Chapter VI

THE MORRIS YEARS

Shortly after becoming Chief of Engineers, Morris met with McGrath to discuss the "optimum uses of the Environmental Advisory Board." They decided that the time was opportune for the Board to reexamine its mission and its effectiveness.[1] Consequently, the meeting in the fall of 1976 was more unstructured than usual. The Board was asked to evaluate national environmental trends for the next ten years and, based upon its evaluation, identify activities and opportunities for the Corps of Engineers in the next three years. The Board was also supposed to select a recipient for the Chief of Engineers Environmental Excellence Award.[2] After a day in which the Board collected its thoughts on these subjects, McGrath presented a verbal overview to the Corps. However, he began with some comments on the management of the Board itself. Members recommended that Board terms be limited to no more than four years. Also, they urged the Corps to put an economist on the EAB.[3]

Turning to the subjects at hand, McGrath noted the emergence of a national environmental ethic. The Board members, particularly Sharpe and McGrath, saw that the growing impact of this ethic in urban parts of the United States would require the Corps to become more sophisticated about urban environmental design. The Corps needed a better knowledge of the complex institutional problems involved in urban planning in order to solve the problems facing the nation's cities. EAB members also asserted that the Army Engineers must better educate people about their responsibilities and about environmental matters in general. Interdisciplinary activities should be encouraged. Finally, the Corps itself needed better forecasting procedures. Too many "soft," or imprecise, numbers were being used.[4]

General Morris' thoughts complemented the Board's. He felt that the Engineers had become environmentally sensitive and should therefore not react defensively to attacks against it. He himself was dedicated to insuring the proper integration of environmental considerations into Corps planning. In fact, the first policy letter he issued, on 8 October 1976, was entitled "Environmental Guidelines for the Civil Works Programs." Later that month, the revised "Environmental Policies, Objectives, and Guidelines" was published in the *Federal Register*. This summary updated the *Environmental Guidelines* published in November 1970. A major change was that the beginning of point c was revised to read "To restore, maintain, and enhance the natural and man-made environment . . . ." rather than only "To enhance."[5]

Meanwhile, Morris had been "grappling" with the problem of what to do with the EAB. Indeed, he admitted at the spring 1977 meeting that he had been wondering about that question for the last four or five years. Progress had been made however, and "we're finally getting close to a workable way to do business, where you do help us with specifics." With sizable understatement, he observed that "some real tough problems" were still left for the Board to consider.[6]

Lieutenant General John W. Morris
Director of Civil Works, 1972-1975
Chief of Engineers, 1976-1980

There remained the question of how the Board was to address these problems. From the EAB's inception, there had always been discontent among some Board members over the lack of progress from meeting to meeting. Stoddard had blamed the Corps staff for trying to control the agenda too tightly, with emphasis on discussion and social events rather than on resolving issues.[7] To some extent, Morris agreed. He thought that the Board spent too much time talking about how to get laws changed and issues resolved. "But then," he recalled, "we'd sit and talk about our limitations on getting it done. Then the Board meeting would be ended. We'd have a cocktail period or something and go away. . . . We had gotten to a point where we had gotten practically all of the good we could get out of that format."[8] Therefore, Morris and McGrath developed an improved way of operating the Board, which closely resembled what General Gribble had established nearly three years before, but had seldom been practiced. Specific questions were sent to the Board for its consideration. Then members would meet in a "workshop session" the first day and report to the Chief on the second.[9]

This new format was only imperfectly implemented at the May 1977 meeting, where mitigation of adverse effects on fish and wildlife was the major topic. While the Board did attempt to address specific questions, it did not allow itself enough time for discussion and analysis. The EAB advised the

Corps to protect the integrity of natural resource systems. Engineers had to realize that some natural features were not elastic; for example, land was a finite resource. Therefore, members insisted, echoing earlier Boards, mitigation had to become a part of all project engineering. There was no one desirable measure of mitigation. The development of habitat equivalents for mitigation purposes appeared promising, but fraught with potential for abuse. Habitat improvement seemed to offer advantages, but needed to be viewed carefully. Federal agencies had to work together on the mitigation problem.[10]

Events beyond its control hindered the Board's effectiveness in 1977. For one thing, new members joined the Board in the spring, and they needed time to learn about the Corps. Taking seats on the EAB were Gerald McLindon, Dean of the School of Environmental Design at Louisiana State University, and Stanley A. Cain, a former Assistant Secretary of the Interior, who was currently a visiting professor at the University of California, Santa Cruz. Cain had also served as the Director of the Institute for Environmental Quality at the University of Michigan. Meanwhile, Richard Backus retired from the Board. In addition to these changes, new personnel came into OCE. The most important officer transfer occurred in July, when Major General Charles I. McGinnis replaced General Graves as Director of Civil Works. McGinnis, formerly the Southwest Division Engineer, had attended a Board meeting in Little Rock in 1974. Because of these personnel changes, as well as an intensive review of the Board by the Department of Defense (see appendix B), it was decided to postpone the fall 1977 meeting. Nearly a year passed before the Board met again in March 1978.

This meeting was the second held at Airlie House, near Warrenton, Virginia. Morris and McGrath had agreed that the Board should use the occasion to review the Corps' performance since 1970. Hence, the theme became "NEPA plus 8 years." The day before the meeting began, EAB members met with Corps staff in a stimulating workshop session. The next day McGinnis presented an overview of the Corps' response to NEPA, and he provided the Board with a draft chronology of Corps actions in the environmental field over the last eight years.

EAB members arrived at a number of conclusions regarding the Corps' environmental record. On the credit side, they were impressed with the Corps' professionalism, its regulatory programs, the extent of public participation, the environmental training programs, and the development of multidisciplinary staffs. Major weaknesses included the esoteric language of Corps regulations; the lack of dissemination of technical information to universities, professional societies, scientists, and the general public; and too little interaction between the Board and the staff. Members stressed that there was much unfinished business facing the Engineers. There was still no mitigation policy. Too many managers without environmental training were being promoted to senior positions. Research in wetlands development and in nonstructural flood control solutions needed to be continued. The contri-

Major General Charles I. McGinnis
Director of Civil Works
1977-1979

butions made by the Corps' environmental atlases required reevaluation. Finally, members urged the Corps to become more involved in monitoring certain projects to assess environmental effects. They also encouraged the Corps to work more energetically in the field of public education. The Board suggested that in the future the Corps should address such challenges as strip mine rehabilitation, the construction and maintenance of railroad beds, and the construction of wastewater treatment facilities.[11]

The March meeting marked the first time that the Board focused attention on the military functions of the Corps as well as on civil works activities. Colonel Charles E. Sell from the Office of the Assistant Chief of Engineers briefed the EAB on the Army's new environmental program. This program was designed to accomplish national environmental objectives at Army installations. The Board reacted favorably to the progress reported in this area.[12]

The EAB went through further personnel changes in mid-1978. McGrath, Tabb, and Evans left in March. McLindon became the new Chairman,[13] and four new members were appointed. Nicholas L. Clesceri came from Rensselaer Polytechnic Institute. A professor of civil and electrical engineering, he specialized in water pollution and eutrophy. J. Henry Sather was graduate dean and professor of biology at Western Illinois University, with expertise in animal ecology and wetlands research. Dee Ann Story was a research scientist and associate professor of anthropology at the University of Texas, who was particularly concerned with archaeological preservation. As such, she brought to the Board expertise and insights that had not been present before. Finally, the general counsel of the National Wildlife Federation, Oliver Houck, also became a member, thus retaining on the

Board at least one representative from a nationally known environmental group. In August, Lieutenant Colonel George F. Boone replaced Hill as Assistant Director of Civil Works, Environmental Programs.

The large turnover determined the agenda at the next meeting, 30 October–3 November 1978, for the new members required basic orientation briefings. In keeping with the new emphasis on military functions established at the last meeting, it was moreover agreed that the meeting would involve tours of some Army installations. Several choices were offered the Chief of Engineers, but he finally decided that visits to Fort Lee and the Radford Army Ammunition Plant, both in Virginia, would be most instructive. Later, at the suggestion of the Army Training and Doctrine Command (TRADOC), the trip to Fort Lee was switched to Fort Eustis in Tidewater Virginia.[14]

With such a large turnover, preliminary workshop sessions were pointless. Instead, after a day of briefings at the Forrestal Building in Washington, D.C., the group flew to Fort Eustis, where the post facilities engineer provided an orientation the following day. At Norfolk, the District Engineer welcomed Board members and gave them an overview of the activities under his direction. On 1 November, the Board traveled to the Radford arsenal in southwest Virginia and toured facilities there. It arrived back in Washington that evening and on the next day held a general discussion about the trip.[15]

After the discussion Dean McLindon talked to General McGinnis about the Board's findings and conclusions. He thought the session had been informative; however, it raised "a number of fundamental issues." According

Gerald J. McLindon, Chairman, Environmental Advisory Board, 1978–1982.

to McGinnis, McLindon questioned "the whole approach to environmental treatment." He thought that perhaps the Radford arsenal's environmental efforts were undermined by a production-oriented staff. Turning his attention elsewhere, the EAB Chairman relayed the Board's concern over the Corps' willingness to accept state environmental standards which were below "optimum levels." The Corps, it was suggested, should require a higher level of compliance. The Board also wondered if the whole planning procedure of the Corps might be outmoded. McGinnis and McLindon agreed to make this a subject for a future EAB meeting. There was concern, too, over "whether the Corps was getting its money's worth in historical and archaeological areas." Members recommended using the expertise of the National Park Service in this regard. A cautionary note was also sounded over the use of benefit-cost analysis. Clesceri suggested that it be replaced by a risk-benefit approach, which balanced the predicted benefits of a project against potential risks to both the environment and human welfare; General Morris later noted that cost-benefit analysis was mandated by law, thus tying the Corps' hands. In conclusion, Dean McLindon recommended that mitigation and water supply problems be considered as subjects for future meetings.[16]

Impressed by the Board's potential, Morris wanted the EAB to work harder, preferably meeting four times a year. Lieutenant Colonel Boone, who had been advised by Hill to "unload" the Board on somebody else if possible, also realized the EAB could be valuable, but only if significant changes were made in its operation. He decided that, in order for the Board to be most effective, it should submit written reports and recommendations after each session, which could then be circulated to Corps offices for written responses. In this way, a continuous, written dialogue between the Corps and the Board would be insured. Furthermore, Board members could see how successful they were in having their recommendations translated into specific actions.[17]

This plan was first tried at the EAB meeting in June 1979, which took place during the four-day Civil Works Environmental Conference held in Chicago. Actually, this conference combined several previously approved conferences, including the EAB, the Clean Water Act of 1977, and the District Engineers planning conferences. Combining these events was expected to save from $50,000 to $75,000. Approximately four hundred people attended.[18] The Environmental Advisory Board had expected to meet again in March or April 1979, but Boone could not find a time when all members were available. The problem of finding a time agreeable to Board members irritated Morris, who wrote to McGinnis:

> We seem to be missing the point somewhat. The Board should meet at COE's call, not at their convenience. Get on a 4 months schedule and hold them to it or get board members who can participate. If *we* don't need the board let's abolish it—if *we* do then make it work for us. I'd like to continue it one more year at least.[19]

Despite some reservations, Morris went along with the idea of having the Environmental Conference; and, as he later admitted, it turned out to be a

great success. The conference included addresses on various environmental problems, ten different workshops on environmental matters, general sessions relating to Corps problems, and summaries given at the end. Corps senior officials and environmental personnel from throughout the country attended, including engineers as well as those associated with the natural and social sciences. Also present were representatives from other federal agencies with environmental responsibilities. The conference came to be, in Boone's words, the "benchmark of today's environmental activities in the Corps."[20]

One of the first things the EAB discussed at the conference was the seating of alternates at Board sessions. A misunderstanding between Houck and the Corps prompted the question. A teaching engagement prevented Houck from attending the June meeting, and he attempted to send one of his associates from the National Wildlife Federation in his place. Boone disapproved because Houck had been sanctioned by the Secretary of the Army's office as an EAB member, and regulations prevented substitutions. Moreover, Boone pointed out that individuals were appointed to the Board, not organizations, as Houck seemed to think. The National Wildlife Federation had no "seat" on the Board.[21] EAB members agreed with Boone, adding that the use of alternates "would seriously impact continuity of study and discussions...." The Board advised the Chief of Engineers to disallow alternates and to encourage members to attend meetings whenever possible.[22]

In an all-day session on Thursday, the EAB analyzed the Corps' planning process. Morris suggested, by way of introduction, that perhaps the process described in Engineer Pamphlet 360-1-10, "U.S. Army Corps of Engineers and the Environment," was not accurate. He thought that the EAB might rewrite parts of this pamphlet. In his address, McLindon summarized recent Board positions on a number of issues. He lauded the Corps for being "strongly professional" in carrying out its functions in a fish-bowl atmosphere and for using multidisciplinary teams, although he noted that some Districts did this better than others. He also listed some weaknesses within the Corps:

1. Failure to describe the regulatory program in terms understandable to the public
2. Lack of or low quality of exchange of information with the public, agencies within the Corps, and other professionals
3. Lack of explanation to the public of Corps missions or processes—how missions are assigned and carried out
4. Shirking responsibility for educating the public on environmental issues
5. Too little emphasis on cultural resources

McLindon closed by suggesting that perhaps one day there would be no need for NEPA, once the public became convinced that the Corps (and other federal agencies) automatically considered environmental issues.

After McLindon's address, Stanford University researchers Charles M. Brendecke and Leonard Ortolano presented a summary of their study, "Environmental Considerations in Water Resources Planning by the Corps of Engineers." Some of their major concluding "speculations" were (1) there is a

significant relationship between hierarchical control and dialogue with outside interests, namely, the more control, the less contact with the public; (2) promotion might depend on favorable reports; and (3) the more controversy, the more control is exercised in an effort to achieve consensus. Morris took strong exception to the second point, insisting that promotion did not depend on the number of construction projects a District or Division Engineer had supervised. Dan Shanahan, Deputy Chief of the OCE Planning Division, described the planning process as it was meant to function. He furthermore noted the problem of getting Congress to pay for mitigation, for instance, for an ecological preserve.

Later in the session, the audience and Board members divided into discussion groups to examine various matters relating to planning. Major General Robert C. Marshall, Division Engineer of the Lower Mississippi Valley, one of the discussion leaders, observed that his group agreed that present regulations were not timely and were overly complex. "Some folks who write regulations have never been in the field," he complained. Nearly all agreed that no more regulations were needed. An interesting discussion also developed about the lack of a real environmental branch in the Office of the Chief of Engineers and about the primacy of engineers over environmentalists within the Corps. One Corps environmentalist asked rhetorically, "How do environmentalists get to the top, to the management positions?" A question was raised about whether District offices should have separate planning and environmental offices. The implications of these questions upset Morris, and he responded that he wanted to depend on leadership and the review process for insuring proper integration of environmental issues: "The chief environmentalist is the District Engineer."[23]

The following morning, McLindon summarized the EAB's findings. He suggested that, though everyone engaged in environmental matters can be called an environmentalist, there are professionals who are specifically trained to incorporate environmental issues into the planning process. The Corps should recognize these professionals. Therefore, the Board suggested several changes: (1) all professional environmentalists (by training) should be identified in the same way that professional engineers are identified; (2) positions requiring little engineering experience should be identified; (3) District Engineers should consider establishing an environmental affairs office which would maintain contact with the public and with other professionals; and (4) there was an urgent need for a separate environmental unit in the Chief's office.

Other recommendations were made regarding the planning process in general. The Board repeated what had been said many times before: regulations must be simplified. Also, the public should become involved in the planning process at the earliest possible time. The Office of the Chief of Engineers should learn of problems out in the field before regulations were drafted; and, once implemented, regulations should be periodically reviewed by OCE.

Morris concluded the conference with some significant observations. He rejected the idea of an environmental office directly under him. The office headed by Boone coordinated environmental activities in the civil works area. On the military side, Colonel Sell in the Assistant Chief of Engineers' office was in charge. Morris also insisted that environmental branches in each District would not work; the multidisciplinary approach would not be helped by developing new functional areas. Leadership was the important thing. All District and Division Engineers must address environmental matters. Moreover, it was "hogwash" that promotion depended on favorable reports. In fact, in Morris' experience, "the program directors that come up in my mind as being poorest are those who send in favorable reports which can't stand the test." Morris once more asked the EAB to tell him whether the pamphlet on the Corps and the environment needed revision, and then he spent a considerable amount of time discussing the relationship between engineers and environmentalists. It would take time to work out all the problems, he indicated; but the Corps could not allow cliques to grow within it. On one hand, he was offended by the implication "that those who call themselves environmentalists have found the Holy Grail. And those of us who are engineers did not participate. That's wrong." But he also lambasted engineers who, as he put it, thought they were the only ones who could tell the District Engineer which way the sun rises. The two sides had to start talking to each other. Environmentalists must not think that engineers cannot understand national environmental objectives, but engineers must learn to listen to environmentalists first. In closing, Morris expressed his "utmost confidence" in his District and Division Engineers. The only thing that bothered him was the lack of consistency from District to District. It was important that the Corps work together as a team. "We have to keep in mind that our mission basically is to be the nation's finest engineering asset."[24]

This comment left little doubt that Morris believed the Corps first and foremost to be a body of engineers. While obviously in favor of multidisciplinary planning, he was not going to change the organization of the Corps in such a way as to raise questions about the professional orientation of the agency. What, by implication, he was willing to concede, however, was that the responsibilities of engineers had changed. In order to perform their duties now, they needed advice and support from other professionals—biologists, botanists, archaeologists, and historians, to name only a few. It was critical that the Corps remain aware of this obligation. Therefore, Morris asked the EAB to monitor the Engineers' environmental sensitivity, as reflected in policy, training, and implementation. If the Board did this work consistently and thoroughly, then he was ready to be fully supportive. If, on the other hand, the Board was indeed becoming window dressing, he did not see any sense in retaining it. Morris had turned the relationship between the Corps and the Board upside down. Six or seven years earlier, it was the Board challenging the Engineers to measure up. Now, it was the Corps asking the same of the EAB.

The Board responded admirably. It was determined to give to the Corps substantive comments and recommendations about the environmental concerns raised in Chicago. Consequently, these same issues were also studied at the next meeting, which was held in Alexandria, Virginia, on 19–21 September 1979. As before, the major subject was the place of environmentalists in both the planning process and the Corps' organizational structure. However, this time Houck was present, and he used the opportunity to ask some probing questions. Why did the Corps have no conservation goals? Does the Corps ignore expensive conservation solutions? Where are the environmentalists in the Corps' structure? Who makes the decisions? Who "scrubs" (examines) environmental impact statements, and when are they finally submitted? The Corps' environmental activities were probed from every direction as the Board sought weaknesses and searched for answers.

The EAB identified three major areas that needed to be improved in order to integrate environmental considerations fully into the planning process:

1. The number and position of environmentalists in the Corps
2. Deficiencies in the environmental review process
3. Difficulties in the permit review process[25]

The Board's criticisms were pointed indictments of the Corps' planning abilities. Summarized, the judgment was "that environmental personnel are not equal partners in the planning process." Grades and salaries fell far below those of engineers, and environmental sections were not given equal stature with planning, engineering, real estate, etc.

Working with the Office of Personnel Management (OPM), the Corps needed to develop more rigorous qualifications for environmental positions. Rewards and penalties had to be based on the quality of environmental studies, and more training had to be provided. EAB members also suggested that public participation, though good, be increased and that local advisory "teammates" be selected who could work with District Offices on specific projects. Army Engineers had to promote "the broadest range of conservation options" more aggressively.

The EAB had little good to say about environmental reviews conducted by the Board of Engineers for Rivers and Harbors. The BERH's "scrub" on projects was "too little too late." Even more serious, it appeared incapable of reviewing applications fairly, for it was inadequately staffed, and positions were at "inappropriate grade levels." In fact, according to EAB members, the BERH was "riddled with promotion versus review conflicts." Its proper function, said the Board, was that of a court, with promotion and review responsibilities resting with OCE. Outside opinions from such agencies as the Department of Energy or the Environmental Protection Agency should be solicited. The EAB also criticized the BERH for approving projects without considering the difficult environmental problems, which were handled separately later.

These severe reproofs shocked Corps personnel. Most of the criticism was rejected out of hand. Later, EAB members were invited to attend a BERH meeting to gain a better understanding. McLindon, Sather, and Houck accepted the invitation and observed a meeting on 14 November. While certain concerns were assuaged, there still remained areas in which the EAB and the Corps were unable to reconcile their different perceptions of the Board of Engineers for Rivers and Harbors.[26]

Turning their attention to the permit system, EAB members declared that environmental positions in construction-operations divisions were both too low in grade and misplaced. These positions should have been in planning and environmental divisions. Furthermore, the entire permit system was reactive; more guidelines were needed. Community education had to be emphasized. The Board also thought that enforcement was "less than rigorous."[27]

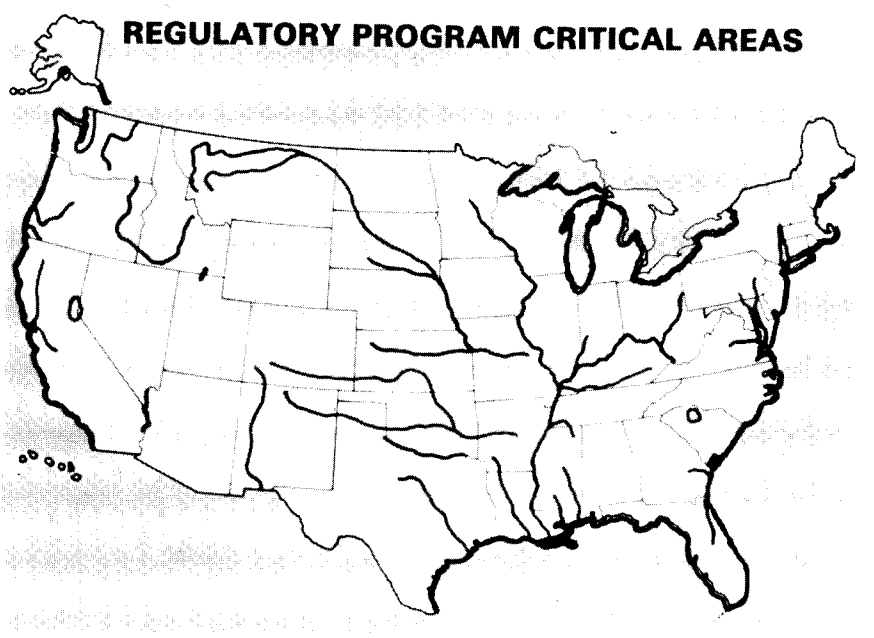
It was decided to write a single comprehensive response to the comments and recommendations emanating from both the June and September EAB meetings. Where the comments were similar, they were

Major General E. R. Heiberg III, Director of Civil Works, 1979-1982.

consolidated. However, before completing the written response, Major General Elvin R. Heiberg III, who became the new Director of Civil Works in July 1979, presented an oral overview of the OCE position at the November meeting of the EAB in Huntsville, Alabama. As a result of this meeting, which concentrated on environmental training, the Board made further recommendations, and the final Corps response also addressed the EAB's comments.[28]

In four major areas the Corps agreed that further study or improvement was needed: enhancing public awareness of the Corps' regulatory program, increasing training opportunities in the environmental field, separating regulatory functions from the construction-operations divisions, and raising the grade levels of regulatory personnel. Nevertheless, it is difficult to evaluate the overall effect of the Board's recommendations. In May 1980, for instance, George Brazier, Chief of the OCE Construction-Operations Division (Con-Ops), requested suggestions from Division Engineers on improving public awareness of the Corps' regulatory functions.[29] Brazier's letter, according to Boone, was a result of the EAB's concern. Curtis Clark, Chief of the Regulatory Functions Branch, on the other hand, claimed that the letter was generated internally; he had never heard of the Board's recommendations.[30]

The same difference in perception was apparent in regard to questions concerning the organizational place and grade structure of regulatory functions personnel. The initial response of the Civil Works Directorate to the Board was that an "unnatural organization" should not be created by establishing a separate regulatory functions division. This answer, however, did not satisfy General Morris; he told his staff to study further the future of regulatory functions within construction-operations divisions in the field.[31] Heiberg passed on the assignment to Brazier, who wrote, "I do not think that an across-the-board edict elevating the regulatory functions activity at the district level to division status would greatly improve the quality of the regulatory decisions made by district engineers. If, however, a manpower analysis were made in any given district which proved that the regulatory workload and technical involvement suggested such a change, I would agree to it." Brazier also suggested that in certain Districts it might be possible to elevate the head of the regulatory branch to the same grade as his immediate superior, the chief of construction-operations, without actually creating a separate division. Nevertheless, he saw in any solution some problems, such as extending the District Engineer's span of control or running into conflicts with civil service procedures.[32] In reply, Heiberg emphasized that the EAB was not trying to develop regulatory functions divisions in all Districts, but only in those eight or ten where regulatory functions were "big business." He noted that the Board was not interested solely in grades; it was also concerned about a system wherein the operations division head—generally an engineer with many responsibilities—acted as a filter between regulatory functions personnel and the District Engineer.[33]



Map of critical geographical areas in the Corps of Engineers regulatory program.

Brazier could only repeat himself: if regulatory functions were to be removed from operations divisions, it must be done selectively. He also insisted that the fact that heads of construction-operations divisions were engineers should have no bearing on the matter. "Our reputation as a leader among agencies responsive to the environmental movement has been earned with engineers in charge."[34] Colonel George R. Robertson, the Civil Works Directorate executive director and a former District Engineer in Alaska, did not agree that separate regulatory functions divisions should be established in *any* District, although he did concede that another review was needed of grade levels and disciplines within regulatory functions.[35] As of June 1980 the issue had still not been resolved.

One area in which the Corps conceded the positive impact of the EAB was in training. The Resource Management Office of OCE asked the Civilian Personnel Office to examine the Board's criticism that environmental training varied widely from District to District. This, in fact, was found to be true. Districts spent anywhere from one-fourth to three man-years in training activities. Moreover, the qualifications of training officers were quite uneven thoughout the Corps.[36] As a result of this finding, the Corps began to establish better management of training programs in order to establish consistently high quality in the entire organization.

At Huntsville the Board recommended that the Corps develop greater contact with universities, perhaps to the extent of having personnel sit on

curriculum advisory committees or at least serve as guest lecturers. The Chief of Engineers responded enthusiastically to this suggestion, and he sent a letter to the field on 26 February 1980 encouraging such contact wherever possible.[37] This program quickly bore fruit in the Lower Mississippi Valley Division. No doubt other field activities will follow suit.[38]

Members of the Environmental Advisory Board at the Huntsville, Alabama, meeting, 28 - 30 November 1980. *From the left*: J. Henry Sather, Nicholas L. Clesceri, Gerald J. McLindon, Dee Ann Story, and Oliver Houck.

An important topic at the Huntsville meeting, of particular interest to Houck, was to what extent the Corps considered national effects when processing permits—national scoping, as it was called. The case of the Portsmouth, Virginia, refinery illustrated this matter. The basic question was whether there were national guidelines the Corps could use to determine if the refinery should be built, or were only local and state interests to be considered. A related matter was the problem of cumulative impacts. By issuing the permit, would the Corps open a Pandora's box of unforseen evils?[39] Shortly after the meeting, Houck expanded his views in a letter to McLindon. Heiberg, Boone, and other EAB members, as well as Michael Blumenfeld, Assistant Secretary of the Army (Civil Works), received copies. Houck asked how many alternatives the Corps should consider in developing its own projects and in evaluating permit applications. In addition, how far should the Corps go to broaden directives from Congress? Finally, when examining permit applications, how limited was the Corps by geographic locations or industrial processes already owned by the applicant?[40]

Blumenfeld thought the last question was particularly significant and wanted Army lawyers to examine existing policies and regulations on the

matter.[41] Brigadier General Hugh G. Robinson, Deputy Director of Civil Works, argued, however, that the Corps should not immediately do a legal study every time there was an environmental problem—"The lawyers can prove anything."[42] Heiberg agreed[43] and asked Colonel Maximilian Imhoff, Director of the Water Resource Support Center, to work with Dr. Lew Blakey, Chief of the Civil Works Policy Office, on the Corps' position in response to Houck's concern.[44]

Imhoff's reply dealt mainly with the question of "when, if ever, should the Corps' view of national interest override a clearly articulated local interest (whether or not that interest is environmentally oriented)." While elaborating on the complexities inherent in such a question, Imhoff could not find the exact answer. Blakey did not add much more,[45] although he agreed with Houck that the Corps had an obligation to turn an applicant away from an inappropriate site. Laurence Jahn, Vice President of the Wildlife Management Institute, Washington, D.C., a recently appointed EAB member, also agreed with Houck that national values often were not fully considered at the District level.[46]

When the Board met in February 1980, in the Kingman Building at Fort Belvoir, Virginia, national scoping was the first issue discussed. The Board agreed that Houck should write a memorandum to General Morris expressing the EAB's concern on the subject. This Houck did at the conclusion of the meeting. A major problem, Houck suggested in his letter, emphasizing what he had already stated orally, was that the Corps planned at the District level, while project impacts often extended far beyond District or even Division boundaries. The Corps' work on the upper Mississippi River, for instance, significantly affected "human life patterns" in the lower Mississippi states. The Engineers often did not consider alternative methods for flood control, power supply, or navigation services because the alternatives were "outside the scope of study." For example, improved railroad service might be preferable to enlarged navigation canals such as the Tennessee-Tombigbee Waterway. Similarly, the Corps should consider energy conservation as an alternative to large projects like the Dickey-Lincoln Dam in Maine. There were also problems with permits. By delaying a decision on whether to issue a 404 permit to allow dredge disposal operations, the Corps was often faced with a fait accompli. The site had been bought, the state had approved the project, and engineers had completed the plans. Consequently, Houck asserted, the Corps was under tremendous pressure to approve the permit.

Houck recommended various solutions. The District had to become involved earlier in projects of potential impact beyond District lines. The issue should then be studied at the appropriate level, at least by the Division, if not at OCE. Proper coordination among all federal and state agencies had to be initiated as early as practical. Moreover, the Corps "should require early application for any activity which will require a Corps permit." In general, the Corps must "provide the most objective, expert analysis possible," free of

artificial restraints imposed by arbitrary boundaries or administrative guidelines. Finally, the Engineers should consider "national authorizing legislation" under NEPA in order to consider the impact of projects collectively and in conjunction with ongoing projects and authorities.[47]

In the middle of April, General Morris sent a letter to his Division Engineers in which he responded to the concerns raised in Houck's memorandum. He cautioned the Division Engineers to be alert to possible effects of projects within their regions which might affect areas in other parts of the country. OCE would continue to "broaden the scope of draft study authorities when given the opportunity to do so," but Districts and Divisions must also consider the adequacy of each study authorization. Morris rejected mandatory consultations before applications were made in the regulatory program, but he emphasized voluntary discussion, especially for large and complex projects. People should be encouraged to make informal inquiries at the District offices before submitting their permit applications. In conclusion, Morris wrote:

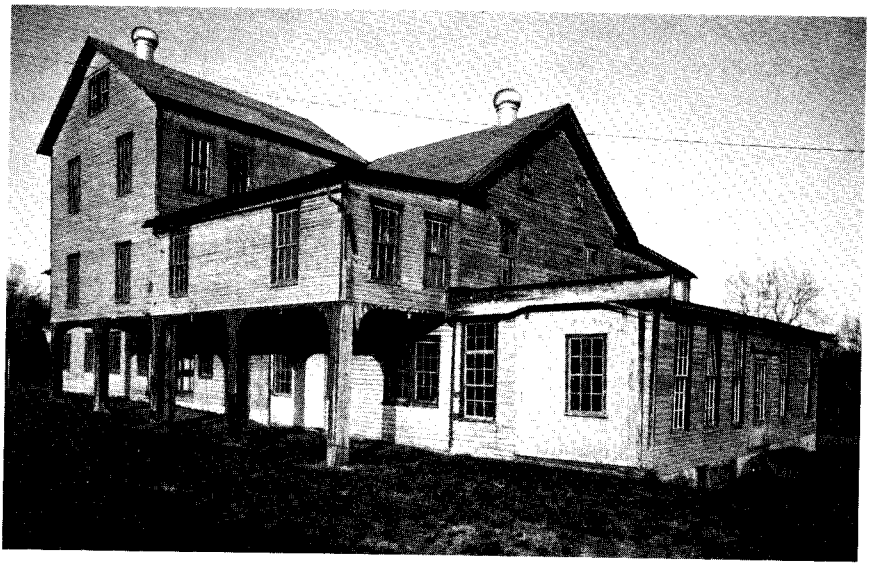
> In all these matters we are dealing with questions of judgment and balance. I am committed to our present system of highly decentralized initiative and execution under broad general guidance. The problem of "national scope" issues raised by the EAB will challenge our determination to make this philosophy work.[48]

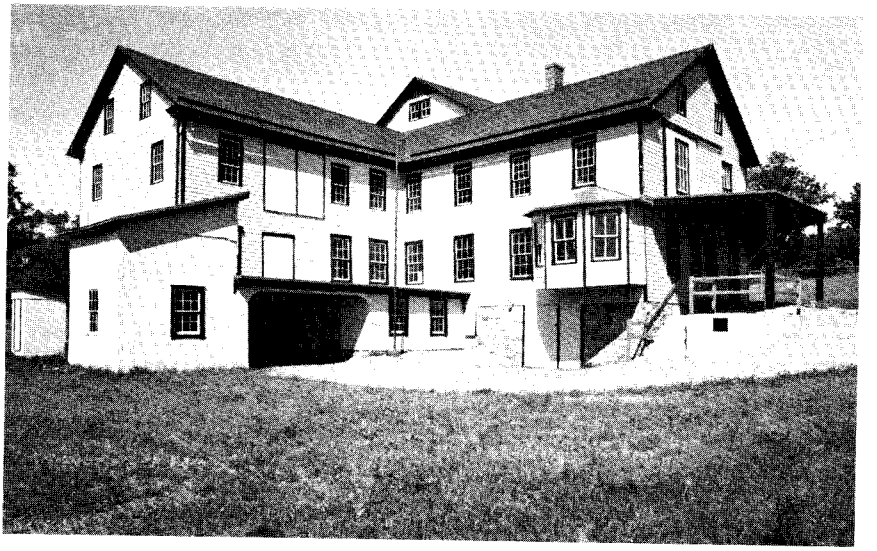
Consequently, General Morris left much to the discretion of his subordinates, as he attempted to reconcile the Corps' decentralized organization with an issue that transcended administrative boundary lines. The development and application of national guidelines, as well as the appropriate time to use them, would remain controversial issues without easy answers.

In December 1975 and May 1977, mitigation had been the principal subject of the EAB meetings. The Board once again returned to this theme at its February 1980 session, which was attended by representatives for the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the Environmental Protection Agency. Earlier, Brigadier General Richard M. Wells, North Pacific Division Engineer, had sent to Heiberg a very provocative letter on mitigation, which illuminated some of the problems facing the Corps; copies were sent to Corps personnel and distributed to EAB members. Wells believed that Corps activities, policies, and procedures were adequate to insure the initial development of mitigation lands; but operation and maintenance responsibilities needed to be reconsidered. The Corps' predilection to depend on funds from other federal agencies for operation and maintenance activities usually led to disappointment, for other agencies simply did not have enough money.[49]

Another mitigation issue was retrofitting, that is, providing additional mitigation for projects already completed when studies revealed new dangers to the habitat. The Civil Works Policy Office felt that retrofitting was not desirable except when specifically authorized by Congress or the courts. An

exception would be made, however, in cases involving resources vitally important to the nation.[50]





The Gruber Wagon Works, Berks County, Pennsylvania—an exercise in historic preservation. Listed on the National Register of Historic Places, Gruber built wagons for farm and industry from 1882 through the 1950s. In 1974, Philadelphia District purchased the three-story structure which was located on its Blue Marsh Lake Project. During the winter of 1976-77, the works was moved section by section to a new location five miles away. These pictures show the works at its new location before and after its final restoration.

The EAB, nevertheless, urged the Corps to reexamine projects presently under construction to insure the adequacy of mitigation and to review "on a discretionary basis" those constructed before 1958 to evaluate mitigation potential. In response, the Engineers noted the legal and policy implications of reexamination but agreed to study the idea further.[51]

One feature of the Corps' mitigation activities elicited strong reservations from the Environmental Advisory Board. This was the "man-day use" method by which the Corps measured the value of wildlife habitat lost to a project. The method involved assigning annual monetary and nonmonetary values to the project area and then calculating how much mitigation was necessary. The procedure emphasized the user's access and facilities rather than the resources to be lost or displaced. The EAB felt this system was of limited value. Members recommended that alternative approaches be tested and evaluated, including a new system called Habitat Evaluation Procedures (HEP), which focused on the habitat itself as the justifying factor.[52]

In addition to fish and wildlife, significant historic and prehistoric artifacts, sites, and structures—cultural resources—required protection. Public Law 93-291 (Moss-Bennett Act), passed in 1974, authorized federal construction agencies to spend up to one percent of project funds to identify and recover historical and archaeological artifacts. Since that time the Corps had been involved in nearly three hundred cultural resources mitigation efforts.[53] Some efforts, such as work on the New Melones Dam project and the Tennessee-Tombigbee Waterway, had proven highly controversial. In April 1980 the EAB met at the United States Military Academy at West Point, New York, to discuss Corps work in this field.

The Board learned about an array of topics dealing with cultural resources management: statutory requirements, the Advisory Council on Historic Preservation (ACHP), the Heritage Conservation and Recreation Service (HCRS), the role of the State Historic Preservation Officer, and the Corps' cultural resources mitigation activities and procedures. Representatives from HCRS and ACHP actively participated in the meeting. Specific topics included the New River and Phoenix City streams in Arizona, New Melones Dam in California, Gruber Wagon Works in Pennsylvania, and the raising of the Confederate ironclad CSS *Georgia* in Savannah Bay.[54]

The Board also reviewed the Military Academy's curriculum on environmental studies. EAB members suggested that some biology or other natural science course be required for all cadets. In the summer, students could participate in one of the Corps' wetlands study courses. The acid rain research done at the Academy impressed the Board. Members also commended the school for its topical environmental courses and encouraged Academy officials to continue the series of lectures by outstanding natural scientists.[55]

The West Point meeting illustrated particularly well some common bureaucratic obstacles to sufficient exchange of information between an agency and an advisory committee. The problem was not quantity—EAB

members over the years had periodically complained of excessive documentation—but quality. Did the Board receive the right information to make intelligent recommendations? At West Point these problems came into focus in a discussion of the Corps' responsibilities for cultural resources management on military installations, detailed in chapter 8 of Army Regulation 200–1. The potential amount of work was enormous. Approximately 4,000 buildings controlled by the Army were more than fifty years old, thereby meeting the most general criterion for listing in the National Register of Historic Places. Of that number, about 2,740 buildings were historically significant and about half of these were listed in the Register. Moreover, there were approximately 500 buildings less than fifty years old but of possible historical significance. The number of probable archaeological sites on the 12½ million acres of Army-controlled land was still unknown, but many installations were located in areas rich in prehistoric remains.[56]

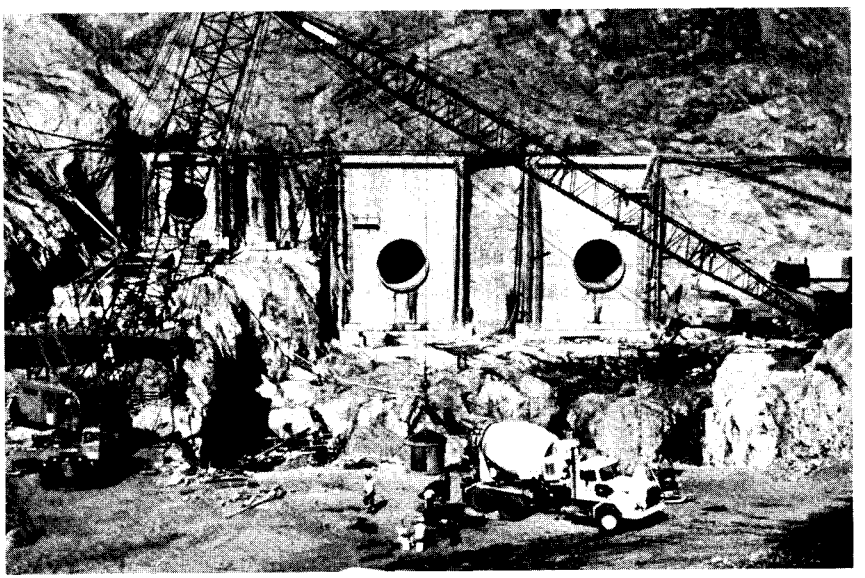
Unfortunately, the scope of cultural resources management activities on military property was poorly communicated to the Board. Constance Ramirez, historic preservation officer in the OCE Military Programs Directorate, was responsible for insuring that missions assigned to the Corps by AR 200–1 were carried out. She was not invited to West Point until two weeks before the Board was to meet and only after she had made inquiries about her office being represented there. Boone had notified the Military Programs Directorate of the upcoming meeting and the topic of discussion, but the information had not reached all the Military Programs branches. Boone had not known about Ramirez's office at all. At the West Point meeting, he managed to "squeeze in" Ramirez to allow her to brief the Board about her activities. However, Ramirez had only a short time to prepare her remarks; Boone told her at breakfast that she would have an opportunity to speak later that same day.[57]

The EAB was never intended to be only a Civil Works Board. Certainly, General Morris never considered it that way. Yet, in a Military Programs activity where the Corps had large responsibilities, a briefing was arranged only at the last minute. A copy of AR 200–1 was not given to McLindon until months later. The EAB Chairman said it was a "real eye-opener" and modified the Board's recommendations to take the regulation into account.[58] In this matter, the issue was clear: there had been neither enough coordination between Civil Works and Military Programs nor adequate dissemination of information within Military Programs to allow sufficient information to reach the Board on an important Corps environmental function. This limited the ability of Board members to make intelligently informed decisions.

The Board itself expressed concern about receiving adequate information. McLindon wrote Heiberg, "It is most helpful to us in our deliberations to have representatives from OCE, the divisions and districts. Through formal and informal discussions we learn a great deal about the successes and problems of implementing policy at the field level."[59] The Chairman said much the same thing at the Vicksburg meeting held in August 1980.[60]

An entirely different problem resulted from a briefing by Colonel Paul Kavanaugh, Sacramento District Engineer, on the New Melones cultural resources program, one of the largest undertaken under the provisions of the Moss-Bennett Act. The Corps had taken over the program from the National Park Service, whose work had been lengthy, poorly managed, and inadequate. The Corps' plan, coordinated with state and federal agencies, met the approval of outside review agencies including the General Accounting Office. Unfortunately, after the program was transferred to the Heritage Conservation and Recreation Service in November 1979, it was shut down for lack of funds. The EAB thought the Corps had performed its work "in a very professional manner despite very poor work by other agencies, an uncertain and changing position in the archaeological profession, and agencies and contractors not fully alert to the magnitude of the cultural properties study."[61] Still, if the Corps and the Department of Interior were unable to agree on the Corps' role in Interior's cultural properties management program for New Melones, the Board recommended the appointment of a "special master." The recommendation, explained McLindon, "stated what we believe to be a general policy. . . . when there is a sticky situation and the Corps has fulfilled its responsibilities, then the interests of the Corps may best be served by appointment of a Special Master. This we find offers hope for a solution and is better than the corrosive atmosphere which generally surrounds disputed claims."[62] McLindon thought Dee Ann Story would be a good choice for special master.[63]

The problem for the Board was that General Morris was not happy that it had addressed the New Melones case at all. It was a difficult situation,



Construction of the new powerhouse at New Melones Dam, California.

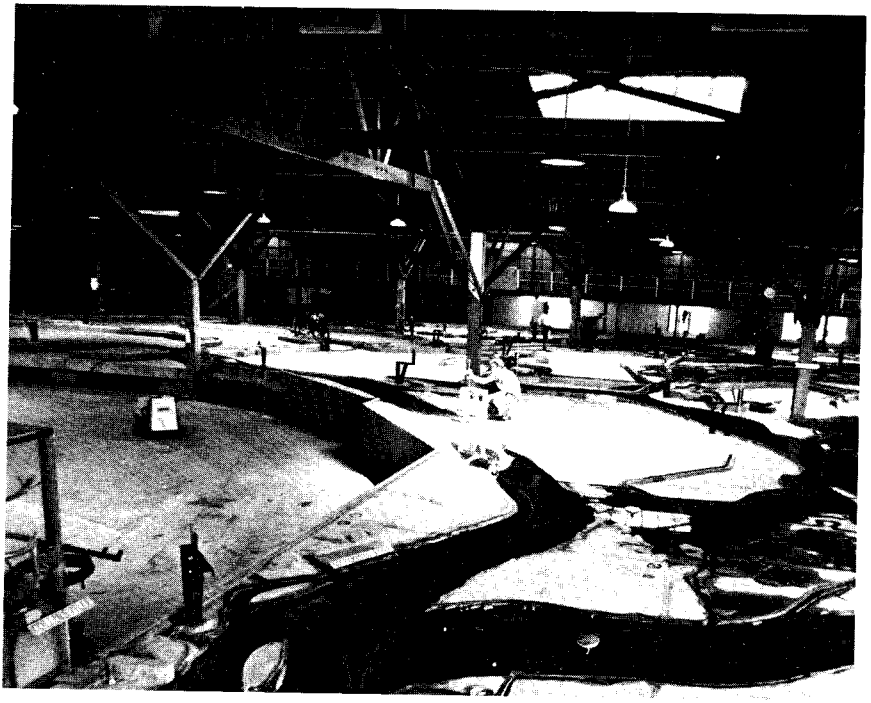
he said, not susceptible to easily identifiable solutions.[64] As McLindon noted, however, "Because the item was placed before us we had to respond."[65] This was a case, then, where the Corps presented to the EAB the details of a complex project, which Morris thought was not suitable for Board discussion.

McLindon conveyed the Board's immediate impressions to Morris at the end of the West Point meeting. Members agreed that the Corps' management of cultural resources showed that the Engineers' decentralized structure was working well. They suggested that the Corps establish "centers of excellence" to provide expertise in specific areas of its program. Other recommendations relating to cultural resources management included (1) use of oral history whenever appropriate, (2) development of integrated guidelines in the preauthorization stage, (3) use of a strong program management plan, (4) hiring a GS-14 or GS-15 professional archaeologist for OCE and cultural resources specialists (archaeologists and historians) at District level where needed, (5) development of job descriptions and training programs, (6) development and implementation of an information exchange system, (7) use of a panel of outside peers to review operations and to anticipate and correct problems, (8) development of standardized data reports, (9) provision of Corps civil works expertise to military posts, and (10) development of a curation and conservation policy at the level of the Office of the Secretary of the Army.[66]

In reply, General Morris asked the Board to prepare a policy statement incorporating its recommendations. He also requested recommendations to improve the engineer curriculum at West Point. He thought that a planned Corps of Engineers museum might have a curation facility where historic and prehistoric artifacts could be treated and stored. He also approved civil works cultural resource specialists doing reimbursable work for military programs.[67]

The Board's recommendations received an unusually long and thorough review at OCE. At the August meeting in Vicksburg, however, General Heiberg presented an interim verbal reply. The Corps favored the Cultural Resources Management (CRM) plan suggested by the Board. This would involve a river basin approach to the development and inventory of cultural resources. The problem for Heiberg was to identify the right Division to develop the plan. Heiberg also agreed that CRM personnel should receive additional training. He was more uncertain about the EAB recommendation concerning outside peer review; he thought the use of consultant environmentalists would best meet the Board's intent. He also mentioned his plan to make the Assistant Director of Civil Works for Environmental Programs a Senior Executive Service position after Boone left. The positions of a lieutenant colonel and a junior officer would remain in the office.[68]

The Vicksburg meeting featured discussions of Corps research and development activities. Except for the Engineer Topographical Laboratory, which Dr. James Choromokos, Director of the OCE Research and Develop-



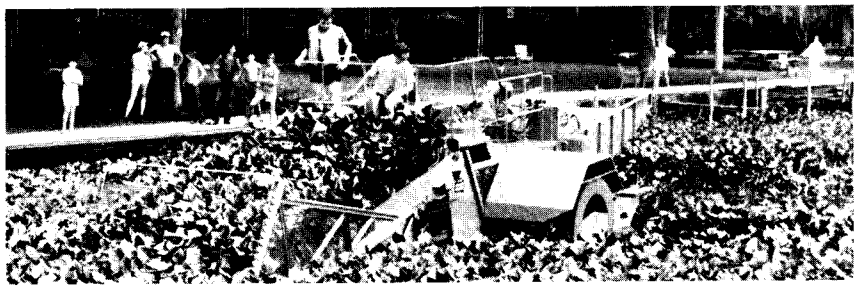
The San Francisco Bay-Delta hydraulics model at the Waterways Experiment Station, Vicksburg, Mississippi.

ment Office, did not think performed activities directly related to environmental matters, all Corps laboratories were represented.[69] The laboratory directors briefed the Board about the activities under their command. While the briefings were often detailed, they did not always answer the questions of immediate concern to the Board: Were the laboratories responsive to field needs? Were environmental projects given as much consideration as those dealing with construction or engineering? And were the laboratories managed efficiently to eliminate redundancy and make the best use of personnel?

At Vicksburg, Heiberg introduced Dr. Lydia Thomas, Associate Technical Director for Energy, Resources and the Environment of the MITRE Corporation. Thomas came to the meeting as a consultant on research and development, but was expected to be formally appointed to the Board in the near future. Heiberg noted that the Board had representatives from the academic and the environmental communities, but not from the world of professional consultants. Thomas' appointment would remedy this situation.

Several of the recommendations submitted by the Board after their meeting dealt with topics other than research and development. In response to a briefing on the MX missile program, which had been given at McLindon's request,[70] the Board offered its assistance in developing an environmentally sensitive program for the construction of the missile facilities. It

also offered the services of "the members qualified in the field" to review and comment on Engineer Regulation 1105-2-460, "Identification and Administration of Historic Properties." Dee Ann Story later flew to Washington to join in a three-day review of this regulation. The Board suggested that interaction with field personnel become a part of every meeting. It also expressed interest in meeting with "our sister group, the Coastal Engineering Board, possibly on barrier islands, beach erosion and similar items of shared interest."[71] EAB members responded to an interim report on the development of an environmental training program in Huntsville, Alabama. They stressed the importance of informing Corps employees of the opportunities offered by this program and of establishing a program which realistically reflected the needs of potential participants. Members encouraged the Corps to view these needs in the light of a report prepared by the Engineer Studies Center on *Future Work Force Requirements*.[72]



The aquatic plant control research program at the Waterways Experiment Station. The Harvester cuts a swath some eight feet wide and up to five feet deep and is capable of operating in only eighteen inches of water.

The overall quality of the Corps' research and development program impressed the Board, although members admitted, "We had great difficulty in grasping all facets of the organization." They suggested a number of significant changes to (1) increase field participation in determining which proposals should become part of the research and development program, (2) develop a comprehensive research plan, (3) eliminate work redundancy among laboratories, (4) insure that the project addresses the questions originally posed, (5) develop five-year research plans and have them reviewed by an outside organization, (6) establish cooperative programs with university research units, and (7) distinguish more clearly between research activities and data acquisition, especially in the Divisions and Districts.[73]

The Vicksburg meeting was General Morris' last as Chief of Engineers. The Board chose to honor him by presenting him with a certificate which read in part:[74]

> Through his commitment to planning and implementing Corps projects in the best interests of the public and in concert with enlightened environmental standards, General Morris has shaped project development policies and inspired environmentally sound

management practices within the Corps.

The ability, energy, and personable spirit of cooperation with which General Morris has approached his responsibilities have been an inspiration to all who have worked with him and have set standards of excellence to be emulated throughout the Corps. As a result of his contributions, the Corps has accepted the challenge and responsibility of facing the future as an advocate and leader in environmental awareness, conservation, and ecologically sound development of the landscape.

The certificate was more than a well-deserved tribute to Morris; it reflected the cooperative atmosphere of mutual respect which had come to characterize relations between the Board and the Corps. A particularly good relationship had developed between Chairman McLindon and Generals Heiberg and Morris. One reason for this rapport was that the Corps showed its commitment to the Board by giving informed responses to EAB recommendations. In effect, a continuous exchange had developed between EAB members and the Corps which involved OCE and field personnel down to the branch level. For its part, the EAB showed a willingness to work toward solving the problems facing the Corps. Morris said of the Board, "We're having good meetings that are addressing tough subjects and coming up with recommendations that are in writing. I just think we're getting a lot of value out of it. I think the Board is more effective now than it has been at any time since the first or second year of its existence."[75] More succinctly, Heiberg wrote, "this Board may be the best ever."[76]

Members of the Environmental Advisory Board present a plaque to Lieutenant General Morris expressing their appreciation, Vicksburg, Mississippi, 28 August 1980. *From the left*: J. Henry Sather, Laurence R. Jahn, General Morris, Gerald J. McLindon, and Nicholas L. Clesceri.