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United States Department of the Interior
NATIONAL PARK SERVICE
SOUTHWEST REGION
P.O. Box 728
Santa Fe, New Mexico 87501

IN REPLY REFER TO:

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SEP 4 1984

Memorandum

To: Associate Regional Director, Planning and Cultural Resources, SWR
From: Chief, Southwest Cultural Resources Center, SWR
Subject: Five-Year Plan

I am submitting to you the five-year plan for the Center. We have revised the plan in numerous places - to respond to your concerns and ours as well, after giving it much more thought. This document was done by the Center as a whole, and represents our collective opinion on the various operations of the Center. Preparation of the document was done during the time of year when the workload was heaviest, and involved complex coordinations among divisions; yet we feel it is a thorough document addressing all of the appropriate concerns.

Many of the plan's goals involve on-going work so that definite starting and ending dates cannot always be stated. Where we feel reasonably certain we have added specific dates. In other instances we have stated goals which can be accomplished at sometime within the five-year period.

We have prepared a summary and a chart which provides an overview of the programs, positions and fundings needs, etc., which are stated more thoroughly in the text of the document.

Richard Sellars

Enclosure

cc:

- Chief, Division of Anthropology, SWR, w/c enclosure
- Chief, Division of Conservation, SWR, w/c enclosure
- Chief, Division of Cultural Research, SWR, w/c enclosure
- Chief, Division of History, SWR, w/c enclosure
- Chief, Division of Special Programs, SWR, w/c enclosure
- Chief, Submerged Cultural Resources Unit, w/c enclosure
- Chief, Division of Interpretation & Visitor Services, SWR, w/c enclosure
- Attention: Dave Brugge

FIVE-YEAR PLAN
SOUTHWEST CULTURAL RESOURCES CENTER
SEPTEMBER 1984

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Southwest Cultural Resources Center
September 1984

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INTRODUCTION

The purpose of this Five-Year Plan is to take a close look at the current status of the Southwest Cultural Resources Center, to determine the directions the Center should take in the next 5 years, and to state where the Center should be at the end of that period in terms of program accomplishments and the scope of its responsibilities and functions.

The Center was established in 1976 and since then has responded to the varied cultural resource management mandates and needs of the Southwest Region as well as other Regions needing support in, for example, remote sensing or submerged cultural resources. Since the Center's establishment, role and function statements have existed which clarify the responsibilities of the various divisions within the Center and of the Center itself. Operating without the benefit of a long-range plan, the growth and development of the Center has been accomplished without systematic consideration of all of the Center's programs. This Five-Year Plan is, therefore, an effort to take into account the present and anticipated Cultural Resource Management (CRM) needs under the purview of the Center and to provide a degree of system and order to the Center's future development. It should be noted, however, that this document is in no way intended to be a rigid, inflexible statement, binding, and precisely defining that development. Rather, it is a statement of goals and objectives designed to provide guidelines for program direction for the foreseeable future.

The Southwest Cultural Resources Center, the largest multidisciplinary cultural resources unit in the National Park Service, currently has a staff of over 50 employees.

The disciplines and programs encompassed by the Center are represented by six divisions and two branches: the Division of Anthropology (including the Branch of Cultural Data Systems); the Division of Conservation (Historic Architecture); the Division of Cultural Research (including the Branch of Remote Sensing); the Division of History; the Division of Special Programs (Indian Assistance); and the Submerged Cultural Resources Unit (Underwater Archeology).

These various divisions report to the Chief, Southwest Cultural Resources Center. At times the divisions work independently of one another, but in most instances two or more divisions are involved in any particular project or program thrust. In this manner, the Center comprises a large group of cultural resources professionals with interrelated interests and methodologies, whose goals are achieved through close cooperation and mutual assistance. Thus, the Five-Year Plan is a multidivisional document reflecting the involvement of all disciplines.

II A. PROGRAM FORMULATION

Current Status

There are two major project funding sources for Cultural Resources Management: (1) the Cultural Resources Preservation Fund (CRP) and 2) the cyclic maintenance project fund. The CRP, a five-year program established through the 10-238 process, is reprioritized annually according to criteria established by the Washington Office (WASO). The cyclic maintenance fund is prioritized annually. Programming for these projects is in the process of being systemized.

The Park Restoration and Improvement Program (PRIP) has provided badly needed funds for preservation and research projects, all of which had been the responsibility of the CRP for years. As a result, a number of the most visible and urgent preservation needs have been met. PRIP, however, provided only project funds, not the base increases necessary to support park and regional cultural resources staffs. Project design, monitoring, and completion reports were provided by existing staff, supplemented by the Denver Service Center (DSC), Vicksburg, and Williamsport. Without a budget analyst to monitor expenditures, program accounting has been haphazard, uneven, and dependent on informal divisional accounts. The burden has often fallen on architects, historians and archaeologists, thus placing extra demands on their valuable time. In addition, the cyclic maintenance fund has received a base increase of more than one million dollars, which must be spent effectively and efficiently. This makes the need for a permanent budget analyst position even more urgent.

Because most cultural resources projects had been dormant due to insufficient funds, superintendents were not motivated to update, revise, or initiate 10-238s. With many of the long-standing maintenance and emergency projects now completed, Superintendents and Regional staff must assess cultural resources needs and program for appropriate projects, for example, ruins stabilization, cyclic maintenance, curation, and specific research.

Few parks requested base increases for cultural resources during the 1986 budget call. Every park in the Region should submit specific program increases to ensure that all of the cultural resources are properly managed in accordance with NPS missions. Superintendents also need to be apprised of needs, means, and justifications for more 10-237s and 10-238s.

Five Year Goals

1. By January of each fiscal year, new Regional cultural resources staff will develop a balanced strategy for allocating more than one million dollars in cyclic maintenance funds and a lesser amount in the Cultural Resources Preservation Fund (CRP). Graphs, spread sheets, or some other means of showing the implementation phasing of each cyclic and CRP project will be designed by March of each fiscal year.
2. A Program or Budget Analyst will be hired to handle the complex accounts associated with CRP and cyclic maintenance projects. Given the considerable complexity of the Center's operation and accounting, the hiring of a program or budget analyst is of the highest priority.

3. Regional cultural resources staff will continue to assess the cultural resources needs of each park and provide feedback to the park staff.
4. Superintendents will be encouraged to revise and update Resource Management Plans (RMP) to reflect new needs and priorities. Regional cultural resources staff is available to assist in the revising of 10-237s and 10-238s.
5. On an annual basis, all new and revised 10-238s will be prioritized into WASO's five-year plan using the CRP criteria. All non-prioritized projects will be eliminated, regardless of length of time in the program.
6. The cultural cyclic maintenance program will also be systematized. Maintenance Management Systems (MMS) will establish the comprehensive cyclic needs of each park for which an MMS is developed. Strong data and justifications from MMS may help to increase base funding for Regional cyclic maintenance programs. In park areas without an MMS, cyclic maintenance projects will be assessed and prioritized similar to the CRP procedures.
7. Regional staff will encourage Superintendents to complete 10-237s in order to increase each park's base funding in cultural resources. In some instances, the Regional Staff may assist parks in justifying additional increased funding.
8. Encouragement will be provided for park superintendents to hire CRM specialists. Regional cultural resources specialists will assist Superintendents in programming and prioritizing the specialists' workloads.

Implementation Strategy

The Cultural Resources staff of the Center will take the initiative and will schedule visits to each park to assess the park's needs. Efforts will be made to visit every park each year.

Recommendations will be made to the Superintendent through a specific memorandum. Viable cultural resources projects will be outlined and explicit 10-238s recommended.

The review of RMPs will continue, and each project will be documented thoroughly in the park's RMP, before it is prioritized within the CRP. Review of 10-238s will also continue; strong supporting statements by Regional cultural resources staff will accompany the review document. Park staffs will be apprised by memorandum of the current status of 10-238s, RMPs, and the prioritization of projects, and Superintendents will be encouraged to revise, update, and initiate new appropriate projects.

Maintenance Management Systems will be expanded to as many parks as possible in the next five years. The data obtained will justify new 10-238s, 10-237s, and increased funding in the cyclic maintenance program.

Annual memoranda from the Center will encourage Superintendents to assess their cultural resources program and to plan additional projects as needed.

Administrative Details

The Program Analyst position will require one FTE. The funding will be provided from the annual cyclic maintenance program, therefore no additional funding may be necessary to implement the goals.

II B. PLANNING AND REVIEW

Current Status

The Division of Planning and Design has invited cultural resources staff to participate on planning teams in various capacities. While most planning teams for cultural parks have CRM specialists as active team members, no firm policy requires their participation. Similarly, planning teams for natural parks with National Register properties usually have cultural resources specialists as consultants but sometimes only to ensure compliance with Section 106. Presently, the current staff of the Division of Planning and Design actively seeks the comments of cultural resources specialists for important planning and design documents. The number of review documents, however, is often overwhelming. As some documents are more relevant than others to CRM, a system for identifying important documents should be developed.

Five-Year Goals

1. Beginning immediately, every planning document--General Management Plan (GMP), Resource Management Plan (RMP), Development Concept Plan (DCP) etc.--which impacts a cultural park will have a Regional or park cultural resources specialist as an active team member.
2. Also beginning immediately, every planning document for a natural area, which affects properties listed on the National Register will have a Regional or park cultural resources specialist serve as a consultant, if not a full team member.
3. Every project completed by or for the Center will be assessed for its effect on relevant existing management plans. The responsible investigator will be required to prepare summaries detailing these effects, if any.
4. The Chief, Southwest Cultural Resources Center will identify those documents to be reviewed that require explicit cultural resources expertise. The appropriate Division Chiefs will be notified through a systematic method agreeable to all. This process will be in effect by March 1, 1985.
5. Research designs should be reviewed by the Regional specialists in History, Archeology, Historical Architecture, and Curation to ensure that the research will not inadvertently harm other resources not specifically addressed in the design. In addition, the review process will acquaint all major disciplines with the research proposal, thus allowing on-going or future research to be coordinated more effectively.

Implementation Strategy

The implementation can be achieved as described in the goals. A review procedure, similar to that of the XXX (Assessment of Effect) process will be developed for research designs, as well as other documents. This process will be in effect by March 1, 1985.

Administrative Details

No additional FTE or funding will be required.

II C. RESEARCH

PROJECT TYPES

HISTORICAL STUDIES

Current Status

Historical studies include Historic Resource Studies (HRS), Historic Structure Reports (HSR), National Register (NR) and List of Classified Structures (LCS) forms, Historic Landscape Studies, Oral History Collection, and Special History Studies.

Historical studies are required by law, policy, and NPS guidelines. These studies, as part of CRM, can seldom be contracted. Academic historians deal with ideas rather than site-specific data; therefore, there are few CRM historians in private consulting firms. Thus, most NPS historical studies are done in-house by historians of the Denver Service Center (DSC), the parks, or the regional offices by specifically hired and trained historians.

Currently Historical Studies in the Division of History are accomplished by temporary historians, who either have been formerly employed by NPS or have been trained by the Division Chief. Other historical studies are in progress at DSC. Because the cost of DSC historians averages \$50,000 per study, the hiring of trained temporary historians is a more cost-effective method than "contracting" with the DSC. Unfortunately, trained historians generally seek permanent employment and so are unavailable and cannot be hired for future projects. Graduate students educated in historical methodology can be trained in site-specific research, but 6 months or more must be allocated for such training. The loss both of time spent in training and of specifically trained historians results in inefficient and ineffective methods of resolving the problem.

Recently finished were two Historic Vegetative Studies, funded by Division of Natural Resources Management, for Fort Union and El Morro, and a Historic Scene Management Plan for Fort Davis. Currently two Historic Resource Studies--Big Bend and Jean Lafitte, are underway. Historic Resource Studies for Bandelier, Hubbell, and Fort Smith as well as El Morro's photogrammetry study will be complete by December, 1984. All the above research has been or is being done with temporary historians. Under contract are Oral History projects at Buffalo and Lyndon Johnson, Historic Vegetative Study at Fort Smith, archeological monitoring report of Coca Cola Plant, and a Farmlands Study at Hubbell. Denver Service Center is completing a Historic Resource Study for Chalmette and Ranching Operations Study at Lyndon Johnson.

Five-Year Goals

1. On July 2, 1982, in a memorandum to the Chief Historian, the Regional Director listed the Historic Resource Studies needed for the Southwest Region. If the CRP funds come through as programmed, by 1990 four of the HRSs will be completed by in-house historians or those of the DSC. National Register forms and Historical Base Maps will be a part of the program. The Division Chief will monitor or supervise all studies. Funding for HRSs, NRs, and Historical Base Maps come from CRP.

2. Because of the increased level of funding in cyclic maintenance and the resulting increased workload, additional Historic Structures Reports will be required prior to preservation, stabilization, or project maintenance. In-house historians will complete historical documentation and will work with architects to synthesize the architectural fabric investigation before the project begins. Funding for HSRs comes from Cyclic Maintenance projects. The number of HSRs required each year will be determined by January of each fiscal year.

3. A list of required National Register forms has been completed, and work on the forms will continue as time allows. Pea Ridge and Canyon de Chelly documentation are top priorities for FY 85. The LCS will continue to be updated through the MMS and through HSRs.

4. The prioritized list of Historic Landscape Studies is described elsewhere in the plan. In-house historians will assist in these projects. Funding will come from CRP or Natural Resources research projects.

5. Work on the Oral History Collection will be continued through contracts with qualified oral historians. Lyndon Johnson, Buffalo, and Jean Lafitte are on-going in FY 84, and the first phase of these collections will be finished in FY 85. These contracts will be monitored by the staff of the Division of History. Funding will come from park sources or CRP. Some Oral History projects may derive from HRSs. The funding will depend on programmed 10-238s and year-end monies from parks or Regional accounts.

Implementation Strategy

As previously mentioned, most historical studies will be done by in-house historians. Since the cyclic maintenance funding level has been increased, the number of Historic Structures Reports and necessary historical archeological clearances will also increase. The workload and funding requirements justify concomitant increase in staffing. One research historian will be added to the Division of History to handle Historic Structures Reports, historical archeological clearances, historical base maps, and photogrammetry. Other research will be done by DSC or temporary historians.

Administrative Details

One full-time permanent FTE will be required. The funding will come from the cyclic maintenance account.

ARCHEOLOGICAL STUDIES

Current Status

Archeological studies include: archeological surveys for inventory and evaluation, including underwater surveys for shipwrecks; surveys for archeological clearance for construction projects; excavations for data recovery in archeological sites which will be affected by construction or stabilization work; archeological assessments (or archeological overviews); test excavations to evaluate sites; and non-park sponsored research by individuals or institutions. The results of these various studies directly affect park management.

In conformance with the conservation ethic and current policy, all archeological research must be as nondestructive as possible to the resource. Excavations are limited to those necessary for evaluation and data recovery; surveys are non-collecting, whenever possible. Those wishing to do non-park sponsored research in the parks are discouraged and urged to conduct their research elsewhere in order to save archeological resources in the parks for the future. This policy does not totally preclude excavations, for there are certain important questions which can only be answered through test excavations.

Archeological inventories have been completed for only six parks of the Southwest Region. These include Aztec Ruins, El Morro, Chaco Culture, Gila Cliff Dwellings and Pecos. The percentage of completion of the survey in other parks ranges from 0 to 85%. Currently, intensive surveys of Wupatki National Monument, Padre Island, and the Chacoan Outliers are being conducted and work has begun to initiate the Bandelier survey. These surveys are required by the Historic Preservation Act of 1966 as amended, and by Executive Order #11593, and are necessary for proper management of the resources. Surveys of several of the parks have been programmed, nevertheless the program will be updated to reinstitute projects which were dropped from it a few years ago.

The Submerged Cultural Resources Unit is currently involved in writing major reports on fieldwork at Isle Royale National Park and Point Reyes National Seashore. The unit is emphasizing park specific research programs consisting of three phases: assessment, survey, and inventory. The aim is to build a cumulative base of knowledge about resources in each area according to a standardized format. The approach is minimal-impact in nature, allows effective use of newly generated monies including outside donations, and follows a Servicewide system of priorities identified and currently being refined in a Special Directive under preparation. Presently scheduled field activities include work at Channel Islands, Golden Gate, Padre Island, Wrangell-St. Elias, and Isle Royale. Other brief studies will be conducted in association with training activities at Assateague National Seashore and Apostle Islands National Lakeshore.

The Division of Cultural Research is in the process of completing a long-term research project in Chaco Culture National Historic Park. This project involved both survey and excavation, and has resulted in the compilation of a great deal of data (over 40,000 items). Analysis and

interpretation of the information continues at present. Eight major reports have been published, and three more are scheduled for this fiscal year.

The Division plans to begin an inventory of Bandelier National Monument during the next fiscal year in cooperation with the Division of Anthropology. This project, which will take several years to complete, will involve field survey and limited testing, but will not involve any major excavation such as those undertaken in Chaco. The outline of an extensive research prospectus has been developed, and coordination with the park staff has begun.

Surveys and test excavations to obtain archeological clearance that are tied to construction and development projects are generally small in scale; however, some have been sizable projects consuming substantial time and funding. Although a construction project usually includes funding for archeology, often there is no funding available as in the case of the Pecos Interpretive Trail project. Increased funding is essential for archeological studies, including funding for analysis and publication of reports. There is a further need for funding for archeological surveys related to planning efforts.

Archeological assessments have been completed for 14 parks. These overviews are valuable in planning for research and in developing plans for the park.

Test excavations to evaluate sites are done occasionally, usually when a site is threatened by construction activities or erosion. The workload has precluded these evaluative tests, necessary to determine the site's eligibility for listing on the National Register; nevertheless, this activity is also assumed to be a part of any large-scale archeological survey. All archeological studies have been and will continue to be accomplished both in-house and by contract (see section C3 on contracting).

Five-year Goals

1. Complete the archeological assessments for an additional six parks within 5 years.
2. Reevaluate and update the archeological research program by August 1985.
3. Continue to allocate funding for archeological work in conjunction with construction, development, or preservation projects.
4. Complete a minimum of two large-scale surveys and initiate two more. This will include the Bandelier survey mentioned above. (Refer to the list of programmed surveys listed in the section on "Archeology Contracting Action Plan").
5. The Submerged Cultural Resources Unit intends to have completed underwater archeological resources base assessments of eight more parks, completed one more park-wide shipwreck survey, two partial surveys and one more complete inventory of all known resources in a park area resulting in a report similar to the final report on Isle Royale which will be out later this year.

6. The Division of Cultural Research will negotiate a cooperative agreement with the University of New Mexico which will facilitate the contracting of the collection and analysis of cultural resources data in research projects undertaken by the Southwest Cultural Resources Center. Depending on the negotiations, it is hoped that this agreement will be reached by January 1, 1985.

7. Complete the research and publication of all the scheduled volumes that report on the research in Chaco Culture by the Division of Cultural Research.

Implementation Strategy

Implementation will require continued coordination both with programming and planning endeavors and with the superintendents, and between the Division of Anthropology, Division of Cultural Research, and the Submerged Cultural Resources Unit in programming and executing archeological studies.

Administrative Details

No additional FTE's are required if contracting sources remain reliable. The Center will identify funding needs and insure that these are in the program for each project. It is possible that the Submerged Cultural Resources Unit might need additional FTE's in a few years if their project workload becomes unmanageable and adequate contracting sources cannot be found or developed. Additional FTE will be sought to accomplish the report backlog in PCA. See section on Backlog.

HISTORICAL ARCHITECTURAL STUDIES

Current Status

The Southwest Cultural Resources Center makes every effort to conduct the research and investigation necessary for hands-on preservation work well in advance of the physical work. This requires both the timely programming of necessary studies and familiarity with the changing condition of the resources. Ideally, on-site preservation work is undertaken only after a thorough Historic Structures Report (HSR) has been completed; however, in emergency situations, actions of a stabilization nature may need to be undertaken prior to the completion of a comprehensive HSR.

Historic Structures Reports, particularly those involving numerous or complex structures, are frequently joint undertakings. For those produced in-house, the Division of Conservation normally assumes responsibility for the architectural portions and the Division of History for the historical data. The Division of Anthropology normally produces the HSRs for the Region's prehistoric structures. The Southwest Region has also contracted with the Denver Service Center to produce Historic Structures Reports, but DSC tends to be more expensive than either in-house or private contract. In addition, the Region has jointly produced the documents with WASO. In the past, the Center has occasionally contracted with individuals or firms in the private sector to produce Historic Structures Reports. Contract work has varied in quality. To obtain a superior product it has proven necessary to follow the progress of the work closely, which consumes a great deal of time in contract administration.

Following stabilization or preservation work in the field, the Division of Conservation produces a completion report for each project. The completion report not only accounts for project expenditures, it also documents repair methods and materials used in the work. Thus, the completion report constitutes an important part of the history of a given structure.

The Division of Conservation is also responsible for the production of Historic Structure Preservation Guides (HSPGs), which are usually written following the HSR for a given structure or group of structures. The Region has produced one HSPG for historic structures: The Boyhood Home, Lyndon B. Johnson National Historical Park (Division of Conservation 1975). In 1984, a prototype Preservation Guide, developed by a contractor for Hubbell Trading Post, introduced the concept of a Maintenance Management System. The Center has contracted with DSC to adapt the Maintenance Management System to five areas and to produce pilot HSPGs that will include preservation specifications. The areas selected are Fort Davis, Hot Springs, Hubbell Trading Post (specifications only), Lyndon B. Johnson, and Salinas.

Other architectural and conservation studies which the Division of Conservation produces are tied to specific physical problems. These are varied, and include reports on the movement and structural stability of walls, special fabric studies, and results of the testing of adobe and other building materials. In addition, the Division has initiated a photogrammetry program which will document overall characteristics, salient features, and the physical condition of the Region's cultural resources.

Five-Year Goals

1. By January of each fiscal year, cultural resources staff will prioritize programmed Historic Structures Reports and identify other HSRs needed in advance of planned and programmed hands-on work. This prioritization will be done as a part of the overall programming process.
2. If funding is made available, four HSRs for historic structures will be produced in-house or under contract within five years.
3. Dependent upon adequate funding, five HSRs for prehistoric areas will be produced in-house within five years.
4. Following WASO's lead, the Center will develop a systematic approach to the HSR which would tailor levels of investigation and discussion to the specific nature and significance of the individual resource. Timing will depend upon WASO's development of guidelines.
5. The Center will prioritize HSPGs and, if funding is made available, produce one for each area in the region. Prioritization will be completed by August 1985.

Implementation Strategy

The studies will be produced by in-house historical architects and historians, by private contract, or by DSC. Editing will be required prior to publication.

Administrative Details

A writer-editor is needed in the Southwest Cultural Resources Center to assist in the research and writing of several of the reports and guides, and to edit all studies produced by the Center prior to their public dissemination. Refer to the section on Publications Program.

CURATION STUDIES

Current Status

The greatest need in the area of Curation Studies is to have comprehensive inventories of the collections made in the parks,--including collections now repositied in the parks as well as those repositied outside the parks. The archeological centers (such as Western Archeological and Conservation Center) keep the parks informed regarding their holdings, but information on the materials held by museums, universities, and similar institutions, both as to the nature of the collections and their status (i.e., whether owned by the Government or the institutions, on loan, etc.), is difficult to obtain. This is particularly true of the areas in which the archeological work began long before the parks were established.

If the SWR is to limit intrusive archeological and biological research in the staff parks, researchers should be encouraged to make more use of the collections as data bases for interpretation and management planning. A survey of the research potential of the SWCRC's holdings would be a very valuable follow-up of the inventory studies, and one that should be kept in mind during the inventory work as it should be possible to devise a Research Design that would provide data helpful in beginning this second stage.

Five-Year Goals

1. Develop adequate curatorial support in the Southwest Cultural Resources Center by the establishment of a Division of Curatorial Services. (Refer to section on Preservation of Objects.) Make a complete inventory of all collections derived from the park areas, repositied elsewhere. The status of such collections should be monitored.
2. A survey of the research potential of the aforementioned collections, as well as those of the SWR will be carefully considered.

Implementation Strategy

Forms (10-238s) have been submitted for most of the needed search projects. The work could be accomplished by personnel on temporary appointments or under contract.

Administrative Details

Costs are difficult to estimate for these projects until some have been completed; they may vary considerably for different areas. An average of \$10,000 per area, including travel costs, seems a reasonable amount and some savings might be possible by combining curation studies undertaken in related areas, or by cooperating with cultural resources staff performing other studies, e.g., historical or archeological, in a particular area. If done by NPS personnel, additional FTEs will be required.

See section on Objects for FTE and funding needs for the Center's curatorial programs.

Backlog

Current Status

Three divisions of the Center have a substantial backlog of incomplete reports. The Division of Anthropology has a backlog of analyses and reports that will require over 5 work years to complete. The Division of Cultural Research estimates that 3.3 work years of analyses and report writing are necessary to complete the backlog for the Chaco Project. The Division of Conservation has a backlog of 10 completion reports for preservation work. The PCA and PCC backlog has accumulated because of staff shortages. When an archeologist finishes fieldwork for a project he or she must move on to fieldwork on another project instead of completing the analysis and report for the first project, because there may be no other staff archeologist available for the new assignment. Similarly, the Division of Conservation has accumulated a backlog of completion reports as a result of preservation crews moving directly from one project to another, without time to do the completion report.

Five-year Goals

1. PCCR will complete all of the scheduled reports resulting from the Chaco research within the next 5 years.
2. PCA will eliminate one-third of the current backlog, by completing the analyses and final reports as well as the cataloging and curating of the artifacts.
3. PCC will finish most of the backlog of reports (7) by the end of FY 84 and complete the remaining reports in FY 85; thereafter backlogs will be avoided. Completion reports will be produced within 30 days of the close-out of the project.

Implementation Strategy

The PCC backlog is being eliminated by hiring additional staff in order to avoid the situation. Future preservation project scheduling will allow for the writing of final reports before new projects are undertaken. The PCA backlog can be eliminated by (1) contracting some new projects to enable staff to work on old reports, (2) contracting for some of the analyses, (3) hiring temporary employees out of project funds to assist staff archeologists in completing their reports and to do some of the small projects that would otherwise be assigned to staff archeologists, and (4) delaying the initiation of new work except in emergency situations.

PCCR will eliminate its backlog by contracting for analyses on future projects.

Administrative Details

One additional FTE will be required for PCA which has the greatest need for backlog work. Funding would be derived from projects and the cyclic maintenance account.

ARCHEOLOGICAL CONTRACTING ACTION PLAN

Current Status

The SWCRC will contract archeological work feasible possible in the Southwest Region. Contractors will be used not only for designated multiyear projects but also for analytical work and gathering data for reports on field investigations that the Center has completed or will complete. Institutions will receive contracts for some small projects whenever it is deemed economical. Contracting for those projects will allow staff archeologists to concentrate on on-going work and the backlog without increasing the backlog.

It should be remembered that contracting will not in any way eliminate the need for the participation of NPS archeologists in these projects since it requires considerable involvement on the part of staff archeologists to write scopes-of-work and Requests for Proposals (RFPs), review and evaluate proposals, monitor the work, and review the final reports.

Several factors will be considered when determining whether a large or multiyear project should be done in-house or by contracting. A project will be considered for in-house accomplishment if:

1. There is in-house expertise in the cultural area to be investigated.
2. The project is closely related to a study already underway or completed by NPS archeologists.
3. There are no contractors qualified to do those projects which have extremely specialized end-products.
4. It will be more cost-effective to conduct the study in-house.

A cost analysis of projects will consist of the following:

1. Each project being considered will be reviewed well in advance of the starting date scheduled for the project. Normally this will be in the preceding fiscal year, if there is a reasonable certainty of funding at that time.
2. A scope of work for the Request for Proposals will be prepared in detail sufficient to be used to develop an estimate of cost for in-house performance of the work.
3. The cost of performing the survey in-house will be developed based on all costs associated with the project, including administration.
4. The cost of contracting the work will be developed based on known contractors' fees. Factors such as the isolation of the area will be considered. The cost of administering the contract, e.g., preparing RFP's and supplying contractor with data stored by the NPS evaluating proposals, monitoring the work, and reviewing the reports, will be added to the estimated contractor's price for comparison with the cost of conducting the work in-house.

It is assumed that FTEs will be available for any in-house projects since they have been determined on the basis of a cost analysis.

Contracting Sources:

A listing of commercial sources for contracting archeological work is maintained by the Regional Archeologist. These sources are used for specific small-scale projects (under \$10,000) not requiring proposals. In accordance with contracting procedures, projects over \$10,000 are advertised in the Commerce Business Daily and, in addition, those contractors known to be interested in the project, or potentially interested, are sent a copy of the Request for Proposal.

Five-Year Goals

There are several multiyear projects planned for the next 5 years.

1. Wupatki Archeological Survey - This comprehensive survey began in FY 80 and will continue through FY 86. The survey will continue to be done in-house, as it is cost effective to do so.
2. Chaco Culture Outlier Survey - FY 84 is the second and final year of the fieldwork, which has been done in-house because of the expertise located in the Division of Cultural Research. The project was initially envisioned as a multiagency project, however, other agencies have not yet participated. FY 85 CRP funds will be used to complete the reports on the surveys accomplished in FY 83 and FY 84.
3. Padre Island Archeological Survey - This is a 3-year project, beginning in FY 84, which includes a magnetometer survey for shipwrecks and a salvors' camp, and a sample survey of prehistoric sites. A Request for Proposals for the first year's work has been distributed. The State of Texas has accomplished a major survey and excavation project on shipwrecks adjacent to Padre Island National Seashore. Their study is one of the most comprehensive and professional projects ever done on shipwrecks; therefore, SWCRC is attempting to contract with Texas to accomplish the magnetometer survey under a Memorandum of Agreement. If the State agrees to conduct the magnetometer survey they will expect substantial NPS participation.
4. Bandelier Archeological Survey - A 5-year project beginning in FY 85 will be accomplished by Division of Cultural Research in collaboration with Division of Anthropology. Servicewide implications regarding predictive modeling, computer graphics programming, other aspects of attaining cultural sites inventory (CSI), and training park personnel as CRM specialists, are expected to result from this project. Because of this and the inherent cost effectiveness of performing most of the work in-house, only analyses and ancillary studies will be contracted.
5. Big Bend Archeological Survey - A 5-year project beginning in FY 86. Because of the State of Texas' special interest and active participation thus far in the area, SWCRC anticipates possibly contracting

with the State to undertake approximately one-half of the project workload, with the rest done in-house.

6. Buffalo National River Cave Survey - A 3-year project. SWCRC plans to contract this survey because contractors have more expertise in the area than NPS archeologists.
7. Buffalo National River Archeological Survey - A 5-year project. SWCRC plans to contract this study because contractors have more expertise in the area than NPS archeologists.
8. White Sands Historic and Archeological Site Survey - A 3-year project. SWCRC plans to contract this project because there are contractors with more experience in the area than NPS archeologists.
9. Carlsbad Caverns Archeological Survey - A 4-year project. A cost analysis will be conducted to determine if this project should be contracted.

In addition to the aforementioned multiyear projects there are several 1-year projects which are likely to be contracted: rock art surveys in several parks (beginning in FY 86); geomorphological study of Canyon de Chelly; and a study of the distribution of Alibates flint.

II D. COMPLIANCE

Current Status

Since the Programmatic Memorandum of Agreement (PMOA) established the Assessment of Effect or XXX process, the number of discrete 106 actions has grown from 50 to more than 400 per year. The process requires the signatures of the four Regional cultural resources specialists and the Regional Director. Formal notification of compliance approval with documentation must then be sent to the park with copies to the Associate Director, Cultural Resources and the appropriate State Historic Preservation Officer. The workload for the Division of History and includes recording each stage of the procedure, tracking down lost or emergency XXX forms, consulting or advising Superintendents on proper action, securing all signatures, and maintaining full documentation by completing logs by park and by XXX form. Typing, photocopying and distributing all copies of forms and documentation are now shared by the several divisions involved.

The XXX form, one of the most valuable documents in cultural resources management, serves the following purposes: 1) complies with Section 106; 2) documents changes in historic fabric, sites, and scene; 3) provides continuous feedback to Superintendents and park staff on current CRM practices, philosophies, and policies; 4) allows cultural resources specialists to offer more sensitive methods or materials to achieve the same purpose; 5) keeps Regional and park managers apprised of CRM projects; and 6) compels Superintendents and maintenance staff to "take into account" the impact to cultural resources of every park project. Thus, the form and its various functions play a major role in good CRM practices. The procedure, however, needs to be streamlined for greater ease of use by the park and Regional staff.

In addition to routine the XXX forms and PMOAs for planning documents, Section 106 compliance with A-76 contracts may become an even greater workload. Each A-76 contract, involving properties listed on or eligible for the National Register which is lower than the park's bid, must be forwarded to the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) for review and comment prior to awarding of the contract. Since most contract proposals will probably lack preservation specifications required to avoid adverse effect, cultural resource specialists will have to work with all parties concerned to develop methods and procedures to ensure the protection of National Register properties. Each A-76 contract will be unique, so no standardization of procedures and stipulations is anticipated. The workload is expected to be intensive and extensive.

Five-Year Goal

1. Center personnel will utilize the summary inspection forms of Maintenance Management Systems (MMS) to streamline 106 compliance. Superintendents can file composite XXX forms that refer to the MMS for specifications and documentation.

2. For parks without MMS, two methods of streamlining can be developed: 1) park maintenance staff can design and implement its own MMS, which would include an inspection system with preservation specifications approved by the Regional Historical Architect, and 2) the Division of Conservation or its contractor will develop a list of "universal" activities including annual and preventive maintenance tasks with a generalized inspection system and limited specifications for more routine maintenance. These two methods will allow limited but documented "blanket" XXX forms for restricted maintenance functions.

3. CRM specialists will attempt to develop procedures for Section 106 compliance with A-76 in cooperation with the NPS A-76 committee, the park superintendents, proposed contractors, the SHPO, and the ACHP. These procedures will expedite compliance while ensuring the protection of National Register properties. Because of the unknown aspects of A-76, these procedures cannot be defined until A-76 is fully implemented.

Implementation Strategy

The cultural resources specialists will work with DSC and specific contractors to develop the MMSs and their alternatives. Park staffs will then be trained in how MMSs can assist in satisfying compliance requirements. Section 106 compliance for A-76 contracts will be resolved on a case-by-case basis.

Administrative Details

No additional FTEs or funding will be required for streamlining the 106 process but the workload for A-76 contracts has not been determined. Since cultural resources specialists are to be members of the panels evaluating the bids as well as responsible for handling 106 compliance, additional staff and FTE or reprioritization of program activities may be required.

II E. PRESERVATION

PREHISTORIC AND HISTORIC STRUCTURES AND SITES

PROJECT DESIGN

Current Status

Prehistoric: PCA is currently responsible for designing and executing all prehistoric ruins stabilization projects in the region. Project design is done by one of the PCA archeologists and execution is done either by the same person or by a selected park archeologist. Project design often requires a short-term data collecting session in advance of the design preparation and project execution.

Among the contractors who ordinarily execute prehistoric ruins stabilization projects (usually archeological firms), the lack of experience in designing projects in concert with NPS-28 and other Service policies has so far precluded the contracting of this task.

When maintenance stabilization work is planned by the staff of an area/park, the XXX process is used to monitor this design. If the reviewers of the plan identify deficiencies in the project design, PCC or PCA may render direct assistance to the area in order to rectify the problem prior to the start of the activity.

Historic: In FY 84, project designs, construction contract supervision, day labor and pre-planning expenses represented a substantial portion of the cyclic maintenance allocation. Included in this amount were the reimbursable expenses for DSC assistance in the Jobs Bill project inspections and the Park Restoration and Improvement Program designs. The SWR preservation program for FY 84 was approximately \$3 million including 25% for overhead (e.g., planning, design and project supervision at 18 different sites).

The Divisions of the Center do not have sufficient base funding to cover the staff that is assigned to design or build these projects, therefore, charging this overhead to projects becomes a necessity. In addition to a shortage of base ONPS funds, there are only two architects in the Division of Conservation, one architectural drafts person, and the Regional Preservation Architect. The production of the design workload thus falls to DSC staff or A/E firms as outside contractors with the Regional staff providing direction, review, and contract administration.

Designing a project in the same year that funds must be obligated has been the stumbling block in previous attempts to provide a rational approach to preservation of structures. Hiring competent staff or securing A/E services to produce the contract documents used in the 90-day procurement process consumes the better part of the fiscal year.

Five-Year Goals

Prehistoric: The primary goal in project design is to increase the quality and consistency of the designs, with the result that more comprehensive data are gathered during the field sessions preceding preparation of the project design and execution of the project. The goal is also to acquire better architectural and preservation data in order to provide a more realistic design for every project that is undertaken by SWCRC.

Historic: The Division of Conservation takes lead responsibility in securing the services of professional Architects/Engineers throughout the preservation program.

1. To better accomplish the goal of securing professional assistance prior to project design, a new branch within the Division of Conservation will be created. Following its establishment the Research Branch will focus on the research and training needs for all upcoming projects. To accomplish the planning or project design in advance of construction, the Division will continue to, (a) first seek out park or Regional help, (b) then solicit the DSC or other NPS regional offices for staff assistance, and (c) and finally will advertise for A/E firms under contract.
2. Project design work leading to contracted construction will slowly become technical assistance for park staff in their routine preservation maintenance of the area's cultural resources.
3. More time will be devoted both to research before the need to act and to routine inspection and on-site consultation. Less funding will be required at the outset to secure contract services, which usually cost more than in-house due to overhead and profit add-ons.
4. If the enhanced cyclic maintenance program becomes a reality it will be based on a computer-aided system with completed HSPGs for all of the Region's parks under the new Maintenance Management System. The upkeep of a computer-aided management system will need to be considered as the program evolves. Training time should be made more available as a result of the shift away from crisis-oriented work to preventive maintenance.
5. Development of our current staff's expertise and that of other staff members in the area will be given greater funding and emphasis.
6. The increased use of graphic aids developed through the Region's computers and of programs associated with the electronic photogrammetry equipment should liberate staff time so that documentation backlogs can be reduced.
7. Production of Historic Structures Reports will be given higher priority when these documents are required for upcoming preservation projects. Word processing capability on the ADP equipment will be maximized for this goal.
8. The multidisciplinary structure within the Center has enabled the project designs to include the concerns of anthropology, history, and the curation of objects on a case-by-case basis. To further develop a unified approach to project design leading toward implementation, one that is coordinated from its inception with all Divisions in the Center and the parks, as well as the State Historic Preservation Offices is a continuing goal.

Implementation Strategy

Prehistoric: Project execution and design is being shifted to PCC, but the PCA staff is expected to continue to collaborate with PCC and PCCR during project design and XXX review. For prehistoric ruins, PCA and PCCR will collect data necessary for project design, although staff from PCC and PCCR may be increasingly involved. No overt staffing or organizational changes are anticipated, but increased contact between PCA and PCC will be needed during the project design phases. Meeting the goal of having better data available prior to design preparation may entail longer lead time between funding acquisition and project initiation.

Historic: With the emphasis shifting toward routine cyclic maintenance throughout the Region, realistic planning of multiyear strategic targets or objectives can begin. Some examples are the successful leasing of vacant historic structures to the private sector or the inventory and documentation of all cultural resources that have been long neglected. The update of the multiyear project list, recently undertaken, has indicated those gains realized through the PRIP years and highlighted weaknesses in the delivery of preservation services to certain park areas. As necessary, the situation is being corrected through the programming process.

Ensuring that the "right" resources receive attention in a timely manner may mean a short-term need for additional professional services. A steady flow of funds to the park staff for required preservation maintenance--so that all cultural resources are brought up to a maintainable standard and held there permanently--will be a long-term solution needing support by all.

Administrative Details

Prehistoric: The primary potential change in procedure is the inclusion of estimated costs when compiling data prior to the execution of the project, i.e., via the 10-238 process. The collection of data necessary for preparing a suitable design will be identified as a line item. Ordinarily, only travel and per diem costs will be involved, because salary costs for short-term archeological tasks can probably be borne by PCA. The exceptional project may require in-depth planning and data collection beyond PCA's means, however. Additional costs that should be added to such estimates are graphics preparation and processing and analyses of prehistoric building materials such as mortar and stone.

Historic: Maintaining current professional staff levels and charging overhead to projects will be necessary to hold the status quo. Additional services will be sought outside the region or contracted through A/E procedures. Administrative assistance (in-house) with cost accounting and technical writing are two areas that need to be built up throughout the Center. The project supervisory staff must be augmented due to the increasing involvement of the SWCRC in ruins stabilization and the growing numbers of contracts. See section on Cyclic Maintenance Program, for additional FTE proposal.

MAINTENANCE MANAGEMENT SYSTEM

Current Status

Over the years, the NPS has come to realize the necessity of providing for a systematized method of maintaining cultural resources. The focus of this need was a document called a "Historic Structures Preservation Guide."

WASO has contracted for the development of a computerized data base for preservation maintenance activities. Concurrently, SWCRC began exploring a systems approach to the HSPGs themselves. The outcome of this was a prototype system designed by Harrison Goodall's Conservation Services for Hubbell Trading Post National Historic Site. The entire system could be quickly implemented Regionwide and enable staff to maintain the cultural resources without waiting for a specific document for each park or resource to be developed.

At the present time, the basic system has been developed and the prototype for Hubbell is being implemented. Four parks (Lyndon B. Johnson National Historical Park, Salinas National Monument, Fort Davis National Historic Site and Hot Springs National Park) were chosen for Phase II because the variety of resources contained therein would be a good test for any further modifications that might be needed.

Five Year Goals

1. All parks within the Region will be on-line with the basic maintenance system in five years.
2. All available data pertaining to detailed preservation maintenance for these resources will be provided to WASO for inclusion in its Data Base through feedback from DSC architect responsible for MMS.
3. Preservation procedures not available in the current Regional data base can be made available through this system to the appropriate parks.

Implementation Strategy

Implementation will be achieved primarily through Regional and DSC projects to bring all parks on-line. Input to the WASO data base will occur as a part of these projects.

Administrative Details

An annual commitment of approximately \$100,000 from the Regional Cultural Cyclic Maintenance fund will be required to accomplish these goals and to employ trained personnel from DSC over the next five years. A need for additional FTEs is not anticipated. However, if availability of the DSC personnel or funds becomes an obstacle the Center will be required to hire an additional staff member to maintain the system that will be in place at that time.

CYCLIC MAINTENANCE PROGRAM

Current Status

Prehistoric: Currently there are nine on-going projects on prehistoric resources in seven parks plus two accounts for equipment and administrative costs for project archeology. A multidisciplinary-team approach involving considerable park staff time is usually taken for all projects. Several parks have in-house stabilization crews that perform annual preventive maintenance.

Historic: The FY 84 program includes projects funded for Cyclic Maintenance, the Cultural Resource Program (CRP), Jobs Bill, and Health and Safety. There are 14 projects on historic resources in nine parks. Only four projects will be done by contracted labor while ten are planned for in-house/park staff and day laborers. Currently there are four projects under contract to 8A (minority) firms funded by the Jobs Bill program. The large projects underway are for emergency stabilization of the prime resources in the park areas.

There are six crew members of SWCRC performing skilled preservation maintenance on the historic structures in this Region. In addition to 50 or so seasonal employees doing area maintenance in the parks, there are a few contracts let each year to accomplish the task at hand.

Five Year Goals

Prehistoric:

1. There is a growing dependence on the use of the Exhibit Specialist classification for project supervisors in the historic structure maintenance program. The trend in the prehistoric ruins stabilization will be toward more systematically programmed field activity led by supervisory exhibit specialists. The craftspersons under the specialist will be certified in a particular skill (i.e., masonry, carpentry, equipment operator). Periodic inspections followed by program requests for funding and FTE will remain the Superintendents' responsibility. Field activity will be regionally supervised for technical performance; and logistical support will be integrated with the overall annual cyclic maintenance program. In 1985, both Cyclic Maintenance and Cultural Resources Preservation Funds list 17 prehistoric projects in five parks.
2. For FY 86 the suggested program for increased annual cyclic maintenance after PRIP contains a request for several projects involving the following: erosion control; stabilization; protective roofs; drainage systems; ruins preservation; equipment replacement and training, and other administrative costs.
3. In addition to this program, a request for 1986 CRP funds included eight projects on prehistoric resources in five parks, representing a substantially increased workload in a very short period of time and requiring a creative means of implementation.

Historic:

1. Emergency stabilization projects involving primary park resources have been a reality under PRIP and may continue for the next two years of this five-year plan.
2. If the annual cyclic maintenance funds are increased by 1986, according to the recent proposal submitted to WASO, several types of preservation maintenance activities will be provided, for example, mechanical and electrical fire and security systems; reflooring; restuccoing/repointing; structural repairs; repainting, and reroofing; and administrative overhead costs, with these kinds of work programmed for many parks as soon as possible.

Implementation Strategy

Prehistoric: In 1985, one exhibit specialist will assume the position of field supervisor and begin the orientation and training for all park employees involved in ruins stabilization.

The development of a systematic approach to programming, implementation, and completion reports will be a concurrent duty of the field supervisor. This additional task will require the assistance of park administrative personnel in the initiation of 10-238s or 10-237s, compliance clearance procedures, and personnel recruitment. Funding will probably remain the same until the new projects are programmed, and the staff enhancements are in effect. At that time additional FTE requests by the parks are anticipated, and extra funding will be sought from all sources to accomplish the expanded mission. The most likely source will be the cyclic maintenance fund with additional monies from the CRP program for those primary resources in serious need of multiyear repair work.

The "emergency projects" will give way to enhanced annual maintenance if cyclic maintenance funds and programming are maintained at the accepted standard. Rather than a continuation of the accelerated PRIP program there should be a "plateau" effect for the next five years with the overall program level remaining steady.

Historic: The ideal of sufficient annual cyclic maintenance funds must be coincident with a rational management system for the execution of this program. With such a system in place, one-time large projects will be needed much less frequently due to enhanced routine maintenance. More communication coordination with park staff will be needed; training, FTE increases, and incentives to implement the maintenance system will be required. The Center has begun "seeding" for the later fruition of this goal with the five HSPG projects and the eventual Maintenance Management Systems for Fort Davis National Historic Site, Lyndon B. Johnson National Historical Park, Hot Springs National Park, Salinas National Monument and Hubbell Trading Post National Historic Site.

Administrative Details

Prehistoric: When annual maintenance funds are raised to the level consistent with the ruins stabilization needs, many new positions or contracts for labor will have to be established.

An estimate of the annual costs required to accomplish the annual maintenance program indicates a lack of sufficient labor force on staff to operate it. Assuming the requests will be granted for increased maintenance funds in future years, it follows that the supervisory exhibit specialist will have to manage labor forces larger than the current summer staff. This task can only be accomplished if each park has either a CRM specialist or a professional (archeologist, architect, engineer) who can devote more than half of his or her time to the ruins stabilization program. Lacking the necessary cooperation at the park level, the alternative would be to seek minority firms (8A) under SBA and contract for manual labor, a situation leading in turn, to a need for more on-site project supervisors qualified in contract administration. With regard to FTE, the parks involved in ruins stabilization will have to recruit many more seasonal staffers if the program expands.

The SWCRC will require another exhibit specialist to oversee the work, whether it is done in-house or by contract. Finally, more time of the design staff will be expended on the awarding of these contracts.

Historic: The next two years will require even more investment in projects. The list for FY 85 has 45 projects in 17 parks totalling \$1.2 million. The FY 86 list contains requests for projects in 13 parks totalling \$750,000 out of the CRP only. If the cyclic maintenance additional funding request is approved there will be \$3 million in FY 86 and \$2.6 million for FY 87 and the initial years of the new cyclic program, with a requirement for less in subsequent years. The next five years' worth of approved projects for the mutliyear program already totals \$11 million or an average of \$2.2 million per year for all aspects of preservation; however, this list will grow as more 10-238s are processed.

In addition to the permanent exhibit specialist mentioned above, temporary craftspersons will have to be hired in order for the program to continue to function. Certainly all of the currently trained park maintenance staff will be needed as well as many more new employees.

LANDSCAPES

Current Status

The Southwest Region has made a good start at documenting historic landscapes and historic scenes. As of FY 84, historical and cultural landscape studies (also known as historic vegetation studies) have been completed for five parks: El Morro, Fort Davis, Fort Union, Pea Ridge, and San Antonio. In addition, historic vegetation studies are on-going for Chalmette and Fort Smith, and a historic farmland study is underway for Hubbell Trading Post.

Fort Davis is the only area in the Region for which a historic landscape plan has been produced. A combination study and plan has been programmed for Lyndon B. Johnson. No landscape plans have yet been programmed for the other areas listed above. In the recent past, no landscape plan has been implemented in Southwest Region.

While broad guidelines exist to assist in the maintenance of the historic scene, park staffs and Regional CRM specialists have not emphasized precise preservation techniques. Historic structures are managed closely but, in most parks, landscapes are allowed to evolve naturally. Grass is mowed, trees planted, and native vegetation encouraged. Stronger guidelines and procedures need to be developed and implemented.

Five-Year Goals

1. Regional cultural resources and planning and design staffs will assess the historic landscape documentation needs of each park and assist park areas in programming for appropriate studies and plans. Once needs have been identified, Superintendents will be encouraged to revise and update their Resource Management Plans to incorporate statements on landscape documentation. The parks will revise or write new 10-238s, if necessary, with assistance from Regional cultural resources and planning and design staffs.
2. Staff will then review the Regional priority list and develop a strategy for producing historic landscape studies and plans for all areas which require them. The present priority list for historic landscape studies is as follows: 1. Lyndon B. Johnson; 2. Hot Springs; 3. Pecos; 4. Salinas; 5. Bandelier. Funding will be sought for the production and implementation of historic landscape plans for the following historical areas, in priority order: 1. Fort Smith; 2. Lyndon B. Johnson; 3. Chalmette; 4. Pea Ridge; 5. San Antonio Missions.
3. For the archeological areas, the Southwest Region will resolve the question of whether landscape documentation is needed, or whether landscape issues can be adequately addressed in the Resource Management Plan. Areas affected are Alibates, Aztec Ruins, Bandelier, Chaco Culture, Gila Cliffs, Navajo, and Wupatki.
4. Park-specific guidelines for the maintenance of the historic scene will be

developed to assist park staff in day-to-day operational needs. Preservation guides, similar to those for structures, will be developed and tested in at least two parks.

Implementation Strategy

During the five-year period, the Southwest Region should have work underway concurrently on landscape studies, landscape plans, and plan implementation. At any given time, all three phases should be under production. Thus, at the end of five years, the Center should have produced five studies and five plans; moreover, historic landscapes at five parks should be fully implemented. This depends on funding from CRP or Natural Resources research program.

The Center lacks the staff capability to maintain this production schedule. Alternatives available to produce the work include the following:

1. Hire a new historian or historical landscape architect;
2. Seek production assistance from Denver Service Center;
3. Contract the work to the private sector;
4. Hire temporary historians/landscape architects under excepted authorities (e.g., graduate students, faculty).

The Center may have to use a combination of all four alternatives to achieve the goals set. Each park requires different expertise: Lyndon B. Johnson and Hot Springs need horticultural expertise; Pecos and Salinas require knowledge of Spanish paleogeography and Borderlands history. Landscape plans will incorporate the requirements contained in the applicable General Management Plans and Interpretive Prospectuses. Planners are essential to the system.

Administrative Details

Depending on the complexity of the resource, landscape studies and plans are estimated to range in cost from \$10,000 to \$30,000 each. The appropriate amount should be programmed for each park.

The need for funding and FTE for a research historian has been stated in the section on historical studies, above. Additional work specifically for landscape studies and plans may be accomplished through contracting or hiring of temporaries, in which case additional FTE will be sought as necessary.

OBJECTS

Current Status

The Regional preservation and curation program varies from park to park. Although a few parks, such as Lyndon B. Johnson and Hubbell Trading Post, have full-scale curatorial programs, even these parks have need for increased storage, and in some cases, increased staffing. In most parks, the greatest need is for adequate storage. PRIP permitted the accomplishment of considerable conservation work on objects, but more is needed. In many cases, unless proper facilities for storage are secured, the PRIP conservation effort will have been futile, as the objects would be returned to the same conditions in which they originally suffered deterioration.

Less than one per cent of the Region's collections have been catalogued. The new museum registration system will permit us to catalog and accession much more rapidly, but the major obstacle will still be a lack of personnel and funding to do the work. A particular problem is the archeological material collected in research and clearance projects, since these projects generally do not include money for the processing of the collections. Because of the erratic nature of this sort of work, it is best centralized in Region or in an archeological center.

The various divisions within the Center generate collections in the course of their work and frequently must have ready access to these collection materials over extended periods of time for purposes of research, resource management, and assistance to other offices. The primary functions of the divisions are sufficiently demanding, particularly in archeology and conservation, that they cannot spare the time of their personnel to properly care for these collections. In addition, preservation of collections is such a specialized field that efficient operation of collections management should be centralized in a division devoted to that purpose. Only with such a division will the Center be able to maintain accountability and preserve collections at NPS standards while providing for their use in on-going Center research.

Five-Year Goals

1. Develop adequate curatorial support in the Southwest Cultural Resources Center through the establishment of a Division of Curatorial Services by FY 87.
2. Within the next five years, produce Collection Management Plans for all parks having sizeable collections and lacking up-to-date plans: Aztec Ruins, Fort Union, Carlsbad Caverns, Guadalupe Mountains, Chaco Culture, Chamizal, Fort Smith, Hubbell Trading Post, Jean Lafitte, Padre Island, San Antonio Missions, and Wupatki.
3. By the end of 1985, prepare a Collection Management Plan for the Division of Cultural Research.
4. Complete the curatorial work needed for the Chaco collections in the Division of Cultural Research and negotiate the establishment of a joint repository with the Maxwell Museum.

5. Establish close liaison with Western Archeological and Conservation Center for the storage of collections not otherwise provided for. This process is underway through a Special Directive for WACC, now in preparation.
6. Assist the Superintendents in meeting the parks' curatorial needs through the revision and writing of new 10-237s and 10-238s.
7. Assure that all areas have personnel with the level of training required for the proper care of their collections.

Implementation Strategy

The Chief, SWCRC, will seek authorization for creation of the Division of Curatorial Services within the Center. Base funding and FTE will be sought for the positions of Chief of the Division and support staff as needed in Santa Fe.

Funding and positions will also be sought for curatorial work in the Division of Cultural Research at Albuquerque, and for GSA rental of new repository space, working with the Maxwell Museum at the University of New Mexico.

Regional curatorial staff will participate in developing and reviewing Resource Management Plans (RMPs), Development Concept Plans (DCPs), General Management Plans (GMPs), and other planning documents that might advance curatorial programs. The Regional Curator will assess needs and develop priorities for the Collection Management Plans and other curatorial projects.

Policy will be established for the storage of collections according to type and kinds of use to which they may be put. This policy will be utilized in the establishment of priorities.

The Southwest Cultural Resources Center will devise and conduct training programs needed to meet needs in curatorial programs not met by courses offered by the training centers.

Administrative Details

At a minimum, three new permanent FTEs are needed: a Division Chief, a Museum Tech or Curator, and a Clerical position. The curatorial workload for the Division of Cultural Research will be handled through hiring temporary employees for which FTE will be needed. Additional FTEs may be needed as the curatorial services program develops.

Base funding to cover salaries and operating expenses for the new Division of Curatorial Services will be needed. Project funds will be sought for the curatorial work in PCCR.

Office and laboratory space in proximity to the Center offices and curatorial storage space will also need to be provided.

INTANGIBLE VALUES OF CULTURAL RESOURCES

Current Status

There is a minimal amount of consultation with Indian religious leaders regarding the traditional use of resources and places within National Park areas. The consultation accomplished thus far has not been overwhelmingly successful due to a general lack of understanding of Indian and traditional culture.

Assistance to Indian groups has been primarily to the Navajo and Hopi tribes. In addition to technical assistance, however, the Division of Special Programs coordinates with tribes, tribal agencies, tribal organizations, and the Bureau of Indian Affairs. There is also coordination in solving mutual problems between parks and Indian groups living within or near park areas.

Indian groups are well identified by the NPS and the Bureau of Indian Affairs. Non-Indian groups are less well known, except perhaps at Jean Lafitte. Jean Lafitte and San Antonio are the most sensitive parks in regard to non-Indian ethnic groups. Areas having important Indian relations problems that affect cultural resources include Canyon de Chelly, Chaco Culture, Bandelier, Pecos, Salinas, and probably Wupatki. Relationships of ethnic groups to the resources are not well identified at all park units.

Five-Year Goals

1. Increase management awareness of American Indian Religious Freedom Act (AIRFA) situations and others dealing with traditional ethnic culture.
2. Continue assistance to and coordination with Indian tribes.
3. Develop park awareness among both managers and other staff of ethnic group interests in park resources.
4. Ensure that ethnic group interests in park resources are addressed in planning documents.
5. Increase ethnic group participation in park operations, both as employees and otherwise.
6. Augment our knowledge of cultural history and ethnohistory of the parks.

Implementation Strategy

Make a presentation on AIRFA and other ethnic group interests in park resources at each annual Superintendents' meeting.

Develop a program for training at Region or in the parks to improve employee awareness of ethnic group interests in park resources. This program will be planned by the end of FY 1985.

Ensure continued support for the Division of Special Programs.

Take into account interests of individuals in various ethnic groups in making assignments to planning teams and in assigning review responsibilities.

Ensure that public review of planning documents is held in places conducive to participation by members of ethnic groups.

Promote affirmative action in hiring for positions in cultural resource management.

Develop 10-238s for studies of the culture, history, and ethnohistory of selected parks and complete at least one study per year if funding and priorities allow. These projects would be funded primarily from the CRP fund and would be considered during the regular programming process.

Administrative Details

One study per year is needed, of one-year duration at about \$30,000, to be accomplished by contract or by temporary appointments. In the latter instance FTE would be needed. Funding would come primarily from the Cultural Resource program.

II.F. EFFICIENT RESEARCH AND PRESERVATION TECHNIQUES

COMPUTERIZATION AND PHOTOGRAMMETRY

Current Status

In the late 1970s, the concept of utilizing computers to manage cultural resources was just beginning to evolve. Computer equipment was not widely available, and usage was largely for data base manipulation (e.g., PARKMAN, LANDSAT). Now, five years later, computerization of CRM activities is no longer merely desirable--it is a necessity. Almost overnight, the computer originally intended for Cultural Resources management has become the nucleus for a Regionwide computer system. Requests for access to the system today equal the demand which was expected three years hence. With compatible units scheduled for installation in almost all of the field areas by the end of FY 85, a tremendous potential now exists for their use in CRM.

There are, however, a number of problem areas. First, such a large system requires trained technical personnel to operate it. The Center lacks such personnel. SWCRC also needs programming capability and has none. There will always be a need for at least some specialized programming capability: the amount of programming assistance will depend on the degree to which the Center may, in the future, be able to take advantage of commercial programs.

Second, to take advantage of the system, compatible software is needed. The Data General (DG) proprietary operating system is unique to DG equipment. MS/DOS and UNIX are becoming the industry standards for which most off-the-shelf software is written, and such software is generally incompatible with the DG. The Center has been able to utilize some software from other agencies, but it is often inferior compared to packages offered by commercial vendors (e.g., the Cost Estimating package obtained from Los Alamos vs. the R. S. Means Co. Estimating System). Consequently, the range of uses to which this equipment has been put is quite small compared to its potential.

Third, computer literacy among managers is still relatively low. Many laborious and repetitive tasks continue to be done manually simply because those responsible do not know that computerization could accomplish the work.

Collectively, the various divisions within the Center own the following ADP equipment:

Anthropology: 4-DG terminals; 2-letter quality printers (LQP);
 1-draft printer; 4-4010 graphics terminals; 1-4051
 graphics terminal; 1-Talos digitizer; 1-Versatec
 printer.

Conservation: 1-4052 graphics computer; 1-Visual 500 graphics

terminal; 1-IBM System 6 word processor; 1-IBM Displaywriter word processor; 1-HP B-size plotter.

Underwater Research: 1-DG terminal.

Cultural Research: 1-DG terminal; 1-4051 graphics computer; 1-4052 graphics computer; 2-draft printers; 1-Tektronics plotter; 1-Lanier word processor.

History: 3-DG terminals.

Three additional Data General terminals are currently on order: one for the Office of the Chief and two for the Division of Conservation. All of the Center's hardware is connected to the Regional Computer System's Data General MV4000 CPU.

The various divisions within the Center have access to all of the software resources available to the Regional Computer: Office Management software (word processing, scheduling and spreadsheet software), Fortran generator programs, Fortran 5, Fortran 77 and 32-bit Basic languages, the IGL Tektronics graphics software program and various editors, compilers, etc. The system also holds the Chaco PARKMAN graphics program, the San Juan Basin graphics program, and their associated data bases. A curation program for managing artifact collections is also in use.

As an integral component of the Chaco Project, the Division of Cultural Research has developed a user-friendly graphics information system called PARKMAN to aid in the management of archeological resources. As developed, the program is specific to Chaco Culture National Park and permits the user to plot archeological sites (recorded by UTM coordinates) of various types, time periods, and functions.

The use of computer resources over the next five years will grow exponentially. At the present time, the Center is installing or has installed over 15 terminals that are compatible with the Regional Computer System. Most of these terminals are presently employed in word-processing functions; however, analytic tasks will begin to supplant word-processing over the next several years.

Five-Year Goals

1. Conduct data analysis using the MV4000 system. This analysis will involve one or more of the following types of uses: (a) creation and manipulation of a scientific or reference data base; (b) statistical manipulation of scientific

or resource management information; (c) the creation, manipulation, and generation of graphic aids for interpretation and/or study.

2. Initiate the use of outside data bases, where Center users can dial other computer systems and gain access to bibliographic reference material, architectural source material, archival material, and so forth. (The Division of Conservation already uses the computer in this manner to retrieve a construction specifications data base, and has plans to similarly use a cost estimating data base.)
3. Provide an adequate number of word processor or computer terminals to enable the direct composition of reports and monographs by the Center's professional staff.
4. Expand the Maintenance Management System (MMS) developed for Hubbell Trading Post to a Regionwide system. This will necessitate development of an adequate spreadsheet program, such as the Lotus 1-2-3, to manipulate management data.
5. Develop software for structural analysis and materials-quantity measurements for the Center's photogrammetric measuring system.
6. Employ computer-aided design and drafting (CADD) software to automate and speed up the production of design and working drawings.
7. Train one or more Center staff in the use of the available software systems. These individuals would then act as advisors who could guide Center researchers to the proper statistical or graphic program necessary for their projects.
8. Develop, through intregration with PARKMAN software, a user-friendly version of MOSS.

Implementation Strategy

The Branch of Cultural Data Systems envisions that most software needs will be filled by the use of large-scale general purpose systems (i.e., data base management systems and graphics systems). Although the use of these systems requires minimal programming or development, this does not mean that the average Center user will be able to develop his or her own in-house system with ease. Rather, most requirements would be met with a minimum of programming effort. A division that identifies a data processing task (i.e., the creation of a specific data base) could seek advice from the Center's data processing personnel on how to structure the data base. It might even have the task performed by the Center's data processing personnel.

All of the Center's divisions will require the input of data. Various specialized data bases will be developed (i.e., Cultural Resource Management System, photogrammetric data, archeological site data, etc.). These data must be entered into the computer by data entry personnel or mechanical means. Over the next five years, the Center will need to employ, or to train, a data-entry clerk to enter data generated by archeologists, architects, and historians. In addition, to utilize fully the capabilities of the photogrammetric system, the

Division of Conservation will require a full-time technically oriented historical architect.

The Branch of Cultural Data Systems could become the Center's service organization for data-processing needs. Once the Branch is relieved of its responsibilities for operation of the Regional computer, it should be able to provide the services of guidance, programming, and general data entry to the Center's divisions. The addition of a programmer/statistician and data entry personnel to the Branch's current staff would provide the needed core for ADP use over the next 5 years.

The Region has purchased a relational data base system, ORACLE, which will enable the Center to create data bases as required. It should allow more efficient creation, data entry, manipulation and report generation. This system requires users to become familiar with SQL, an IBM DBMS language. The Center's ADP staff would be most useful in facilitating this process. Potential Center users should be consulted to determine their needs before such a purchase is made.

The Regional Computer System will also have Precision Visual's D4000 graphics system available for use, which should provide us with the core software for most graphics requirements. Programming will be required, however, to interface the subroutines in this package to the specific applications. The Center will probably delve further into three-dimensional color graphics applications for mapping, data analysis, and design. D4000 graphics routines would probably serve as a base for these explorations. Underwater sonar data and LANDSAT data, as well as archeological stratification data and architectural measurements could be manipulated by this program.

The Region does not at present support a statistics package, although it has leased the IMSL statistics package in the past. The Center will probably seek to renew or replace this package in the near future.

The Center might seek to purchase or re-program packages developed for other computer systems within the next five years. There are many such systems currently under development. CADD/CAM programs for architectural design and development are among such systems. MOSS, a graphics information system developed by the U. S. Fish and Wildlife Service, requires a great deal of training to operate; however, the incorporation of the Center's software will make it accessible and available to the various park areas.

The Center will want to design its own programs specific to its particular needs. Among these is to develop, in cooperation with the Division of Natural Resources, a Bandelier version of PARKMAN which would be applicable to other park areas in the Southwest Region and will have the capability of producing output of value to natural resource management as well. This version will be tested in the course of the archeological survey project the Division of Cultural Research will conduct at Bandelier. The Division of Conservation expects to develop programs to take advantage of the data obtained by means of the photogrammetric system. The Division also intends to maintain the level of technical expertise necessary to keep its programs as cost effective as possible.

Administrative Details

Branch of Cultural Data Systems: 1 FTE will be needed for a Programmer/Statistician, and 1 FTE for a Data Entry Clerk. Base funding will be sought.

Division of Conservation: 1 FTE is required for a technically oriented historical architect capable of handling computer-related and other highly technical equipment, projects and processes. Base project funding will be sought.

II. G. TRAINING, ASSISTANCE TO FIELD AREAS, AND PUBLIC AWARENESS IN CRM

TRAINING OF PARK STAFF IN CULTURAL RESOURCE MANAGEMENT

Current Status

Training through the SWCRC is offered in 1) preservation and maintenance management by guiding park staff in hands-on projects; 2) remote sensing through the Regional training support program; 3) submerged cultural resources in both "classroom" and underwater environments; and 4) formal and informal training courses in CRM, custom designed for each park. In addition, participation in underwater training is open to sport divers as an effort to increase the public's sensitivity to submerged cultural resources.

A need for intensive and regular training in CRM has been identified. An outline of a detailed, center-wide program to train CRM specialists for park areas has been developed. The full program is currently being written. In addition to this CRM training program, a Request for Regional Training Support for an annual Region-wide CRM workshop geared to the park level of expertise has been submitted. The staff of the Branch of Training has offered its assistance whether or not funding is received from the Regional training account.

Interpretation of cultural resource research data is currently available to park staffs and the Division of Interpretation by a passive system. After research is complete, interpretation of the data becomes the responsibility of the Regional Office (principally the Division of Interpretation) and park personnel who summarize SWCRC findings for their use. Occasionally such interpretations are drafted by SWCR personnel in response to specific requests. Copies of final SWCRC reports normally receive distribution to the SWR's library and specific park areas. A more structured and effective system needs to be developed.

Five-Year Goals

1. Formalize a comprehensive plan in FY 85 that describes the full CRM Specialist intern program; obtain the necessary approvals, funding, and FTE to implement the program; and activate the program.
2. Through the CRM training program fully train and place four CRM interns in park areas by FY 90.
3. Conduct five Region-wide workshops (one per year) in CRM for park staffs, beginning in FY 85.
4. Develop comprehensive training programs in prehistoric ruins preservation for park personnel.
5. Make servicewide training function for submerged cultural resources to all park areas known to have very significant underwater cultural resources. Prioritize the servicewide training function for submerged cultural resources.

6. Provide up to two formal training courses per year in CRM at specific parks, beginning in FY 85.
7. Develop a procedure for alerting interpreters (Regional and field) to the findings of the SWCRC that are potentially useful to interpretive programs.
8. Participate in the seasonal orientation program at selected parks, every year.

Implementation Strategy

All training strategies conducted or sought by the SWCRC will continue with changes made as indicated in this section.

The CRM training program will be administered by the Division of Cultural Research in cooperation with all SWCRC divisions and those closely involved in the operation (e.g., the Divisions of Natural Resources, Interpretation, and Planning and Design; the Branch of Training; and Superintendents). A committee will select the recipient parks and interns and develop detailed Individual Development Plans for each of the two years of the training. The CRM training program will be regularly and formally evaluated with refinements made accordingly.

The CRM Region-wide workshops for park staff will be a combined major effort representing the entire scope of the Center's functions and will involve most of the SWCRC staff as well as experts from WASO and elsewhere. The level of presentation will be geared to the general level of current field expertise. Park staffs will provide topics they would like covered. Regional Training Support Requests will continue to be submitted annually.

The Division of Conservation, with assistance from the Division of Anthropology, will develop a comprehensive training program in pre-historic ruins preservation. Park-area participants will receive extensive hands-on training and will be actively involved with all of the responsibilities prior and subsequent to preservation fieldwork. Identification of areas within the NPS that need training in submerged cultural resources will be made by the Submerged Cultural Resources Unit with assistance from all Regional Directors.

Formal training courses, similar to the one-day course given in FY 84 at Lyndon B. Johnson, will be made available to other parks. Hubbell Trading Post and Big Bend have expressed an interest in park-specific 2-day courses.

Future research conducted by or for the SWCRC will be summarized in lay terminology and sent to the Division of Interpretation and specific field areas. In some instances, researchers may spend time with park staff and brief interpreters and law enforcement personnel on the results of the research and potential impacts to the resources and their jobs.

Upon completion of SWCRC projects, including those contracted, it will be standard operating procedure to review the findings of that project, evaluate the findings as they relate to existing management plans and report to management any recommendations that may affect existing plans.

The SWCRC will also emphasize its role in assisting parks in preparation of CRM sections of Resource Management Plans where parks are deficient in CRM expertise.

Administrative Details

Implementation of the five-year goals in training can be met with existing staff, funds, and equipment except as indicated below. The supplements requested below are overall for a five-year period.

The CRM training program will require a maximum of six full-time FTEs, two of which will be in the SWCRC and filled on a rotating basis by interns and four of which will be requested by Superintendents to accommodate the placement of trained personnel in field areas.

A total increase of \$44,000 for FY 85, \$83,000 for FY 86, \$87,000 for FY 87, \$91,800 for FY 88 and \$96,500 for FY 89 in base funding is estimated for the trainees' salaries, per diem, and travel expenses, as well as travel and per diem costs for instructors. Additional staff and funding for the SWCRC to administer the program will not be necessary.

The travel and per diem costs of field participants in the CRM Region-wide workshops for park areas is expected to be borne by the benefitting parks.

If necessary, additional travel money will be sought to support the increased training effort by SWCRC.

TRAINING OF SWCRC STAFF

Current Status

Updating professional skills and management abilities among the Center's staff needs renewed emphasis. The primary means by which expertise is enhanced is through the NPS Servicewide Training and Development Program with specific courses offered by NPS. The other means is through attendance at professional meetings where current CRM philosophy and particular skills and abilities are discussed and refined. Unfortunately for most SWCRC staff, few professionals are allowed attendance at either professional meetings or training programs; often, SWCRC staff must take leave and pay his/her own way to ensure acquisition and appropriate expertise and knowledge required for the job.

Some employees are receiving NPS support in pursuing other training, e.g., money for tuition, flexibility in work schedule, or use of NPS resources for study and employment facilitated through cooperative agreements.

Five-Year Goals

1. Compile and maintain a list of feasible short training sessions, detail assignments, academic courses, and professional seminars/meetings that will aid in the formulation of Individual Development Plans, scheduling appropriate training and, thus, updating the skills and knowledge of the SWCRC staff.
2. Work with Regional and Washington Office managers to develop an understanding for the importance of attendance at professional meetings.
3. Host at least one servicewide CRM conference to address major issues, such as leasing historic property, maintenance management systems, etc.
4. Encourage SWCRC staff to refine NPS research results for publication in professional journals and books. Attempt to allocate additional research and writing time for those CRM professionals whose work consists of refining NPS reports, etc., for publication. Through this effort the Center will help improve the reputation of the Park Service as well as the archeologist, historian, or architect producing the publication.

Implementation Strategy

The Center Chief and Division Chiefs will work together with their staffs to compile a list of internal and external training opportunities and professional seminars/meetings. Project directors will evaluate and discuss with all Center division chiefs the possibility of assigning Center employees to assist in projects outside of their normal scope of duties.

The Center Chief and Division Chiefs will seek Regional and Washington approval for increased attendance at meetings and approval of the plan to host a servicewide CRM conference. Staff members who are seeking to

publish NPS reports in professional journals, etc., will be allocated some time to refine research results for publication outside NPS. This will enhance the professional reputation of both the individual and NPS.

Administrative Details

No increase in funding or FTEs is expected.

II H. SERVICEWIDE PROGRAMS

SUBMERGED CULTURAL RESOURCES UNIT

Current Status

The Submerged Cultural Resources Unit (SCRU) engages in three basic activities:

1. Conducts research projects at the request of Regional Directors in fulfillment of programmed objectives identified in the normal Servicewide 10-238 selection process. This process is addressed in the Special Directive on the Submerged Cultural Resources Unit, currently being finalized.
2. Develops Servicewide models for researching, interpreting and protecting shipwrecks and other cultural sites on submerged lands of the National Park System.
3. Responds to emergencies and trains area divers in operational diving techniques at the request of Regional Directors.

Five-Year Goals

1. The Unit should continue performing activities to meet programmed project objectives defined in 10-238's over the next 5 years, however, steps are being taken to formalize the process by which the Regional Directors may approve Servicewide priorities on an annual basis (see WASO Special Directive 9/84). The Unit will also have increased responsibility in Southeast Region for projects as of September 1984, the date that the Southeast Archeological Center will phase out its underwater archeological responsibilities.
2. It is anticipated that the development of submerged cultural resources management models will continue to be heavily emphasized over the next 5 years. Fairly explicit guidelines for the full spectrum of management needs should be in place and precedents established for dealing with most emergency situations that arise. Managers of water areas should be able to look to other parks for examples of survey, inventory, specific site documentation, interpretive trails, guidelines for visitor use and precedents for legal protection.
3. It is anticipated that the emergency response aspect of SCRU activities will remain at about the same level but will become a bit more formalized, especially concerning issues outside of the Region. The Washington Office is considering implementation of an emergency diving response program on a Servicewide basis. Should that idea move into the active proposal stage, the Southwest Regional Director would decide the level of involvement of SCRU.

The WASO Training Division in consultation with Regional Directors will establish the national priority for special training activity.

Implementation Strategy

No plans for permanent Unit expansion have been proposed at this time. It is conceivable that a heavy project workload generated partly from increased input from Southeast Region might force reconsideration of this position, but this is not likely in the immediate future because most objectives could be

met with increased contractual involvement or through special detail assignments from other Government employees. Additional equipment purchases will largely be dependent on project workload developed by the parks. In most cases the Unit has chosen to lease the very expensive components of underwater survey systems rather than buy them. Since electronic technology is in such an accelerated mode of development, this approach does not tie the Unit into systems that may become obsolete before the Service has realized sufficient gains from purchase rather than leasing. If a very heavy survey project schedule over a period of 2 years or more becomes a reality then this position should be reevaluated. It is anticipated, however, that additional video recording equipment for underwater purposes will be purchased in the next few years.

Administrative Details

The Unit is not presently base funded. It is hoped that this will occur sometime by FY 1986 or 1987. Base funding has been requested. It is likely that additional FTE of .5 - 1.0 will be needed to address a rapidly increasing workload. The funding level will need to be increased over the next 5 years. The new special directive stipulates that if circumstances and project workload warrant base funding or staff increases, the Regional Director, Southwest Region, in consultation with the other Regional Directors, shall justify and document the need for increased base funding for the Unit on a form 10-237 and submit it to the Associate Director, Cultural Resources for inclusion as a WASO priority in the budget. This increase will be weighed as compared to other Servicewide priorities in accordance with established budget procedures.

BRANCH OF REMOTE SENSING

Current Status

The Branch of Remote Sensing has two major functions and they can be further separated into smaller responsibilities: 1) The branch is the designated office for conducting research into the uses of remote sensing for CRM purposes. It examines the uses of aerial photography and satellite imagery and photointerpretation, as well as photogrammetric and thematic mapping techniques. 2) The branch provides consultation services for NPS managers and professionals in the application of remote sensing for CRM. It provides formal technical advice including preparation of statements of work, requisitions, lists of contractors, mission planning, product acceptance and limited photointerpretation in support of Service projects. The branch provides formal methods of information dissemination of the results of its research in the form of training sessions and publications. 3) The branch maintains a laboratory of equipment for training and research purposes and an archive of materials acquired in previous projects for use by Service professionals.

No more than 10 park areas in the SWR have a complete or partial set of aerial photographs. Both cultural and natural resources specialists, at the field and Regional office levels, believe it is in the best interest of each park to obtain a set.

Five-Year Goals

1. The branch will continue to provide advice and guidance to NPS managers on the applications and uses of remote sensing techniques for cultural resources management. The branch will also continue to publish books and articles resulting from its research and applications projects and will provide training and workshops to NPS employees. The laboratory and archive will continue to be housed at branch facilities at the University of New Mexico.
2. The branch will examine the use of an electronic distance measurement instrument for archeological field survey and will report to the Service on its findings, as well as to the profession through its publication series. The branch will also begin a program to develop techniques for integrating digital imagery with thematic map data. Both of these programs will be developed so that the data generated can be analyzed on existing branch equipment.
3. As directed by the Director's Phase II Reorganization Plan, the branch will establish closer ties with the Digital Cartography and Remote Sensing offices of the Division of Natural Resources which is housed at the Denver Service Center. This will help the branch stay current with developments of remote sensing techniques within the field of natural resources management.
4. In order to maintain the branch at a level commensurate with the above suggested goals, the branch will need assistance to archive materials, to conduct training sessions, to perform data analyses, to develop software and to prepare final reports.

5. The branch will program to provide each SWR park area with a complete set of aerial photographs of their respective park.

Implementation Strategy

The branch will search for existing aerial photography or contract for an initial set of aerials for each SWR park. In addition, a schedule will be devised to regularly supply field areas with current imagery. Through a combined effort with the Division of Natural Resources, training will be conducted that will demonstrate the many uses of aerial photography.

The most effective way to assure the branch achieves its five-year goals is to provide two half-time student positions to support the branch's training, research and publication programs.

Administrative Details

The branch is currently able to fund and is in need of the addition of a full-time GS-5 in the form of two half-time student positions and plans to request the necessary FTE.

DIVISION OF SPECIAL PROGRAMS

Current Status

The Division of Special Programs performs technical assistance to Indian Tribes on a reimbursable basis and to other Federal and state agencies on a nonreimbursable basis. The primary recipients of this work are the Hopi and Navajo Tribes and the Bureau of Reclamation. This assistance is primarily recreation oriented, involving planning, design, layout etc., of recreational facilities. The division also coordinates activities requested by the Native American Religious Freedom Act, as it involves the relationship between Indian Tribes and NPS operations.

Five-Year Goals

1. Continue assistance to Indian Tribes. The workload depends upon funds available to the Tribes. The division will seek sufficient base funding so that travel, etc., are no longer handled through reimbursable accounts.
2. Continue assistance to other Federal and state agencies, in response to requests from other agencies.
3. Increase training possibilities for individuals from Indian Tribes in the park and recreation fields; make an effort to include these individuals in basic park operation and management courses.
4. Continue coordination of the actions required by the Native American Religious Freedom Act (see above, Section II E5, on Intangible Cultural Resources).

Implementation Strategy

Develop a strategy for bringing individuals from various Indian Tribes into NPS training programs in park management and operations.

Administrative Details

No additional FTE or equipment is anticipated. Base funding will be sought to assist the Tribes.

II I. PUBLICATIONS PROGRAM

Current Status

The Southwest Cultural Resources Center (SWCRC) has approximately 30 professional staff members in six divisions producing about 20 publishable reports a year. Publications include archeological reports, Historic Structure Reports, Historic Resource Studies, submerged cultural resource surveys and assessments, remote sensing studies, project completion reports, and special history studies. In general, all publishable material has been researched, written, and produced by in-house staff, including editing, graphics, and text preparation. Occasionally editing, paste-up, or typesetting jobs are contracted. Usually a manuscript is made into camera-ready copy from word-processing equipment and sent through approved channels (Denver Service Center, GSA, GPO) for printing. Individual divisions are responsible for mailing and distributing the final product. Funding for each division's publications is provided through budgeted project monies, rather than any type of base funding.

Because of the independence and flexibility currently possessed by each division in regard to publications, there is little awareness that the SWCRC is involved in publication, and any common bond among the various publications appears remote, at best.

Five-Year Goals

A Southwest Cultural Resources Center publication series is being created that includes published material from all six divisions. This series will be entitled "Southwest Cultural Resources Center Professional Papers," and all reports will be numbered sequentially within this series as they are prepared. The number of publishable manuscripts being prepared is anticipated at about 20 per year, similar to the current output. It is proposed that publications be channeled through an editorial coordinator, who will ensure the documents meet the standards established for the SWCRC Professional Papers regarding placement of publications within the series, format, print type, cover style, and editorial professionalism. The coordinator will initiate any necessary contracting for editing, illustrating, typesetting, paste-up, indexing, and printing. All preparatory approvals will be obtained by the coordinator.

An editorial committee, including the coordinator, the Center Chief, and all Division Chiefs (or their representatives), will be established to ensure a consensus among the Center's divisions in regard to format and acceptability of publishable material. The coordinator, in agreement with the committee members, will develop publication guidelines for use by all Center personnel in order to establish a consistent series format.

The advantages of this organization will be not only to create a more "visible" and integrated Center vis-a-vis its publications, but to instill a firm measure of quality control into all divisions' publications. Channeling all publications through a coordinator will increase efficiency of the publication process. Most importantly, however, it will release the professional staff of historians, archeologists, and architects from the

duties of editing, printing, contracting, etc., for which they have little time or expertise.

It is a goal of the SWCRC to obtain a "blanket" DI-550 publication approval, similar to that of the Denver Service Center. This will allow rapid publication, bypassing the tediously slow Departmental (DOI) request approvals required of each division on a report-by-report basis.

Implementation

The editorial coordinator to be sought, would answer directly to the Center Chief, and be physically located in the same building as the Chief and a majority of the Center divisions. Blanket DI-550 approval will be sought for the Center during FY 85.

Administrative Details

The establishment of a central editorial position requires the hiring of a single coordinator, with the attendant FTE. Base funding for this position will be sought. All publications will be funded from project money, in a manner similar to current practice.

II J. HISTORIC PROPERTY LEASING PROGRAM

Current Status

The responsibility for the Historic Property Leasing Program has been transferred to the Associate Regional Director, Planning and Cultural Resources. A new Management by Objective (MBO) has created new pressures to implement the program. Currently 14 agricultural leases at Pea Ridge have been fully implemented--the first in the NPS. The MBO requires that a total of 10 properties leased by the end of 1985. While the PERI leases count toward that total, the SWR should establish an aggressive leasing program for future years. The SWCRC should take the lead in identifying the properties to be leased, the precautions to be included in the lease, and the planning necessary for implementation.

Five-Year Goals

1. The Center will establish an aggressive program to get as many historic properties leased as possible, consistent with agency policies and guidelines for cultural resources management. The minimum goal will be to lease 10 additional properties by September 1985.
2. The Division of Conservation will coordinate the Center's program with the divisions of History, Concessions, Planning and Design, and Land Resources as well as with relevant park staffs.

Implementation

The Division of Conservation will initiate the Center's program in historic property leasing. Since NPS-38 requires that archeological clearances be obtained for those properties leased, the Division of Anthropology will be required to coordinate this part of the program.

Administrative Details

No additional FTE or funding required.

Summary

This document is intended to be flexible and will naturally warrant revision over time. It was prepared through the cooperation of the six Divisions within the Center and the Regional Curator, coordinated by the Chief of the Center--all during the peak work season of the year. Further time for reflection on this plan will no doubt reveal changes that need to be made, both in detail and in broader scope.

The ultimate purpose of this long-range planning document is to improve the efficiency and effectiveness of the Southwest Cultural Resources Center in its efforts to serve the parks and their resources. Major elements in the plan include:

1. Developing a more systematic program formulation process.
2. Streamlining the planning and review process through more thorough and better coordinated involvement.
3. Assessing the research programs for history, architecture, archeology and curation, and improving the formulation, programming, execution, and review of research undertaken by the Center.
4. Formulating an archeological contracting action plan.
5. Streamlining Section 106 compliance especially through tying the XXX process to Maintenance Management Systems.
6. Systematizing the preservation of cultural resources, including prehistoric and historic structures, landscapes, objects, and intangible cultural resources values. This includes the goal of establishing a Division of Curatorial Services within the Center to combine all of the preservation disciplines in one office.
7. Improving the efficiency of research and preservation techniques through computer technology, with the necessary programming and data-entry staffing.
8. Systematizing the CRM training both for the Center and the park staffs.
9. Implementing long-range goals for Servicewide programs including Submerged Cultural Resources and Remote Sensing.
10. Developing a more systematic and better coordinated publishing program, including the establishment of a publication series for the Center.
11. Maintaining the Center's role in the Historic Property Leasing Program.

To accomplish the goals of the Five-Year Plan, some additional funding and positions are needed. These are listed in the chart that follows.

Division	Reference in 5-Year Plan	Position	Estimated Cost	Fund Source	FTE	EOD	Comments
PCR	Program Formulation	Program Analyst GS-7/9	25,000	Cyclic Maintenance	1	1985	
PCH	Research: History	Research Historian GS-11	30,000	Cyclic Maintenance	1	1985	
PCA	Backlog	Archeologist (Temporary, LTFT) GS-7	15,000	Cyclic Maintenance	.8	1985	
PCC	Cyclic Maintenance Program	Exhibit Specialist GS-7/9	25,000	Cyclic Maintenance	1	1985	
PCC	Cyclic Maintenance Program	Craftsmen (Temporary)	varies	Cyclic Maintenance	0	1985	Park FTE should be used
PCR	Object Preservation	Curatorial Staff and Secretary GS-13, GS-7 GS-5	75,000	Base	3	1987	
PCR or PCCR	Object Preservation	Curator (Temporary) GS-9	25,000	CRP Fund	1	1986	Depends on project funding. Position may be placed in Division of Curatorial Services
PCH	Intangible Cultural Resources	Historian/ Anthropologist (Temporary) GS-11	30,000	CRP Funds	1		Depends on project funding
PCCR	Training CRM	CRM Interns	96,500 by FY 89	Base	6 (through FY 89)	1985	WASO funding will be sought until base is established. WASO FTE will also be sought.

Division	Reference in 5-Year plan	Position	Estimated Cost	Fund Source	FTE	EOD	Comments
PCA Branch of C.D.S.	Efficient Research and Preservation	Programer GS-9/11	30,000	Base	1	1987	
PCA Branch of C.D.S.	Efficient Research and Preservation	Data Entry Clerk GS-5	15,000	Base	1	1987	
PCC	Efficient Research and Preservation	Historical Architect GS-9 (Temporary)	25,000	Base	1	1987	
PCCR	Remote Sensing	Research Technician (2)		Project	1	1986	
PCR	Publication	Editor/ Coordinator GS-9	25,000	Base	1	1987	

The above positions are not prioritized due to the variety of funding sources. They are listed in the order in which they appear in the plan.

Funding will also be sought to get Hicks, Sulam, Bush Thurber and half of Bradford's salaries off of cyclic maintenance, and to get Anderson's salary off of the CRP fund--to have all of these positions on Base funding.

