

## CHAPTER 3

# Responding to the Public Mandate for Environmental Protection, 1970-1987

### The View From Washington

The 1970s and 1980s saw changes in natural resources staffing levels, the focus of B&G management tasks, and the recognition given to natural resources concerns by the Department of Defense.

Between 1975 and 1987, the commands lost natural resources personnel and the installations gained them. The B&G staff described 1987 command staffing levels as "bare bones," but believed that installation staffing was more important to getting the actual work done. However, the loss of command personnel adversely affected natural resources programs in several ways. There were fewer people available to make supervisory visits, and installation personnel lacked the necessary command authority to win the installation commander's compliance.<sup>1</sup>

The loss of command-level personnel spaces for natural resources management was part of an ongoing Army-wide and DOD-wide situation that intensified in 1980. The Reagan administration, in the interest of cutting government spending, promoted contracting as an alternative to staffing. Thus, when a vacancy occurred, it would be reevaluated and might be eliminated or left vacant as a result. The same drive to involve the private sector in government work gave installation commanders more autonomy in allocating resources. They did not always choose as natural

resources managers would have liked.<sup>2</sup>

The lack of time and money for supervisory visits to installations remained a problem. Command-level personnel believed that B&G personnel should make more field visits, while Buildings and Grounds wanted command personnel to make the visits.<sup>3</sup> The conflict is well illustrated by the comments of a former B&G forester. He reported that time and money limitations precluded his making as many visits as he believed necessary and that the visits he did make were extremely rushed.<sup>4</sup>

Gradually, as installation programs became better established, Buildings and Grounds spent less time assisting installation and command personnel and more time providing information to the Secretary of the Army. Interaction with the secretariat, rare in 1975, was routine by 1987.<sup>5</sup> Also by 1987, Buildings and Grounds staff spent increasing time responding to congressional inquiries, requests for public access to Army land by special interest groups, and letters from the public about wildlife issues.<sup>6</sup>

Another responsibility that captured an increasing portion of B&G staff time was research and development. In the late 1970s, Buildings and Grounds Branch realized that military land management presented unique problems that Department of Agriculture consultants could not adequately address. Therefore, the branch began to initiate, monitor, and disseminate research and development projects in natural resources management. An example is the Integrated Training Area Management system, a computer-supported program for controlling and evaluating the impact of training activities on the land. An Army engineer research laboratory developed the system in 1987. At that time, the chief agronomist spent close to 25 percent of his effort on such research and development-related tasks

as introducing new developments to the installations through reports and conferences.<sup>7</sup> The installations also conducted research and development projects in cooperation with other organizations.<sup>8</sup> An example is the Fort Meade project that fostered parasites of the cereal borer for use in other parts of Maryland.

The early 1980s saw greater DOD recognition of natural resources management and more communication and coordination among the armed services. The Department of Defense began to mount an official response to the environmental movement. In 1982, a DOD-level natural resources position was created. In this new position, Christina Ramsey activated the Department of Defense Natural Resources Group to coordinate among the services. DOD-wide natural resources management improved as a result.

Despite the increased DOD-wide recognition and coordination, natural resources management remained secondary to the military mission. To a great extent, the amount of work accomplished still depended on the backing of individual installation commanders, who were not uniformly receptive to the natural resources program.<sup>9</sup> However, installation personnel observed increasing receptivity among the commanders.<sup>10</sup> Given the inconsistency of commander support, the relative self-sufficiency provided by the reimbursement of timber sales, agricultural leasing, and hunting fee proceeds was doubly important to the natural resources program.<sup>11</sup>

### Land Management

Multiple use land management remained the primary concept of DOD natural resources policy throughout the 1970s and 1980s. Its new definition in the 1977 version of Army Regulation 420-74 reflected the

changing values of the era: "The integrated management of all natural resources, each with the other, to achieve the optimum use and enjoyment while maintaining the environmental qualities, ecological relationships and esthetic values in proper balance."<sup>12</sup>

In the past, Army land supported the multiple uses of military training, natural resources conservation, timber and crop production, and outdoor recreation. Multiple use land management responsibilities expanded, along with public awareness, to include floodplain management and protection of beaches, wetlands, and endangered species. The establishment of wetlands was important not only for habitat development, but for water conservation and watershed management as well.<sup>13</sup>

During the 1970s and 1980s, the total area managed by the Army fluctuated between 11 and 12 million acres. Approximately 1.5 million acres comprised forests, while improved grounds acreage hovered around 300,000.<sup>14</sup> The number of natural resources professionals employed Army-wide expanded from 38 agronomists, 51 foresters, and 10 wildlife biologists in 1976 to 53 agronomists, 52 foresters, and 23 wildlife biologists in 1983.<sup>15</sup> However, this expansion had not kept pace with the need perceived by Buildings and Grounds.

#### Soil Erosion and Conservation

While soil conservation had long been recognized as basic to all other natural resources conservation, it was not until 1977 that the growing body of knowledge about soil found expression in Army regulations requiring land use planning to be based on assessment of soil capabilities and limitations.<sup>16</sup> Although both soil capacity and the public mandate to conserve natural resources imposed limits on the

military use of land, Buildings and Grounds sought to inform installations that natural resources management could also make training areas more durable and diversified.<sup>17</sup> Diversified environments were useful because they allowed units to train on different kinds of terrain.

The need for military training land grew more acute because modern weapons systems required as much as ten times the land area as systems of the 1940s. Heavier vehicles and longer-range weapons added to the damage that mechanized infantry could do to soil and vegetation.<sup>18</sup> Reestablishment of vegetation after training exercises was an ongoing major task of installation land managers.<sup>19</sup> Training sites had to be rotated to prevent the soil from losing its ability to support any vegetation.<sup>20</sup>

In the past, Army trainers regarded land for tracked vehicle training ranges as an infinite resource. Over time, they began to feel the pinch as the amount of available land declined. Soil erosion and compaction, externally imposed ecological restrictions, granting of easements, and cession of land to other agencies were among the causes of training area losses. In 1983, the Director of Training, Office of the Deputy Chief of Staff for Operations and Plans, explained, "Loss of training lands through poor management is endemic."<sup>21</sup> In addition to erosion, excess growth of underbrush caused loss of training areas. Only one base had a program to clear overgrown training land in 1983.<sup>22</sup>

To address this problem, Buildings and Grounds sponsored several research and development efforts by the Construction Engineering Research Laboratory. They resulted in the development of three computer-based land management programs during 1987. The Geographic Resources Analysis Support System (GRASS) and the Land

Condition-Trend Analysis programs provided automated support for land use decisions. GRASS displayed data and maps of terrain features and analyzed suitability for proposed uses. The Land Condition-Trend Analysis system assessed data on changes in land condition that result from multiple uses. The Integrated Training Area Management (ITAM) program combined computer analysis of land condition with soil stabilization and revegetation techniques, coordination among trainers and land managers, and an environmental conservation awareness program for base personnel. In 1987, the systems were being demonstrated at selected Army installations.<sup>23</sup>

#### Grounds Maintenance

The attractive appearance of Army bases remained a primary concern of improved grounds maintenance. However, partially in the interest of economy, the elaborate landscape plantings of the 1960s gave way to a more natural look. Despite the introduction of occupant self-help programs for grounds maintenance around dwellings, grounds maintenance remained the most expensive component of land management costs.<sup>24</sup> Improved grounds comprised 3 percent of total Army land area and 75 percent of the maintenance budget. In an attempt to cut these costs, installations put their efforts into converting improved grounds to semi-improved or unimproved grounds that require less work to maintain. The emphasis changed to natural landscaping and economical, low-maintenance plantings.<sup>25</sup>

As concern about the appearance of military lands increased, grounds maintenance requirements extended to sodding or landscaping of spoil banks, borrow pits, and quarry areas. Construction projects not only had to include landscaping in the contract, but also had to

analyze and preserve natural features of the site. Projects had to provide safeguards against environmental damage, such as erosion, that might be caused by construction activities.<sup>26</sup>

### Agricultural Leasing

During the late 1970s and early 1980s, agricultural leasing involved approximately 850,000 acres on 60 Army installations. Leasing for crop production occurred on some 160,000 of the acres, and the balance featured grazing.<sup>27</sup> Leases required adherence to the proper agricultural practices for erosion control and enhancement of soil fertility and productivity.<sup>28</sup> By this time, installations recognized the value, above and beyond cash rental, of maintenance work performed by lessees. Other benefits included improved public relations with local farmers and enhancement of habitats and food sources for wildlife.<sup>29</sup>

Agricultural leasing continued to be promoted Army-wide as an inexpensive means of managing natural resources. A supplement to Army Regulation 420-74 also cited the worldwide need for food and fiber production as a rationale for encouraging agricultural leasing.<sup>30</sup>

A surge in both the demand for and the rents offered by agricultural leases in the late 1970s caused Buildings and Grounds to investigate the possibility of requiring a wider range of maintenance and conservation tasks as part of its leases.<sup>31</sup> In 1983, military installations finally won the authorization to use agricultural-leasing proceeds for improvement of agricultural land. A Navy-sponsored provision to this effect, quietly tacked onto the DOD appropriations act, passed through Congress in that year.<sup>32</sup> This provision provided an even greater incentive for installations to offer land for lease.<sup>33</sup>

## Forest Management

In 1976, Buildings and Grounds recognized Army foresters' ecological achievements.<sup>34</sup> For example, in response to public law mandate, forest management objectives had expanded to include protection of the environment, endangered species, and historical sites. Also, cover for recreation supplemented the former objective of providing cover for training.<sup>35</sup>

The Army forest management program could take credit for supporting the military mission, the economy, and environmental programs, as well as supplementing the Operation and Maintenance budget by paying for fire protection from timber sales proceeds. In fiscal year 1977, the Army harvested close to 75 million board feet of lumber and 84,000 cords of pulpwood. The improving quality of Army timber stands indicated that the annual harvest would probably continue to increase.<sup>36</sup>

Partially as a result of the 1961 authorization to retain timber sales proceeds, managed Army woodland acreage grew from 1 million acres in 1955 to 1.5 million acres in 1973.<sup>37</sup> By 1982, the Army forest management program comprised 1.4 million acres on 61 installations employing a total of 52 professional foresters and 42 forestry technicians.<sup>38</sup>

One episode in the constant DOD-wide competition for tight money and manpower was a 1975 challenge by the Deputy Secretary of Defense to forestry staffing levels. He called for Army forestry spaces to be reduced to levels comparable to those of the other armed services. Buildings and Grounds successfully argued that fire control would suffer because forestry personnel were on call 24 hours a day for fire control on all installation grounds except improved grounds.



Forestry programs on smaller Army installations and adjacent Air Force bases would also suffer from any manpower cuts, because they frequently borrowed personnel from larger Army installations.<sup>39</sup>

Since its 1961 authorization to use timber sales proceeds, the Army-wide forestry program has only once required appropriated funds. That occurred in 1982 due to the expense of the newly created state entitlement program. The program developed from complaints by state and local officials that Army installations removed large blocks of land from local tax bases. To compensate for this revenue loss, the entitlement program required installations to share 25 percent of net profits from timber sales with the host states, who in turn passed the money on to the counties. The state share rose to 40 percent in 1984. The state entitlement program had the twofold effect of creating more paperwork for the B&G forester while enhancing the Army's popularity with the states and counties.<sup>40</sup> Due to the Army's greater experience in natural resources management, the B&G forester began serving as the executive agent for all DOD forestry programs in 1982. This job involved handling the budgetary paperwork and allocating extra Army funds to the other military services' forestry programs.<sup>41</sup>

Weather and climate, local timber demand, protection of endangered species, military training requirements, and metal contamination of trees all continued to place external limits on Army forest management activities.<sup>42</sup> The damage done to forest vegetation by training exercises was a major concern of forest managers. However, as one installation forester pointed out, firing ranges did not have to be written off. They could still produce forest products through management practices that work around the training schedules.<sup>43</sup>

As wildlife conservation grew more important in the public eye, foresters became better versed in wildlife management.<sup>44</sup> They were well aware of the ways in which forestry practices could improve wildlife feed and habitats. The Sikes Act amendment of 1986 recognized the link between forest and wildlife management. The amendment allowed timber sales proceeds that remain after all forestry expenses have been met to be placed in a special fund for use on other natural resources such as wildlife.<sup>45</sup>

### Wildlife Conservation and Outdoor Recreation

Only a few years after the National Environmental Policy Act (NEPA) took effect, Congress passed the Endangered Species Act of 1973. The act prohibited federal agencies from conducting any activity that would harm an endangered species. Under the act, the military had to inventory the species and habitats on their lands and protect endangered species and critical habitats.<sup>46</sup> Installations also had to protect species that resembled endangered species to forestall the potential for misidentification.<sup>47</sup>

As in previous years, Army manuals and regulations strictly limited introduction or reintroduction of species. Pursuant to the National Environmental Policy Act, such activities also required an environmental impact assessment.<sup>48</sup> Wildlife management evolved to emphasize preservation as well as harvesting.

Army wildlife managers continued to rely on technical assistance from state and federal wildlife agencies. Installations without resident wildlife expertise particularly required assistance in identifying endangered species. Another concern requiring interagency cooperation was the potential for disturbing habitats just off of installation property

by such practices as overflights of critical nesting areas.<sup>49</sup> Communication among the natural resources disciplines, the federal agencies, and the levels of Army command regarding wildlife issues improved significantly. Both installations and major commands had been compelled by law and public opinion to be more receptive to the views of wildlife managers.<sup>50</sup>

Although money and personnel remained scarce and the commitment of installation commanders to wildlife management remained inconsistent, the Army wildlife management program continued to grow. Overall, the program achieved greater use of Army land for both wildlife management and recreation without an adverse impact on the military mission.<sup>51</sup>

Public concern about endangered wildlife also continued to grow after the passage of the Endangered Species Act. By the early 1980s, wildlife had become a particularly emotional public issue. This had a major Army-wide impact resulting in a higher status for wildlife management programs and more wildlife personnel at the installations. Consequently, by 1987 wildlife specialists were as numerous as foresters.<sup>52</sup>

Buildings and Grounds frequently received letters from the public on wildlife issues. For example, in 1987 letters from a group of school children asked that an endangered wolf species be introduced to an installation in the Southwest. Buildings and Grounds provided guidance about the potential impacts of fulfilling such requests to the Secretary of the Army. The Secretary had the authority to make the final decision on such issues and could overrule the installation commanders.<sup>53</sup> The 1982 version of Army Technical Manual 5-633, Fish and Wildlife Management, devoted an entire chapter to public relations and cited the avoidance of congressional inquiries as one of the justifications for maintaining good public relations.<sup>54</sup>

As of 1987, wildlife experts recognized that military installations had become the final refuges of many endangered species. Had the military not held the land, much of it would have been developed and many habitats destroyed as a result.<sup>55</sup>

In 1982, 115 endangered species were under protection at 33 installations in the continental United States, Hawaii, and Panama.<sup>56</sup> Wildlife programs existed on 95 installations, which managed a total of nine million acres for wildlife. About five million of these acres on 71 installations were open to the public or to guests of base employees. Another 9 installations allowed recreation for DOD personnel only. The entire Army employed a total of 23 wildlife professionals and 31 technicians.<sup>57</sup>

The Sikes Act of 1960 and its amendments authorized cooperative interagency management of fish and wildlife on military land, collection of fees for recreational use, and the funding of public recreational facilities with fee collections and appropriated funds. Fees collected for hunting, fishing, and other outdoor recreation were used by installations for their wildlife management and outdoor recreation programs. However, during the early 1980s, the General Accounting Office, consulting wildlife experts, and Buildings and Grounds agreed that the fees charged by many installations were unrealistically low. Of 95 installations, only 39 charged any fees at all in 1984.<sup>58</sup> Buildings and Grounds had repeatedly recommended that installations charge higher hunting and fishing fees, as well as institute admission fees for other recreation, so that the wildlife and recreation programs could become more self-sufficient. Installation commanders had other priorities and thus were reluctant to use any of the authorized appropriated funds for wildlife and recreation. This

caused wildlife programs to remain dependent on fee collections.<sup>59</sup> In fiscal year 1979, however, Congress directed the military to expend the appropriated funds of \$1.5 million a year.<sup>60</sup>

Access to recreation on Army land offered the advantages of improved public relations, heightened employee morale, and reduced pressure on adjacent nonmilitary recreation areas. Regulations evolved to require installations to develop outdoor recreation plans. Technical Manual 5-635 provided criteria for developing different types of recreational facilities. Concern about the growing popularity of off-road vehicles and the environmental damage they can cause led to a 1972 executive order, which permitted such vehicles on Army land only if strictly planned and controlled to prevent adverse impacts on the environment and on other recreation.<sup>61</sup>

#### Preservation of Historic Sites

The Army's first serious efforts to implement the National Historic Preservation Act of 1966 followed a 1971 executive order. Executive Order 11593 mandated the preservation, restoration, and maintenance of historic sites on federally owned land. In 1974, the Department of the Army directed the Buildings and Grounds Branch, Office of the Chief of Engineers, to implement the order.<sup>62</sup> In 1977, the branch hired its first historic preservation expert, whose efforts led to wider recognition that construction projects, training activities, or even such natural resources activities as clearing land can destroy archaeological or historical sites.<sup>63</sup> In 1981 and 1982, Army technical manuals dealing with land management, outdoor recreation, and forest management all discussed the identification and protection of archaeological sites.

## Pest Control

The continued trend of increasing public scrutiny and limitation of Army pesticide use in many cases has caused friction between the installations and adjacent landowners. Environmental Protection Agency regulations had frequently barred the military from using pesticides that were still permitted to private landowners. This led to a situation where landowners complained that pests thrived on Army land, reinfested private land, and thus harmed their crops.<sup>64</sup>

Even before external limits governed pesticide use, Army foresters tended to avoid it. Whether controlling weeds or insects, foresters preferred such alternatives as burning for weed control or selective thinning for control of tree-attacking insects.<sup>65</sup>

In 1970, the Army issued its first technical manual on herbicide use. Technical Manual 5-629, prepared by a B&G agronomist, stated, "With the present concern over the impact of pesticides on the environment, it is most important that herbicide selection and application be managed by professional personnel."<sup>66</sup> In 1971, Army Regulation 420-76 was the first edition of the regulation to reflect environmental concerns. The 1978 version was the first to require an environmental impact statement for aerial spraying.<sup>67</sup> The 1980 version of Army Regulation 420-76 introduced Integrated Pest Management, which utilized a combination of chemical and nonchemical pest control techniques in an attempt to reduce chemical pesticide use.<sup>68</sup>

## Notes

1. Bandel interview.
2. Ibid.
3. Becton interview.
4. Andrews interview.
5. Bandel interview.
6. 1) Andrews interview. 2) Bandel interview.
7. Bandel interview.
8. Department of Defense, "Proceedings of the Fourth DOD Real Property Maintenance Conference," Jan. 1974, pp. 67-74, Bandel collection.
9. Bandel interview.
10. Warren interview.
11. Mays interview.
12. Department of the Army, Facilities Engineering: Natural Resources--Land, Forest, and Wildlife Management, Army Regulation 420-74 (Washington, DC: Government Printing Office, 1977), p. 3.
13. Bedker, "National Security Management: Renewable Natural Resources," 1979, File 3, Bandel collection.
14. See various sources in File 3, Bandel collection.
15. 1) Department of the Army Annual Historical Summary FY1976, Corps of Engineers Historical Division, Washington, DC. 2) Bandel to Ramsey, "Update of Wildlife Management Programs," 24 Feb. 1983, File 3, Bandel collection.
16. Army Regulation 420-74, 1977.
17. "Making Natural Resources Work for You," no date, File 3, Bandel collection.

18. L.R. Jahn et al., "An Evaluation of U.S. Army Natural Resources Management Programs on Selected Military Installations and Civil Works Projects," Oct. 1984, Bandel collection.
19. Andrews interview.
20. "Making Natural Resources Work for You."
21. Brig. Gen. John M. Kirk, "Training Land Management," 10 Aug. 1983, in "Secretary of the Army Briefing on Natural Resources," Oct. 1983, Bandel collection.
22. Ibid.
23. 1) Bandel interview. 2) Fact Sheets, File 3, Bandel collection.
24. Bedker, "National Security Management. . . ."
25. Schrack, "Land Use Policy, Planning, and Management. . . ."
26. "Talking Paper--The Army Corps of Engineers' Role in Conservation," 13 Dec. 1971, File 3, Bandel collection.
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31. "Department of the Army Land Management Program," no date, File 3, Bandel collection.
32. Bandel interview.
33. "Secretary of the Army Briefing on Natural Resources," Oct. 1983, Bandel collection.
34. "Information Furnished DA Supporting TRADOC Forestry Programs," no date, Becton papers.
35. Department of the Army, Natural Resources: Forest Management, TM5-631 (Washington, DC: Government Printing Office, 1981).



36. "Army Forest Management Program," no date, File 3, Bandel collection.
37. "FY73 Base Data--Land Utilization and Management," File 3, Bandel collection.
38. Bandel to Ramsey, 24 Feb. 1983, File 3, Bandel collection.
39. "Information Furnished DA Supporting TRADOC Forestry Programs," no date, Becton papers.
40. 1) Bandel interview. 2) "Making Natural Resources Work for You."
41. Bandel interview.
42. "Secretary of the Army Briefing on Natural Resources," Oct. 1983, Bandel collection.
43. "Woodland Management in the Small Arms Area, Fort Gordon, GA," no date, Becton papers.
44. Andrews interview.
45. Bandel interview.
46. Bedker, "National Security Management. . . ."
47. "Department of the Army Land Management Program," no date.
48. Ibid.
49. Department of Defense, "Proceedings of the Fourth DOD Real Property Maintenance Conference," 1974, Bandel collection.
50. Warren interview.
51. Mays interview.
52. Bandel interview.
53. Ibid.
54. Department of the Army, Natural Resources: Fish and Wildlife Management, TM5-633 (Washington, DC: Government Printing Office, 1982).
55. "Making Natural Resources Work for You."

56. Jahn, "An Evaluation of U.S. Army Natural Resources Management Programs. . . ."
57. Bandel to Ramsey, 24 Feb. 1983, File 3, Bandel collection.
58. Jahn, "An Evaluation of U.S. Army Natural Resources Management Programs. . . ."
59. "Department of the Army Land Management Program."
60. Bedker, "National Security Management. . . ."
61. Ibid.
62. "Development of Criteria and Guidance for Historic Preservation to Implement Executive Order 11593, 'Protection and Enhancement of the Cultural Environment,'" 28 Jan. 1974, File 3, Bandel collection.
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64. Mays interview.
65. Becton interview.
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