Rivers pointed out that we are looking at the next Civil Works Strategic Plan, and a linked provocation/EAB may inform its development. Need to look for some elements from these seven issues. She said we have provided staff support, but we need to reach across the Corps to get broader support and provide the most complete critical thinking.

Mr. Stockton noted that Dr. Donahue did participate in the last provocation session, and that the Corps needs to hear different viewpoints and stretch the imagination.

LTG Strock thanked the Board for their commitment and for asking the tough questions; keep it up.

There being no further business, the meeting adjourned at 1205 hours.