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The New Research Mandate for America's National Park System: Where It Came From and What It Could Mean

Easily the most significant parks legislation to pass the 105th U.S. Congress was the National Parks Omnibus Management Act of 1998, which was signed into law (Public Law 105-391) by President Clinton on November 13, 1998. Omnibus bills have been used since the 1970s by Congress to combine disparate park-related legislation into one large package. The main concern of the 1998 omnibus is revamping the concessions policy of the National Park Service, and most of what was said about the bill in committee and on the floor of Congress had to do with this part of the law. However, buried within the law is a section which is potentially more far-reaching than the concessions reforms. In fact, this section—passed with no fanfare whatsoever—could fundamentally change the way NPS manages the National Park System.

The section is Title II of the act. Its disarmingly dry heading, “National Park System Resource Inventory and Monitoring,” gives no hint of the significance to follow. Yet contained within Title II is something that no less than a dozen blue-ribbon panels (going back to the Leopold Committee of 1963) have called for: an explicit legal mandate for research within the National Park System—research that is to be used to guide and support the management of the parks. The need for a mandate runs long and deep. As Richard West Sellars showed in *Preserving Nature in the National Parks: A History* (Sellars 1997), the Park Service consistently has failed to use ecological science in managing the natural areas of the System, despite much rhetoric—and some genuine good intentions—to the contrary.¹ Whether the Park Service has done any better on the cultural resource side remains an open question, for there is as yet no parallel critique to go with *Preserving Nature* to establish or refute this in a systematic and thorough manner. Regardless, in Title II Congress has spoken forcefully of the need for sound information to be used to manage the National Park System, and one of the considerable strengths of the new law is that it applies equally to all types of resources within the parks.

Senator Craig Thomas of Wyoming, chair of the Subcommittee on National Parks, introduced the legislation which led to Title II in February 1998; it was co-sponsored by Senator Spencer Abraham of Michigan.² These two legislators deserve much credit for seeing the bill through Congress, and for having the vision to include the research mandate in the first place.

This paper briefly explores the historical context of Title II by reviewing what previous laws relating to the national parks have had to say about research and its relationship to resource management. Following that is a detailed, section-by-section analysis of Title II. This is less onerous than it sounds, because Title II is pithy, weighing in at just under 20 short paragraphs. Although knowing the historical background is helpful in understanding Title II, it is by no means a prerequisite, so readers who are primarily interested in the practical implications of the law can skip right to the sectional analysis. The paper concludes with a short summary of Title II's possible overall effect on the National Park System.

Research Directives in Previous Park-Related Laws

In almost every law concerning the National Park System, there are provisions that can be interpreted as implying the need for some kind of research-based management.³ For instance, the earliest legislation, the 1872 Yellowstone park act, gave the secretary of the interior the duty of making "such rules and regulations as he may deem necessary or proper for the care and management" of the park, specifically to preserve from injury or spoliation the "timber, mineral deposits, natural curiosities, or wonders within said park" and to ensure "their retention in their natural condition" (Dilsaver 1997, 28). In modern parlance, this is a non-degradation clause, and it implies the establishment of some kind of baseline scientific information to use as a "natural condition" benchmark. But obviously this is reading much too much into the law, for certainly Congress in 1872 intended no such scientific program. Similarly, in the Organic Act itself research and resource management activities are implied in the critical passage, which directs NPS to conserve the parks' natural and historic objects and wildlife "unimpaired for the enjoyment of future generations." Today, the Organic Act is increasingly given a modern science-oriented interpretation by people both within and outside NPS, but, as Sellars has documented, in 1916 the agency had a very different idea of what constitutes "unimpaired." In any event, the wording of the Organic Act is far from an explicit directive for research-based management.

The research implications of the Antiquities Act of 1906 are more substantial. In the key section which gives the president the power to set aside national monuments, the scope of such proclamations is limited to "historic landmarks, historic or prehistoric structures, and other objects of historic or scientific interest," with the national monuments so created "confined to the smallest area compatible with the proper care and management of the objects to be protected" (Dilsaver 1997, 40). Obviously, some kind of preparatory evaluation of historic or scientific value is implied here, along with studies of the minimum extent of land needed for proper preservation. The act goes on to give the secretaries of the interior, agriculture, and war the power to issue permits for re-

search (“examination” is the word used), excavation, and collecting to “institutions which they may deem properly qualified,” provided that these activities “are undertaken for the benefit of reputable museums, universities, colleges, or other recognized scientific or educational institutions, with a view to increasing the knowledge of such objects, and that the gathering shall be made for permanent preservation in public museums” (Dilsaver 1997, 40). Here we have an early example of Congress encouraging a partnership between the federal government and academia, as well as a mandate for professional, perpetual curatorial care of cultural and natural objects. But again, no standards are set forth and so presumably the proclamations and permits could be based on virtually any kind of information.

Perhaps the most explicit research mandate is contained in the Historic Sites Act of 1935, where the secretary of the interior is directed to gather drawings, plans, photographs, and other data on historic sites; to survey those sites; and to “make necessary investigations and researches” into the sites and their associated objects (Dilsaver 1997, 132). More recent cultural resource laws treat research more narrowly. In the National Historic Preservation Act (1966), the research burden is shifted to the states, with the federal government authorized (but not required) to fund statewide surveys (Dilsaver 1997, 302). The Archaeological Resources Protection Act (1979) aims to foster cooperation and exchange of information among agencies, outside professionals, and private individuals, thereby enabling the secretary of the interior to “expand the archaeological database” (Dilsaver 1997, 404). Section 5 of the Native American Graves Protection and Repatriation (1992) requires all federal agencies to inventory their collections for Native American human remains and funerary objects and identify the geographical and cultural affiliation of each item (Dilsaver 1997, 425).

In the natural resource laws of recent years, there is even less that can be construed as a mandate to do ecological or biological research within the National Park System. In the Wilderness Act (1964), the only explicit mention of research in designated wilderness areas is under the guise of “gathering and dissemination of information regarding their use and enjoyment as wilderness.” This is, if anything, a directive to do social science. Nor does the National Environmental Policy Act (1969) really come closer to filling the ecological gap. Section 102(b) of NEPA requires federal agencies to “utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and decisionmaking” (Dilsaver 1997, 365)—laudable, but hardly a clarion call to park management. Even the anti-derogation language of the Redwood Expansion Act of 1978 (section 101(6)(b); Dilsaver 1997, 392), which is widely considered to reinforce the ambiguous preservation provisions of the Organic

Act, only implies the necessity of knowing baseline conditions; it doesn't specifically direct that they be established through research.⁴

Another implied directive is contained in the National Park System General Authorities Act of 1970. There, under Section 8, "General Authorities," the secretary of the interior "is directed to investigate, study, and continually monitor the welfare of areas whose resources exhibit qualities of national significance and which may have potential for inclusion in the National Park System" and provide an annual listing of these areas to Congress, which is to be accompanied by "a synopsis ... of the current and changed condition of the resource integrity of the area and other relevant factors, compiled as a result of continual periodic monitoring..." (U.S. House Committee on Resources 1998). But these reviews apply only to potential new additions to the National Park System, not to existing units.

Reviewing all these laws makes it evident that the whole approach to park research has been piecemeal. The Historic Sites Act does not apply to archaeology, nor ARPA to history, nor the Wilderness Act to frontcountry, and so on. The result was a patchwork where the necessity of research was implied over and over again in a variety of situations, but there was nothing to tie it all together, no clear statement of the importance of research to managing *all* the resources of *all* the parks.

Title II: A Section-by-Section Analysis

This is the gap Title II has now filled, clearly and concisely. It provides an explicit, incontrovertible mandate for doing research in every unit of the National Park System, no matter how large or small, whether primarily "cultural" or "natural." Most importantly, Title II directs that the results of such research will be used to guide management.

What follows is a section-by-section analysis. It makes no claim to being a definitive interpretation. It is not the work of a legal scholar, and in any case the interpretation and implementation of Title II will develop over time within the public policy arena, just as with every other law. However, a close analysis is warranted because the language of Title II was obviously crafted very carefully, and future court interpretations of the law will be decided on a scrupulous reading of the text. In what follows, the actual text of Title II is in italics; the commentary follows each section in plain type, as a series of bullet points.

Sec. 201. PURPOSES.

The purposes of this title are—

(1) to more effectively achieve the mission of the National Park Service;

- Note at the outset that Title II is not an attempt to resolve or even re-interpret the oft-noted preservation-versus-use dilemma of the National

Park Service Organic Act of 1916. That mission—contradictory though many think it to be—remains unchanged.⁵

- Significantly, the mandate (as stated below in section 202) is being given to the secretary of the interior on behalf of the National Park System, and is not exclusively aimed at the National Park Service. Obviously, NPS is expected to be central to the research effort, but the first purpose of Title II is to benefit the *mission* of the National Park Service, not NPS *per se*. This is a vital distinction, for, as we shall see, other parts of Title II specifically direct NPS to establish partnerships with other federal agencies (an example would be the U.S. Geological Survey Biological Resources Division). It is clear that Title II is not intended to be a vehicle for NPS to take back the natural-science research capacity that was transferred to the National Biological Service (the predecessor to USGS-BRD).

(2) to enhance management and protection of national park resources by providing clear authority and direction for the conduct of scientific study in the National Park System and to use the information gathered for management purposes;

- The second purpose of Title II is to explicitly link scientific research as a necessary prerequisite for resource management that is not only professionally defensible, but now, with the passage of this law, legally defensible as well. To do this, Congress felt that it was necessary to go beyond the science directives that were merely hinted at or scattered among previous laws. Instead, this section recognizes that clear legal authority and direction need to be given to all entities (not just NPS) that are engaged in research in the National Park System.
- The science to be carried out must be usable science, science that has management applicability, science that will “enhance management and protection” of resources, not just purely speculative or theoretical research. This is obviously a potential gray area, because many studies that seem to have no immediate applicability to current resource management issues may prove crucial in the future. (This is recognized in the next two sections of the law.)
- In case there are any lingering doubts about this, Congress specifically extended its “clear authority and direction” not just to conducting scientific study, but to using “the information gathered for management purposes.” All in all, this subsection is an elegant and forceful directive to do science-based park management.

(3) to ensure appropriate documentation of resource conditions in the National Park System;

- Here Congress makes a very important recognition that links with subsection 2 above: namely, that without baseline studies of resource conditions, park management objectives cannot be legally met. This is an obvious, but often overlooked, point. Baseline inventory and ongoing monitoring are vital components of park management, but are all too easy to put off in the face of more immediate concerns. By inserting the documentation of resource conditions as the third purpose of Title II, Congress has elevated this function to an appropriate level of importance.
- The further implication of this section is that proper adaptive management, based on strategic, problem-solving research, is not the same as “brush fire” management. The baseline documentation mandate suggests that Congress means NPS resource management to be primarily proactive, not reactive.

(4) to encourage others to use the National Park System for study to the benefit of park management as well as broader scientific value, where such study is consistent with the Act of August 25, 1916 (commonly known as the National Park Service Organic Act, 16 U.S.C. 1 et seq.); and

- The fourth purpose of Title II is essentially a partnership directive. Congress is recognizing that NPS and its sister federal agencies will never have the wherewithal to carry out all the needed research on their own. This is nothing new, but by officially acknowledging it Congress is directing NPS to seek out research partners in academia, among nongovernmental organizations, and elsewhere.
- Note again the explicit and primary linkage of study to “benefit” park management. However, the rest of sentence also makes it clear that research in the parks which is carried out by nonfederal partners (the “others” referred to in the sentence) does not necessarily need to be management-oriented—in contrast to research carried out by federal agencies. (This division of roles expands on the guidance contained in subsection 2.) Here, Congress recognizes that parks are important venues of scientific endeavor, apart from their other roles. However, any such “broader scientific” research cannot conflict with the mission laid out in the NPS Organic Act and its amendments. This is an important legal proviso that will enable park managers to disallow proposed research projects that are deemed to be damaging to park resource preservation or public enjoyment. (This point is taken up again in Section 205(b) and even more explicitly in Section 207.)

(5) to encourage the publication and dissemination of information derived from studies in the National Park System.

- The final purpose of Title II is an information-sharing and public education directive. Congress is saying that it is important for NPS to communicate the resource conditions in the parks to policy-makers, professionals, and the public at large. To the extent that traditional park interpretation has focused on “telling the stories” of the parks, rather than on exploring their contemporaneous role as protected natural and cultural areas interacting with present-day society, then this section expands the scope of what ought to be interpreted to visitors and the general public.

Sec. 202. RESEARCH MANDATE.

The Secretary [of the Interior] is authorized and directed to assure that management of units of the National Park System is enhanced by the availability and utilization of a broad program of the highest quality science and information.

- This is the heart of Title II, as simply and directly stated a research mandate as one could hope for. The secretary of the interior is not merely authorized to institute research, he or she is “directed to assure” that it *will* happen. No discretion is given, no “to the extent practical” fudge phrase is included. This is key language, since it is intended to shelter park research programs from shifting political winds as administrations and interior secretaries come and go.
- The last two words of the phrase “broad program of the highest quality science *and information*” further implies that Congress intends for Title II to apply to both natural and cultural resource management in the National Park System. (The applicability of the word “science” to cultural resources is discussed in more detail below.)
- It will be interesting to see how the term “highest quality” comes to be defined and interpreted. Does this mean that the traditional publication of resource management findings in the “gray literature” will give way to more and more to peer-reviewed studies? If so, what changes within NPS will be required to encourage park managers to participate in peer review?

Sec. 203. COOPERATIVE AGREEMENTS.

(a) COOPERATIVE STUDY UNITS.—The Secretary is authorized and directed to enter into cooperative agreements with colleges and universities, including but not limited to land grant schools, in partnership with other Federal and State agencies, to establish cooperative study units to conduct multi-disciplinary research and develop integrated information products on the re-

sources of the National Park System, or the larger region of which parks are a part.

- This section enshrines in law the cooperative program between NPS / USGS-BRD and academia (variously called Cooperative Parks Studies Units, CPSUs, or Cooperative Ecosystem Studies Units, CESUs). These campus-based units have traditionally been used for all kinds of needed research in parks. By placing the units on campus rather than in individual parks, various economies of scale are realized, as are the benefits of having the researchers being in close contact with the academic community at large.
- Congress here again recognizes that NPS cannot go it alone. The agency is directed to enter into partnerships with kindred federal and state agencies in establishing cooperative units. This would seem to have special applicability to USGS-BRD, many of whose members were transferred over from cooperative research units run by NPS and the U.S. Fish and Wildlife Service.
- The research is specified to be multidisciplinary. This is an important congressional recognition of the complexity of the problems facing the National Park System. Whether the issue is brucellosis and bison in Yellowstone, or the scope of off-reservation tribal consultation that must be done to carry out the National Historic Preservation Act amendments, almost any problem facing the parks requires a wide array of information if it is to be solved.
- It follows then, that the information produced must be integrated—which is to say that the disparate assumptions, methods, and jargon from the various disciplines must be melded into a comprehensible whole, for the use of resource managers, elected officials, and the general public. This requires resource managers and researchers to work together cooperatively.
- In line with all this, Congress also states specifically that research can apply to the larger regional matrix in which parks function. This too is an important official recognition that, in the now-familiar phrase, “no park is an island.”

(b) REPORT.—Within one year of the date of enactment of this title, the Secretary shall report to the Committee on Energy and Natural Resources of the United States Senate and the Committee on Resources of the House of Representatives on progress in the establishment of a comprehensive network of such college and university based cooperative study units as will provide full geographic and topical coverage for research on the resources contained in units of the National Park System and their larger regions.

- This section directs the secretary of the interior to issue a status report on cooperative study units by November 1999. The ultimate goal, a system of study units providing “full geographic and topical coverage” of the resources of the National Park System, is extremely ambitious. Because the phrasing is not qualified, it applies to both cultural and natural resources in the parks. To achieve full coverage of both will be a tall order, though not without precedent: the National Park System Plan of 1972 attempted something similar.

Sec. 204. INVENTORY AND MONITORING PROGRAM.

The Secretary shall undertake a program of inventory and monitoring of National Park System resources to establish baseline information and to provide information on the long-term trends in the condition of National Park System resources. The monitoring program shall be developed in cooperation with other Federal monitoring and information collection efforts to ensure a cost-effective approach.

- The mandate under Section 201(3) to document baseline resource conditions is here restated explicitly as an I&M program. Again, the establishment of the program is not discretionary—the secretary “shall” do it. The last sentence of this section mandates partnerships between federal agencies, in contrast to previous language in Title II where partnerships are “encouraged” and are not limited to federal agencies.
- One might read in this section echoes of the original intent of the National Biological Survey (later the National Biological Service, now metamorphosed into the USGS-BRD), which was to do nothing less than a biotic inventory of the entire nation. Here, the inventory is scaled back to (if “scaled back” is the appropriate term!) to the National Park System.
- Taken literally, this section mandates a complete accounting of System resources—both natural and cultural, since neither one alone is specified. This is obviously an enormous chore, but the language is unequivocal.

Sec. 205. AVAILABILITY FOR SCIENTIFIC STUDY.

(a) IN GENERAL.—The Secretary may solicit, receive, and consider requests from Federal or non-Federal public or private agencies, organizations, individuals, or other entities for the use of any unit of the National Park System for purposes of scientific study.

- The secretary is not limited in any respect to the source of research proposals, nor are any units of the National Park System excluded from the research mandate—another clear indication that both natural and cultural areas are covered by the law.

(b) CRITERIA.—A request for use of a unit of the National Park System under subsection (a) may only be approved if the Secretary determines that the proposed study—

(1) is consistent with applicable laws and National Park Service management policies; and

(2) will be conducted in a manner as to pose no threat to park resources or public enjoyment derived from those resources.

- These criteria align Title II not only with the Organic Act (note the dual preservation–use language in subsection b-2), but with other park-related laws and NPS management policies. Subsection b-2 further recognizes that research activities can themselves have a substantial resource impact, and that conducting research in national parks therefore carries with it extra responsibilities on the part of the researchers themselves. Or, to put it another way, park managers have the obligation under Title II to turn down research proposals that don't meet its criteria.

(c) FEE WAIVER.—The Secretary may waive any park admission or recreational use fee in order to facilitate the conduct of scientific study under this section.

- This section is self-explanatory.

(d) NEGOTIATIONS.—The Secretary may enter into negotiations with the research community and private industry for equitable, efficient benefits-sharing arrangements.

- This section apparently refers to the burgeoning interest in bioprospecting within the National Park System, of which the gathering of microbial samples from the geothermal pools in Yellowstone is the most controversial example to date. This section anticipates that the government may wish to capture some of the profits gained by private biotechnology companies for resources taken from the parks. It does not address the ethics or legality of bioprospecting, nor the issue of patenting. And it does not require the secretary to enter into benefits-sharing agreements—the operative word is “may,” not “shall.”

Sec. 206. INTEGRATION OF STUDY RESULTS INTO MANAGEMENT DECISIONS.

The Secretary shall take such measures as are necessary to assure the full and proper utilization of the results of scientific study for park management decisions. In each case in which an action undertaken by the National Park

Service may cause a significant adverse effect on a park resource, the administrative record shall reflect the manner in which unit resource studies have been considered. The trend in the condition of resources of the National Park System shall be a significant factor in the annual performance evaluation of each superintendent of a unit of the National Park System.

- Section 206 is perhaps the most far-reaching part of Title II, because it addresses some key internal workings of the NPS. Sellars demonstrated in *Preserving Nature in the National Parks* that the Park Service traditionally has resisted giving scientific resource management a prominent place in park operations, even while the agency has nominally embraced the notion. The first sentence of Section 206 directs the secretary to *assure* that park management is based on sound scientific research. There are no hedge words here: studies are to be fully used in making management decisions. This gives a belated legal validation to the many recommendations calling for more and better science going back at least to the Leopold Report in 1963. (See Table 1, below.)
- The second sentence of this section is a very specific, affirmative mandate for science-based resource management. NPS managers must demonstrate how significant decisions have been supported by scientific study. Presumably, if the administrative record fails to show the link to sound research, the NPS can be held accountable in court.
- However, this second sentence is not to be interpreted as a congressional go-ahead for a new legal pry bar that can be used to force parks to do NEPA-style environmental impact statements for every management decision. The House Committee on Resources report accompanying the legislation states that “it is the intent of the Committee that this section is not to be construed as an additional administrative requirement to produce an environmental assessment, environmental impact statement, or any other additional documentation like that required for the National Environmental Policy Act (NEPA) or other authorities akin to NEPA. Further, this section does not create any other environmental standard that is to be met by the NPS” (House Committee on Resources 1998). This was the only substantive comment in the report’s analysis of Title II, so it is apparent that the House wanted to give it special prominence.⁶
- The last sentence of Section 206 cuts to the heart of the NPS institutional culture. Superintendents have always been, and will no doubt continue to be, the centers of power within the agency. Now, for the first time, they will be held directly accountable for the resource condition of parks under their charge. The fact that the criterion will be the *trend* in resource conditions speaks once again to the crucialness of establishing a baseline through in-

ventory studies, and of monitoring changes to that baseline on an annual basis. For natural areas of the System, "condition of resources" may be interpreted as being analogous to the "ecological integrity" criterion used by Parks Canada; for predominantly cultural areas, the criterion could be the cultural integrity of their sites, objects, and resource values. In any event, some kind of integrity yardstick is implied by Section 206, if this annual evaluation of superintendents is to have meaning.

Sec. 207. CONFIDENTIALITY OF INFORMATION.

Information concerning the nature and specific location of a National Park System resource which is endangered, threatened, rare, or commercially valuable, of mineral or paleontological objects within units of the National Park System, or of objects of cultural patrimony within units of the National Park System, may be withheld from the public in response to a request under section 552 of title 5, United States Code, unless the Secretary determines that—

(1) disclosure of the information would further the purposes of the unit of the National Park System in which the resource or object is located and would not create an unreasonable risk of harm, theft, or destruction of the resource or object, including individual organic or inorganic specimens; and

(2) disclosure is consistent with other applicable laws protecting the resource or object.

- This is, potentially, an extremely powerful section of the law because it gives park managers the authority to deny requests made pursuant to the Freedom of Information Act (FOIA) for sensitive information about natural and cultural resources. Previously, Section 9 of ARPA gave park managers the right to keep the nature and location of archaeological resources confidential (Dilsaver 1997, 402), and Section 5 of the Federal Cave Resources Protection Act of 1988 does the same for the location of caves. But Section 207 significantly expands the scope of permissible FOIA exemptions to animals, plants, mineral and paleontological specimens, and objects of cultural patrimony in general.
- Moreover, the cloak of protection is defined so as to cover any organism or specimen that is deemed to be endangered, threatened, rare, or—and this is a vital addition—commercially valuable. Therefore, not only are listed species covered, but so is any abundant species or object that might be of interest to poachers. Section 207 is an excellent safeguard because it could prevent the release of (for example) radio-collar frequencies of collared wildlife, the locations of fossil formations, the locations of valuable plants (e.g., ginseng, rare cacti), and culturally sensitive information such as the sites of former summer camps of Natives—or perhaps even clan structure

information collected by anthropologists. Of course it remains to be seen how courts will determine what constitutes an “unreasonable risk of harm,” but Section 207 appears to be a very powerful tool to prevent those who would use sensitive resource information for their own financial gain—or who wish, for their own perverse reasons, to undermine efforts to protect park resources.

The Potential Impact of Title II

It is obvious that Title II is a turning point in the long struggle to achieve recognition of the scientific and heritage research values of the parks. Students of Park Service management history know that a whole series of panels, beginning with the Leopold Committee in 1963, have called for major changes in the research and resource management functions of the agency. The most recent panel was convened by the National Academy of Science in 1992. Its report (National Research Council 1992) summarized the major recommendations of its predecessors, going back to Leopold, and published a tabular synopsis of the major recommendations of four of the most prominent previous reports. Table 1 reproduces this synopsis, and adds a new column showing which recommendations are addressed in Title II.⁷

One of Title II’s real strengths is that it applies to both natural and cultural resources. As we have seen, authority to conduct cultural resource research in the System has always been stronger, but Title II is much more than an “equalizer” for the natural resource side. It is significant that the word “natural” does not appear anywhere in the final text.⁸ Title II consistently speaks of “resources,” not “natural resources”; “conditions,” not “natural conditions” or “biotic conditions”; “science,” not “ecological science,” “biology,” or anything else that would constrain the meaning to one type of resource only.

Still, many in the cultural resources community may feel that the frequent use of the word “science” means that Title II doesn’t really apply to them. This would be an understandable, but erroneous, reading. The problem here is one of semantics, not substance. There is no convenient sister term to “science” that applies to the various fields involved in cultural resource management. The cultural resource analogues to ecological science are (1) scholarly historical research, which traditionally is classed under the humanities; and (2) the research methodologies of the various social sciences (sociology, psychology, archaeology, anthropology, ethnography, etc.), used in analyzing the human dimension of parks, both present and past. Underlying all of these (or interwoven with them, if you like) are the supporting curatorial professions. The boundaries between these fields are especially apt to become blurred in national park units because many have both cultural and natural resources of significance, and all of them engage concerns from both sides of the resource

Table 1. Major actions recommended in selected previous reviews, now addressed in Title II

Action recommended	Leopold Report (1963)	Robbins Report (1963)	NPCA Research Needs Assessment (1988)	Gordon Report (1989)	Addressed in Title II? (section reference)
<i>Research</i>					
Congressional mandate		x	x	x	201(2); 202
Independent research arm	x	x	x	x	See Note 1
Major expansion	x	x	x	x	201(4)
Basic & applied missions	x	x	x	x	201(2); 206
Coordination with other research programs	x	x	x	x	201(4); 203(a); 204; 205(a); 205(d)
Quality control improvements		x	x	x	201(1); 202
Establishment of science centers		x	x	x	203(a)
Internal restructuring for emphasis		x	x	x	No
Recruit & develop qualified personnel			x	x	See Note 2
Resource management					
Mandate			x		201(2); 202
Set objectives, develop plans	x		x	x	No
Apply ecosystem principles	x		x	x	203(a)
Inventory & monitoring		x	x	x	201(3); 204
Recruit & develop qualified personnel			x	x	See Note 2
Accountability with criteria			x	x	206
Cooperation with others in resource management				x	204

Note 1. The creation of USGS-BRD has, to some extent, addressed this recommendation, but not in the manner originally envisaged by the panels referenced above.

Note 2. Title I of P.L. 105-391 covers career development, training, and management within NPS. Section 101 of Title I reads: "Recognizing the ever increasing societal pressures being placed upon America's unique natural and cultural resources contained in the National Park System, the Secretary [of the Interior] shall continually improve the ability of the National Park Service to provide state-of-the-art-management, protection, and interpretation of and research on the resources of the National Park System."

Source: Adapted from National Research Council 1992, 55.

ledger. If “science” is interpreted to mean a systematic and intellectually defensible method of inquiry, then plainly there is such a thing as “cultural resource science,” even if this is not a term widely used.

In summary, Title II is the legal mandate that many people have long wanted. It presents multidisciplinary research and resource management as linked endeavors that together lie at the very heart of the National Park System’s purpose. It requires NPS to use resource information in its decision-making, and be accountable for the impact of those decisions upon resources under its care. It is not an exaggeration to say that it is brilliantly crafted legislation: highly focused, clearly stated, concisely expressed. But this in itself is not enough, as we all know. Laws are only as effective as the people who interpret and enforce them, and many questions remain wide open. Will NPS incorporate Title II into the current revisions of its management policies? Will the department of the interior seek the money needed to carry out Title II?⁹ How will courts fit Title II into existing legal precedents? Will park pressure groups use Title II to sue for alleged mismanagement? It is far too early to do anything but guess at the answers. But one thing is already clear: Title II has the potential to fundamentally transform how NPS manages the resources of the National Park System.

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Endnotes

- ¹ This was bluntly admitted in NPS’s own 75th anniversary symposium report, the Vail Agenda: “... the National Park Service is extraordinarily deficient in its capacities to generate, acquire, synthesize, act upon and articulate to the public sound research and science information” (National Park Service 1992, 31).
- ² The legislation was originally named the “Vision 2020 National Parks Restoration Act,” S. 1693.
- ³ A few individual parks (e.g., Channel Islands, Glacier Bay) have a research mandate in their enabling legislation, but, as we shall see, there are very few such mandates that apply Systemwide.
- ⁴ Recently, the received view that there is indeed a contradiction within the Organic Act has been challenged strongly (Winks 1997; Keiter 1997).
- ⁵ Other parts of the Redwood law do explicitly call for the scientific restoration of the ecological conditions of the park, but the anti-derogation clause is the only one that applies to the whole National Park System.
- ⁶ No such language was included in the Senate report (U.S. Senate Committee on Energy and Natural Resources 1998).
- ⁷ Interestingly, the need for Title II was framed as a response to the recommendations of the Vail Agenda (U.S. House Committee on Resources 1998; U.S. Senate Committee on Energy and Natural Resources 1998). None of the other previous blue-ribbon reports are mentioned in the various committee documents and hearings associated with Title II.
- ⁸ The Senate committee with jurisdiction over the bill, the Committee on Energy and Natural Resources, did frame the need for Title II in terms of natural resources, as follows:

"The complex and technical nature of resource management in the National Park Service requires more specialized expertise than can be provided exclusively by generalist rangers or even natural resource generalists. This specialized experience is particularly required as the Park Service policies, actions, and proposal review comments are often challenged in courts and by outside experts where park resource preservation objectives conflict with commercial or other interests.

"Unfortunately, many National Park units are subject to a wide variety of natural resource impacts and threats. Air pollution has degraded the magnificent views in Grand Canyon and Shenandoah National Parks, while water quality and quantity problems threaten the delicate aquatic ecosystems in Everglades. Many parks today face urban encroachment and many more suffer from the impacts of excessive visitation. Left unchecked, these factors could threaten the very existence of many biotic communities within the parks.

"Recognizing the importance of this issue, the first strategic objective contained in the Vail Agenda report was a statement that 'the primary objective of the National Park Service must be protection of park resources from internal and external impairment.' To meet these resource stewardship responsibilities, the report recommended the park managers have solid natural resource information at their disposal.

"Title II of S. 1693 directs the Park Service to implement a broad scientific research mandate to ensure that park managers have the highest quality science and information available when making resource management decisions" (U.S. Senate Committee on Energy and Natural Resources 1998).

However, this report was issued in June when the legislation was still in its early stages, and quite different from its final format.

- ⁹ The Congressional Budget Office estimated that, using its existing authority, NPS will need \$160 million over the next 10 years to implement Title II (U.S. House Committee on Resources 1998).

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