NATURAL RESOURCES RESEARCH PROGRAM

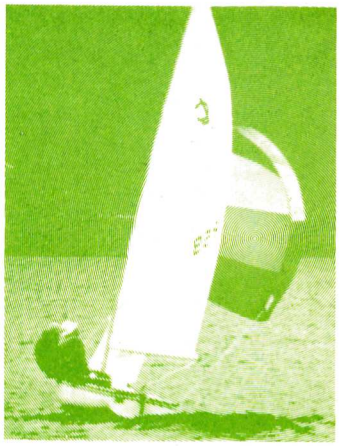
TECHNICAL REPORT EL-91-4

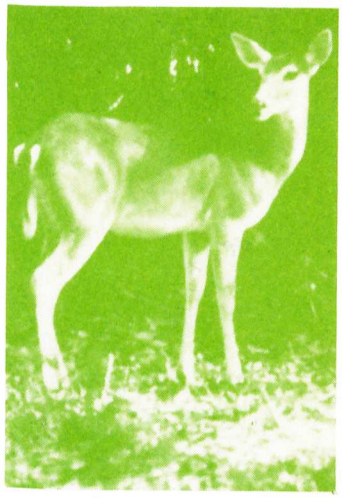
PROCEEDINGS WORKSHOP ON OPERATIONAL MANAGEMENT PLANS: IMPROVING THE PROCESS

5-7 December 1989

Arlington, Texas

John P. Titre, Jr., Linda Peyman-Dove, Michael R. Waring, Editors





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A workshop entitled "Operational Management Plans: Improving the Process" was held in Arlington, TX, 5-6 December, 1989. The purpose of the workshop was to bring together a representative group of Corps personnel having responsibilities for preparing, reviewing, and implementing operational management plans (OMPs). Objectives of the workshop were to (a) exchange information on approaches and experiences for preparing OMPs, (b) discuss progress made and identify areas for improvement, and (c) recommend future direction and identify needs.

The workshop was organized into two morning speaker sessions followed by two afternoon discussion sessions. The sessions covered four major themes: (a) project management, (b) District coordination, (c) master planning, and (d) automation (especially geographic information systems).

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The proceedings contain text from the presentations of 17 speakers, a summary of the discussion sessions, and useful appendixes for improving the process of preparing and implementing OMPs. Recommendations from the attendees call for a national task force to develop a similar workshop to meet the growing needs of OMP preparers and reviewers.

PREFACE

This work was sponsored by Headquarters, US Army Corps of Engineers (HQUSACE) as part of the Natural Resources Research Program (NRRP), Work Unit 32503, entitled "Guidelines for Improving Operational Management Plans." The NRRP is managed under the Environmental Resources Research and Assistance Programs (ERRAP). The report is the proceedings of a workshop held in Arlington, TX, 5-6 December 1989.

Editors of this report were Mr. John P. Titre, Jr., Ms. Linda Peyman-Dove, and Mr. Michael R. Waring, Resource Analysis Group (RAG), Environmental Laboratory (EL), US Army Engineer Waterways Experiment Station (WES), Vicksburg, MS. Mr. Waring, Team Leader, Land-Use Planning Team, RAG, was principal investigator for the work unit. Review comments were provided by Messrs. R. Scott Jackson and Larry Lawrence, RAG.

The study was supervised by Mr. H. Roger Hamilton, Chief, RAG, and Dr. Conrad J. Kirby, Chief, Environmental Resources Division, EL. Mr. J. L. Decell was Program Manager of ERRAP, Dr. Adolph J. Anderson was Assistant Manager, ERRAP, for the NRRP, and Dr. John Harrison was Chief, EL. The report was prepared for publication by Ms. Janean Shirley, of the Information Technology Laboratory, WES. Ms. Judith Rice, CECW-ON, and Mr. Robert Daniel, CECW-PD, HQUSACE, were Technical Monitors for NRRP.

COL Larry B. Fulton, EN, was Commander and Director of WES. Dr. Robert W. Whalin was the Technical Director.

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AGENDA

OPERATIONAL MANAGEMENT PLANS:
IMPROVING THE PROCESS

4 DECEMBER 1989

5:30 - 6:30	Informal Icebreaker (Radisson Suites Hotel - Atrium)

DAY 1
5 DECEMBER 1989

8:00 a.m.	Opening Remarks - Mike Waring, Waterways Experiment Station (WES), Vicksburg, MS Welcome - John Jarboe - Fort Worth District
8:45 a.m.	Current Status of OMPs - Linda Peyman-Dove and John Titre, WES
9:00 a.m.	BREAK
9:15 a.m.	Session I - Project OMP OMP Preparation: A Learning Experience - Phillip Adams, West Point Lake, Georgia A Manager's Approach to an OMP as a Working Tool - Robert Chapman, Belton and Stillhouse Lakes, Texas The Benefits of an OMP at an 89-72 Project - Joseph Tanner, Falls Lake, North Carolina A Scorecard System for Prioritizing Natural Resource Work - Mike George, Lake Oahe, South Dakota
10:30 a.m.	BREAK
10:45 a.m.	Session II - District OMP Managing the OMP Process - Tim Feavel, Rock Island District Coordinating the OMP at the District Level - Debbie Knaub, Seattle District OMPs - The Fort Worth Perspective - Ron Pivonka, Fort Worth District Inventory Procedures, Mapping Techniques, and Proposed GIS Systems for OMPs in the Vicksburg District - Julie Marcy, Vicksburg District
12:00 p.m.	Lunch
1:15 p.m.	Breakout Sessions

DAY 2
6 DECEMBER 1989

8:00 a.m.	Session III - Master Planning The Relationship of Master Plans to OMPs - Matt Rea, Portland District GIS Implementation for Master Plans and OMPs - Blaise Grden, Walla Walla District Are We Achieving Our Goals/Objectives - Frank Star, St. Paul District

9:00 a.m.	BREAK
9:15 a.m.	Session IV - Automation Data Base Usage in OMP Development - Alan Gehrt, Kansas City District Making GIS Work for the Resource Manager - Bill Cotten, Fort Worth District Developing OMPs with a GIS - Tim Peterson, Omaha District
10:15 a.m.	BREAK
10:30 a.m.	Session V - Final Considerations Pondering the OMP: A Ranger's Perspective - Jim Shiner, Alum Creek Lake, Ohio A Division Perspective - Terri Hoagland, Ohio River Division An HQ-USACE Perspective - George Tabb, HQ-USACE
11:30 a.m.	Lunch
12:45 p.m.	Breakout Sessions

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miles (US statute)	1.609347	kilometres

WORKSHOP ON OPERATIONAL MANAGEMENT PLANS: IMPROVING THE PROCESS

Introduction

A workshop entitled, "Operational Management Plans: Improving the Process" was held in Arlington, TX, 5-6 December, 1989. The purpose of the workshop was to bring together a representative group of Corps personnel having responsibilities for preparing, reviewing, and implementing operational management plans (OMPs). These proceedings are intended to provide not only a record of the papers and dialogue from the workshop, but may also provide additional insight into the task of improving the OMP process.

Specific objectives of the workshop were to:

a. Exchange information on approaches and experiences for preparing OMPs.

b. Discuss progress made and identify areas for improvement.

c. Recommend future direction and identify needs.

Background

The workshop was organized as one of the tasks in Work Unit 32503, "Guidelines for Improving Operational Management Plans." This is part of the Natural Resources Research Program (NRRP).

Originally, the work unit was to provide guidelines to assist Corps personnel in managing natural resources through the OMP process. However, during the preparation of a status report on OMPs,* an examination of completed OMPs and outlines revealed considerable variation in the kinds of topics considered important for successful project management. It appeared doubtful that a single "guidelines" publication could fulfill the broader needs of OMP writers and reviewers. This was further underscored in the findings from a questionnaire mailed to 29 District offices as part of the status report. Based on these findings and input received from the field at the NRRP annual meeting held in Omaha, NE on April 19-20, 1989, the direction of the work unit was changed to focus on exchanging information in the form of a workshop. It was

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* Peyman-Dove, Linda, Waring, Michael R., and Titre, John P., Jr. 1989. "Operational Management Plans: Status, Content, and Implementation," Miscellaneous Paper R-89-2, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

suggested that the goal of a national workshop be directed toward improving the OMP process by sharing current approaches.

Workshop development

With the decision to proceed with a workshop, telephone calls were placed during the end of FY 89 to alert Division contacts and to obtain advice concerning information needs for producing operational management plans. Each Division contact provided two or more names of Corps personnel who were actively involved in the OMP process at various levels of responsibility. These individuals were contacted by the workshop coordinators during October 1989 to discuss their current OMP involvement. Although emphasis was placed on reaching operations personnel, the workshop coordinators also contacted individuals from planning functions. All 10 Corps Divisions were able to identify individuals to send to the workshop. However, the South Pacific Division was unable to attend due to earthquake relief efforts.

Actual workshop dynamics limited attendance to approximately 30 participants. The workshop organizers felt that this group size was adequate to thoroughly discuss the issues based on a detailed screening and an attempt at wide representation. Of the 33 participants who attended, excluding WES, 17 were from District offices, 8 were from projects, 6 were from Division offices, and 2 were from HQUSACE. Approximately 80 percent of those attending hold positions in operations, while 20 percent work in planning roles.

Efforts were made to insure that these personnel also represented the full spectrum of OMP activities. Five areas of expertise were considered in screening workshop participants to achieve balance in workshop discussion groups. The areas included: (a) project management, (b) District coordination, (c) Division review, (d) automation (especially geographic information systems), and (e) planning. This was done with the intention of fostering a lively interchange on the discussion questions as well as encouraging the groups to consider various perspectives. The discussion groups were organized prior to the workshop with a leader appointed for each group.

Workshop organization

The workshop was organized into two morning speaker sessions followed by two afternoon discussion sessions. The speaker sessions were arranged so that they started with project managers, since projects are generally responsible for preparing an OMP and carrying out the annual work plan. Subsequent speaker sessions dealt with aspects of putting the OMP into practice. They included: (a) District coordination, (b) master planning, (c) automation, and

(d) final considerations. In addition to the five morning sessions, which included 17 speakers, an afternoon discussion format was selected to solicit input from all participants. The afternoon sessions included the following topics: (a) purpose of the OMP, (b) conducting inventories, (c) master planning, and (d) recommendations. The afternoon sessions were related to the material presented each morning and were intended to generate greater discussion and to provide depth and clarification.

Organization of the Proceedings

These proceedings are organized to generally reflect the workshop agenda. The Introduction is followed by Workshop Papers which contain the talks that were presented in the morning sessions. The next section (Breakout Session) provides a synopsis of each afternoon's topic. The final section (Conclusions) provides a summary of the workshop.

Additional information is supplied in the Appendixes. Appendixes A-C relate to the breakout sessions and are discussed in the text. Appendix D provides an example Division checklist for reviewing the OMP prepared by the Natural Resources Management Branch, South Atlantic Division. Appendix E contains a useful guide for an OMP training session and was provided by the Ohio River Division.

WORKSHOP PAPERS

Introduction From HQUSACE

Judith Rice*

Good Morning. I am glad to have the opportunity to be here today in my role as Tech Monitor for the Natural Resources Research Program. This is the first working session of this kind I have attended in that capacity, and I expect it will be a particularly interesting and informative session.

I think we are all in agreement as to the importance of the Operational management Plan (OMP) as a vital and dynamic planning document. As a 5-year plan with an annual work plan, it can be one of the most useful, as well as most used, documents in a project office. If done well, it can be picked up a project or District staffer for quick reference in making day-to-day natural resource management decisions, as well as providing a basis for budget requests and justifications. If done poorly, on the other hand, it can become just one more dust-covered tome on the project manager's bookshelf.

One of the purposes of the Natural Resources Management and Planning work unit in the research program is to provide help in assuring that our OMPs are done well, rather than poorly, and are useful, workable documents. One of the products of this study is the interim report, "Operational Management Plans: Status, Content, and Implementation," published in October of this year.** This workshop - as a forum for you to present your plans and discuss them - will assist the US Army Engineer Waterways Experiment Station (WES) in continuing that study by providing an effective vehicle for information gathering and exchange.

I know there has been a lot of good work done on OMPs throughout the Corps - lots of innovation and hard work and trial and error. I expect to hear in the next couple of days about the things that worked for you and the things that maybe did not. I expect to hear about the roadblocks and stumbling blocks you encountered and how you overcame them, or maybe did not. I expect to see some good documents of which you can be justifiably proud,

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* Technical Monitor, HQUSACE, Washington, DC.

** Peyman-Dove, Linda, Waring, Michael R., and Titre, John P., Jr. 1989 (Oct). "Operational Management Plans: Status, Content, and Implementation," Miscellaneous Paper R-89-2, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

because we have - in John Titre's words - the "best and brightest" of the Corps' natural resource managers in this room today, presenting the honest and thoughtful efforts of their Districts.

And because you are all energetic managers, who care about the program, I expect there will be some lively discussion about the "best" way to prepare OMPs. Not only is this perfectly acceptable - assuming we are all courteous to each other - but this discussion and interaction will be beneficial in providing additional fodder for WES's study.

I expect to see in the final work unit product delivered by WES to Headquarters a distilling of what is presented and discussed this week. I think we have the opportunity in this study to make some sound evaluations based upon a good sample of existing documents. And I believe the resulting policy and guidance from HQ will be solid and credible, based on WES's conclusions and recommendations.

But, we are not at that point yet. This week we are information gathering and exchanging, yes, but this is not a policy-making session. In the interim report* is a paragraph stating that nearly 75 percent of the respondents to the OMP questionnaire felt that a workshop could fulfill the need for guidance for OMP development and preparation. And we may very well decide to do that.

But, this ain't it! We aren't ready yet.

Please do not go back to your Districts and say, "Corps policy on OMPs is thus and such, because I heard it at the workshop."

WES's role in this process is to collect information, evaluate it, and present conclusions and recommendations to HQ. HQ's role is then to review those recommendations, formulate Corps-wide policy, and provide guidance in that regard to the field.

Our particular role or task this week is to listen and learn from each other - to share the good and the bad in what has been done so far. It is an important task, and I am happy to be involved and eager to get started.

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* Peyman-Dove, Linda, Waring, Michael R., and Titre, John P., Jr. 1989 (Oct). "Operational Management Plans: Status, Content, and Implementation," Miscellaneous Paper R-89-2, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

Master Plans and Operational Management Plans
A Historical Perspective

H. Roger Hamilton*

While the concept of operational management plans (OMPs) is relatively new, guidance for developing and implementing master plans has been in force in the Corps of Engineers for several years. Master plans were required by orders and regulations dated 15 October 1952. Section 4224.07 stated in part "... Preparation of the master plan will normally be initiated prior to establishment of the final taking line for acquisition of lands for the project in order that possible uses of the lands and properties may be considered prior to and during the land acquisition proceedings."

The 1952 directive goes on to state "... The master plan should be broad in scope and evolutionary in principle to permit subsequent revisions necessary to fit changing conditions." Cost estimates for construction, operation, and maintenance to be undertaken by the Corps and by cooperating agencies, concessionaires, or private parties were to be prepared and accompany the master plan, but not be incorporated into it. The orders and regulations prevailed through the 1950s and 1960s. In 1968 work began to update guidance to the field offices in the area of recreation and natural resource management. Times had changed. New water resource projects had been developed, the urbanization of existing projects had become reality, transportation methods in the nation had improved dramatically, and more people were beginning to place increasing demands on the finite resources at Corps projects.

The guidance must contain some essential ingredients if it would be a useable tool for District and project personnel. It would be necessary to articulate the Corps' philosophy on this subject in the context of the mission of the agency relative to other authorized project purposes, such as flood control and navigation. Policy guidance on specific issues of recurring visibility would need to be addressed and a set of management objectives would be needed.

All the information briefly described above would make interesting reading but not be capable of full use by field personnel unless a vehicle for

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* Chief, Resource Analysis Group, Waterways Experiment Station, Vicksburg, MS.

implementing the guidance were provided. At the time of preparing the guidance, the most appropriate vehicle for implementing it was the master plan. However, master plans were not oriented toward meeting the objectives about to be incorporated into the new recreation-resource management guidance.

Early drafts of the new guidance included instructions for preparing master plans for water resource development projects that were comprehensive in nature. Emphasis was placed on obtaining and updating baseline data that would provide information that the manager could use to exercise his or her responsibilities in managing the total ecosystem contained within the project boundaries. Good soils information was essential since that element constitutes the very foundation upon which other resources depend and, thus, the very lifeblood of our nation. Vegetative data (whether forest, prairie, or wetland) were essential to any public use that might be made of the Federal projects. Of course, fish and wildlife habitat and appropriate recreation development and activities dependent upon the project natural resources are integral components of such a plan.

This assignment was one of great complexity and difficulty. The agency was composed of many component parts. Each had its own agenda, but, also, in nearly every case, each part had a keen interest in management and stewardship of the recreation and natural resources. In addition to the keen interest, each representative seemed to have some "technical" advice on how the agency should approach this facet of its service to the Nation. Unlike other Corps functions (including engineering, hydrology, planning, dredging, and economics) which required a body of knowledge and a certain expertise to execute, recreation and natural resource management appeared to be functions in which everyone was expert.

An outline and, subsequently, several drafts of the guidance were produced, reviewed, discussed, and debated. Each draft required a review by all interested parties that would, ultimately, have to sign off on the final guidance. Two recurring themes dominated this procedure. Nearly every party was interested and each was not reluctant to provide comments.

The original concept of using the master plan as the vehicle to implement the guidance prevailed. The shape of that vehicle was modified through all the coordination, comments, compromises, and concessions that occurred during the formulation of the policy guidance.

Originally, the master plan was viewed as a single document that addressed all of the essential elements or attributes that comprised the

natural resources base of the project. This was consistent with the structure and function of ecosystems and confirmed Aldo Leopold's pronouncement that "everything is connected to everything else." It was, and is, difficult to separate vegetative communities from wildlife habitat, for example. An important addition that was proposed in order to make the master plan a working document was the inclusion of a provision for a 5-year plan that would describe proposed work, schedule that work, and estimate funding to accomplish it. This would be the vehicle for requesting funds and manpower to accomplish the work necessary to get this important Corps mission up and running and to keep it running.

Through the process of staffing the draft Engineer Regulation, the single-document approach came somewhat unraveled. Special interests saw the approach as more effective by creating appendixes to the master plan. Thus, the five appendixes listed below were included in the final guidance.

Appendix A - Project Resource Management Plan

Appendix B - Forest (or Range) Management Plan

Appendix C - Fire Protection Plan

Appendix D - Fish and Wildlife Management Plan

Appendix E - Project Safety Plan

The development of guidance in implementing the Corps' recreation and natural resources management mission was begun in July 1968. ER 1130-2-400* was published on 28 May 1971. The task required nearly 3 years of fairly consistent work. The final document that went to the Chief of Engineers for signature carried coordination initials from 25 separate elements in the Chief's Office.

ER 1130-2-400 was revised and reissued on 1 October 1983. That revision incorporated the requirement for preparation of OMPs designed to replace the master plan appendixes. This change was perpetuated in a subsequent revision on 1 June 1986.

Development of an OMP for each project to implement the concepts described in the master plan brings us back in part to the original goal established during the writing of the first ER 1130-2-400.* We must be able to intelligently acquire, analyze, and use all pertinent information in

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* US Army Corps of Engineers. 1983. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

meaningful ways if we are to successfully manage and protect the natural resources entrusted to us by the American public. Fragmentation of special interests may work for those particular interests, but cannot address the broad issues that are part and parcel of large, complex, multi-use projects that have as integral components a variety of ecological and social attributes.

It is often easier to understand where a person or an organization is coming from if one knows where that person or organization has been. Perhaps this brief synopsis of the history behind requirements for OMPs will be helpful in understanding the purpose and intent behind requiring preparation and implementation of such an operational tool.

OMP Preparation - A Learning Experience

Phillip M. Adams*

Background

During 1986-87, I served as Operational Management Plan (OMP) Coordinator at West Point Lake, a 58,000-acre** multipurpose project in the Mobile District. I coordinated preparation of the OMP and wrote several portions of it. In 1987 I also conducted a workshop on OMP preparation at the South Atlantic Division Park Ranger Conference in Savannah, GA.

What Worked for Us

a. The West Point Lake OMP was developed at the project level. I believe this was the best approach to produce a project-specific and usable document. The people most familiar with the lake were able to have direct input. We developed annual and 5-year work plans using information obtained in the field.

b. The entire lake staff participated in OMP development. Many people were assigned sections to write and everyone had an opportunity to review and comment before the draft OMP was submitted to the District. This process made the entire staff feel that they were part of the team and resulted in a better product. Most of the actual material was prepared by GS-09 park rangers and a GS-11 forester. Team spirit meetings are held annually and the results are used in OMP updates.

c. A project OMP coordinator kept everyone on track and on schedule. Having one person who served as a point of contact for guidance and problem resolution really worked well. Since the initial text of the OMP was prepared by several people, different writing styles were evident. The coordinator was responsible for standardizing these styles in the final document. The coordinator was also a big help to the resource manager as a contact for progress reports and updates.

d. The District OMP Coordinator visited our office and conducted periodic reviews. His comments aided us greatly in developing a product which could survive the formal District and Division

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* Supervisory Park Ranger, Mobile District.

** A table of factors for converting non-SI units of measurement to SI (metric) units is presented on page 9.

review process. He was also familiar with the OMPs being developed at other projects and helped incorporate the good points of each into all the documents.

e. We swapped information between projects in our Division. Sample work plans and other parts of the OMP were freely shared. If someone had a better way to do something, word usually got around.

f. The South Atlantic Division circulated their checklist for review of OMPs. This provided the answers to the test before the test was given. It gave the project OMP coordinator a clear understanding of what would be considered during the review process and the chance to include any missing items.

What I Would Do Differently

a. As I look back on OMP preparation, I remember the uneasy feeling of wondering whether or not I was doing this right. The OMP was something new for everyone and there were few finished products to use as a standard. I think it would have helped me (probably psychologically more than anything else) if we had held regular meetings between project OMP coordinators to share our successes and failures.

b. I would have gotten organized more quickly and allowed myself a greater buffer between the target completion date and the actual completion date. I don't think I fully realized the magnitude of the task in the beginning and the complexity of getting people to pull together. The seemingly infinite number of details which surfaced during the final assembly operation were mind-boggling. Each time I got the page numbering system in place, I would find a sheet someone had omitted or wanted to add!

General Observations

Many people have complained about the lack of guidance for OMP development. I can now look at the limited guidance available as a means of providing flexibility and insuring that the OMP would be a "project-specific" document. The word "operational" is the key to OMP development, and I believe each OMP can be as different as necessary to reflect the needs of particular project. Sure, there are some items which should be included in all OMPs, but I think flexibility beyond that will produce a better document.

A Manager's Approach to the OMP as a Working Tool

Robert C. Chapman*

Summary

If the Operational Management Plan (OMP) is in fact a plan for use by managers and other field personnel, then it must be realistic, readable, and arranged in a format that is comfortable to use.

In developing an OMP, our approach was simple: This is our plan; let us write it as a working tool so it flows and gives us the information at a glance that we need to manage the project.

With this in mind, we decided to:

a. Describe the areas.

b. Provide the history of the areas.

c. Give the current conditions.

d. Discuss long-term development.

e. Prioritize the tasks.

f. Incorporate detailed area maps.

g. Provide a chronological flowchart.

Our final assessment of the OMP was that it should be written by project personnel with emphasis on detailed operation and administration requirements. We felt that it must provide real information stated in terms that are easy to comprehend and be arranged in a sequence that makes sense. If not, it will be just another book on the shelf gathering dust.

Discussion

ER 1130-2-400,** Appendix B - Operational Management Plan, Paragraph B-1 provides good basic guidance. It states:

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* Reservoir Manager, Fort Worth District.

** US Army Corps of Engineers. 1971. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

> Following approval of the master plan, preparation of the operational management plan for natural resources and park management will be initiated by the operations element. The OMP shall be prepared as a separate document, and will outline in detail the specific operation and administration requirements for natural resources and park management, consistent with the approved master plan.

The rest of the regulation distracts us from what we felt was the spirit/intent of the OMP. Instead of staying with "detailed specific operation and administration requirements," it requires regurgitating the same technical and scientific information about the project already found in the master plan appendixes and other reference materials. When we tried to incorporate all of this information, it ceased to be a useful management document. We chose to write a ready desk reference instead of what we felt would be a cumbersome, bureaucratic, dust-collecting document.

In my view, the OMP should be:

a. Written by project personnel.

b. A "detailed plan outlining ONLY specific operation and administration requirements."

c. Designed for use by managers and other field personnel.

A new manager or ranger at a project should be able to pick up the OMP and very quickly gain the flavor of the history, current status, and past management practices of his new duty station. With this in mind, our approach to the OMP was simple: This is our plan, let us write it as a working tool so it flows and gives us the information at a glance that we need to manage the project. Although the OMP is easy to use, it was not easy to develop. It took over a half man year to put ours together. However, I am sure this was time well spent, as this is our operating plan for the next 5 years.

Our OMP incorporates all facets of operations such as staffing and prime facilities. Being a "user-friendly" document, anyone unfamiliar with the lake could pick up, read, and have basic insight and knowledge necessary to operate and manage the project. We felt the technical and scientific information found in the master plan appendixes was reference material. These are now used as the technical appendixes to the OMP.

In our OMP, park, resource management areas, and prime facilities are divided into four parts: narrative, prescription priority, maps, and chronological flow development.

a. Narrative - describes the areas, provides the history of the areas, gives the current conditions, and discusses the long-term development.

(1) Description - We described each recreation and/or resource management area including acreage, facility descriptions, and existing vegetation.

(2) History - A brief history of the park or management area is given so the reader is aware of the past management practices and is able to follow the current trend.

(3) Current condition - An explanation of the current condition brings the reader up to date on the utilization patterns, management practices, and public perception of each area.

(4) Long-term development - Long-term development goals are addressed to inform the reader of the future management objectives in each area.

b. Prescription priority - The yearly objectives are broken down into tasks and prioritized for budgeting purposes.

c. Maps - Detailed area maps are incorporated to show the location of each activity (Figure 1).

d. Chronological flowchart - A timetable depicting estimated costs and planned methods for funding over a 5-year period (Figure 2).

We compiled all of these individual items so that they are efficient and readable. Two important features of this OMP are the flowcharts, and the face-to-face placement of the maps and the flowcharts for a quick and ready reference.

The flowcharts were developed in Lotus 1-2-3 and list the prescription priorities by year, estimated cost, location, and funding category. Facing the map to the flowchart shows the reader the general area of the development by location code. This flowchart and map system allows the reader a quick overview of an entire year's plan for a particular park, resource management area, or prime facility. This format is the key element which makes the document a readily usable working tool.

This format allowed us to develop a tracking program to compare our funding requests to the actual funding level. This program will be utilized to provide management planning, current budgeting information, and forecasting of future budget packages. We anticipate the tracking program being able to show the request for budget packages, the authorization of the budget packages, and the slippage of the packages in the case of inadequate funding. It should provide a firm audit trail for performance indicator assessment. The OMP will indicate by task and time line that the project manager has fulfilled

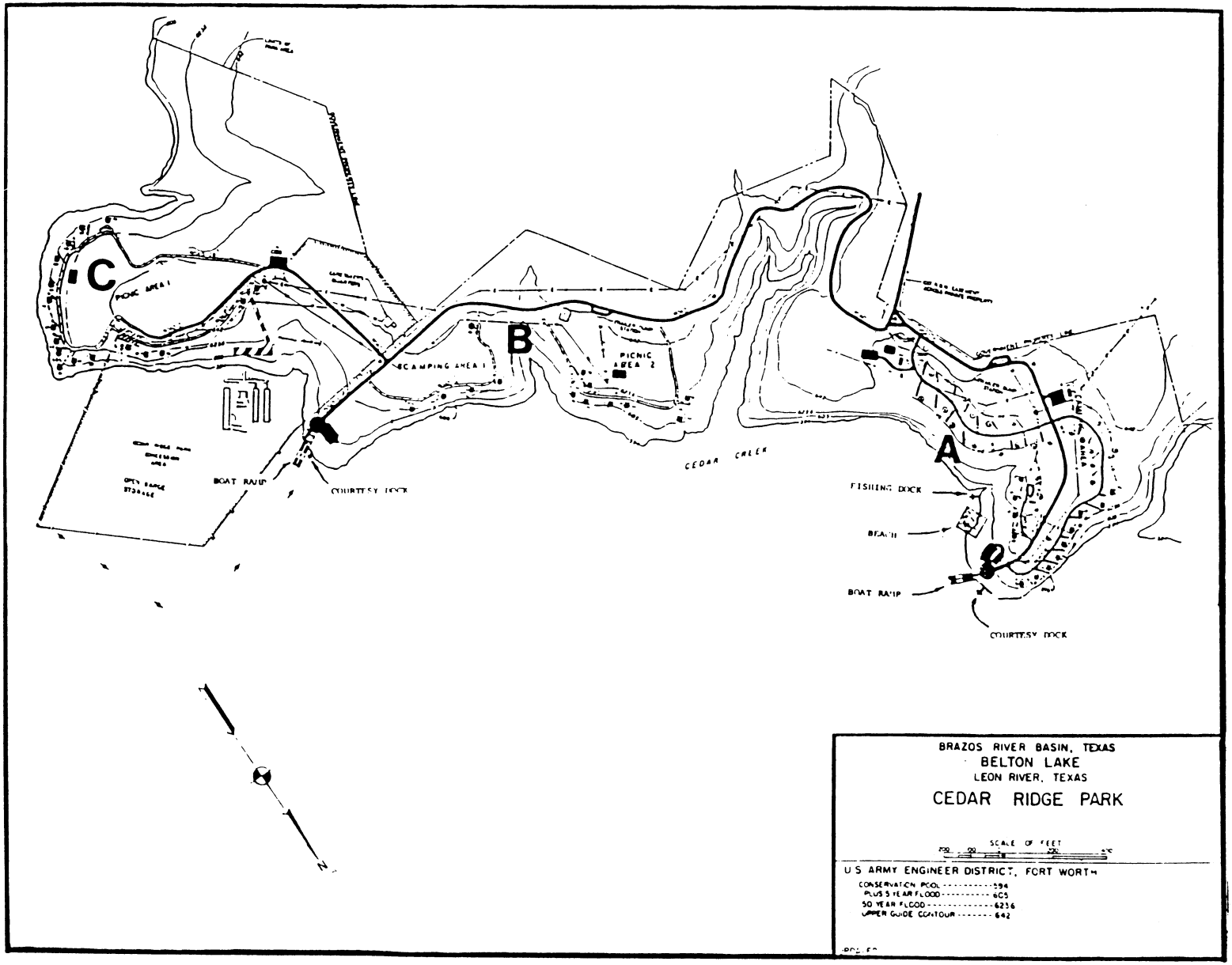

Figure 1. Sample area map

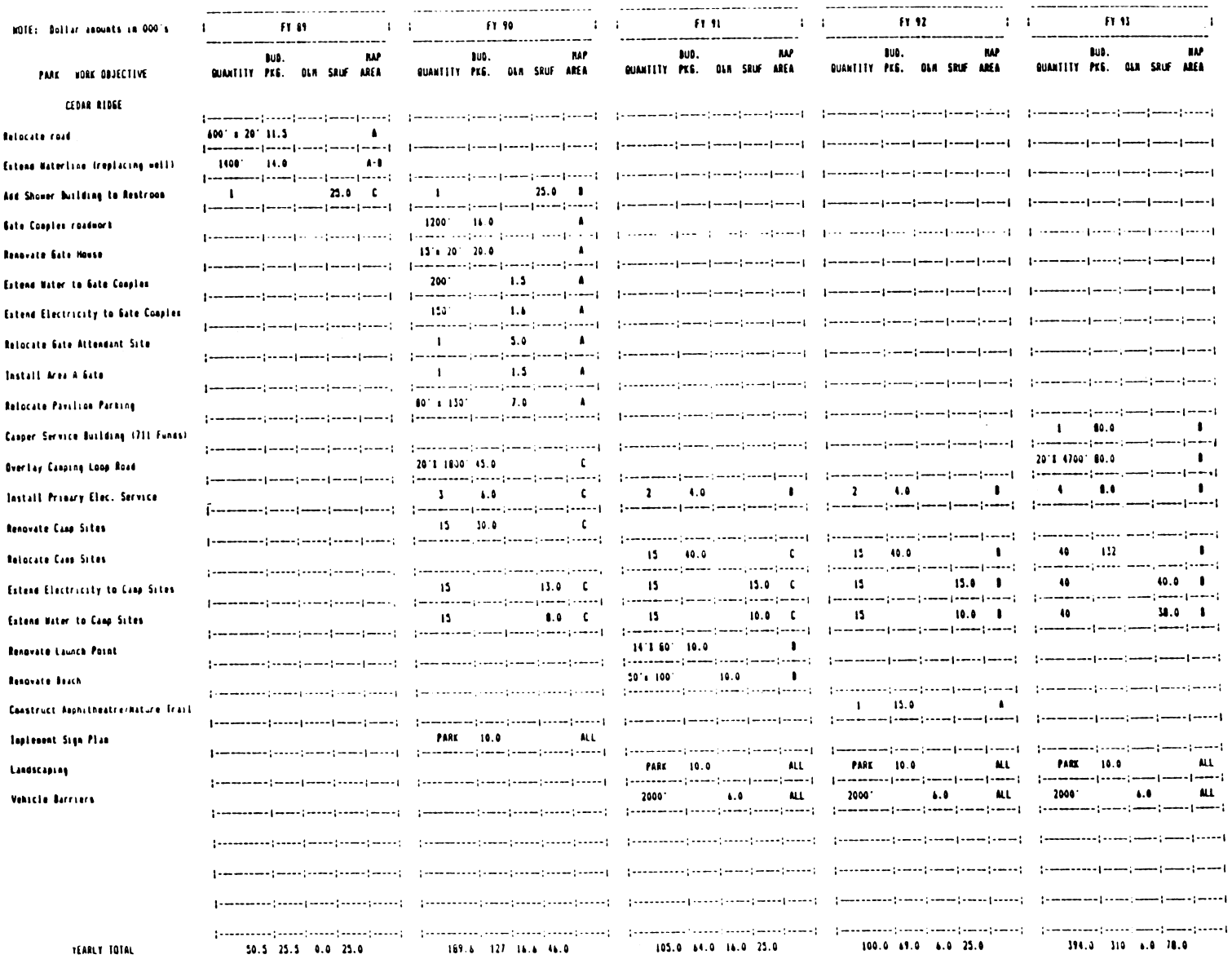

Figure 2. Sample flowchart

his responsibilities to program and budget in accordance with policy, guidelines, regulation, and law. Project budget requests will then mirror the approved OMP requirements.

The OMP and a tracking program would allow performance indicator assessment based on actual planning and execution of a manager's funding rather than comparing an under-funded project against a gold-plated one.

In conclusion, I strongly feel that the OMP should be written by project personnel detailing only specific operation and administration requirements. It MUST be realistic, readable, and developed in a format that is easy to use. Otherwise, the OMP will be just another book on the shelf gathering dust. A sample of a portion of an OMP is included as Figure 3.

CEDAR RIDGE PARK - consists of 195 acres and is maintained and operated as two separate use areas, a fee area and a non-fee area. The entire park is within the Morgans Point city limits.

Cedar Ridge fee area consists of 22 developed acres which includes 40 campsites, 1 beach area, 1 two-lane boat ramp, 1 water-borne toilet with shower, 2 vault toilets, 1 shower building, paved access roads, 1 trailer dump station, and a gate-manned entrance complex.

This park area has been managed as a fee area since CY 76. It received moderate usage during the summer months and was a favorite area for visitors from the Gatesville, Moffat, and McGregor areas. In 1982, the existing campsites were upgraded to full hookups and increased by 23 to a total of 400 sites. At this time the gate house was built, segregating this area from the rest of the park. Due to increased popularity, Cedar Ridge fee area will be kept open year-round, beginning 1 October, 1988.

Cedar Ridge non-fee area consists of 30 developed acres which includes 25 picnic sites, 1 two-lane boat ramp, 2 vault toilets with water, 1 vault toilet, paved and gravel access roads, a trailer dump station, and Pier 36 Marina access.

This section of the park area has been managed as a day-use area with free camping since CY 76. This area also received moderate usage during the summer months and was a favorite area for visitors from the Gatesville, Moffat, and McGregor areas.

Most of the facilities were overutilized, with some sites heavily vandalized. Thefts and burglaries of vehicles, campsites, and boats moored at the Pier 36 Marina have increased in the past 2 years because of management techniques applied in other park areas. These conditions worsened to the point where legitimate recreation activities were greatly reduced, and the most effective means of control was the concentration of law enforcement efforts in this park at the expense of other parks.

The long-term development plan for this area is to completely redesign the park entrance complex totally incorporating the entire park into a fee area. Day use will be restricted to the west boat ramp and the marina facility only. The camping area will be upgraded to a maximum of 135 fully developed campsites, with the addition of a camper beach area and adequate sanitary facilities by FY 93.

Figure 3. Sample OMP (Sheet 1 of 3)

The following prescription priority lists the work objectives under the fiscal year they are to be accomplished. A map (Figure 1) is included to show the general location and a flowchart (Figure 2) is provided showing the scheduled fiscal year, estimated cost, and the appropriate funding method of each item.

Cedar Ridge Park Prescription Priority

FY 89

a. Relocate 600-ft road to segregate day use from camping in area B.

b. Install 1,400 ft of waterline replacing ground water system with community water supply from area A to area B.

c. Construct shower building in area C.

FY 90

a. Gate complex road work in area A.

b. Renovate gate house in area A.

c. Extend water to gate complex in area A.

d. Extend electricity to gate complex in area A.

e. Relocate gate attendant site in area A.

f. Install area A control gates.

g. Relocate pavilion parking in area A.

h. Construct shower building in area B.

i. Overlay area C road system.

j. Install primary underground electric service in area C.

k. Renovate camp sites in area C.

l. Extend electricity to sites in area C.

m. Extend water to sites in area C.

n. Implement sign plan

Figure 3. (Sheet 2 of 3)

FY 91

a. Relocate campsites in area C.

b. Extend electricity to sites in area C.

c. Extend water to sites in area C.

d. Install primary underground electric service in area B.

e. Landscaping.

f. Renovate launch point in area B.

g. Relocate beach in area B.

h. Install vehicle barriers.

FY 92

a. Relocate campsites in area B.

b. Install primary underground electric service in area B.

c. Extend electricity to sites in area B.

d. Extend water to sites in area B.

e. Construct amphitheater/nature trail complex for contract interpretative services in area A.

f. Landscaping.

g. Install vehicle barriers.

FY 93

a. Construct camper service building in area B.

b. Overlay area B road system.

c. Relocate 40 campsites in area B.

d. Install primary underground electric service in area B.

e. Extend electricity to sites in area B.

f. Extend water to sites in area B.

g. Install vehicle barriers.

h. Landscaping.

Figure 3. (Sheet 3 of 3)

SESSION I: PROJECT OMP

The Benefits of an OMP at an 89-72 Project

Joseph S. J. Tanner II*

Introduction

The Falls Lake Project, located just outside of Raleigh, NC, is an 89-72 project, whereby the Corps has relinquished most of the operations and maintenance responsibilities to two State governmental agencies. Long before the project became operational, all three agencies agreed that the project would be operated by Corps standards and that the State agencies would be responsible for accomplishing most of the operational tasks. However, the field-level managers for these State agencies were instructed to manage the Falls Lake project as any other State park or wildlife area in North Carolina, and to ignore any suggestions by the Corps on how the project should be operated and maintained.

Observations

a. Different method of management from other Corps projects - project functions accomplished by non-Federal agencies on 89-72 project versus functions accomplished by hired labor, contracts, etc.

b. No previous experience managing 89-72 projects - no "cookbook" formulas, policies, procedures, guidelines, etc.

c. Different management philosophies and priorities among the three managing agencies at Falls Lake.

Note: All three agencies are "experts." All have years of experience. All have been "highly successful" in attaining their goals and objectives. All are concerned with natural resources, but each has a different priority.

NCWRC
- People-oriented.
- Politically motivated.
- Priority is to provide for the hunter and fisherman.
- Provide for the now, not the future.
- Restrict hunter or fisherman only as a last resort.

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* Resource Manager, Wilmington District.

- Other resource management activities given lower priority, including non-game management, forest management, safety management, enforcement, etc.

NCDPR
- Preservation-oriented.
- Allow nature to manage itself.
- Allow diseases, wildfire, insects, etc. to do their natural thing.
- Surely, do not allow hunting.
- Philosophy of past Chief of Operations: Barricade entrances to all State Parks; lock gate; throw away key; and prohibit public from entering these natural areas.
- Do nothing, it's the easiest option.

Corps
- Active multiple-resource management.
- Management philosophy agreed to by all agencies.
- Includes both people priority and preservation. Manage ALL the resources.

d. State agencies considered the management agreements only a paper exercise.

- Deputy Director of Department of Parks and Recreation (DPR) Parks was overjoyed that lease had been signed, now DPR could manage lands as they had been doing in other State parks.
- Both agencies had same attitude.
- Administrative level did not provide copies of agreements nor did they advise field managers of conditions of the agreements.
- Field staff instructed to manage business as usual.
- State agencies looked for ambiguous and weak language in management agreements.

e. Communication, a learning process.

- Corps unsuccessfully attempted to communicate.
- Communication problems in both agencies worse than in Corps (horizontal and vertical).
- Total lack of communication between other agencies because they did not speak.

Solution: The OMP and the OMP Process

Benefits of OMP.

- Communications improved.
- Continuity has been established.
- Management objectives have been legitimized.
- The process involved State field-level managers.
- Responsibilities and standards have been detailed.
- Confusion and ambiguities in other management documents have been discussed and resolved.
- Methods of accomplishing tasks have been identified.
- Priorities have been established.

- A team approach utilizing all the "experts" has been established.
- A partnership of three agencies has been established.
- The importance of work plans has been realized.
- Flexibility and professionalism is required by all.

A System For Prioritizing Natural Resources Work

Michael D. George*

Summary

Often field managers fail to see the value of the Operational management Plan (OMP) process. It appears to them to be a paper exercise that, when complete, is used against them. By developing a prioritization system, the OMP becomes a tool for the field manager to help him or her justify budget requests and resource commitments to higher authority. A system for prioritizing also protects the manager from outside criticism, not by eliminating it, but by showing how decisions are based on a set of criteria that have been through several management layers of review and refinement. When an OMP is set up with this type of system it is no longer a liability but becomes a tool that benefits the field.

Discussion

In Corps of Engineers heaven, all lake projects have an OMP that is used and revered by all. In the real world, though, it just ain't so. For whatever reason, lake projects, and in some cases, Districts, have resisted writing and implementing OMP. Often the reasons vary from "They will use it to cut our budgets and/or (full-time equivalents)" to "We never had one before, why do we need one now?" These are known, respectively, as the "Why give them the stick to beat me with?" or "If it ain't broke, why fix it?" arguments.

These arguments may have been true at one point but are no longer valid. Budgets are being cut with or without OMPs and as budgets are cut, the old system of first to the "money trough" no longer works. Priority work items do not get done while crisis management prevails--the classic "I will take care of the irritants and let the next guy worry about the priorities." The problem with this reasoning is sooner or later someone has to be the next guy.

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* Natural Resource Specialist, Omaha District.

In a worst-case scenario, the field manager's decisions are reviewed in a wider forum such as congressional people, other politicians, special interest groups, or even the courts. Of course, this is usually as a result of someone wanting some of the field manager's resources (people or money) committed to where they think they should be. Regardless, the manager is forced to justify his or her decisions. If the manager's decisions were based on a crisis or reactive type system, his or her decisions become difficult to defend. Under these types of systems the defense is often "I used my best professional judgment." Unfortunately, in our confrontational society, professional judgment no longer goes very far. The opposition brings in a covey of "experts" and "proves" that professional judgment was merely personal judgment that was arbitrarily applied. It does not matter if the manager is right or wrong in this type of situation--he or she still loses.

It is in this type of situation that the OMP can serve the field manager--especially if he or she is an intricate part of the formulation. The decisions are still the field manager's best professional judgment but now they are reviewed in the "friendly forum" of the OMP approval process and not a "hostile" outside forum. As the OMP passes each level of review and modification, the field manager's decisions for commitment of resources become more and more valid. Now a manager defending his or her decisions for the commitment of resources no longer stands alone; his or her decisions are now the Corps of Engineers' decisions.

This still leaves the problem of how to prioritize the work for the review process. At Lake Oahe, in North and South Dakota, this problem was addressed by developing a "scorecard" for evaluating and prioritizing management units (Figure 1). The scorecard identifies factors that go into the decision process and then gives a weighted score to each factor. The factors and weighted scores were reviewed by a multi-disciplinary team and their recommendations were incorporated.

The scorecard is implemented by evaluating each management unit against the factors and then assigning the appropriate score. The management units are then listed by priority with the total cost of the prescribed management practices as identified in the OMP (Table 1). This is done yearly as part of the annual work plan. When the manager receives his or her budget, he or she merely moves down the list and draws a line underneath the amount that is the closest without exceeding the budgeted amount. Everything above the line is now the annual work plan, by priority. The line is not static. As the year

goes on and budget commitments become more obvious, the line is moved up or down to reflect the changes.

The manager now has a system for setting priorities that no longer appears arbitrary. Anyone, with a little training, can now take the scorecard and score a unit. With minor variations the score will be the same for whoever does the scoring.

Concluding Remarks

In a perfect world the manager always makes the right choice. We do not live in a perfect world and we do not always make the right choice. Sometimes our decisions need to be defended, often by upper management. An OMP that incorporates a priority system and goes through a review process can help make our decisions defendable. Each level of review and approval strengthens the document, bringing all levels of management together in agreement. This is particularly important lest we forget the old axiom, "Together we stand, divided we fall." The OMP can be the document that lets us stand together.

SCORECARD SCORECARD

PRIORITY SETTING FOR WILDLIFE MANAGEMENT WORK

Management Unit Number_____

Scoring

Each heading or sub-heading is to be evaluated and a score chosen that most closely matches the actual conditions on the management unit. If none of the choices represent field conditions, the score is zero (0). All headings and sub-headings should have a score. There should be only one score per heading or sub-heading, as is indicated beneath the heading.

Heading	Score
1. ENDANGERED SPECIES	_____
2. CRITICAL WILDLIFE HABITAT	_____
3. POTENTIAL FOR DEVELOPMENT	_____
A. Soils	_____
B. Moisture	_____
C. Access	_____
D. Shoreline erosion	_____
4. COST-EFFECTIVENESS	_____
A. Protection from livestock	_____
B. Mobilization	_____
5. SOCIAL/POLITICAL CONSTRAINTS	_____
A. Public perception	_____
B. Encroachments	_____
C. Agency requests/inputs	_____
Total Score	_____

Scorer's Adjusted Score_____Justification_____

_____

_____

_____

_____

_____

_____

Scorer's Name_____

Figure 1. Scorecard for evaluating and prioritizing management units (Sheet 1 of 6)

PRIORITY SETTING FOR WILDLIFE MANAGEMENT WORK

PURPOSE

This scorecard and score rationale are designed to aid the field manager or decision maker when attempting to prioritize work. It is an attempt to document the decision process and remove the potential argument that Corps' management decisions are arbitrary. Since the score rationale cannot take into account everything that might affect the decision on prioritization, a portion of the scorecard allows the scorer to make adjustments (with justification) to the final score.

	Relative Value
1. ENDANGERED SPECIES:	
(Choose only one relative value)	
1. No Federally threatened and endangered (FT&E) species have been identified on the management unit and/or management prescriptions are of no value to FT&E species.	0
2. FT&E species have used the unit in the past but are not now present. Management prescriptions will make conditions right for the return or reintroduction of FT&E species.	10
3. FT&E species use the management unit incidentally. Management prescriptions will benefit these species.	16
4. The management unit is critical habitat for the survival of regional populations of FT&E species. Management prescriptions protect or enhance this habitat.	18
5. The management unit contains critical habitat for the overall survival of FT&E species. Management prescriptions protect or enhance this habitat.	20
2. CRITICAL WILDLIFE HABITAT:	
(Choose only one relative value)	
1. There is no identified critical wildlife habitat on the unit as identified by the State	0

Figure 1. (Sheet 2 of 6)

wildlife agency or the US Fish and Wildlife Service and/or management prescriptions are of no value or have a detrimental effect on critical habitat.

2. There is identified critical wildlife habitat on the unit and management prescriptions will protect this habitat. 5

3. There is identified critical wildlife habitat on the unit and management prescriptions will enhance this habitat. 10

3. POTENTIAL FOR DEVELOPMENT:

(Choose one relative value from each subheading)

Soils

1. Management prescriptions are on soils that have very poor potential for wildlife habitat development as identified by the SCS county soil survey report. 0

2. Management prescriptions are on soils that have poor potential for wildlife habitat development. 1

3. Management prescriptions are on soils that have fair potential for wildlife habitat development. 3

4. Management prescriptions are on soils that have good potential for wildlife habitat development. 5

Moisture

1. A watering system is required to implement management prescriptions. 0

2. No extra moisture is available except what normally occurs climatically. Management prescriptions are consistent with moisture availability. 3

3. Extra moisture is available from existing irrigation run-off or some other seasonal source. Management prescriptions 4

are consistent with, and take advantage of, moisture availability.	
4. Extra moisture is available from naturally occurring riparian zones. Management prescriptions are consistent with, and take advantage of, moisture availability.	5
Access	
1. Management unit is inaccessible except by boat.	0
2. Management unit is accessible by vehicle but permission is required from adjacent landowner(s)	2
3. Management unit is accessible by vehicle and permission is granted to Corps employees to cross private land but not to the general public.	3
4. Management unit is accessible by vehicle and is open to both Corps employees and the general public.	5
Shoreline Erosion	
1. Shoreline erosion on the management unit is extensive and would eventually destroy prescribed work. Methods to slow or stop erosion are not possible or are cost prohibitive.	0
2. Shoreline erosion on the unit is occurring, but management prescriptions address it so as to stop or slow the erosion rate, or management prescriptions are such as to be unaffected by shoreline erosion.	3
3. Shoreline erosion is not a factor.	5
4. <u>COST EFFECTIVENESS:</u> (Choose one relative value from each Subheading)	

Figure 1. (Sheet 4 of 6)

Protection from Livestock

1. Not possible or cost prohibitive to protect unit from livestock access. 0

2. Management unit will require some work to be done to protect prescribed work from livestock. Cost of protection will not be more than the expected benefits over the next 10 years. 2

3. Management unit is not protected from livestock, but under present and long-term anticipated management, no protection will be necessary for prescribed work. 3

4. Management prescriptions are/will be protected from livestock at no additional cost to the Corps. 5

Mobilization

1. Under normal driving conditions, unit cannot be reached from current or anticipated duty stations of work crews in less than 1 hour. 0

2. Under normal driving conditions, unit can be reached from current or anticipated duty station of work crews in less than 1 hour but more than 30 minutes. 3

3. Under normal driving conditions, unit can be reached from the current or anticipated duty station of work crews in less than 30 minutes. 5

5. SOCIAL/POLITICAL CONSTRAINTS:

(Choose one relative value from each subheading)

Public Perception

1. Landowners and/or citizens groups actively and publicly oppose prescribed work on management unit. No other group 0

Figure 1. (Sheet 5 of 6)

voices any support for prescribed work and/or public opinion is perceived as definitely opposed to proposed work.	
2. Landowners and/or citizens groups are opposed to prescribed work on management unit. Other landowners and/or citizens groups voice support for prescribed work. Support and opposition appear evenly divided or neutral.	3
3. Landowners and/or citizens groups express support for prescribed work on the management unit. No opposition is perceived.	5
Encroachments	
1. There are no known encroachments on the unit and/or management prescriptions will do nothing to rectify existing encroachments.	0
2. There has been a history of encroachments on the management unit, though none now presently exist; management prescription will stop or prevent these encroachments.	3
3. Management prescriptions will rectify or partially rectify existing encroachments.	5
Agency Requests/Inputs	
1. State or Tribal Wildlife Agency and/or US Fish and Wildlife Service (USFWS) have expressed opposition to proposed management.	0
2. State or Tribal Wildlife Agency and/or USFWS have expressed no opinion or have taken a neutral position on proposed management.	3
3. State or Tribal Wildlife Agency and/or USFWS have endorsed or recommended proposed management.	5

Figure 1. (Sheet 6 of 6)

Table 1

Mitigation Priority Report

March, 1988

Priority Rating Number	Score Value	Site*	Mgmt Unit ID No.	Total Non-Mitigating Natural Resources + Natural Resources Mit = x$1000	Natural Resources Costs x$1000	Mitigation Costs For Oahe Project x$1000	Accumulative Totals
01	64	P	001	6.7	1.5	5.2	5.2
02	64	M	116	59.2	57.7	1.5	6.7
03	62	P	006	37.3	13.9	23.4	30.1
04	62	P	151	35.2	6.3	28.9	59.0
05	59	P	141	32.6	32.6	0.0	59.0
06	57	M	058	23.3	21.2	2.1	61.1
07	57	M	119	19.8	19.8	0.0	61.1
08	55	M	065	0.2	0.2	0.0	61.1
09	53	P	013	9.7	0.5	9.2	70.3
10	53	P	017	24.5	11.2	13.3	83.6
11	53	P	023	86.4	63.6	22.8	106.4
12	52	M	018	6.8	6.8	0.0	106.4
13	52	M	121	10.2	10.2	0.0	106.4
14	52	M	132	63.3	61.4	1.9	108.3
15	51	P	012	0.6	0.3	0.3	108.6
16	51	M	133	10.6	10.5	0.1	108.7
17	51	P	150	28.6	11.5	17.1	125.8
18	50	M	124	10.6	10.5	0.1	125.9
19	50	M	131	9.9	9.8	0.1	126.0
20	50	P	136	219.4	166.0	53.4	179.4
21	49	P	029	37.3	18.9	18.4	197.8
22	49	M	115	25.3	25.2	0.1	197.9
23	49	M	123	18.4	18.4	0.0	197.9
24	49	P	134	154.1	118.0	36.1	234.0
25	49	P	140	61.4	61.4	0.0	234.0
26	48	M	044	2.9	1.7	1.2	235.2
27	47	P	148	16.8	5.4	11.4	246.6
28	46	P	139	95.3	53.5	41.8	288.4
29	45	M	038	20.3	4.6	15.7	304.1
30	44	P	021	21.4	21.3	0.1	304.2
31	44	M	050	58.8	49.4	9.4	313.6
32	44	P	144	48.1	17.7	30.4	344.0
33	44	P	147	66.3	19.7	46.6	390.6
34	43	M	042	60.0	59.6	0.4	391.0
35	42	M	040	21.6	10.6	11.0	402.0
36	42	M	067	2.8	2.7	0.1	402.1
37	41	M	046	15.5	2.5	13.0	415.1
38	41	M	122	3.8	3.7	0.1	415.2
39	40	P	137	359.8	337.0	22.8	438.0
40	39	M	034	105.7	68.6	37.1	475.1
41	39	M	063	40.9	25.7	15.2	490.3
42	39	M	111	10.9	10.9	0.0	490.3
43	39	P	146	23.2	20.8	2.4	492.7
45	38	M	128	23.2	23.1	0.1	492.8
46	37	P	004	10.3	1.4	8.9	501.7

* P = Pierre, M = Mobridge.

SESSION II: DISTRICT OMP

Managing the OMP Process

Tim A. Feavel*

Introduction

Operational Management Plans (OMPs) in the Rock Island District have been in place and operating for about 3 years. I would like to share with you some of the mechanics of managing this OMP process. And it really is more a process, continually changing and evolving, as opposed to a static document.

Before I get too far along I would like to show you a time line to give you an idea of how we progress through from one year to the next with OMP implementation.

Our OMPs are implemented on a fiscal year schedule (Figure 1). On 1 April all projects turn in an annual OMP update for both parts I and II to the District office. This coming April, 1990, updates will include a 5-year work plan for FY 1991 through 1995.

By 1 May the final OMP update is prepared after comments and corrections have been incorporated into the OMP document. There is an "Executive Review" held in the District office in mid-May, which I will talk about shortly. The final OMP update is distributed to other District elements and to the Division around 1 June. At this time all cultural, endangered species, and other (National Environmental Policies Act (NEPA)) requirements are coordinated. By 1 October the FY 1990 work plans for all projects should be ready to implement.

There are three areas that I want to touch on in the next few minutes:

a. The executive summary.

b. Accountability.

c. Monitoring.

One of the biggest questions that has plagued our minds since the OMPs were first implemented has been, "How is the District engineer (DE) incorporated into the OMP process?" In other words, how do we make that connection in management levels between the DE and the project manager? The DE

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* Forester, Rock Island District.

OMP TIME LINE

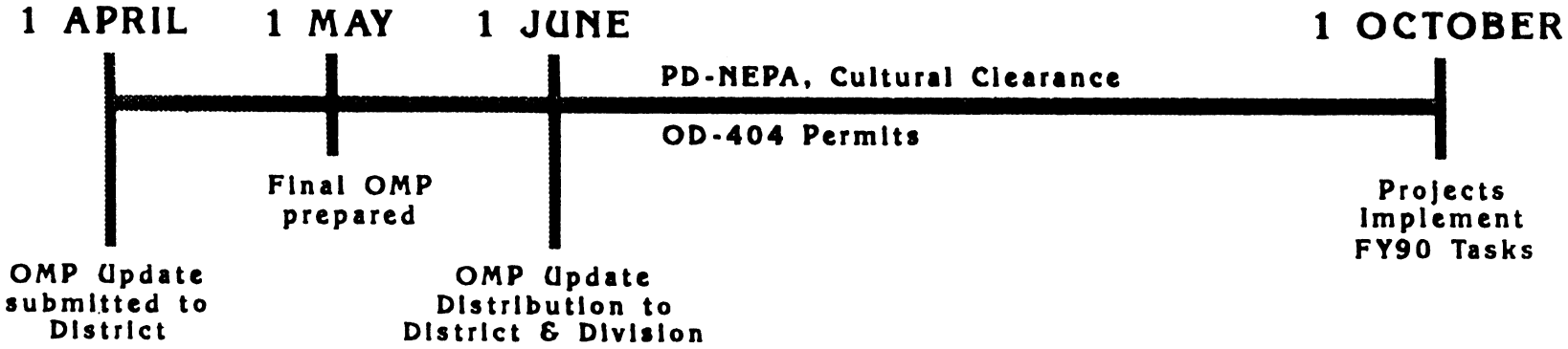

Figure 1. OMP time line

supposedly has the most direct knowledge of goals and priorities of the organization, the "Corps."

The Executive Summary

This executive summary strategy allows the District engineer the opportunity to meet command goals, through the individual who can make it happen...the project manager.

Each year in May the project managers present their OMP package for the coming fiscal year (some "out-year" tasks included). He or she stands before the District staff which includes the chiefs of Operations, Engineering, Planning, and Real Estate and presents a slide show of work plans for OMP tasks to be started that following 1 October.

This event has evolved into a very critical element in the overall OMP process and is believed to accomplish some powerful things:

a. It requires the project manager to become very familiar with his OMP work plans.

b. The District engineer gets a direct one-on-one shot at the project Manager (and vice versa).

c. It begins the coordination process with the other District elements (endangered species, cultural, and other NEPA coordination).

d. Most importantly, it encourages a sense of involvement or participation, leading to better cooperation.

Unfortunately, this process has been in place for just 2 years now and it has been difficult to measure its success. We are cautiously optimistic.

Accountability

Accountability is probably the most important item in the entire OMP process. It needs to be prevalent at all levels of management and that can be a very difficult process. At the end of every fiscal work year an "OMP Accomplishment Report" is prepared by the District, sent to each project to fill in the blanks, and sent back to the District. This report highlights those goals that were either supported or were not supported by a task or tasks that particular year.

It also highlights those "orphaned" work tasks that do not support a project goal. Accomplishments by percentage of work completed for each

project are reviewed every year in October. If, for example, a project completes only 40 percent of the work that was scheduled for that year, it is probably a good indication that the Manager was being too ambitious for the resources he had. He over-scheduled his work year. On the other hand, if 100 percent of the work is completed, the manager has probably under-scheduled his work year, and could indeed accomplish more.

A manager should be encouraged to take some risks. Completing possibly 75-85 percent of what he said he was going to do is closer to what likely should occur.

The opposing forces of quantity of work versus quality of work tend to balance this process to discourage managers from playing the system to simply look good on paper. Generally most project managers want to complete the majority of their work plans and they also take a lot of pride in the quality of that work. The results of the accomplishment report (by percent completions of work tasks for the past fiscal year) are published in a branch newsletter which compares the performance between projects.

Therefore peer pressure plays a big part in this process and tends to be fairly powerful in encouraging accountability and pride in the OMP. I mentioned the executive summary where the project manager presents his OMP work plans. A similar opportunity is offered in November to his staff of resource rangers where they present the accomplishments of the past year to their peers during a natural resource workshop. Peer pressure also comes into play here, and has really promoted a sense of pride in their work and has added some competitive spirit. The workshop is a technical information exchange event rotated from one project to another each year.

Monitoring

We have found that the District needs to be very careful in deciding what is "important" enough to be monitored. Resources (time and money) will tend to slide toward that area that receives the most attention, and could result in other program areas suffering.

SESSION II: DISTRICT OMP

Coordinating the Operational Management Plan (OMP) at the District Level

Deborah J. Knaub*

Summary

Some of the major things that the Seattle District office has done to coordinate the Operational Management Plan (OMP) process are outlined in this paper. In facilitating the OMP process, the District has needed to clearly communicate to the projects that the OMP is a management system, and that once completed, the OMP will lay out and provide rationale for the natural resources and recreation "job" we do. The District has emphasized that the management unit plans and the specific measurable objectives are the key elements in these plans. An effort has been made to develop formats, outlines, and budget/schedule sheets that are simple and understandable. The District has developed its own version of the Division outline for the OMP. The District has also attempted to serve a central role in providing "educational: materials to the projects on OMP-related topics such as preparing objectives and natural resource inventories. Since an updated master plan can provide a base for the OMP, the District has coordinated a review of some project master plans as an initial step in the OMP process. This was done to determine if master plan updates were needed, particularly in the area of resource objectives. If the master plan for a District project did not contain resource objectives, the District coordinated the development of provisional resource objectives for the project and for the individual management units. These provisional resource objectives have been used as a starting point for the more specific objectives of the OMP. Open lines of communication between the District and the projects have been important to assure that OMP preparation did not become an exercise, done only to comply with the engineer regulation. Districts need to acknowledge that OMP preparation will be a major effort on the part of the projects and, if at all possible, should assist the projects by providing additional staffing, specifically for the OMP process.

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* Outdoor Recreation Planner, Seattle District.

Discussion

The Seattle District's official role in the OMP process began a few years ago, when the projects were asked to submit a schedule for OMP completion. The natural resource managers at Seattle District projects have wanted a lot more than deadlines from the District. They have specifically asked for more guidance on overall format; a District version of the Division outline for the OMP; clearer definitions for OMP terminology in the ER and our Division supplement to the ER; a format of the schedule/budget sheet for each management unit; and guidance on the scope the District and Division expect for inventories, 5-year management unit plans, budgetary and full-time equivalent (FTE) information. Our resource managers were concerned that a great deal of time and effort would be expended in the preparation of the OMPs, and that when reviewed, the OMPs would be returned to them for substantial changes and revisions. They wanted significant guidance in advance so that this would not occur. Like most Corps Districts, we have had to complete OMPs with our existing staff and budgets. With competing workload items, and more "immediate" deadlines, the time to do the OMPs has been hard to come by. The projects have valid concerns about time and cost expended in the OMP preparation effort.

There has been some concern in our District about outlines and formats for OMPs. In some cases, there is a need to "individualize" overall outlines and formats at the District level. Seattle District is "customizing" the Division OMP outline, with project input. The objective is to provide an easily understood outline, with understandable terminology. If a term does not mean much to me at the first reading, I assume the term will not mean much to the projects and try to leave it out of outlines and correspondence.

Some of the biggest complaints I have received regarding OMPs have been over the 10-1b prototype OMPs I have sent as examples. Seattle District is emphasizing that redundancy should be avoided in the OMP. Information contained in ER's, design memos, and master plans should not be repeated in the OMP. These documents should be referenced, and if needed as back-up information for the OMP, can be included in the OMP appendixes. The appendixes, if substantial, can be included as a separate OMP volume. This will keep the size of the main part of the OMP manageable and easy to use on a day-to-day basis.

I have found that the District role in assisting the projects in getting the OMP job done is a challenging one. In most cases, the Districts are not, and should not be, writing the plans. But the Districts do have responsibility for seeing that the plans get done and get done well. In most cases, the District must play a role in selling the projects on the value of these plans. A lot of cajoling and convincing has gone on over the phone lines to get the OMP process rolling. Initially there was a lot of reticence about the OMPs, a lot of "if it's not broke, do not fix it" discussions about this new management system, and a lot of "attitude" to overcome about OMPs just being another job to get done. Finding out what "gaps in information" or "attitudes" need to be overcome or changed to make sure the OMP documents are workable, useful management plans is an important District role. As I mentioned, one of the first things our district did to initiate the OMP process at the projects was to ask each project to make a commitment establishing a schedule for OMP completion. But with competing demands, commitments have slipped. The District has needed to keep the pressure on to get OMP development to the top of the natural resource managers "to-do" lists.

I want to emphasize that it is critical that the natural resource managers and their staffs at the projects write these OMPs. They know the resources at their projects best, and are going to carry out these plans - they have to "own" the plans. The District operations element has a role in overall guidance and in review, but these are project OMPs and must be written by the projects.

A key concept that can be lost in the initial effort to produce an OMP is that the OMP is a management system, a system for laying out and accomplishing work by setting and measuring the achievement of objectives. In cases where natural resource managers work under others, such as a project engineer, the purpose of the OMP must be well understood and supported by all the players at the project. OMPs were looked at as a job to do, but we needed to understand that the OMP would be <u>"the job"</u> we do. It is easy to get bogged down with the "exercise" of doing the OMP. A clear understanding of "why" we were doing these documents helps, as well as some confidence in their usefulness as a management system. Some good works to that effect from top-level management at the beginning of the OMP effort and throughout the agency-wide development process would help to counter some of the initial skepticism a new management system always encounters.

A good master plan is an important document to have as a base before OMP preparation. A current master plan has inventory information and general project-wide and management unit objectives that serve as a starting point for the more specific objectives in the OMP. Four Seattle District projects did not have updated master plans, that is, master plans with resource objectives (ROs). Since funds were not available to complete the master plan updates in the required time, the District developed provisional resource objectives (PROs) for three of these projects.

The North Pacific Division regulation states that PROs will be required where master plans are nonexistent or out-of-date. An appendix of the Division regulation provides guidance for the preparation of these PROs. The PRO document provides the project-wide and management unit resource objectives, and the rationale for each objective. The lead for District master plan preparation led the PRO effort, and the PROs were developed as a team effort by natural resources staff in the District and at the Project and Planning Branch. A fisheries biologist, a wildlife biologist, a landscape architect, the project natural resource manager, and an outdoor recreation planner made up the team. Since it would be easy for the PRO development process to become a "master-plan" sized effort, the North Pacific Division regulation specifies that the effort spent on the development of these PROs should not exceed 4 working days. It was a challenge to keep the effort within these time guidelines, but the guidelines did assure that the team effort was efficient. The PRO effort was a success, as it resulted in some useable ROs which allowed us to move ahead with the OMPs at these projects. The PRO development process also helped to identify gaps in available information (such as resource inventories) needed for a good OMP.

The PRO effort in the Seattle District was useful enough that if I had the OMP effort to do again, I would start each project's OMP preparation process with a meeting between myself and the project natural resource manager to review ROs and initiate needed changes. This meeting would be a good starting point for the OMP process and would be a good way to get OMP authors thinking about management units, 5-year planning, needed inventories, and OMP objectives. An initial review of the master plan would also assure that the OMP and master plan were well coordinated in defining objectives for the project.

The most important parts of the OMP are the management unit plans, with their very specific objectives for work to be accomplished each fiscal year. The District has suggested to the projects that these management unit plans be

done first to assure that this part of the OMP is emphasized. As the OMPs are completed in the Seattle District over the next year, we will be asking the projects to submit the management unit plans first. The management unit plans can be done in draft form if necessary, until needed inventories are completed.

As part of the planning process, OMP authors must know how to develop good objectives that are measurable and specific. Districts can play an important role in providing training and educational materials to the project on OMP topics. When providing information to the projects about objective preparation, we have asked that natural resource managers prioritize the objectives for the management units so that the project can quickly respond to budget shortfalls. Writing good objectives, and developing a system for prioritizing them, would be good topics for District/Division conferences or OMP meetings.

Some Divisions and Districts have developed prototype OMPs as models and several natural resource managers in the Seattle District have asked for a model OMP. But I do not think that presenting model OMPs to the projects is a good idea. If Seattle District had produced a model OMP and asked the projects to use it as an example, I do not think that would have produced the best OMP effort. A prototype may have stifled creative individualized approaches at the projects. Rather than providing a recommended prototype, I would prefer to encourage the natural resources staff to produce OMPs appropriate to their projects, possible utilizing some of the good ideas in other OMPs. Many good ideas have come out of the OMP production process across the Corps. The fact that guidance has been somewhat general may, in the long run, assure that better, more site-appropriate documents are produced.

Concluding Remarks

As the coordinator for OMP preparation in the Seattle District I have found that the District office can benefit the OMP preparation process at the projects not only by establishing deadlines and coordinating review, but also by providing support and guidance.

Operational Management Plans - The Fort Worth District Perspective

Ronald W. Pivonka*

Summary

In November of 1986, the Fort Worth District took the first steps in what has proven to be the long process of writing operational management plans (OMPs) for 24 water resource projects by convening a committee to formulate an outline for the preparation of the plans. This outline, which conformed to all requirements in ER 1130-2-400,** Appendix B, was furnished to two projects, Granger Lake and Sam Rayburn Reservoir, and instructions were issued for the preparation of a "prototype" OMP from each. These OMPs were prepared in the field, reviewed and edited in the District office, and submitted to the Southwestern Division for approval in May of 1988. Upon receiving approval of the OMPs in July, 1988, and reacting to the comments furnished with the approval, a revised outline and preparation instructions were issued to the remaining water resource projects. This procedure has allowed for an orderly, sensible preparation process which has produced desirable results, a product that can and will be used in day-to-day operation of our projects.

Discussion

When the requirement for OMPs was first discussed in the Fort Worth District, the necessity of applying certain criteria to the preparation process was deemed of utmost importance. First, and most important, the document was to be one which would actually be used by the project staff and not simply placed on the shelf to gather dust with other like documents. Secondly, if this was to be true, it followed that the bulk of the active preparation of the document should be done at the field office by those who know firsthand

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* Supervisory Outdoor Recreation Planner, Fort Worth District.

** US Army Corps of Engineers. 1971. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

the problems and challenges present at that project. In addition, the document was to be organized in a manner which would allow for updates and/or revisions without the need to rewrite large portions or sections of the document. It was in this phase of the preparation process that a decision was made to exclude any formal public involvement in the formulation of the OMPs. This is not to say that public involvement is not important in the management process. We are sensitive to actions which could be controversial and will deal with them as needed on a case-by-case basis.

The first step taken was the appointment of a "steering" committee consisting of five field office managers and four staff members in the Recreation-Resource Management Branch. The committee's task was to formulate an outline to be used in preparing OMPs. The outline was to include coverage of all topics as required in Appendix B of ER 1130-2-400* and any other topics thought necessary by the committee. It was this committee which proposed to include an additional section in the OMP to be titled "Maintenance of Prime Facilities." This additional section was to cover planning for maintenance of the dam, spillway, outlet works, and other O&M structures integral to the water conservation and flood control functions of the project; including this section made the document a complete "management document" which had not existed before in the District. The presence of field office personnel on the steering committee allowed for input to the outline process from their point of view, a procedure felt necessary for the success and support of this effort.

With a workable outline in hand, the next step was to select two projects which would be entrusted with the privilege of preparing the first "prototype" OMPs. The two projects selected were Granger Lake, a rather small project with relatively low visitation, and Sam Rayburn Reservoir, a large hydropower impoundment with high visitation. The projects were furnished the outline and 6 months of time to complete the document.

The outline itself divided the document into three parts or sections: a) natural resources management, b) park management, and c) maintenance of prime facilities. Basically, each section begins with an introduction, followed by identification of goals and objectives, general discussion of topics

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* US Army Corps of Engineers. 1971. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

within the section, and ends with a 5-year plan of work items to be accomplished. Descriptions of work items include estimated costs; this will help managers enormously during budget preparation time. The document was organized in a ringed binder to allow for removal and/or insertion of updated or revised pages.

After receiving the draft OMPs from both projects, District office staff began critical review of the documents, made comments and recommendations, and returned the draft OMPs to the projects for finalization. The final documents were submitted to the Division office and subsequently approved, subject to several comments. With two approved "prototype" OMPs in hand, and a finetuned outline available, the next step was the distribution of copies of both OMPs, and the outline, to all projects, along with instructions to proceed with preparation of OMPs. The first drafts began trickling in to the District office in February 1989 and, to date, 19 of 24 projects have approved OMPs in use.

Concluding Remarks

The Fort Worth District approach to OMPs exemplifies that the document was designed to serve the needs of the field office and not simply to be placed on the shelf and forgotten. The majority of these OMPs are less than 100 pages in length, yet adequately cover major work items projected for the next 5 years in resource management areas, park areas, and prime facility areas. The plans purposely cover very little background or backup information already available from other sources. The plan lines out the "yellow brick road" for the manager and staff, and creates continuity in direction and purpose if and when personnel changes take place at the project. Eventually, the Historic Property Management Plan (HPMP) will be placed in these OMPs as an appendix. HPMPs are being done in-house for each project. It is also possible that other documents, such as lakeshore management plans, will be appended to OMPs at a later date. These OMPs were done at minimal cost and did not require funding from special line-item budget work packages. The use of computer-aided design and drafting (CADD) or geographic information systems (GIS) was not considered in the preparation of the OMPs but could be considered in the future to facilitate record keeping.

SESSION II: DISTRICT OMP

Inventory Procedures, Mapping Techniques, and Proposed GIS Systems For OMPs in the Vicksburg District

Julie Marcy*

Introduction

Operational Management Plans (OMPs)

Overall, OMPs originate in eight field offices, and are provided in both paper and floppy disk form to the District. While in the District, outdoor recreation planners, a forester, and a wildlife biologist review the plans before sending them to other offices.

a. One OMP is complete, except for an environmental assessment (EA) of Grenada Lake. The EA is required for new forestry proposals (hardwood removal and the use of composting restrooms) and is now in the Lower Mississippi Valley Division (LVD). This OMP is used as a model although it continues to evolve. It required 5 years of effort before being approved by LMVD for a variety of reasons.

b. Three other draft OMPs are currently in the District for review. The remaining drafts are due in the District during 1990. We originally planned to have all OMPs finished in 1990, but this will not occur. We will be lucky to finish one per year with our current procedures.

c. Map artwork is being prepared for one project by the drafting department. All eight projects have new photo mosaic maps with boundary lines for use in preparing OMP maps. We only do artwork on one project at a time, since we are constantly looking for ways of minimizing cost and required processing time.

Inventory Procedures

a. Forest inventory. Eight projects completed a project-wide forest inventory in 1988 for a total of 185,723 acres. This approximately 5 percent total project survey will be updated by resurveying one fifth of the project each year. Data are collected along permanent transects on species type, age, vigor, volume, litter accumulation, etc. All original inventories were performed by in-house personnel to establish

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* Environmental Specialist, Vicksburg District.

familiarity with the project. Updates are performed either in-house or by contract. We utilize several forest management software programs, and Husky Hunter field computers in our analysis. All projects follow the same inventory procedure so that data can be compared between projects.

b. Wildlife inventory. For all practical purposes, we do not have a wildlife inventory for any of our projects at this time. Species lists were originally compiled for the project master plans, but detailed population studies have not been performed. We are currently in the process of obtaining all wildlife data available from state game agencies, Natural Heritage offices, etc. In addition, we have a contract with the US Army Engineer Waterways Experiment Station (WES) to establish standardized wildlife inventory procedures. This process will include gathering baseline data and developing continuing analysis techniques. Critical species have been identified, and a 12-month field test will be performed at Grenada Lake to determine efficacy. Both population and habitat data will be collected. Once techniques are finalized, WES will perform training for all field personnel, and in-house inventories will begin. The primary criteria for techniques used is that they fit within our current manpower and funding allocations.

c. Cultural/historical resource inventory. These inventories are even more incomplete for the District. No comprehensive survey procedure has ever been developed by our Planning and Operations Divisions. Surveys performed have been "piecemeal" as construction sites, etc. were needed. Unfortunately, what little information is available is not in a master computerized data base where it can be easily accessed to determine what areas have and have not been surveyed. The reasons for this situation appear to be lack of funds - master planning and historical inventory funding requests are routinely removed from budget requests after submission; and excess costs - most surveys are performed with expensive contracts that sometimes cost more than the proposed facility. We recently held a training workshop for field personnel, and appear to be getting more analysis support from the state of Arkansas. WES has provided us with a plan of action, but it is not known whether or not the Planning Division will adopt this.

d. Soil surveys. Soil surveys performed by the SCS are relatively good for our Mississippi and Louisiana projects, fairly poor for our Arkansas projects.

Mapping Techniques

Our OMP maps are detailed working maps prepared in full-size and miniature formats. Current black and white photo mosaics are provided to each project for use in developing draft maps. The maps are then finalized in our

drafting Department. They do excellent work for us, but the process has been taking 9-12 months per project since they are frequently forced to abandon our jobs to work on engineering projects (their Division office).

a. Multiple color separations. A procedure whereby a separate color plate is prepared for every color used. This is our previously used procedure. Due to large preparatory requirements and expense, we no longer use this technique (the Grenada Plan's mapping costs were approximately $100,000.00.)

b. Four-color process. A color blending system whereby fewer plates are prepared yet numerous color combinations can be used. We are currently preparing OMP maps with this technique. These maps are scheduled for completion on 15 December. We believe this technique will result in a printing savings, but it is requiring more hand drafting time. We will not know if we are going to realize substantial savings overall until the work is completed.

c. Color proofs. As I understand it, past management plan maps were prepared in final form for the review process. Obviously, any change to the maps would necessitate reprinting. We now use relatively inexpensive color proofs for review purposes. We also plan to reduce our costs by printing only the full-size maps required, and color xeroxing the small-scale maps onto bond paper.

Proposed GIS

Geographical information systems consisting of a color graphics workstation, ARC-INFO and GRASS software, a digitizer, and color printer have been proposed for the branch office and eight field offices. The original order was submitted in FY89. Only the digitizers and printers were obtained before CELMV-IM froze all Division GIS orders. Approval to proceed was finally provided in September, and the systems are currently being advertised. Most information digitizing will be performed at the District Office level. Each field office will have a self-contained system used for preparing OMPs, annual reports, brochure maps, reconnaissance missions, etc. Following initial expenditures, these systems are expected to result in substantial savings of time and money.

SESSION III: MASTER PLANNING

The Connection Between Master Plans and Operational Management Plans

Matthew T. Rea*

Summary

Few Districts or Divisions appear to understand the relationships between master plans (MPs) and operational management plans (OMPs), or are attempting to prepare or update MPs in accordance with our new master-planning regulation. An immediate need exists to communicate the benefits of preparing adequate, up-to-date MPs to project natural resource management programs, particularly OMP preparation and implementation. Corps regulations allude to the idea that MPs and OMPs are intended to be different elements or phases of the same Corps of Engineers resource management planning process. What is needed is to begin thinking of both MPs and OMPs in terms of the process, rather than emphasizing the end-products themselves. Very rarely is any kind of structure or process observed in putting together OMPs. Master plans provide an opportunity for a planning structure and process that should be followed out all the way through to completion of OMPs. The importance of interdisciplinary/interoffice study team involvement in the process of preparing MPs and OMPs cannot be stressed strongly enough. Master plan maintenance should become an integral part of the process of developing and updating our OMPs.

Background

A little information about my background and experience might help explain some of my personal perspectives concerning master plans and operational management plans. I have worked primarily as a master plan study manager since starting at Portland District in 1979. Even before then, North Pacific Division began making a push for their Districts to prepare new updated master plans that are useful to District operations, planning,

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* Outdoor Recreation Planner, Portland District.

engineering, and real estate elements, as well as other agencies and the public. Our goal has been to replace the traditional "recreation design memo" master plans with plans that provide broad-based multiple resource guidance.

Important concepts that we have emphasized in our master plans have been regional overviews, resource objectives, and interdisciplinary study teams. If you are familiar with the new master-planning regulation, ER 1130-2-435*, you know that it also emphasizes those concepts. That is not due to coincidence; the regulation was written with a high degree of input from North Pacific Division staff. Many of the innovations and procedures first used or refined in North Pacific Division (NPD) master plans have been incorporated into that regulation. After working for over 10 years to try to implement those concepts, we believe that Portland and the other Districts in NPD have more current experience than perhaps anyone else in the country. To put it succinctly, we think we do pretty good master plans.

That is not to say that we cannot do a better job. We are still learning. We have many ideas for improving both master plans and OMPs that due to time and other constraints, we have not been able to implement. Some comments in my presentation today may be controversial; they are not meant to be inflammatory as much as to open up some ideas for discussion. Many of the things I will say are highly theoretical and I understand that there are many practical problems that stand in the way of the "perfect" master planning and OMP process. In order to improve what we are doing now, though, we have to look at the theoretical roots of our program.

Issue/Problem Statement

A report recently released by the US Army Engineer Waterways Experiment Station (WES) summarizes results of a questionnaire distributed to District operations divisions and project offices.** One of the most significant results of the report is the nearly total lack of discussion concerning the direct functional relationship between MPs and OMPs. That is not meant as a

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* US Army Corps of Engineers. 1987. "Preparation of Project Master Plans," Engineer Regulation 1130-2-435, Washington, DC.

** Peyman-Dove, Linda, Waring, Michael R., and Titre, John P., Jr. 1989. "Operational Management Plans: Status, Content, and Implementation," Miscellaneous Paper R-89-2, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

critique of the report written by WES; they were only summarizing the results of the questionnaire. What it does suggest, however, is that few Districts or Divisions appear to understand the relationship between MPs and OMPs or are attempting to prepare or update MPs in accordance with our new master-planning regulation (ER 1130-2-435). An immediate need exists for those of us that are involved in master planning to communicate the benefits of preparing adequate, up-to-date MPs to project natural resource management programs, particularly OMP preparation and implementation.

Policy and Philosophy

Although the relationship is not clearly spelled out, ER 1130-2-400* and ER 1130-2-435** allude to the idea that MPs and OMPs are intended to be different elements or phases of the same Corps of Engineers resource management planning process. In the Portland District, we call that process the master plan for resource use (MPRU) to distinguish it from the traditional master plan document.

In the regulations, the master plan is defined as the basic guide for use, management, and development of project resources. The MP is not to be simply a recreation facilities design memo, but should address the entire spectrum of natural and cultural resources. In very simple terms, MPs cover the who, what, where, and why of resource management.

Resource objectives (ROs) are an important element of our new MPs; they are the direct link between master plans and operational management plans! ROs are clear, definitive statements that specify attainable options for resource use, development, and management. They can be specific to a group of projects, to an individual project, or to a specific parcel of project area (management unit). Both ROs and MPs deal in concepts, not details.

In comparison, OMPs describe in detail how objectives and concepts presented in the MP will be implemented. OMPs are action documents; they translate concepts into detailed development, management, and administrative functions. In the OMP, the project resource manager prioritizes objectives

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* US Army Corps of Engineers. 1971. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

** _____. 1987. "Preparation of Project Master Plans," Engineer Regulation 1130-2-435, Washington, DC.

first identified in the MP. The OMP specifies the methods and techniques to be used to implement those objectives, given the resources available (i.e., funds, manpower, equipment, materials, volunteers, etc.). The OMP covers the how and when of resource management.

The functional relationship between MPs and OMPs is strongly supported by Corps regulations. ER 1130-2-400* states that final OMPs should not be prepared without a current, approved master plan. In this case, "current" means that the MP was prepared in accordance with the new regulations (ER 1130-2-435).* ER 1130-2-435 contains some very important requirements intended to strengthen that relationship:

> A current, approved master plan is required before any action can be taken which may restrict the range of future options. All actions by the Corps of Engineers and outgrantees must be consistent with the master plan. Prior to facility construction, renovation or consolidation, whether to be accomplished with O&M, General, Construction, General, or SRUF accounts, such activities must be included in an approved master plan. These activities will not be included in budget submissions unless they are included in an approved master plan division for approval.

Please keep in mind that this is a project operations regulation. This was not written by a bunch of planners sitting around trying to think up ways to keep resource managers under their thumbs. I understand that this requirement was added to the regulation at the specific request of John Elmore, Chief of Operations, HQUSACE. It can be interpreted to mean that HQUSACE wanted to get some control on the resource use, management, and development activities that are unilaterally undertaken at the project level without first undergoing a complete and thorough master planning study. There appear to be very few Civil Works projects where this requirement is being met.

Resource Management Planning Process

What we really need to do is to begin thinking of both MPs and OMPs in terms of the process that we must go through to develop them, rather than emphasizing the end-products themselves. Too often there is too much emphasis placed on doing MPs and OMPs solely for the sake of completing a document. Thinking of master plans as products will result in old style "recreation DM master plans" good only for gathering dust on a shelf.

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* US Army Corps of Engineers. 1987. "Preparation of Project Master Plans," Engineer Regulation 1130-2-435, Washington, DC.

Try to think of master planning as the process through which all of the responsible elements in the District periodically come together and review project management to ensure that regional public needs are being met, that the project is being efficiently operated, and to respond to changing project conditions. Completion of the master plan document only signifies completion of the first phase. At that phase, however, there should be full District, higher authority, other agency, and public concurrence of the project resource management plan and objectives. The OMP is a continuation of the process into the implementation phase.

A logical, step-by-step process is required to develop both meaningful master plans and OMPs. Some of the key elements of the Corps Civil Works resource management planning process include:

a. Interdisciplinary/interoffice study teams.

b. Public involvement program.

c. Interagency coordination.

d. Review and analysis of regional needs and desires.

e. Project resource inventory, analysis, and mapping.

f. Synthesis.

(1) Influencing and constraining factors.

(2) Suitability and analysis.

(3) Tradeoff analysis/alternatives.

g. Plan formulation and refinement.

h. Master plan maintenance.

All of these elements are procedural rather than functional elements. In other words, they are phases of the process rather than parts of the plan. It is the process of preparing MPs and OMPs that results in action or implementation; not the documents themselves. In addition, every one of these elements can be considered common components of both MPs and OMPs.

Traditionally, master plan study managers seem to be more inclined to think in terms of study processes than OMP study managers. That can be explained by several factors, including the education, training, and mentality of the average Corps employee in each of those roles, as well as the missions and functions of the District elements taking lead in each of the phases. In other words, planners "plan," that is their job; while resource managers like to "do." The bottom line, though, is that very rarely is any kind of structure or process observed in putting together OMPs. Too often they are completed by a resource manager or park manager in the field who is told he has

to have a completed OMP in order to do anything on the project. Consequently, they follow a "fill in the outline" or "cookbook" approach. The end result is inadequate OMPs that are completed to fulfill minimum requirements rather than truly trying to identify and meet project needs.

Master plans provide an opportunity for a planning structure and process that should be followed out all the way through to completion of OMPs. Going over each of the key elements of the master-planning process in detail would be enough information to fill another workshop altogether. However, the first and the last two elements, study teams and master plan maintenance, deserve a little more emphasis.

Interdisciplinary Study Teams

The importance of interdisciplinary/interoffice study team involvement in the process of preparing MPs and OMPs cannot be stressed strongly enough. Without an honest interoffice study team effort, you cannot have valid MPs and OMPs that truly reflect the District's goals and objectives for use management and development of the resources of a given project. There are multiple benefits to the team approach.

a. Foster cooperation between District elements.
b. Develop base of institutional knowledge about projects.
c. Ensure the needs of all offices are met.
d. Clarify scope of plans.
e. Foster long-term support of plans.
f. Encourage implementation of plans.

I could go into much detail concerning team makeup (which disciplines and District elements should be involved). The key point is that between the MP and OMP phases of the study process, the only part of team makeup that should change is a shift of team leadership, usually from the District planning element over to the operations element. Individual team members should stay the same; project resource managers should rely on the same experts who established the conceptual resource objectives to help develop detailed implementation plans. Make use of that base of institutional knowledge about the project that was developed in the master plan phase!

Obviously, one very important aspect of the study process will be the transition from MPs to OMPs. Unfortunately, I do not have a good feel for how

that should be accomplished. Hopefully, one outcome of this workshop will be some guidance on when and how the baton will be passed, so to speak.

In reading the WES report on OMP status, content and implementation, it is obvious that a number of Districts emphasize using a team approach to develop OMPs. I am not convinced, however, very many of those Districts truly understand the team process. Study team involvement requires full give-and-take participation in the decision-making process. It cannot be limited to simple coordination. Too many people consider that one person writing a document and then distributing it for others to review and comment constitutes a study team approach. Likewise, different individuals writing separate sections for consolidation by an individual office or element do not constitute a study team.

Master Plan Maintenance

Master plans are intended to be living, dynamic documents that anticipate problems that could arise and are flexible to changing conditions. Unfortunately, due to time and funding constraints, we all too often will put our finished master plans up on a shelf and forget about them. Little effort is made to "maintain" our master plans until a number of years pass and it's time to go through a full-blown update.

Master plan maintenance should become an integral part of the process of developing and updating our OMPs. This could be accomplished quite simply; what I envision is the study team getting together each year as the OMP update process is initiated for the purpose of reviewing the master plan. Their goal will be to identify those resource objectives that have been fully or partially achieved, those objectives that may no longer be valid, and new objectives that should be established to meet changing project conditions or needs. Through this process, the study team should also be ready to make recommendations concerning the need for major updating, supplementing, or amending of the MP. This decision-making process should become part of the written record that is appended to the master plan.

Scope/Levels of Detail of MPs and OMPs

One final important issue is the age-old problem of determining the appropriate scope of master plans and subsequent OMPs. What is the

appropriate level of detail of master plans and OMPs in terms of resource inventory and analysis? What about in terms of the level of guidance in management and development techniques? As discussed earlier, MPs deal in concepts while OMPs deal in details. By itself, that is some pretty vague guidance. Just what is it that makes a recommendation a concept versus a detail? It's all relative.

This is an issue that probably every District and Division has had to face at one time or another, and in most cases it probably has not been resolved. The primary concerns that Planning has generally heard from operations, and that the District office has heard from the field, are that too much detail in master plans does not leave any decisions for the resource manager. Detailed master plans are too inflexible and commit resource managers to activities and techniques they may not want to implement.

I am happy to report that this scope and level of detail appear to have become less of an issue in the Portland District. We have been through about half a dozen master plans now, many involving the same study team members. With experience, our study teams have become more familiar and comfortable with master plans and OMPs, and the desired level of detail of each. Operations staff serving on study teams, particularly project representatives, have come to view master plans as a tool through which their own ideas and concepts are formalized, ultimately streamlining the OMP process. To be honest, in many cases I end up having to tell our operations team members that some of the material they want to put in our MPs really belongs in the OMP. Again, in order for this understanding to occur, you must have an <u>honest</u> team effort.

There is no clear-cut answer to this issue. Every project is different in terms of the level of resource information available and type of guidance needed. It is the responsibility of the study team to determine the scope and level of detail that is appropriate at each phase of the study. The only guidelines I would offer are that study teams should make use of all of the information that is currently available to them. Likewise, all of the information that the study team used to make resource decisions presented in the MP should be referenced or included in the document. A key responsibility of any MP is to identify additional research, monitoring, investigation, etc., needed in order to complete the OMP phase.

The Interrelationship of Geographic Information Systems with Master Plans and Operational Management Plans

Blaise Grden*

Summary

Automated geographic information systems (GISs) serve the master planning program by bridging the gap between the master plan (MP) and the operational management plan (OMP). The GIS is a tool that stores graphic and alpha-numeric data, provides information, analysis, and/or synthesis used in decision making, and assists management activities. This paper explains the environmental planning process used in developing MPs and OMPs, and how our GIS serves the process, as well as Walla Walla District's approach in implementing a GIS.

Introduction

The connection between the MP and the OMP is currently weak. The current planning process is much like two mules pulling against each other. The MP and OMP are not working together. Many resource personnel feel that these plans are not part of the same process. These plans are part of the same process. The MP guides "...the use and development of the natural and manmade resources of a given project or groups of projects," while the OMP "describes in detail how the resource objectives and concepts described in the MP will be implemented and achieved," (USACE 1987, p 1).**

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* Landscape Architect, Walla Walla District.

** US Army Corps of Engineers. 1987. "Preparation of Project Master Plans," Engineer Regulation 1130-2-435, Washington, DC.

Geographic Information System (GIS)

Throughout time, the need for and the access to information have always been important. GIS provides easier access to information as well as an organized process for the MP and OMP. The automated GIS is a computer software/hardware system to: collect, store, organize, retrieve, analyze, and display spatial data located upon the earth's surface.

The GIS contains both spatial and alpha-numeric data. Information can be entered in the system through digitizing, stereo plotter, other GIS sources, statistical data, and the computer-aided design and drafting (CADD) system. The GIS can produce maps, reports, derived products, terrain data, and can be used to query the system and conduct analysis (Figure 1).

Walla Walla District's Approach

The Walla Walla District has recently installed and is implementing a GIS. The approach taken is a holistic one, so that the system will be utilized by the entire District.

The use of interdisciplinary teams is important to insure a holistic approach in the planning process. The master plan interdisciplinary team is headed by the planning division, with members from the operations division, engineering division, real estate division, and information management office (IMO). The OMP interdisciplinary team is made up of the same members, only with the operations division acting as the lead. (The OMP process is still in the planning stages at this time. The OMP was developed in the operations division, with coordination from other District elements.) In the Walla Walla District, a GIS subcommittee (GISSC) is made up of members from the same offices with the IMO member chairing the Committee. The GISSC is under the information steering committee, which is comprised of all the office and division chiefs who are directly under the District engineer. The GISSC is responsible for (a) coordination between Divisions, (b) the development of GIS goals and objectives, (c) scheduling and prioritizing projects, development of data standards and criteria, and recommending acquisition of hardware/software and available data. Each committee member is responsible to coordinate with their respective organization.

The Walla Walla District GIS equipment configuration is made up of a VAX 252, dual processor CPU with a file/plot server and plotter, which is

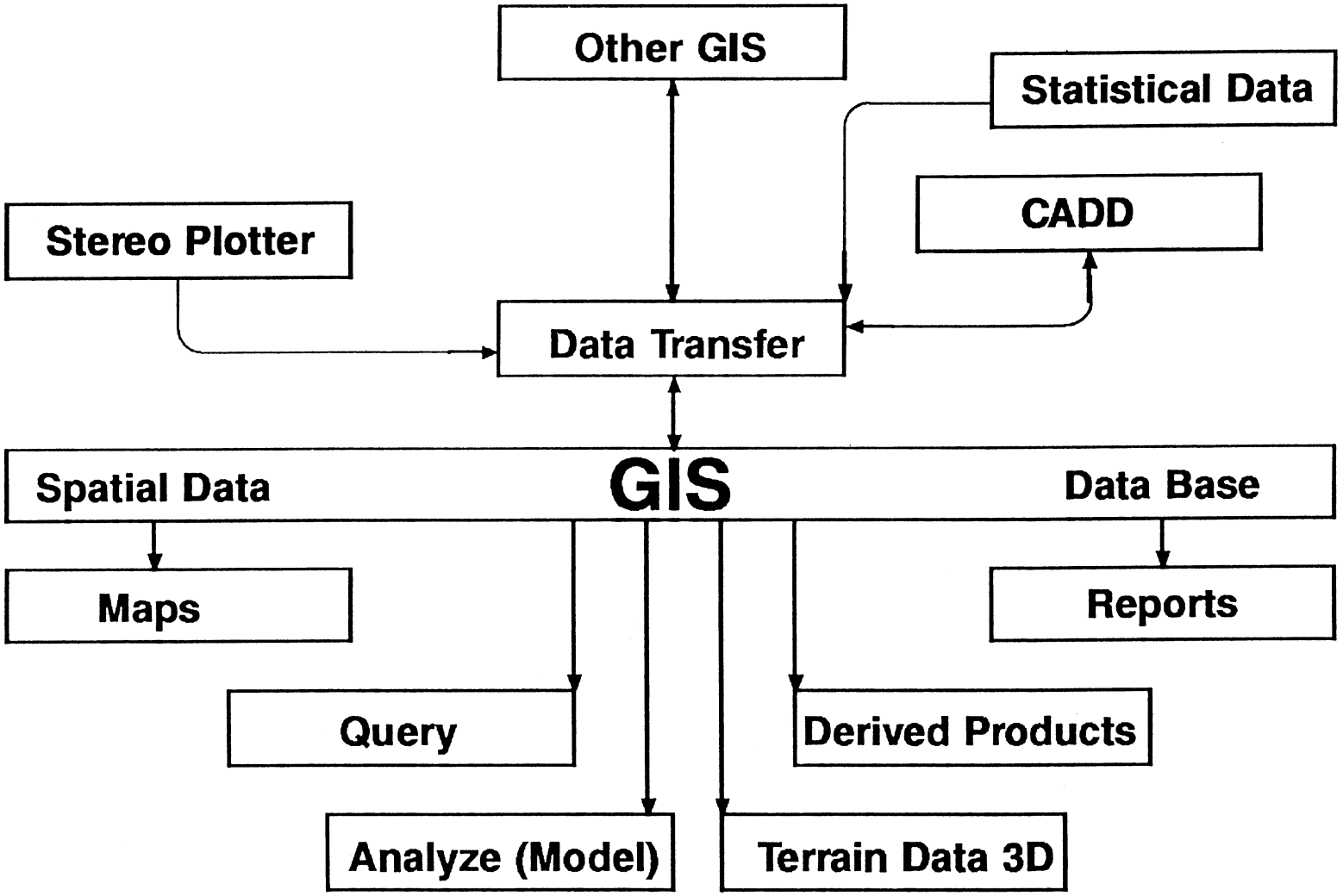

Figure 1. Capabilities of a GIS

shared with the CADD and "Intergraph" intelligent work stations located in the planning, real estate, and operations divisions, and in the IMO. Two digitizing stations are located in the engineering division. The GIS is connected by a local area network (LAN). The work stations can also be utilized by the CADD (Figure 2).

The planning division is currently or planning to utilize the GIS for master plans and environmental impact studies, cultural resource inventory and monitoring, fish passage analysis, terrestrial habitat studies, and feasibility studies. An example application is an underwater 3D topography which is used to study dredge disposal and how it will affect fish habitat. A study of vegetation changes on the Snake River near Jackson, WY, is also being conducted.

The engineering division will use the system for new map entry, compilation, base map maintenance, digital map acquisition/input and integration of field data collection tools. The "Zeiss C120" analytical stereo plotter is used to transfer aerial mapping into digital data usable in the CADD and GIS. Currently the stereo plotter is transferring detailed information on the Tri-Cities area of Washington which will be used for internal drainage studies and by the cities of Richland and Pasco, WA.

The GIS will serve the real estate division in acquisition planning, management and disposal support, outgrant mapping and conflict analysis, encroachment detection and monitoring, automated output products, and acreage analysis. Currently all spatial real estate data for outgrants has been placed in the GIS for the Mill Creek Lake and Dworshak projects. This information is now available for use by the real estate division.

Operations division functions that can be served by GIS are OMPs, wildlife management, resource management, navigation management, regulatory, and emergency management. Currently personnel can access information and create reports and custom maps on the Mill Creek Lake and Dworshak projects.

The Planning Process

The planning process used for MP and OMP is shown in Figure 3. The process brings together laws and directives (both public and regional) and project inventory and analysis.

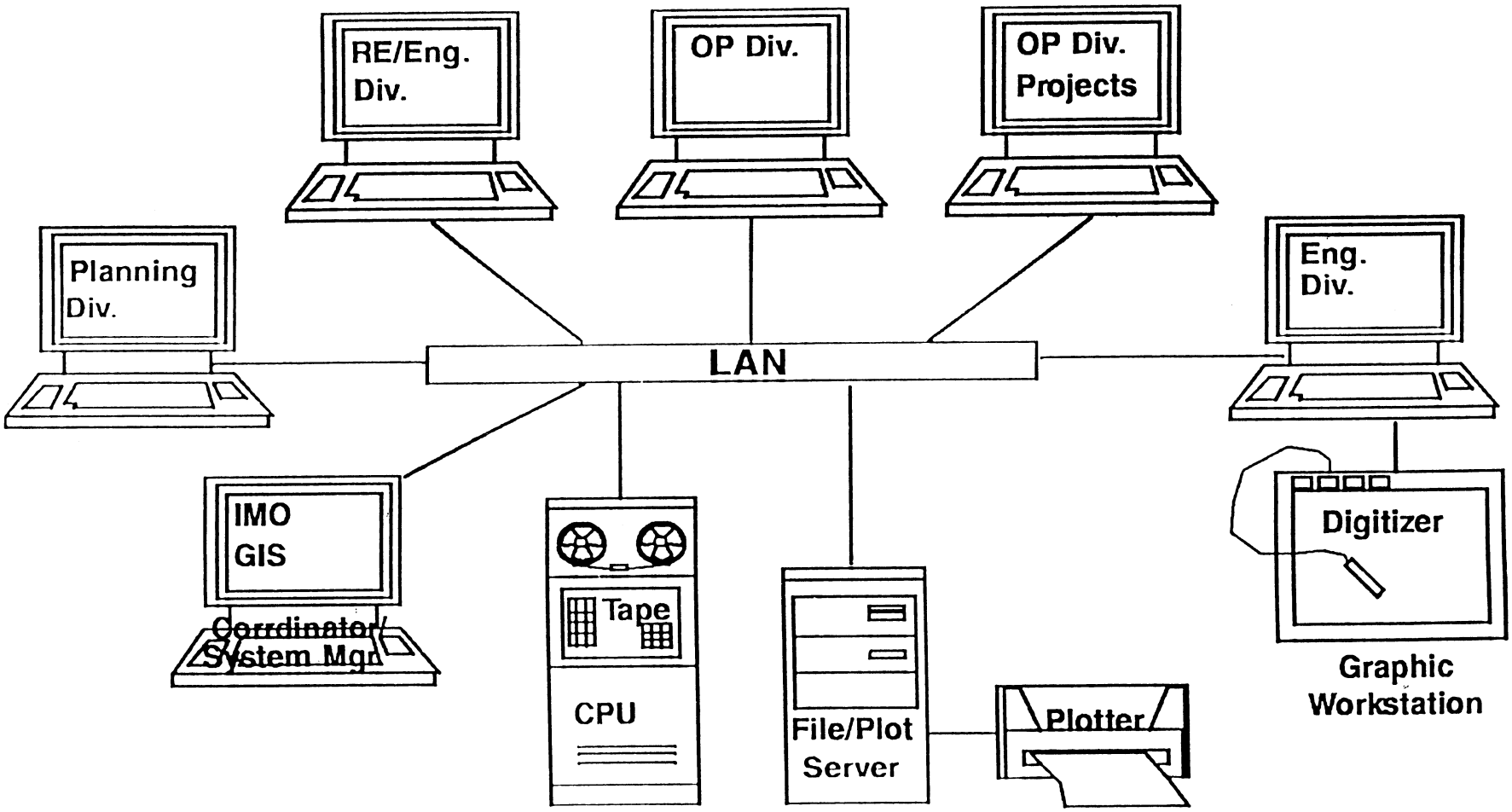

Figure 2. GIS primary equipment configuration

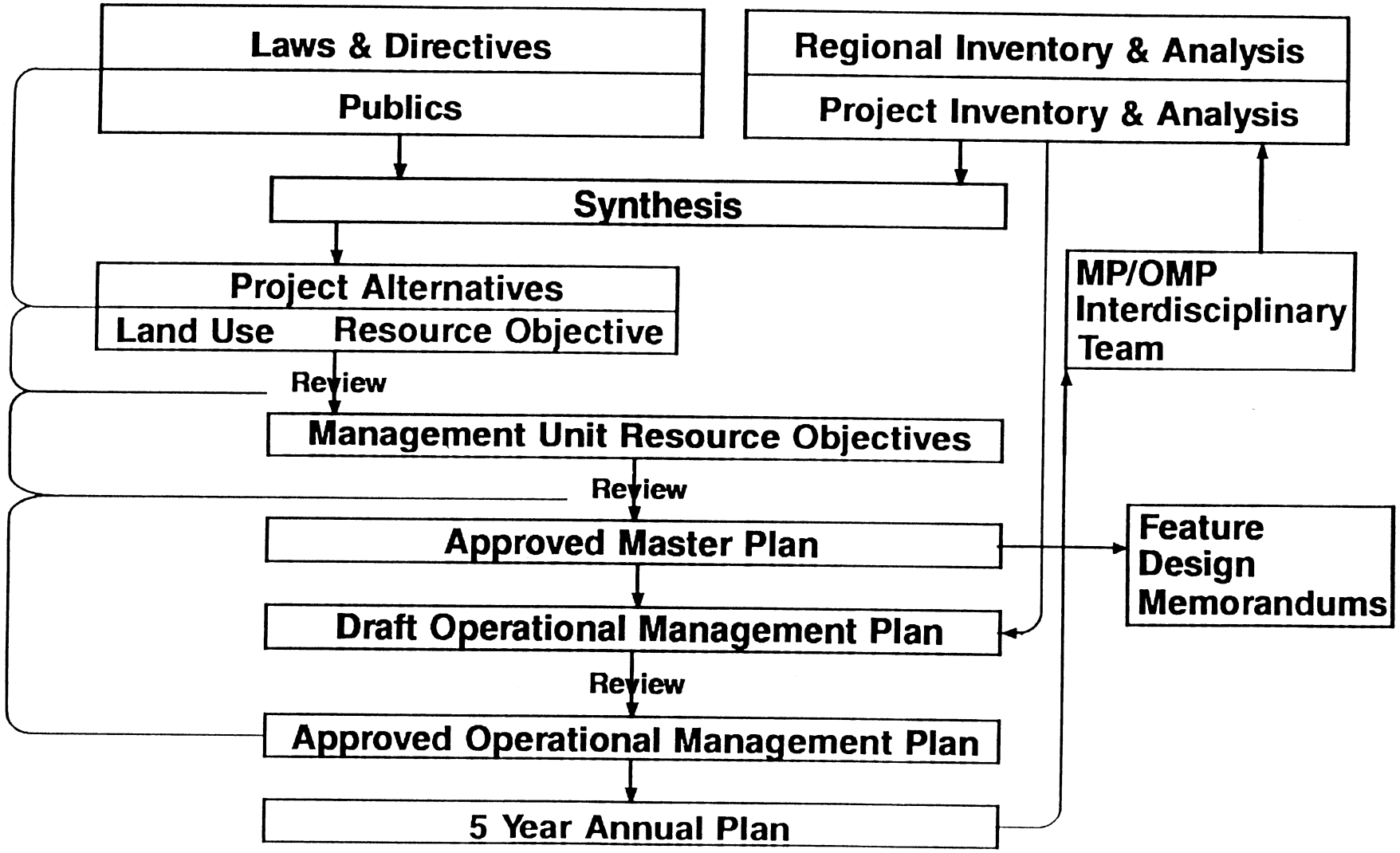

Figure 3. Planning process for MPs and OMPs

Step 1. Regional and project resources are inventoried and analyzed. The analysis defines the area of study and the importance of ecological, cultural (man-made), and aesthetics factors of the region and project. The digital base map used by the District was originally digitized on a CADD by the Portland District (CENPP) at 1:250,000 scale for the Columbia River and Tributary (CR&T) Study. The Walla Walla District edited the base and reorganized the information. Regional data themes were digitized directly into the system. Examples of regional data themes are physiography, geology, vegetation, precipitation, hydrologic basins, big game, upland game, waterfowl, fisheries, population, access, land use and cover, land ownership, and recreation. The project base map used for the Mill Creek Lake master plan was compiled from aerial photography using the Zeiss stereo plotter. Through the plotter, the operator was able to enter different data themes on digital tape. This information was digitized directly onto the District's GIS. The Mill Creek Lake base map is composed of the data themes of hydrology, transportation, topography, and project boundary. Project data themes mapped are slope and pool elevation, aspect, soils, vegetation, wildlife habitat, land ownership, outgrants, existing developments, and visual resources.

Step 2. Synthesis. The synthesis step determines the land use or management classifications and project resource objectives on project lands. The public's (Federal, State, local governments, and the general public) needs and desires, as well as the resource compatibilities, are considered during synthesis. The synthesis overlay process used by the GIS (Figure 4) is an automated method of overlaying data themes for analysis. The overlay process is not new and was first used as early as 1912 by Warren Manning, landscape architect.* A method to analyze the data to use models for attractiveness, vulnerability, and compatibility for each land use were considered. This particular type of overlay analysis is modeled after the method used in Murray et al. (1971).** The model maps are produced by the GIS from overlays of the data themes. Attractiveness maps are developed to locate the most attractive sites or those best suited for a particular land use. Vulnerability maps

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* Steinitz, Carl, Parker, Paul, and Jordan, Lawrie. 1976. "Hand-Drawn Overlays: Their History and Prospective Uses," Landscape Architecture, Volume 66, No. 5, pp 444-455.

** Murray et al. 1971. "Honeyhill: A Systems Analysis for Planning Multiple Use of Controlled Water Areas, Volumes 1 and 2," prepared by Department of Landscape Architecture Research Office, Harvard Graduate School of Design for US Army Institute for Water Resources, Cambridge, MA.

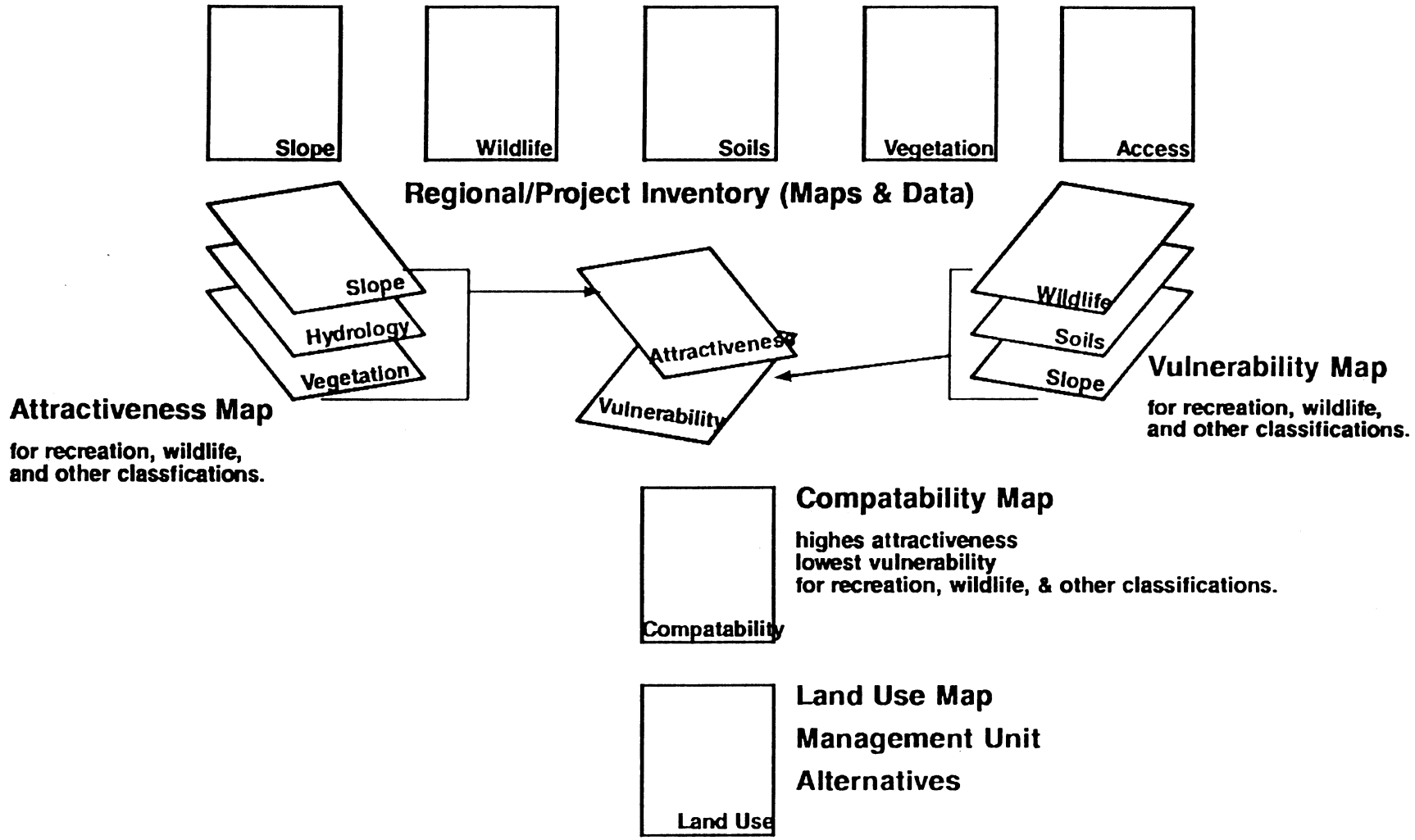

Figure 4. Synthesis overlay process

identify areas that are vulnerable to impact (negative or positive). Compatibility maps are created by combining the attractiveness and vulnerability maps for each land use.

After compatibility maps are created for each land use, a set of land-use alternatives are developed by the MP team using a trade-off process. Each alternative meets the needs and desires of the public as well as the compatibility of the resources. During the synthesis, project resource objectives (PRO) and management unit (MU) boundaries are also developed. These land uses identify the primary activity for each management unit, such as wildlife mitigation or recreation. PROs serve to guide the use design, and development and management of the project and its resources. The alternatives developed are then presented to the public for consideration and comment.

The ability of the GIS to overlay different data themes gives the team greater opportunity to make intelligent decisions. In the past, the synthesis step used a manual overlay process which was very labor-intensive and did not allow easy development of alternatives. Updates and rerun of models were also difficult. The automated GIS allows for easier entry, allows for the development of alternatives, easy updates, and the rerunning of alternatives. Additionally, a data base is behind the spatial data. The use of the system for analysis/synthesis is more systematic and less labor-intensive than the manual system. Using the automated GIS, the process can be better-documented, thus repeatable and credible.

Step 3. Government agencies and the public review the land use and PRO alternatives. The public and agency comments are analyzed and incorporated in the draft land-use plan and PROs.

Step 4. Resource objectives (ROs) and conceptual development plans are formulated for each MU based on the synthesis of the regional and project factors and agency and public input.

Step 5. The final draft is distributed for review and comment. Comments are considered and incorporated in the plan.

Step 6. OMP. After the MP is approved at the Division level, the OMP is developed to implement the goals and objectives in the MP. Data in the GIS are also used for the development of the OMP.

The OMP team and the project resource manager have access to the same data themes as the MP study team. The data developed during the MP study was developed at a level that would be useful for the development of the OMP. The

data base is designed so that data needed by the project manager are suitable for the management of the project on a day-to-day basis.

During the OMP, the GIS can serve to assist in final location for developments specified in the MP for each management unit. Management implementation alternatives can be created for the MU. The GIS allows for better management and implementation of development on the project.

The information developed in the planning process can provide information to the resource manager such as detailed location of existing facilities, and land ownership. Reports can be brought to the screen such as soils information. The data can be queried for groups of information. Custom maps can be developed at various sizes. Special studies can use the data base to develop new maps and information, such as lake elevations. The manager can develop new strategies such as maintenance plans which include studies for cost and priority. The base data can be used for interpretive displays as well as better understanding the data by using 3-D draping. Draping is the data theme overlayed on a 3-D topographic view.

During the development of the OMP or during the management of the project, questions, changes, and new information can be presented to the teams for reconsideration, and possible new or additional analysis.

Conclusion

By using the GIS as a common information source and tool for the development of MPs and OMPs, the plans will work together to serve the public, resources, and the project. GIS as a common tool used in the planning process by the MP and OMP will serve to bridge the gap between them. As mentioned in the introduction, the mules can now work together toward a common goal.

For several years the Corps of Engineers has recognized the value in using GIS, as stated in ER 1130-2-435, "The use of automated geographic information systems is encouraged to perform resource analysis and mapping tasks as a method of increasing efficiency and reducing long-term costs."*

Using the GIS allows for better decision-making by the Corps of Engineers, and allows personnel to be responsive to the needs and desires of the public and the resources of the project.

Further Reading

Grden, Blaise. 1988. "Walla Walla District's Geographic Information Systems - A Holistic Approach," US Army Engineer District, Walla Walla, WA.

US Army Corps of Engineers. 1988. "Lucky Peak Master Plan - Design Memorandum No. 5 - A Master Plan for Lucky Peak Lake, Idaho; Vols 1 and 2," US Army Engineer District, Walla Walla, WA.

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* US Army Corps of Engineers. 1987. "Preparation of Project Master Plans, Engineer Regulation 1130-2-435, Washington, DC.

Are We Achieving Our Master Plan Goals/Objectives Through The Operational Management Plan?

Franklin E. Star*

The purpose of the workshop is to share our knowledge and experience in developing master plans (MPs) and operational management plans (OMPs). The intended result is a better understanding of the overall process. The development process and uses of the OMP are still evolving. This paper will discuss the use of goals and objectives and the importance of periodic assessment of progress toward the stated goals and objectives of the project. It will pose questions for further thought and discussion. The paper reflects the views and opinions of the author and not necessarily those of the St. Paul District and/or the Corps of Engineers.

The Corps of Engineers has a responsibility as a steward of public resources to actively manage those resources for the maximum public benefit. The master plan and the operational management plan, collectively known as the master plan for resource use, are the major tools available to resource planners and managers to carry out this responsibility. The master plan is a continuing and dynamic conceptual document that provides the direction for resource development. The operational management plan translates those concepts into operational terms for implementation.

OMPs have been described as the handbook by which the Project is run. If the entire staff were to suddenly leave, the new staff simply could take the OMP and know exactly what to do. Unfortunately, the early efforts at preparing OMPs have taken this definition too literally, the result being OMPs that were written more as standard operating procedure (SOP) manuals than as resource operation and management plans. If the staff of a project were totally replaced, the new staff selected would have had experience in managing projects. They would know proper citation procedures, fee collection, etc. The location of the citation and fee books, etc., would be very useful, and thus the need for SOPs. However, more important to the new staff is how are they to manage that piece of ground over there, or, why is it being managed

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* Outdoor Recreation Planner, St. Paul District.

the way it is? That is why the linkage between the MP and the OMP through the resource objectives is so important. In addition, the history of the actions taken and the results are important so the new staff (or a new MP/OMP team) does not reinvent the wheel. The OMPs address the management of the project, not the operational items better described in SOPs.

As stated in ER 1130-2-400* and ER 1130-2-435,** both the MP and the OMP should be developed by interdisciplinary teams with representatives from operations, planning, real estate, etc. Ideally, the same individuals would be members of both teams and would meet periodically to review action plans and evaluate the overall effectiveness of the MP and OMP. Much has been written about the benefits of team planning. It is particularly true in the MP and OMP process. The District office staff brings knowledge of the current regulations, policies, guidance, and their regional perspectives, while the Project staff brings knowledge of how the resources are currently being used, local perspectives, and practical knowledge of what can and cannot be effectively accomplished. The greatest benefit comes from the interaction across functional lines and vertically from the field through the District office.

As each project is different, with its own resources and demands on those resources, its master plan and operational management plan will be unique. Therefore, we cannot take one MP and/or OMP that is judged best and simply change the names to make it fit any project. However, the one element that all MPs and OMPs should have in common is clearly written resource objectives (ROs). ROs specify attainable options for the project's resources. The ROs are based on the goals of the individual project, are developed in the master planning process, and are implemented through the OMP. The ROs are the dynamic link between the MP and the OMP.

Goal statements, objectives, action plans, and the like, have been around for many years. However, their use/definition has not been applied consistently. It seems each report that used goals and objectives has a slightly different definition of what they are. For example, there is a wide range of thought on what constitutes a good goal statement. At one end, there are those who believe that goals should be unattainable; in a sense, they

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* US Army Corps of Engineers. 1971. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

** _____. 1987. "Preparation of Project Master Plans," Engineer Regulation 1130-2-435, Washington, DC.

represent perfection. At the opposite end of the continuum, others believe that goals should be easily attainable and be constantly reviewed and revised as they are reached. With such a range in what goals should be, it is understandable that there is inconsistency in the use of goals and other related terms.

The goals for Corps projects are outlined in ER 1130-2-435. Briefly, Corps projects should provide the best combination of resource uses that respond to regional needs, public desires, and by the authorized purposes of the project, various Federal laws, interagency agreements, Corps regulations, and the like. Some goals ("provide for flood control") are easily measurable so you know when they have been reached. Other goals ("provide for recreational opportunities consistent with the public desires") are difficult, if not impossible, to measure. How do you know when you have reached the goal? Thus, the need for objectives; objectives allow for indirect measurement of progress toward established goals.

Objectives, known as resource objectives in the Corps MP/OMP process, establish the basis for day-to-day and long-term management of the project's resources. The Waterways Experiment Station recently issued Miscellaneous Paper R-89-2* which contains a discussion of what are properly written objectives. There are five characteristics of good objectives: (a) specific, (b) output-oriented, (c) quantifiable, (d) time-bound, and (e) attainable. However, most of the ROs written fail to meet the five characteristics. As an example, the following ROs were taken from a recently approved MP:

- "Identify recreation facility demand, supply and needs. This RO lacks a time frame, and it should be more specific in terms of facilities that could be provided on the project.

- "Control nonpublic use of Corps-administered lands." This RO is very non-specific, in terms of "what" nonpublic use, where, etc.; it lacks a time frame; and how would you measure it? Besides, is not this curing encroachments, which is required?

- "Preserve unique, endangered, or threatened species." This is more of a goal than an RO. The RO should specify the known species on the project and could suggest management techniques to be implemented, such as "Preserving/enhancing critical breeding habitat for species X."

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* Peyman-Dove, Linda, Waring, Michael R., and Titre, John P., Jr. 1989. "Operational Management Plans: Status, Content, and Implementation," Miscellaneous Paper R-89-2, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

• "Preserve, restore, and maintain important cultural and historic resources." Again, this is a goal rather than an RO. During the MP process, these resources and their "needs" should have been identified. The ROs would be specific in terms of erosion control at particular sites, outlining needed maintenance, etc.

Action plans, or work plans, are the specific items to be carried out to reach the objectives. They are the "by whom," "when," and "how much" portions of the management process; the day-to-day management activities. "Action plan" tends to have a broader meaning than "work plan" and, therefore, will be used throughout this paper.

As an example of the use of goals, objectives, and action plans, a goal statement "To be physically fit" will be used. Since there are a number of factors to consider when determining physical fitness, there would need to be agreement on specific factors. These factors would constitute the objectives. DA Pamphlet 350-18,* establishes what constitutes various fitness levels based on age and sex. The goal statement should be expanded to establish the level of fitness desired and the age and sex of the individual. The level is determined based on three tests: a timed 1.5-mile run, a number of sit-ups in a given amount of time, and number of push-ups in a given amount of time. Thus, if the goal is to be at a specific level of fitness, the objectives are to run the distance within the specified time range, and within 1 minute, do the required number of sit-ups and push-ups within the given range. The action plans are the training necessary to meet the objectives. A key factor that must be established is the time frame. The action plans will be significantly different depending on whether the goal is to be reached in 6 months or 2 years. The result would be:

- Goal: To be at a good level of physical fitness for a 35-year-old male by the end of 1990.
- Objectives:
  a. To be able to run 1.5 miles within 11:01 - 12:30 minutes.
  b. To be able to do 31-41 push-ups in 1 minute.
  c. To be able to do 35-44 sit-ups in 1 minute.
- Action Plans:

  (These would be the specific programs one would undertake, such as pretesting and in-progress testing, training programs, diet, and the like.)

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* Department of the Army. 1983. "The Individual's Handbook on Physical Fitness," DA Pamphlet 350-18, US Army Soldier Support Center, Alexandria, VA.

In terms of resource management, if the goal is to "preserve... cultural resources," the ROs should be specific in terms of the resources to be preserved ("Cultural Site Lamb V") and the reasons they are threatened (shoreline erosion). A basic time frame could be established in the resource plan portion of the MP, with priorities given to the most severely threatened sites. The RO could be expanded further in the OMP to specify the techniques to be used at each site. The action plans would be the requests for funding, technical support, materials, etc.

The ROs should govern/direct all aspects of project management. While it is easy to see the connection between ROs addressing wildlife management and specific unit prescriptions, it is harder to see the connections to such program areas as interpretation, visitor assistance, and safety. Yet, those are critical connections to make for a number of reasons. Given a goal of providing quality recreation, the objectives should include more than clean restrooms, well-designed facilities, etc. We need to do everything we can to insure that visitors have an enjoyable experience. For example, one thing that would spoil the experience is receiving a citation. Most projects have policies or guidance concerning good verbal/written warning/citation ratios. These are based, in part, on citing only the really bad offenders and warning the rest. We should be tracking the numbers and types of warnings/citations issued to determine if changes are needed in project management, like putting in a path rather than telling visitors not to cut across the grass, or informing visitors of the rules and the reasons for the rules through interpretation.

One of the basic tenets of good planning is that once a plan is completed, it is evaluated to determine if it is accomplishing its intent. It is essential that the master plan be reevaluated periodically. The public's desires for recreational opportunities change over time. New technologies have resulted in new recreational activities, such as snowmobiling, boardsailing, and hang gliding. How many projects do we have that are being used exactly the way they were 10 years ago? Are they being managed exactly the way they were 10 years ago? As changes occur, the master plan needs to be reevaluated to insure it is still meeting its objectives. And, as the management directions in the master plan change, so does the OMP. If we cannot provide a horse trail without causing unacceptable damage to the resource and/or a quality visitor experience, then the MP should be modified to reflect that.

Going back to the fitness example, what would happen if 3 months into the action plan, a running-related injury occurred? The choices may be to continue to run and risk permanent injury or to find an alternative. Most people would opt to reevaluate their action plans and substitute another activity such as walking, bicycling, or swimming. The objective and goal would remain the same. What if the injury is such that running any distance is impossible, making the first objective unreachable? Does that mean that, because the running objective is unreachable, the goal is unreachable? The objective would have to be changed or dropped, but the goal would remain valid.

We need to monitor the progress toward our goals and objectives. As part of our fitness program, we would probably weigh ourselves periodically, take various tests to monitor our progress, etc. The same is true at our projects. If one RO is to improve waterfowl nesting, then one action plan item should be to periodically conduct a nesting survey to determine nesting success, number of breeding pairs, etc. The action plans and/or overall strategy to reach the RO may need to be reevaluated if the surveys indicate that nesting has not improved as planned.

The importance of monitoring the success of the action plans cannot be overstated. Monitoring and evaluation should be included in the OMP 5-year plan. Given the time and effort required to do complete updates of master plans and operational management plans, it is important to be aware of needed changes as soon as possible. The process required to supplement the MP is much easier than an update. It can be compared to navigating a ship across the ocean: if you monitor your position and progress routinely, you can make minor adjustments to keep yourself on course. If you do not, who knows where you will end up or the effort required to get where you want to be.

It is sometimes easier to measure success on the natural resource side than on the recreation side. If we want to improve nesting and we go from 5 to 10 breeding pairs on a particular unit, then we must be making progress toward the goal. But how do you measure a quality recreational experience? Not an easy question to answer. You may have to rely on indirect measurements. For example, at one of our projects, the rangers noted that many of the campers were parking their boat trailers off the camp pads, a citation offense. In keeping with the project's philosophy, rather than writing a warning or citation, the rangers would talk to the campers and explain the reasons for not allowing vehicles, including trailers, off the camp pads. In

the process, the rangers learned that the campers were parking the trailers off the pads because the trailers interfered with the campers' use of the site. The concept of a trailer parking area was developed and implemented. The result: a less cluttered site for the camper, thereby improving the quality of the experience, requiring fewer enforcement actions by the rangers, and providing better resource protection.

We should be moving away from the caretaker form of management and toward a proactive form. We all know of managers/supervisors who believe that a successful fiscal year at the project is when obligations are at 98 percent, expenditures are at 96 percent, full-time equivalent (FTEs) are within 0.01 of the target, the visitation is not down significantly, and there were no major incidents causing lots of paperwork, Congressional correspondence, etc. They are not concerned about whether the project was actually meeting its goals. Tangibles, such as numbers of things, are important to them, not intangibles, such as a quality experience. Actually, for the caretakers, management would be easier if the visitors were not around to cause problems. If one of the ROs was to provide more primitive camping opportunities, the caretaker types would simply add primitive campsites every year without considering whether the result was a primitive camping experience. If trails were needed, the caretakers would build trails without considering such things as links into regional systems, routing the trails to where people want to go, the quality of the trail experience, etc. Quality is a clean restroom or a well-maintained building.

Proactive managers consider the quality of a visitor's experience equally with the various numeric indicators when evaluating programs. These managers realize that clean restrooms are an important part of a quality experience. For these managers, the visitors are an important indicator of the effectiveness of the action plans. If the MP called for a horse trail, these managers would have the MP/OMP team evaluate all the alternatives to determine the best alternative based on resource protection and visitor experience. If no alternative was determined to be suitable, the team would evaluate the RO and/or MP to determine if they need to be revised.

In recent years, there has been an emphasis on customer care. For us, that means operating and maintaining quality resources and facilities for the benefit of the public. The problem is in the definition of quality. There is guidance on what constitutes a quality planning/engineering product. When a solicitation for architecture/engineering proposals is published, the firms

wishing to be considered must include their quality assurance plan. These plans include such things as conformance to established standards, biddability/constructibility review processes, and the standard procedures to be used. In the service contracts at the projects, there is a quality assurance section that outlines the deductions to contract payments that would be made if the contractor fails to, say, clean the restroom as specified. All these means to assure quality are measurable. They are tangible. How do we measure the quality of the experience our campers have? Or, the improved hunting experiences that have resulted from our wildlife management/hunting access programs? Since the tangibles are easier to measure, more time is spent assuring quality in such areas as cleaning, painting, and mowing, than in the hard-to-measure intangibles, such as the effectiveness of the interpretive program.

In the Blanchard video seminar, "Legendary Service," one of the presenters relates a relevant story that illustrates what we as managers/supervisors do. The manager of a restaurant is instructing a new employee on the duties of the job. The manager points to the customers sitting at the tables and stresses that service to the customers is a top priority. Whatever the customers need, whether they know it or not, the employee should provide. In addition, if there is time, the employee should keep the butter cup tray filled. But, the customers are top priority. The manager then goes back to the office and does manager-type paperwork, etc. A few hours later, the manager comes out to check on the operations. The manager notes that the new employee is out interacting with the customers, which looks good. However, the manager also notes that the butter cup tray is almost empty. The manager calls the new employee over and says, that while helping the customers is great, let us keep the butter cup tray filled. What is the message being sent to the employee? What is the top priority?

Given the recent emphasis on automation for collecting data, managers will have useful tools for effective management. Visitor survey data and campground registration data can be used to determine visitor profiles. For example, if the market area of the project is known, then information regarding the project, off-site interpretive efforts, etc., can be directed more effectively to the users.

If changes in user patterns, such as length of stay or mix of activities, are noted over time, those changes can be evaluated. Even visually noting how the visitors' use of the facilities has changed over time is

important. For example, the aging of the population has meant that more senior citizens are using our facilities. The "snow bird" population, many using recreational vehicles (RVs), has been increasing in the Southern United States. The usual camping equipment is a self-contained RV, and the users want all the hookups. Ten years ago, electrical hookups were considered a luxury better left to the private sector. Today, in some parts of the country, there are not enough private sector providers to satisfy the demand. The result has been an increase in the number of sites at public sector areas, including the Corps, with electricity. Because of the popularity of boating by day users at one project, campers routinely retrieve their boats on Sunday mornings so as not to get caught in the traffic jam at the ramps later in the day. These are the types of changes that managers and planners need to be aware of in order to make the appropriate changes in the action plans, objectives, and perhaps even the goals of the project.

SESSION IV: AUTOMATION

Data Base Usage in OMP Development

Alan K. Gehrt*

Summary

Operational Management Plans (OMPs), besides being a regulatory requirement, have become an integral tool in managing Corps' water resource projects. The Kansas City District has developed a data base computer program to assist in developing and then managing the myriad of information contained in the OMP.

Natural Resource Management

The natural resource management portion of the program includes OMP compartment descriptions, management practices to be used in developing compartment prescriptions, and the actual compartment prescriptions (implementation plan).

Initially, the user enters information about each individual management compartment including size, master plan land classification, description, and management objectives. Any inventory information can be included under the compartment description. Compartment descriptions will remain intact for future OMP updates but can be edited to reflect changes in descriptions and objectives. Information about the compartments can be used to print out compartment descriptions for inclusion in the OMP.

The user also enters information on the different management practices which will be used as the OMP is implemented. Information will include a basic heading, such as "Prescribed Burning", a short narrative description of the management practice, units for the management practice (acres, rods, etc.), per unit cost, and an initial startup cost. This data base is dynamic and can be tailored to meet specific project needs. A descriptive listing of management practices can be printed out for inclusion in the OMP document.

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* Outdoor Recreation Planner, Kansas City District.

Compartment management prescriptions are a blending of compartment descriptions and management practices. The user enters the OMP compartment number and further defines the precise area over which a given management practice is to be implemented. The appropriate management practice is selected from a menu and the number of units to be completed, year to be implemented, and the funding source are entered. A cost estimate is automatically calculated and the information is recorded as a data base record.

From this information, management prescriptions can be printed by OMP compartment and year; and by year, management practice and OMP compartment. A report of funding requirements by year and funding source can be generated from this data and is useful for budget preparation/justification.

Park Management

Part II of the program parallels the natural resource management portion of the program. The user enters the park name, number of acres, a narrative description of the park, and a prioritized listing of non-routine maintenance/development activities to be accomplished during implementation of the OMP. This information can be used to print out park descriptions for inclusion in the OMP.

The park prescriptions (5-year program for park management) are entered by selecting the park name, category, and funding source from menus, entering the year to be implemented/completed, and the estimated cost. Categories include hired labor, materials and supplies, service contracts, and other. Funding sources include O&M (06), SRUF, Code 710, Special Item, Volunteer, and Other.

Park prescriptions can be printed by park, year, and category; by year and funding source which is useful for budget preparation/justification; and by year, category, and OMP compartment for inclusion in the OMP.

Both Part I and Part II of the OMP program have historical files. Prescriptions completed can be transferred to the historical files and extracted by year or compartment at a later date.

Conclusion

This computer program has not yet been used for OMP development. However, it was demonstrated at the Missouri River Division Natural Resource Management Conference in October, 1989 and met with considerable interest at that time. Primary selling points of this program are its data handling and tracking capabilities. The Kansas City District will be updating all of its OMPs in 1990 and the program will be thoroughly tested, evaluated, and revised at that time.

Making GIS Work for the Resource Manager

Bill R. Cotten*

My remarks this morning are not directly related to operational management plans (OMPs); however, you probably can draw some parallels between the types of problems we are addressing and those involved in the OMP. It is my hope that you perhaps may see some possible new solutions. Let me first explain that I am not a geographic information system (GIS) person. I am not even a computer person. I am a landscape architect, which means that I am a Corps professional with problems to solve, looking for ways to solve those problems with the least amount of time and money necessary. Just like you.

I guess my work for the Fort Worth District Planning Division makes me a planner. And I really believe in planning, if that means establishing some reachable goals and finding ways to accomplish them. But I like to think that I am practical enough to realize that planning is a waste of time unless you can understand and address the problems of the people in the field. So what I am here to talk about is a way that the people in our shop are working with some natural resource managers to help them find some new and effective ways to solve their problems.

The Fort Worth District is currently working on a project for two of our military customers, the Red River Army Depot and their contiguous neighbor, the Lone Star Army Ammunition Plant. These two installations occupy approximately 30,000 acres of land near Texarkana in the northeast corner of Texas. The vegetative cover in the area is typical of East Texas with about 90 percent of the site covered in pine and pine-hardwood forest.

The project we are working on is called the Integrated Resource Management Demonstration Project (IRMDP). The sponsors include the installations, Headquarters/Army Material Command, and the Corps of Engineers Research Lab. The major goal of this 2-1/2 year project is to provide a working GIS system using a multi-layered integration of data to allow natural resource managers at the installations to make informed decisions on land use and management practices where multiple variables are present. The product we are delivering

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* Chief, Landscape Planning and Recreation Section, Fort Worth District.

is an accurate, reliable, repeatable, updatable digital data base which will provide an effective process for handling forms, contracts, and other programming activities. What that means in plain English is this: the people who live with these installations every day will be able to get their jobs done faster and better using an easy-to-learn, easy-to-operate, computer-driven tool.

The resource problems we are dealing with in this project include:

a. Forestry management.

b. Fish and wildlife management.

c. Landscape and grounds maintenance.

d. Pest management.

e. Cultural resources.

f. Land-use planning.

Other concerns which may be included at a later date are:

g. Recreational lands and facilities.

h. Mobilization master planning.

i. Hazardous waste.

The GIS software we chose to use in developing this system is GRASS. We like GRASS for several reasons, among which are the facts that (a) it is public domain, and therefore free, (b) it is user-friendly, and (c) it will operate on a number of hardware configurations. We are building the data bases using Oracle and Enformix, and we are using a software programming contractor to develop the data bases and create the hooks which will attach the data to the GIS cells.

Using GRASS and a combination of satellite imagery, aerial photography, and digital site maps of the installations, our team and the software programming contractor are building multiple layers of site information such as vegetative cover types, soils, slopes, hydrology, wildlife habitats, existing structures and facilities, and cultural resource sites.

With a user-friendly, menu-driven interface, the average individual out at the installation, who does not have a degree in computers, can easily call up color maps of specific areas on the installation and can ask the computer to show him different layers of information related to those specific areas. These layers can be overlaid in various combinations to analyze relationships between the different types of data.

When the forester at the installation needs to sell some timber, he will call up a map which shows him the site he is interested in and a transparent

overlay layer showing timber compartments. When he selects a particular compartment (using a mouse), the system will show him the multiple cutting units in that compartment. When he chooses a specific cutting unit, the system will tell him how many trees per acre presently exist there, and their size and species. If he chooses to have some cutting done in this unit, he will probably want to look at additional overlays, to see if there are sensitive cultural resources or habitats for endangered species there. Another combination of layers can tell him if there are highly erodible soils in this area.

Whether to initiate a timber-cutting operation in a particular unit is still the forester's decision, but he will have a lot more information with which to make a good decision. If the timber is to be cut, the forester can instantly update the system to reflect the change in density, and the system will help him generate the information to write and manage a timber contract and keep his inventory current on the data base.

You are probably already thinking that this is just another one of those deals where those "planning types" in the District Office have gotten together and decided what the people in the field need. But you should go back to what I said at the beginning. Planning only works if it really works. Planning team members for this project include biologists, archaeologists, landscape architects, foresters, and a geologist, but the most important members of this team are the people out at the installation. The process for the development of this project began with, and continues to be driven by, long conversations with the installation staff. The first question we asked was, "Exactly what do you do each day, and what do you need to make your job easier?" And we are still asking questions.

We started out with a wish list...all the possibilities, and we are refining it down to those things which are most important...those things which are obtainable now. We are also building some flexibility into the system to accommodate more tasks as time goes by and needs become more focused. To convey the needs expressed by the installation people to the software programmers, we developed flow diagrams showing the way the graphics and data bases should relate in the program, and how the information should be accessed by the user. I brought flow diagrams for two portions of the system for you to look at, and they will be available today for those of you who might be interested.

From the beginning, we have operated under the philosophy that computers are tools that must be usable by people who are not computer experts. You do not have to understand the dynamics of the internal combustion engine to drive a car; and you do not have to be able to build a computer, or write a computer program, to be able to use it...if the people who design the system have the user in mind. My advice to you is to not let yourselves be intimidated or put off by those things which you have not yet tried. In other words, "Let out the cats!"

Developing Operational Management Plans with a GIS

Tim Peterson*

Scoping

Budget

A comprehensive budget must be programmed and initiated 1-2 years prior to the start-up of an operational management plan (OMP) project. Line items should include training, travel, aerial photography, cartographic supplies, full-time equivalents (FTEs), digitizing/data entry, and computer hardware and software needs. This budgeting effort should be coordinated between field and District level counterparts.

Staffing

The project manager must appoint a permanent staff person as OMP/GIS coordinator. This individual will act as a team leader, coordinating the development of the OMP and implementation of the District GIS at the project level. Critical work elements relating to the OMP and GIS should be made part of his/her performance standards. The individual selected for this position should have above-average writing skills, knowledge of photographic interpretation, cartographic skills, knowledge of maps and mapping, and a basic knowledge of computers and computer technology. Summer temporaries and stay-in-school type appointments have shown potential in providing inventory staff personnel, with minimal drain on the overall FTE ceiling.

Schedule

A detailed completion schedule must be developed identifying major milestones and completion dates. This schedule must be coordinated with CEMRO-OP to insure commitment at all levels of involvement.

Logistics

Necessary supplies to include punch-registered Mylars, base maps, a light table, and miscellaneous cartographic supplies must be ordered prior to

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* Operations Division, Omaha District.

start-up. Data needs and requirements must be evaluated and data sources identified. Contracts, MOUs, and MOAs should be written and submitted well in advance of start-up. A flowchart that includes scoping, as well as the various other activities that go into creation of an OMP, is presented as Figure 1.

Problems

Because of unknown complications due to the use of new technologies and concepts, the District Office did not have all of the answers. Everyone was on the learning curve. Therefore many changes had to be made in the original "blueprint" as the OMP process was going on. Upper management had a "hurry up - let's get it done" attitude and did not understand the concept of a "working document."

District-level management did not know what they wanted as an end product. ER 1130-2-400* was much too vague to provide the "hand-held" guidance that District and Division chiefs were looking for. District had to interpret the ER and write OMP guidance (take a cookbook approach).

There was much difficulty in setting up a completion schedule. Field offices did not or could not commit to FTEs or the amount of time required to complete the OMP. Priorities had to be set. Division chiefs made OMPs a critical element in job performance standards.

Inventory

Training

Training must be provided whenever necessary by the District element or through other training facilities. Topics that must be covered include: field mapping procedures, photo interpretation, cartographic techniques specific for digitized GIS input, and an introduction to the data base and associated attributes. Any questions concerning cover types or map subjects must be defined and clarified.

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* US Army Corps of Engineers. 1971. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

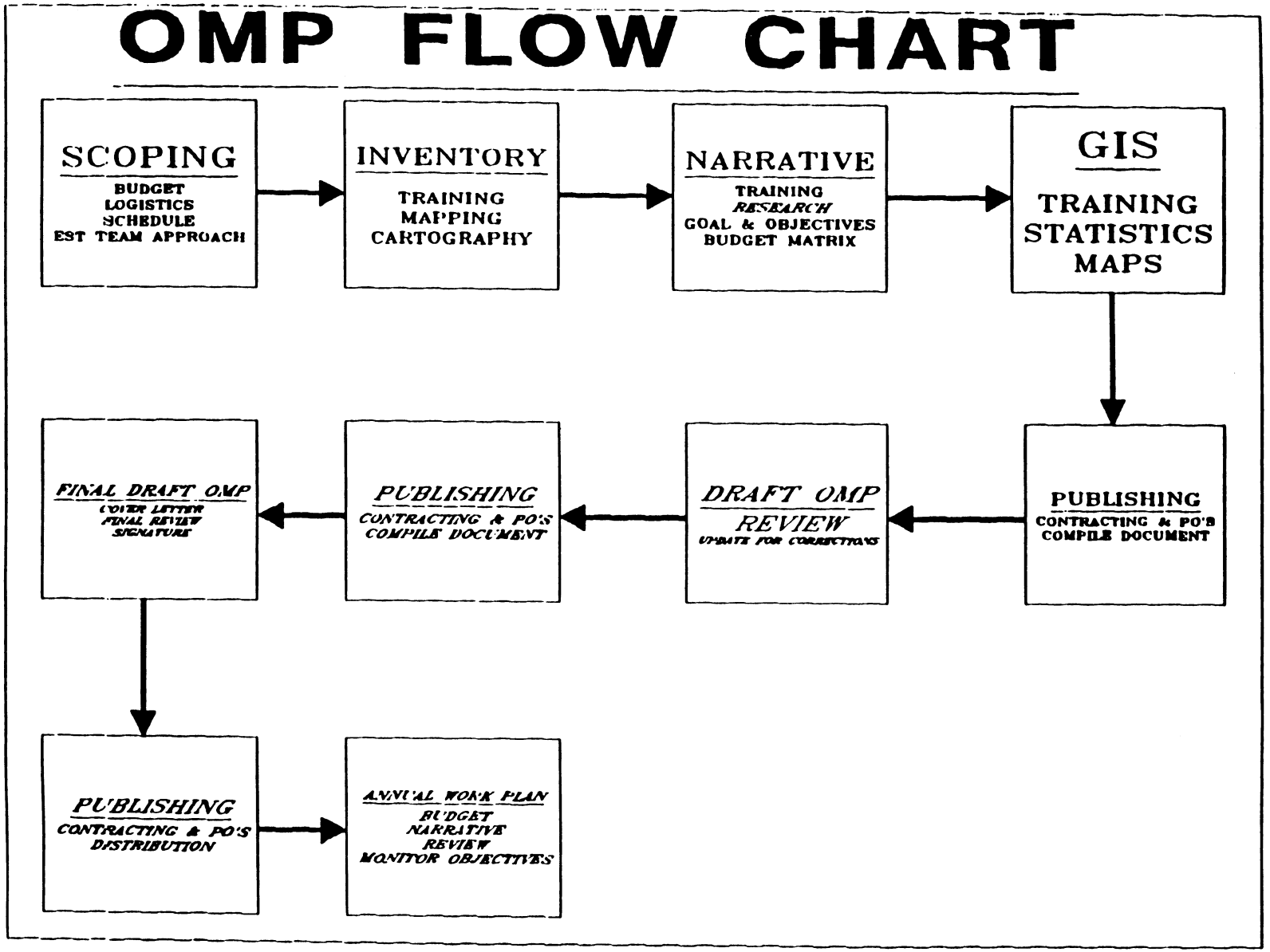

Figure 1. OMP flowchart

Mapping/data collection

Field mapping of natural and physical resources can be accomplished by transcribing "on the ground" physical features onto diazo (blue-line) copies of Mylar base maps, cross-referenced to aerial photography. It is possible that digital data have already been collected for the study area, by other Federal, State, and private agencies. These sources should be used whenever possible.

Cartography

Field maps should be collected by the project team leader and checked for clarity and accuracy. Once checked, field data are transcribed onto a Mylar base and sent on to the District for a final quality check.

Digitizing/data input

Depending on the size of the project, digitizing can be done in-house or by private contractor. Digital data, (vector, raster, thematic), can be acquired from outside sources. Always be aware of accuracy requirements.

Problems

a. Training intensive. Train "key" personnel.

b. FTEs, labor intensive. Creative hiring.

-Stay in school
-Contract (PO)
-Summer temporary

c. Standard definitions for mapped data.

Narrative

Training

Training should be provided to include: computer PC/DOS, word processing software, i.e., Wordstar - Wordperfect, D base III+, Multiplan, and Grammatic III.

Research

A thorough search must be made for all available background data. Good places to look are master plans, executive survey orders, boating and recreation maps, any previous photography, ERs, DMs, special plans and directives, and consultations with other agencies.

Goals and objectives

Establish goals and objectives on a unit-by-management-unit basis. A team approach, using as much of the project staff as needed, is encouraged to

evaluate and prioritize each unit. Omaha District has adopted a weighted scale approach developed by a vector-to-raster conversion of the Lake Oahe OMP/GIS data.

Budget matrix

Develop the 5-year budget matrix based on goals, objectives, and established priorities. An amortized matrix should be developed using Multiplan-type software.

Geographic Information System (GIS)

Training

Training on the GIS, using the individual project's data base, was facilitated by the District OMP/GIS coordinator at the District office. The project's OMP/GIS coordinator should be involved with the creation of maps and statistics used in the OMP.

Maps and statistics

Management unit maps illustrating natural and physical features accompanied by a statistical report are produced via the GIS. Hard copy is then sent on for mass reproduction through the Government Printing Office (GPO).

Digital modeling

Once the GIS data base is up and running, probability models, statistical and locational queries, can be performed to provide information to those "what if" questions that arise during the planning and decision-making process.

Publishing

Contract and purchase orders for color and black and white reproduction need to be scored with the GPO.

Compile the document into an efficient, usable document. Three-ring binders are the standard here, allowing for easy updates and retrieval of information when needed. Keep in mind the "working document" concept.

First Draft OMP

In Lake Oahe's case, review of the OMP was done at Division and District levels concurrently. Try to keep the reviewing elements to a minimum.

Communication with all affected Branches and Divisions prior to the official review process is essential, especially when introducing new concepts and strategies. Try to arrange for a "show-me" type demonstration that involves reviewers and authors as well. If a good level of communication has been maintained throughout, feedback should be positive and conclusive. Make sure that a reasonable time frame is established and agreed upon before the review process is begun.

Update OMP to include all pertinent changes and recommendations.

Publishing

Prepare necessary contract and purchase orders (POs). Order supplies, i.e., binders, labels, cover graphics, etc.

Prepare and compile document for "dress rehearsal" final draft.

Final Draft OMP

Prepare cover letter for signature by District and Division Commanders.

Prior to completing the final review, any unresolved comments or suggestions should be resolved or dealt with by the concerned elements. If possible, any problems or changes should be included or negotiated without major revisions.

Obtain the signature of the Division Commander.

Publishing

a. How many copies are enough?

b. Who gets them?

c. Do all elements need the same "full dress" document, or something less?

d. Distribution.

The questions listed above may or may not be of any consequence, depending on the size and scope of the plan.

a. Prepare annual budget requests, to include a short narrative from the OMP unit description.

b. Review for compliance with OMP goals and objectives.

c. Update the OMP. Prioritize the units and prepare for next year's budget needs.

d. Updates for the narrative and budget matrix are to be completed on Wordstar, Multiplan, D Base III+, etc. GIS updates will reflect work completed as well as work scheduled for completion.

Aspects of Mapping the OMP Using the GIS

In recent decades, the GIS has become an evolution on a parallel with both the advent of the printing process and aerial photography used for mapping. Just as printing made maps available at a low cost to many people, a GIS gives a user the power to extract and analyze a multitude of project information.

Perhaps the conventional topographic map is most analogous to the GIS. The topographic map is easily available and contains a myriad of information from hydrology to transportation, the common ground being the information contained in each system. This is where the physical similarities end for the paper map. Although a paper map is inexpensive, it is a one-time product and difficult to update. The information on the printed map is at best a compromise, attempting to serve the needs of a wide user community. Also, the overabundance of data detracts from the desired purpose. The digital maps supporting the GIS give the end user the capability, at will, to combine the information into a sensible product showing the appropriate data at a reasonable scale. Since the map is stored in a digital form, additional capabilities are inherently available. These include the ability to extract both area and length statistics, query the map for attribute, header, and projection information. Just as conventional maps have geographic limits, the information used in the GIS is stored as geographic coordinates (or other projections as needed).

The processes involved in mapping with GIS fall into one of three general groups: collection, analysis, and display of geographic information. The collection process is normally referred to as digitizing. Once the

digitization process is complete, the data are then available for further processing. After the pertinent information is extracted from the data set it is then available for display as a map or as statistical information in tabular form.

Digitizing is the crux of the GIS collection process. This procedure determines the accuracy and precision of the data set used in the remainder of all mapping and analysis. Decisions made at this point are long-term and will affect all subsequent processes based on this data. Major factors in the decision-making process include final map scale, available source material, data density, precision and accuracy requirements, as well as funding criteria. Digitizing converts analogue source material, i.e., a map, into a digital form used by computers. This is advantageous when determining statistical information such as area and length, exploiting the computer to make the calculations. Data are input as themes or layers which are based on map features and specific information such as that developed for the OMP.

OMP data sets were designed based upon user requirements encompassing scale, source material, data type, and budget requirements. Due to the large geographical areas involved in the District projects, mapping units were chosen which coincide with the US Geographical Survey (USGS) 7-1/2 quad boundaries. Since the final map scale is 1′ = 500′, all project overlays are registered to 1′ = 1000′ Mylar quads to ensure final map scale and preserve the detailed field data. Source material includes USGS quads, survey plats, EO 12348 and EO 12512 real estate maps, and aerial photography covering each project. The OMP overlays are digitized as different themes or information layers, and stored permanently on magnetic media.

Once the project is complete and the data set is verified, the information is available for analysis. The user can then combine the information as needed, either vertically as overlays or horizontally with adjacent map information. The maps, because they are stored in digital form, can be produced at virtually any scale. This gives the user the ability to create large-scale site maps or small-scale project maps from the same data set, depending on the intended use. Additional information is also derived from the same data set through the computer in the form of statistics.

The fulcrum for analysis and map output from the GIS is the overlay statistical system. This subsystem allows the user to access and analyze the various information layers for a project. Individual project overlays are combined to produce large-scale site maps for individual management units.

The data sets are also merged to create small-scale maps covering larger geographical areas. The ability to plot at different map scales allows the user to cover all aspects of mapping the OMP. Acreage and other statistical information are provided as printouts in tabular form. Statistics are accessed with the same dexterity as maps. Maps are used in conjunction with statistics, providing information necessary to develop the project operational management plan.

Mapping the OMP using the GIS is cost-effective and permanent; by avoiding replication of mapping, redundant effort is reduced to a minimum. The same energy used to planimeter areas one time is put to more effective use in the similar process of digitizing, but with the added benefit of virtual storage of the data. This will create a permanent District data base accessible to many users interested in the same geographic space.

SESSION V: FINAL CONSIDERATIONS

Pondering the OMP: A Ranger's Perspective

James W. Shiner, Jr.*

Summary

The operational management plan (OMP) is a principal management document for the field level at Corps of Engineers projects. The author summarizes several of the problems encountered with the development and implementation of the pilot OMP for the Huntington District. The insight gained from pondering the causes of these problems led to a reassessment of the purpose of an OMP. This reassessment culminated with the identification of the concepts which make for an "ideal" OMP. Two concepts were considered essential to the development of this "ideal" OMP; (a) The OMP must provide a means whereby a manager can take the project from where it is to where it ought to be, and then keep it where it ought to be; and (b) The OMP must focus on the way we manage projects, not on the management actions themselves.

Purpose

This paper has two purposes:

a. It provides a medium to share my personal experience and insights into the purpose, preparation, and implementation of an operational management plan (OMP).

b. It is my intention that the contents generate some profound thinking and energetic discussions about the philosophical foundation which underlies the "ideal" OMP and approaches to the development and implementation of that OMP.

Definitions

Every profession has its own terminology. These terminologies often assign different meanings to the same terms. To avoid this problem, I will

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* Park Ranger, Huntington District.

define some of the terms used in this paper so everyone understands what I mean when I use the following words:

a. Goal. A goal is a statement of what ought to be at the project, if everything is operating up to snuff. It is vital that these goals be tied to the project purposes and the resource objectives (ROs) in the master plan.

b. Objective. A statement that moves us from what is toward what ought to be. An objective is succinct, achievable in a given time frame, and includes an indicator so everyone knows when it has been achieved. This objective is not to be confused with the ROs in the master plan.

c. Problem. A problem is anything which prevents me from getting from where I am (existing conditions), to where I ought to be (goal). Incidentally, if an obstacle is not preventing me from achieving a mission-oriented goal, then there is really no problem.

d. Management program. An independent, mission-oriented, mandated program. The acid test is the question, "Am I required to execute this program even if it is the only program I have?" If the answer is yes, then you have a management program. An example is a public safety program. Even if there is no dam, no recreation areas, no fish and wildlife program, Code of Federal Regulations 36 (CFR) 327 and ER 1130-2-400* require us to provide for the safety of any member of the public who might enter onto the property.

e. Support program. Support programs are the programs which are not management programs. They are used to execute management program objectives and are subordinate to management programs. As a general rule, support programs are only used when needed to accomplish a management program objective.

Background

My involvement with the OMP began when I was tasked to prepare the pilot OMP for the Huntington District. I was assigned to John W. Flannagan Dam and Reservoir (in the coal fields of southwest Virginia), so Flannagan was selected for the first OMP. Preparation began in 1986, with approval in September 1987. Implementation began in earnest after approval. Problems began to materialize almost immediately.

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* US Army Corps of Engineers. 1971. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

Problems

Nearly all of the problems with the pilot OMP fell into one of three categories. Most were simple errors resulting from vague or awkward wording and were easily resolved. Less common, but still plentiful, were those problems resulting from the use of previously untested procedures developed specifically for the OMP; these were easily resolved by minor revisions. The rarest, fortunately, were the problems that did not have an obvious solution. Those were the problems which forced me to think about what I had done wrong; they struck at the very foundations of the OMP.

a. Problem 1 - Segregated Programs. All of the programs, e.g., maintenance, public safety, and interpretation, were treated as independent programs, with their own set of objectives and management actions. No system was included to tie the programs together into a cohesive unit, and each section tended to develop in a vacuum. Overlap between programs occurred by chance rather than by design. Worse, the fragmented format led to a mindset where each individual management and support program was viewed as equal, making it nearly impossible to set priorities.

b. Problem 2 - Bias to Structural Solutions. Management actions almost exclusively focused upon concrete responses to resolve problems. Rarely were non-structural responses advocated, such as recommending a change in a policy or conducting research into the nature of the problem. I did not even mention the Natural Resources Technical Support Program, let alone recommend its use to resolve any problems.

c. Problem 3 - No System to Identify Problems. Problems were identified through an intuitive process. If an individual on the project staff perceived that a certain feature was a problem, then it became a problem. Likewise, there was no systematic means to identify new problems.

d. Problem 4 - Too Much Emphasis Upon Existing Conditions. The bulk of the OMP contained information describing existing conditions or standard operating procedures (SOPs). Where goals and objectives were included, they frequently reflected personal preference and/or mere improvements to what already existed. The vision of what the project ought to become was in the reader's head, not in the document.

e. Problem 5 - Poorly Prepared Objectives. Perhaps a better title is poorly conceived objectives. My objectives met the definition of a correctly prepared objective; specific, output-oriented, quantifiable, time-bound, and attainable; but that did not make them "good" objectives. I did not verify that the objectives selected were needed to realize the appropriate goals. So while technically correct, the actions generated by the objectives did not necessarily result in a meaningful product.

f. Problem 6 - Failed to Define Entire Workload. The workload from programs not included within the scope of the OMP (i.e., dam maintenance and operation, and work assigned the project at the Area and District levels) was not accounted for in the OMP. Because this workload was not accounted for, the rudimentary management system I had developed was overloaded and the OMP's effectiveness was reduced.

g. Problem 7 - Management System Was Not Defined. Although a rudimentary management system was included, it proved to be easily overwhelmed by outside factors and failed to provide a mechanism to define goals and insure that actions selected were moving the project toward those goals.

h. Problem 8 - Ignored Project Purposes. Goals and objectives were not consciously tied to the project's purposes or ROs in the MP. I failed to realize that it is the project purposes which define the project's reason for existence.

There is a ninth overriding problem, of which the previous eight problems are only symptoms; I had lost sight of the reason for the OMP. I was so concerned with getting the job done, with getting something on paper as quickly as possible, that I neglected to spend sufficient time defining the purpose of the OMP. Eventually, I became so enamored with the document itself and the associated technology used to develop it, that I completely forgot about what the OMP was designed to do. To rectify this, I resolved to define an "ideal" OMP.

The Ideal OMP

It is impossible to develop a "perfect" Corps-wide OMP format because of the decentralized nature of the Corps and the different missions and management approaches taken by (or forced upon) each District and project. Nevertheless, I believe there are certain universal concepts which are the essence of the OMP. The fundamental concept is the purpose of the OMP.

The purpose of the OMP is to provide a system(s) whereby the manager can take the project from where it is, to where it ought to be, and then keep it where it ought to be. In order to realize this purpose, several other concepts must be included in the ideal OMP:

a. The OMP is a management system. The OMP is not a document, but a management system. It is never completed because the variables within the Natural and Cultural/Political Environments (which specify the project purposes) are perpetually changing, requiring adjustments to the project's management system. It also means the OMP is probably outdated before it is approved.

b. The emphasis needs to shift from a list of proposed actions to the management system used to determine those actions. The defined management system is the real heart of the OMP, the work plans are merely the product. The ideal management system includes the following components:

   1. A mechanism to define and refine management program goals within the context of the project purposes. This mechanism should rely upon the information available in the master plan, water control manual, and regulations. This mechanism is essential. Unless we know where we want to go, how will we get there?

   2. A means of identifying, analyzing, and selecting objectives needed to realize the goals is required. If the goal has been realized, objectives are selected to maintain this state.

   3. A process to define problems and select management actions which overcome those problems. The process should confirm that the problem does indeed affect a management program goal, that the action(s) selected will resolve the problem, that both structural and non-structural actions are considered, that the completed actions are evaluated to determine their relative success in resolving the problem, and that changes can be easily made to correct faulty actions or improperly defined problems and objectives.

c. Management programs need to be separated from support programs. by focusing attention on management programs as a group, separate and distinct from the support programs, it is much easier to "see the whole forest" and determine priorities. This approach also makes it easier to think of support programs as being in a support role, especially if you stick to the definition I gave at the beginning, where support programs are used only to fulfill management program objectives and goals.

d. It must include the entire project work load. The entire project work load, including work imposed by area and District elements, needs to be included. Failure to include this skews the management system and either allows the natural resources and park management programs to dominate all the others (by virtue of being better planned) or it allows all the other programs to dominate (because there is no way to compare actions and a crisis management approach prevails for those programs).

Concluding Remarks

I have summarized the mechanical problems with a pilot OMP and the concepts of an ideal OMP which evolved from insights gained while resolving those problems. Two of the concepts are essential to the development of an ideal, utilitarian OMP:

a. The OMP must provide a system(s) whereby a manager can take the project from where it is to where it ought to be, and then keep it where it ought to be.

b. The OMP must focus on the way we manage projects, not on the actions themselves.

Regrettably, there is one problem which no OMP can address, the problem of attitude. A Columbus (Ohio) Dispatch editorial on November 21, 1989 says it best. The editorial entitled "Is the Navy Sinking?" referred to the recent US Navy stand-down for safety reviews: "It has to go well beyond running down a checklist. The heart of any ship's safety program is crew attitude. No set of procedures is immune from the virus of indifference."

There are individuals within the Corps who are not entirely sold on the value of the OMP. Some of them are happy with the status quo and do not see any need to change. Others would rather see all this time spent on writing used on doing. A few may be reluctant to have someone either write down their management system on paper or else "dictate" a management system to them. This requires a commitment by all managers, including division and branch chiefs, to reinforce the importance of the OMP. When the command structure begins to insist that proposed actions be supported by the OMP, OMPs will become important.

I submit that the worst OMP, if it is being used, is better than the ideal OMP which has never left the bookshelf.

SESSION V: FINAL CONSIDERATIONS

OMP Process From the Division Perspective

"The Mythical OMP"

Terri Hoagland*

I had a four-page speech already done and typed when I arrived here, but after yesterday, I realized I not only did not have all the answers, I did not even know what all the questions were. So I threw out everything but the introduction. I kept that because it has not changed. It is background material, ostensibly on my background in the Operational Management Plan (OMP) process, but it is actually a background on where OMPs came from.

When I was working in Headquarters in the early 80s, I (like everyone else who has ever been in OCE) worked on revising ER 1130-2-400.** I managed to get the revision out in 1983. Included in that revision was the first (and last) Corps-wide OMP guidance. As many of you know, the first ER 1130-2-400 published in 1971 called for six master plan appendixes. Many people asked why we combined them into one OMP. Actually, the appendixes were initially one plan when the original ER 1130-2-400 was drafted, but through the political chop process it was fragmented into the six separate appendixes (one reviewer thought fish and wildlife management was so important, it deserved its own plan; another thought safety warranted a separate plan, etc.). In revising the ER, we took the opportunity to get the six appendices back into one plan because resources do not exist in vacuums; they are integrated, and what you do to one affects the others.

Since we were treating the OMP as an integrated one, it only made sense to treat natural resource management units as integrated ecosystems, which in nature, they are. That is why Part I of the OMP is based on management compartments. Part II seemed to lend itself more to project-wide discussions, but I am not so sure anymore that is true. I will address that later.

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* Ohio River Division.

** US Army Corps of Engineers. 1971. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

The OMP outline given in the ER was general by design because being in OCE, Headquarters, does not take you long to realize that no two projects are alike and local flexibility is the foundation of the success of the Corps of Engineers. The regulation left it up to the Divisions to provide more detailed guidance.

In the Ohio River Division (ORD, we developed an outline for the projects to follow. Some thought it was too detailed, others thought it did not give enough guidance. We thought of it as a minimum, a floor, but for the most part, it has been treated as a ceiling. Not many projects venture beyond the given outline topics.

(To give you an idea of what we are dealing with in ORD, we have 122 projects including navigation, flood control, hydropower, and all possible combinations. A little over half of our area is leased to one or more of 14 States for operation, and we have four Districts with very different approaches to life.)

That is all I salvaged from my original speech, but I still need to address John Titre's questions: "What did you learn?" and "What would you do differently?" What I have learned, both in my job in ORD and at this meeting, is that there are a lot of myths about OMPs. I have perpetuated some of them myself; I have learned a few more here and I am sure there are several others that have yet to surface. My response to these myths constitutes what I would do differently.

Myth No. 1. Project managers need management plans to know when their programs are effective, but Districts and Divisions know an effective OMP when they see one by divine inspiration.

We need a management plan to guide the OMP process. In it we should identify where we want to go and how we are going to get there. I flounder as a reviewer because I do not know what I am looking for. This meeting will help us focus on what OMPs should be, but I do not think there is a standard answer from Headquarters that is needed or desired. It is evident from the presentations thus far that different Divisions, Districts, and projects have different agendas for the OMP. One uses it primarily as budgetary input; another uses it as a way to improve State management; some see it as a way to legitimize the decisions made by the project manager, others use it as a way to gain command attention. Whatever philosophy your Division or District has, that should be the basis of your plan for managing the OMP process.

Myth No. 2. A related myth is that Districts and projects can read Headquarters or Division's minds, or at least read between the lines, and know exactly what we want by looking at our outlines of required OMP topics.

We should be providing training in preparing OMPs. For many managers, that would include basic training in setting goals and preparing management plans in general. It would also include our philosophy on what we want the OMP to do or to be used for. I would probably show the managers what I thought a good OMP looked like (even if I did not let them keep it long enough to plagiarize it). Others have mentioned creativity and that if you give the projects a prototype, they tend to copy it rather than being creative and doing their own version. I thought the same thing when I wrote the ER, but perhaps that is another myth.

Myth No. 3. Creativity is in the format rather than in the content of the OMPs.

In reality, management is a science--managing is an art. We can standardize a lot of the format (e.g., inventories--it may not matter how timber cruises are documented). The creativity is in what the manager does with the information; what management practices he/she decides to use to accomplish the objectives and how it is all implemented. Perhaps we should standardize some of the input and format and let the manager save the creative juices for the managing part.

Myth No. 4. Natural resources are integrated in an ecosystem, but recreation and maintenance items somehow float about in their own vacuums and never interact.

Both the ER and our ORDR were written with separate laundry lists for Part I, Natural Resources and Part II, Park Management. At the time, it seemed to me that Part II items could be managed on a project-wide basis and that to address the same subjects in every recreation compartment would be duplication. Actually, visitor assistance may be very different from one area to the next. As it is now, the subjects are often treated in a general narrative fashion rather than with specific management objectives and practices that recognize the integrated nature of the whole project. I would now consider having the whole project on a compartment basis, with Part II items being part of the overall compartment descriptions and management scheme.

Myth No. 5. A related myth is that a flexible OMP is one with a lot of blank tabs at the end so the project manager can add new plans as they come along.

Since the ER was published in 1983, there have been several new requirements for plans (e.g., sign plans, historic properties management plans, oil and hazardous substance spill plans, etc.). Our approach thus far has been to do those plans separately and stick them in the back of an existing OMP. By doing so, we are getting back to the piecemeal approach of the old appendixes. We need to integrate these plans into the existing OMP, not have them exist as separate entities.

By the same token, we should consider having the OMP address all aspects of project management. As it is now, dam maintenance and other aspects fall through the crack because they do not neatly fit into either Part I or Part II. This becomes critical when the OMP is used as a budget maker. How can we say manage and budget for natural resources and recreation, but just guess on other aspects of project management?

Luckily for the integration of plans issue, there is a new answer to the next myth.

Myth No. 6. Topographic maps and Mylar are the answer to all of our mapping needs. I see the GIS system as a way to cure several ills. We need it to adequately portray the integrated nature of our resources (both natural and cultural), but we can also use the GIS system to integrate the various plans I talked about. For example, a sign plan needs to be done. We want to see the overall plan to get a general idea of the magnitude of the program, yet we need to know exactly where each sign fits into the recreation area compartment. With GIS technology, we can zoom in on one area, or pull signs out completely and portray one project-wide plan. That is how we should look at our management in general--we should be able to focus in on one area or subject, but never lose site of the overall program. We need to integrate all project management aspects into one plan, but be able to address separate issues when needed.

Myth No. 7. The last myth is that District and Division reviewers should read operational management plans to determine if they are done correctly.

A plan is done correctly if it is effective. To evaluate the effectiveness of a plan, we should not read it. We should go to the project and look at the corners of the plan document. If the corners are crisp and new, we have all wasted a lot of time and money. I am looking for dirty, crinkly corners and worn pages with notes on them (plus a copy of the plan on the

project computer in the process of being updated). THAT is a successful plan, no matter what format it is in.

SESSION V: FINAL CONSIDERATIONS

An HQUSACE Perspective

George E. Tabb, Jr.*

I would like to ask you a question. How many of you have had a root canal? If you know anything about root canals, there are sometimes two treatments necessary. During the first treatment, the dentist cuts the top of your tooth off and removes the nerves. During the second treatment, the dentist, without anesthesia, reams the roots out to remove any remaining nerves. Needless to say, this second treatment is quite painful. I had my first root canal this summer and it was quite an experience.

I think that attempting to do new things in the Corps can be compared to a root canal treatment. I also believe that operational management plans (OMPs) and master plans can be compared to root canals. Root canals can be very painful in the short run. A person who has had the first treatment will think long and hard before deciding to go through with the second treatment. Several questions must be answered; should I go ahead with this; what other choices do I have?

Here again, the same questions are valid for OMPs. The pain on the first round makes you think long and hard before going ahead with the second round. To get through it, you have to focus on the splendid relief at the end of the process rather than the impending pain. At the end of the process the splendid relief is worth the pain and you are glad you did it.

I have got to tell you a funny story. Terri Hoagland, as you know, is the author of ER 1130-2-400.** Terri can tell you about the root canal that she had to go through to get it written. She had the entire regulation written and then lost it on a Metrobus. She had to go back and recreate all that work. In my opinion, the splendid relief at the end of that process was worth the pain.

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* Acting Chief, Land Management Section, Natural Resources Management Branch, HQUSACE.

** US Army Corps of Engineers. 1971. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

From the Headquarters perspective, I believe that OMPs are absolutely necessary. Without them, we are in trouble. We have nothing to guide our management decisions, etc. It is absolutely necessary that the OMP be developed at the project level. Without project level involvement, the usefulness and effectiveness of the plan is going to be almost nil. As Terri said, if you find OMPs at the projects that do not have pages written on or page corners that are not turned back, then it is not a useful document. Many operations people have felt in the past that OMPs are just another requirement handed down from Headquarters. They have made statements like "We are going to produce this thing, but we do not think it will be useful." If you do not make it a useful document, then you are not doing your job to properly manage the project.

One item of importance that I want to emphasize, especially to the operations people, is the need to read ER 1130-2-435.* I feel that many of you who are writing OMPs at project and District levels are overlooking this regulation because the title of it deals with master plans. When Terri wrote ER 1130-2-400,** she stepped into a new area that had not been explored. She was on the leading edge and doing a good job with what she had to work with; but, after the regulation went out to the field and people began using it, we learned a great deal more. Therefore, in ER 1130-2-435,* we covered some of those things that we missed when we wrote ER 1130-2-400.** In ER 1130-2-435,* you will find a lot of references to OMPs. You need to be familiar with the definitions. I cannot emphasize this enough. Pay attention to ER 1130-2-435,* it provides guidance that many field people seem to be missing.

Another point I want to make is that we cannot let the OMP momentum die. Without our OMPs we lose the ability to handle management problems effectively and consistently. OMPs are one of the first steps the Corps is taking in moving our project management efforts from "caretaker" status to "proactive management" status. We want our project managers to be masters of their own fate. We want them to control all aspects of project management, and OMPs are the instrument to get them there.

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* US Army Corps of Engineers. 1987. "Preparation of Project Master Plans," Engineer Regulation 1130-2-435, Washington, DC.

** US Army Corps of Engineers. 1971. "Management of Natural Resources and Outdoor Recreation at Civil Works Water Resource Projects," Engineer Regulation 1130-2-400, Washington, DC.

The last point I want to mention is that full coordination is the key to this effort. Other elements such as the planning division, real estate division, etc., can provide valuable input and assistance and can produce quality products if given the opportunity. You do not know what these people can do to help until you ask them. My experience has been that once you ask someone to help you, many times you find that you have more friends than you realized.

I really appreciate the opportunity to be here with you and to learn from you. It has been an eye-opening experience for me. I especially appreciate your openness and honesty. We really have not had fistfights, and I believe we are seeing eye to eye. I want to say thank you to the people of the Waterways Experiment Station for the quality job they have done in producing this event. I think they deserve a big round of applause.

BREAKOUT SESSIONS

Introduction

The discussion groups were organized prior to the workshop with a leader appointed to each group. Group assignments were made based on each individual's background, job assignment, and/or geographical representation (Division, District, or project). The goal was to construct representative groups and avoid bias in terms of disciplines or regions of the country. This provided all groups with an opportunity for a balanced response to the problems encountered in the OMP process. The organization of these groups is found in Appendix A.

Problems for the groups to discuss were presented in the form of questions. Potential questions were solicited from telephone calls to nearly 50 individuals at HQUSACE, Division, District, and project offices. Four questions emerged from a list of approximately 20 related to: (a) the purpose of the OMP, (b) inventory procedures, (c) master planning, and (d) recommendations. It was felt that these four areas best captured the most important issues related to operational management planning and were best handled in a discussion group setting.

Modified Nominal Group Technique

The purpose of the nominal group technique (NGT) is to solicit input from heterogeneous groups of people and foster exchange. The goals of NGT are to: (a) promote diversity of viewpoint, (b) promote balanced participation among groups, and (c) develop perception of critical issues. The technique is appropriate for problem identification, solution exploration, and priority setting (Delbecq et al. 1975).* The NGT is especially effective when the group is familiar with the problem. This technique was selected since it focuses on setting priorities as participants voice the most important aspects related to the OMP process.

The technique is described in detail in Figures 1 and 2. If readers are interested in applying this technique, they can obtain (free of charge) a

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* Delbecq, A. L., Van de Ven, A. H., and Gustafson, D. H. 1975. Group Techniques for Program Planning, Scott, Foresman, and Co., Glenview, IL.

** Brademas, James D. 1989. Guidelines for Facilitators Conducting Nominal Group (NGT) Meetings, Office of Recreation and Park Resources, University of Illinois, Urbana-Champaign.

STEP 1

WRITTEN INDIVIDUAL RESPONSES
(10 MIN MAX)

- **WRITE NOT OVER 3 IDEAS PER QUESTION IN BRIEF PHRASES ON CARDS**
- **WORK SILENTLY AND INDEPENDENTLY**

Figure 1. Step 1 in the modified nominal group technique

publication entitled Training Manual for Nominal Group Technique Meetings from D. James Brademas.**

The NGT was modified to limit the time spent in clarification to only those items voted as having high priority. Each afternoon two questions were presented to the groups for discussion. After an explanation of the process, participants were assigned to groups of approximately six individuals and questions were distributed to each group leader. A specified time was announced to finish discussion on the two questions. The groups were instructed to continue with the next question after completing the first. Workshop organizers were available to clarify questions and other concerns.

As described in Figure 1 (step 1), each member of a group responded in writing to the provided question with three ideas they considered to be most important. In Figure 2 (step 2), the items were clarified if necessary. The group leader then wrote all 18 items on poster paper. Ballots were distributed for voting as indicated in Figure 2 (step 2, continued). Sample ballots are provided in Appendix B. Votes were tallied and the five items receiving the most votes were discussed. Only three of the five were forwarded from the group to the plenary session.

In the plenary session, Figure 3 (step 3), the top three items forwarded from each group were listed on poster paper. After the entire group cast

STEP 2

INDIVIDUAL FEEDBACK AND GROUP DISCUSSION

- EACH PERSON PRESENTS HIS OR HER IDEAS
- MEMBERS DECIDE ON DUPLICATES
- FACILITATOR RECORDS AND NUMBERS ALL ITEMS

(CONTINUED)

Figure 2. Step 2 in the modified nominal group technique (Continued)

STEP 2
(CONCLUDED)

INDIVIDUAL FEEDBACK AND GROUP DISCUSSION

- EACH PERSON USES BALLOT TO RANK TOP FIVE ITEMS
  - 5 = TOP RANKING
  - 1 = BOTTOM RANKING
- GROUP LEADER USES FINAL TALLY SHEET TO TABULATE RESULTS. RECORDS TOP FIVE.
- GROUP DISCUSSION ON WHICH 3 TO REPORT TO PLENARY SESSION. CLARIFICATIONS ARE MADE (IF NEEDED).

Figure 2. (Concluded)

STEP 3

PLENARY SESSION FEEDBACK

- ALL CONVENE IN ONE SETTING
- TOP 3 ITEMS REPORTED FROM EACH GROUP
- VOTING AND FINAL TALLY
- DISCUSSION ON TOP 3 ITEMS

Figure 3. Step 3 in the modified nominal group technique

individual ballots for the final top five items, these items were discussed. A synopsis of each of these discussions is provided in this section. Responses to each discussion session are reported as outlined in the agenda. A complete list of responses from the groups to the discussion questions is provided in Appendix C.

Session I: Purpose of the OMP

The discussion group sessions began with a question related to the purpose of OMPs. It seemed important to understand workshop participants' perceptions of an OMP before presenting other questions related to getting the OMP prepared and implemented. The question was stated as "What purpose should the OMP serve?" e.g., what are the information needs at Division, District, project, and HQ-USACE levels?

In discussing the purpose of an OMP, a participant wanted to know if the OMP is viewed as an extension of the master planning process, or is project management broader than recreation and natural resources? Participants responded with varying responses. While some respondents felt that it would be difficult to integrate all management components, others said that project management needs more consolidation. As a practical resolution someone said,

"If you budget for it, you must include it in the OMP since everything has to be prioritized." Perhaps this is a part of a larger issue that cannot be entirely resolved in an OMP workshop.

There was a discussion of ways to enhance coordination and communication within the OMP process. In response to this issue a participant said that, "If the question is what purposes does the OMP serve, then coordination and communication are two of them. What we heard this morning (speaker session) is that it is not the product but the process that is important. And this process includes coordination." To expand on how communication fits within the process and our organization, someone said that communication is the basis for the OMP. "And without that basis, we won't get anything done. In working with engineers we've gotten better about explaining our basis for doing things that we may have taken for granted in communicating with professionals in our field."

In summarizing this session, it was generally felt that the question on purpose is really not a hard question. There are a multitude of purposes and they are all valid. A deeper and more proactive stance is to explain just what the OMP does that the appendixes or master plan cannot do. This was stated as, "One of the most important things about a plan is to provide continuity and direction. Without that plan you may go in any direction. It is like being lost in the woods without a compass, you just wander around. If I leave the project and someone else comes in, they still have a direction." Throughout this first session, a working definition emerged: An OMP is an action document for implementing resource management objectives.

Session II: Inventories

There were a number of participants who voiced interest in discussing the topic of resource inventories. The question for the session was phrased as, "Give us your thoughts on how the resource inventory fits in the OMP Process? (e.g., When should it come into the process? What level of detail? Who does it?)"

There was common agreement that the level of detail and accuracy of inventories are determined by the need to support objectives. Yet there were various opinions on how much detail is necessary to achieve these objectives. Someone felt that it would be helpful to have some type of direction on minimum level of detail, while another respondent suggested obtaining all the

information possible. In reality, budget decisions often dictate the level of detail.

It was also pointed out that inventory information often exists in other documents. For example, it was stated "If you have good information in the environmental impact statement (EIS), reference it and use it. Don't collect data that are already available." This may require greater coordination between the master planning and operations functions.

The efficiency of any inventory effort could be improved if results from a study on indicators of damage or change could be measured and evaluated along with other inventory data. The caution is that for some indicator species, resource conditions may vary across the nation.

Discussion was not limited to natural resources in dealing with how often to conduct inventories. It was stated that it may not be necessary to conduct recreation studies every year as part of the inventory process. Instead, the examination of trends in visitation may be more cost-effective and useful.

The inventory question was perhaps the most difficult to answer among the discussion questions. Although everyone recognizes the importance of inventories and their relation to management objectives, vague responses surfaced concerning the level of detail. The participants seemed to reflect a variety of information needs, disciplines, and decision-making functions, e.g., District operations personnel vs. District budget personnel. Although the level-of-detail question was raised often from discussions with the participants prior to the workshop, it may have been too complicated to fully resolve during this workshop. Clearly, additional work is needed in this area.

Session III: Master Planning

Because of the interest Corps personnel have in how the Master Plan and OMP should work together, the following question was posed to the group:

> What is the relationship between the master plan (MP) and the operational management plan (OMP)? (e.g., Are they part of the same process? Where does the OMP pick up from the master plan?)

Based on the responses to this question, the majority of workshop participants indicated that the master plan and OMP should be a continuous process. Also, the master plan addresses long-term project goals, while the OMP

is an action document that addresses ways to implement these goals, in terms of clarifying specific resource management objectives. Even though most participants consider neither the master plan nor the OMP to be subordinate, they regard the master plan as the legal document. Ideally, participants tended to think the master plan should be prepared first, along with the development of base information and inventories. This information could then be used in the OMP to form the basis from which to plan and execute project objectives.

The major area of concern in the plenary session centered around what to do at existing projects that do not have a master plan or an updated master plan. At least one respondent felt that the master plan on a completed project should be done in Operations. This would allow the master plan and OMP to be combined into one document. He supported this by saying,

> As a manager, I can gain a lot of input and ideas from the public meeting process, because a lot of those people come into the public meeting and they're not dealing with broad concepts of land-use allocation. They want to know when you're going to get play courts on your playground. That is valid information that may not be getting to Operations.

However, others voiced concern about the feasibility of doing a master plan and OMP at the same time, especially for a large project.

Also, one person did not want to mislead people into thinking they have to do a master plan before doing an OMP. Someone stated that he has a fairly good recent master plan, but this in no way helps with the day-to-day management of his project. He continued to say that the reason the OMP evolved is that the appendixes to the old master plan were not helpful.

However, someone else felt that even if a District or project decides to go ahead with an OMP, this does not preclude the need to do a master plan. In an effort to bridge this gap, one District was successful in pushing forward provisional resource management objectives.

A comment that provided a synthesis of the above concerns stated that,

> The critical thing is not whether you have a master plan or an OMP. What is important is that you have a process that establishes objectives, and you also have to prioritize those objectives and have a plan for implementing those objectives. Whether this occurs in a master plan or in an OMP is immaterial. It has to be up front in the process. A manager may really be doing a master plan process by setting up those initial resource objectives.

It was stated that we may be talking about two kinds of objectives. There are the specific objectives of the OMP and the broad objectives of the master plan. At the master plan level, an objective is really a goal. The definitions of a master plan and OMP are listed in ER 1130-2-435.* The master plan is defined as the document guiding the use and development of the natural and manmade resources of a given project or group of projects. The OMP is defined as a management action document that describes in detail how resource objectives and concepts prescribed in the master plan will be implemented and achieved.

Another participant pointed out that part of the problem may be that the resource management objectives for one Division may be very detailed and specific, while the resource objectives at another Division may cover the whole project. North Pacific Division gave an example of what kind of resource management objectives they have in a master plan. They said that a master planning objective for a project would be to manage for wildlife habitat, and a management unit objective would be to provide bald eagle habitat. Then, the OMP prescribes how to provide that habitat. However, someone added that if you don't have a team that is equally distributed among the functional elements (i.e., recreation, wildlife, etc.), this won't work.

Many responses seemed to underscore the need for greater coordination and communication as mentioned in the first session, especially between the Planning and Operations Divisions. One respondent questioned the involvement that the Planning Division has, aside from a cursory review, to insure the OMP stays in the general guidelines of the MP. A planner answered the question by saying,

> In my perspective, I should be in Operations. What I bring to the master planning process as a planner is the skill and expertise of a facilitator to write and prepare a document. Operations may want to look at that as a service that is available to them. If I had a choice, I think it would be a whole lot easier if I was in Operations.

Overall, it was felt the lack of coordination between the two division elements is attributed to the combination of negative attitudes, conflicting personalities, the tendency not to cross division lines, and the fact that some divisions exert more influence.

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* US Army Corps of Engineers. 1987 (Dec). "Preparation of Project Master Plans," Engineer Regulation 1130-2-435, Washington, DC.

A final topic of discussion centered around the idea that some participants consider the master plan to be the legal document. However, one participant felt that the OMP may be a legal document too. Several people responded with the thought that the MP is driven by the law under the National Environmental Policy Act. One respondent concluded the discussion by saying,

> The COE has defined the MP as being the document that is not categorically excluded; the specific management plans in OMPs are categorically excluded. Everyone has bought off on that in the Federal regulations. It is a legal document from that standpoint.

The above statement illustrates how the MP could be viewed as a "legal" document. The fact that there is a public review process for an MP may also lead to this viewpoint. However, a legal document within the directive of the NEPA would be an environmental assessment (EA) or an Environmental Impact Statement (EIS).

Session IV: Final Considerations

The last session of the workshop was used to wrap up key issues and answer the general question "Where do we go from here?"

The work group responses centered around who should take the lead on the OMP preparation, the need for some type of training course or workshop, and clear definitions of the OMP process and procedure. However, in the plenary session, there was little or no discussion on the issues of "taking the lead" and "definitions of the process." The participants tended to agree that the projects should take the lead in OMP preparation while the District and the Division should provide guidance. The response on "definition of the process" received little discussion. Most of the participants felt this had been adequately discussed throughout the workshop.

Most participants were primarily interested in discussing the need for some type of workshop or training course. Participants discussed what type of training format would be most appropriate, who should organize it, who would attend, and what would be taught.

Most of the participants were in favor of keeping future formats similar to a workshop format, where there would be a dynamic information exchange. A PROSPECT course was considered less desirable, primarily because it would be more standardized, less dynamic, and more costly. Yet one respondent whose group specifically listed the need for a PROSPECT course said,

> When we said a PROSPECT course, we weren't thinking about a cookbook on how to do an OMP. We were thinking in one sense of a PROSPECT course to legitimize the OMP purpose, but also to incorporate the workshop format.

Several participants mentioned the US Army Engineer Waterways Experiment Station (WES) as a possible organizer for the workshop. Workshop participants also felt that the workshop should be organized at a national level. Someone stated,

> When I first came here, I thought we should keep this on a Division level; basically, we don't want someone telling us how to do it. But with all the information I've gotten from people all over the country, it is obvious that it's got to be an information exchange nationwide, rather than localized.

Someone questioned what would be discussed at a workshop, especially since nearly all the OMPs will be written and approved by the time a workshop or training course is established. Everyone was in agreement that instead of focusing on development, we would be focusing on continuing education through information exchange.

A participant suggested using concurrent sessions. This would allow basic sessions for those in the elementary stages of OMP development, but more advanced sessions for those beyond that point. Several suggestions for topics included setting goals and objectives, flowcharting, computer applications, and GIS.

Workshop participants agreed that the training issue should be presented to a training task force. Someone also suggested setting up a committee to determine what material would be appropriate for OMP training.

As a final thought, someone suggested establishing a nationwide data base of names, phone numbers, and areas of knowledge or expertise. This would be a good head start for a workshop or training course.

CONCLUSIONS

The workshop established a dialogue for those attending to share both positive and negative first-hand experiences with the OMP process. The workshop moderator and coordinators intended for this tone to permeate morning and afternoon sessions. In a dialogue, positions are not rigidly held and people are willing to listen to others and interact to promote constructive change. Such an atmosphere aided in making this a true workshop rather than a training course. Based on personal experiences, participants shared information about preparing OMPs in addition to what was offered during the regular sessions.

Considerable interest emerged with the discussion of a future workshop. It was felt that a workshop would allow participants to share their experience and knowledge, while gaining from others. It was also evident that the OMP is a process rather than a product. The time and effort afforded the decisions made in the master plan should be evident as a thread in the OMP. Collectively, participants learned that there are no definitive answers as to what constitutes a good OMP. This is in reply to a challenge posed by a report on the status of OMPs.* Workshop participants did learn that although there may be common elements of an OMP, approaches are often dependent on a myriad of situational factors found on the project. For that reason, it would be difficult to state that one OMP is better than another without understanding factors related to the physical resource, the amount and type of recreation use, and the management influence on the project. This is not to diminish the importance of identifying criteria for evaluating OMPs. General criteria, such as those developed for writing management objectives, provide an example of performance standards for OMP evaluation. Finally, several Division offices have taken the lead in developing checklists used by reviewers and made available to those preparing OMPs. This would allow writers of OMPs to better understand what is expected of them. Furthermore, checklists are flexible to accommodate the needs of each Division and they can be used for updated OMPs as well as first draft reviews.

The workshop and its proceedings are only a start in assembling the information necessary for improving the way OMPs are compiled and implemented. These efforts are a success to the extent that rangers, managers, and specialists in project, District, and Division offices build on this information

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* Peyman-Dove, Linda, Waring, Michael R., and Titre, John P., Jr. 1989. "Operational Management Plans: Status, Content, and Implementation," Miscellaneous Paper R-89-2, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

with internal meetings or written memoranda to refine what was presented and discussed. The authors encourage the dialogue to continue, and individuals to document experiences, sharing them where appropriate.

APPENDIX A: GROUP ORGANIZATION FOR BREAKOUT SESSIONS

Group I

Knaub - Discussion Leader
Rae
Chapman
Hoagland
Peterson
Hamilton

Group II

Tanner - Discussion Leader
Grden
Pivonka
Horowitz
Gehrt
Rice
Cotten

Group III

Purvis - Discussion Leader
Schoenebeck
Feavel
Drumn
Peloquin
George

Group IV

Bain - Discussion Leader
Melinowski
Marcy
Liagre
Chenoweth
Petit

Group V

Star - Discussion Leader
Adams
Daoust
Puglese
Lenning
Tabb

Group VI

Mason - Discussion Leader
Shiner
Troglin
McCauley
Day
Anderson

APPENDIX B: BALLOTS FOR APPLYING A MODIFIED VERSION OF THE NOMINAL GROUP TECHNIQUE

OPERATIONAL MANAGEMENT PLAN WORKSHOP - DECEMBER 1989.

GROUP: _____ FINAL VOTE TALLY SHEET

SOLUTION NUMBER	RESPONDENT NUMBER 1	2	3	4	5	6	7	TOTAL SCORES	PRIORITY
1								=	
2								=	
3								=	
4								=	
5								=	
6								=	
7								=	
8								=	
9								=	
10								=	
11								=	
12								=	
13								=	
14								=	
15								=	
16								=	
17								=	
18								=	
19								=	
20								=	
RESPONDENT #	1	2	3	4	5	6	7		

OMP WORKSHOP - DECEMBER 1989

INDIVIDUAL TALLY SHEET

GROUP: _____

SOLUTION NUMBER	RANK
1	:____:
2	:____:
3	:____:
4	:____:
5	:____:
6	:____:
7	:____:
8	:____:
9	:____:
10	:____:
11	:____:
12	:____:
13	:____:
14	:____:
15	:____:
16	:____:
17	:____:
18	:____:
19	:____:
20	:____:

> (5) HIGH
> (4)
> (3)
> (2)
LOW (1)

APPENDIX C: BREAKOUT SESSION RESPONSES

PURPOSE OF AN OMP

Group I
Provide rational basis for funding/manpower allocations and decisions.
Provide continuity and direction.
Establish priorities for implementing resource objectives (ROs) from master plan.

Group II

Guide/working document for implementing ROs for project perspective (Choice No. 1).

Provides continuity in project operation.

Identify and justify budgetary priorities (project and District) (Choice No. 4).

Group III

Identifies management practices.

Legitimizes implementation of management philosophy (goals and objectives of manager, District, Division, etc.).

Group IV

Working document for managers (roadmap) (Choice No. 2).

Sets management priorities.

Budget tool.

Group V

Delineates specific park and resource objectives, including site-specific prescriptions to accomplish same (Choice No. 5).

Serves as standard operating procedure (SOP) for project.

Provides inventory/description of resource base and describes future plans.

Group VI

Provides for a 5-year work plan to insure continuity of priorities, to justify budget items and the orderly management of the project.

Enhances coordination and communication (Choice No. 3).

Provides details of how to meet objectives.

INVENTORIES

Group I

OMP should contain inventories at level of detail necessary to make management decisions (Choice No. 5).

Unit decisions and should be based on resources at project.

Should be used ASAP; OMP should proceed while developing inventory.

Inventory done by most qualified people, considering costs.

Group II

Inventory should be done prior to first draft OMP, ideally as part of master plan.

Who should do inventory?

Level of detail should be as simplistic as possible while still allowing resource managers to make informed decisions.

Group III

Project responsible for getting inventory from best source.

Should be done first, but it is a continual process (Choice No. 2).

Level of detail depends on objectives.

Group IV

Level of detail is related to project attributes and management objectives (Choice No. 4).

Essential to OMP process and forms basis of plan.

Accomplished by various means and sources-best and cheapest.

Group V

Level of detail and accuracy of inventories should be sufficient to support objectives (Choice No. 1).

Should be accomplished by qualified experts.

Important as a management tool to document work accomplishments.

Group VI

Should not duplicate previous efforts, if they were adequate (i.e., master plans, appendixes, EIS, etc.) (Choice No. 3).

Basis for resource management (so should be done during master plan).

Level of detail sufficient to select, implement, and evaluate objectives.

MASTER PLANNING

Group I

OMP process should be vehicle for MP maintenance.

Ideally, MP should be done first.

OMPs and MP share data base.

Group II

Master plan charts long-term project goals consistent with authorized project purposes, while the OMP provides the means for achieving those goals, in terms of specific objectives as integral parts of one process (Choice No. 1).

They are part of the same dynamic process with the MP establishing the project and MU objectives and land-use classification; the OMP implements the objectives (Choice No. 2).

The MP should come first and should compile base information and inventories of project resources. The OMP should draw upon the information in the MP to form the basis from which to plan and execute project objectives (Choice No. 3).

Group III

Any MP on completed projects should be done in operations, then MPs and

OMPs could be combined in one document.

The MP should provide broad goals and OMPs should address specific objectives (action document) (Choice No. 5).

The MP should stop at land allocation level.

Group IV

The MP is a legal document - OMP is an action document.

The MP is conceptual - OMP is detailed.

The MP is long-term - OMP is short-term.

Group V

The OMP is a continuation of the MP and provides a forum to develop specific plans and objectives to achieve broad project goals.

The OMP picks up where direction is needed on project operations.

The MP contains broad resource inventories and establishes general land allocations - OMPs are more detailed.

Group VI

The two documents are outputs of a continuous, dynamic process; neither is subordinate (Choice No. 4).

MP reflects a macro perspective (i.e., what, where, why, and sometimes who). The OMP reflects a micro perspective (i.e., how, when, and sometimes who) (Choice No. 2).

Both require an interdisciplinary team approach; with planning having the lead on MPs, and operations having the lead on OMPs.

FINAL CONSIDERATIONS

Group I

Training or workshops should be offered to exchange concepts/information (Choice No. 2).

Districts need to provide carefully chosen guidance; not taking over project responsibilities for OMP.

Do not kill OMP value as a management tool by institutionalizing development procedures.

Group II

Throw out all the stuff that is nice to know but cannot be directly utilized - reference other documents where data can be found.

Maintain latitude at District/project levels to insure that OMPs serve the intended purposes within the spirit and intent of the ERs (Choice No.3).

The projects should take the lead in OMP preparation and the District should be the focal point for providing guidance for OMP preparation (Choice No. 1).

Group III

Have a prospect course on OMPs (including management training) (Choice No 4).

Clarify OMP versus master plan in regulation.

Clarify master plan process for new versus completed projects.

Have executive orientation on OMPs.

Group IV

Based on a clear overall natural resource management mission -- define OMP process and procedure (Choice No. 5)

Develop a task force to review and recommend a small number of existing OMPs as good examples - in lieu of a prototype.

Define and emphasize the importance of goals and objectives, management practices, and prescriptions.

Group V

Recognize high level of resistance to OMP development and use at many projects, and devise additional managerial strategies to overcome resistance.

Provide guidance on writing good resource objectives.

Allow for stronger ties to budget process.

Group VI

WES should prepare an instruction report (similar to the interpretation supplements) that identifies strengths and weaknesses in writing goals and objectives; shows the transition from an MP goal to an OMP objective; identifies the strengths and uses of GIS as a tool, etc.

Master plans are important; therefore, HQUSACE should place higher funding priority on master plans.

Need to define the scope limits of the OMP, i.e., we cannot continue to add new requirements to the OMP.

APPENDIX D: EXAMPLE OF AN OMP REVIEW CHECKLIST

CHECKLIST FOR REVIEW OF OMP'S

SOUTH ATLANTIC DIVISION

page ___ of ___

project name _____
date of OMP _____
reviewed by _____
date of review _____

action designations
C = critical, must be incorporated prior to SAD approval
N = non-critical, incorporate before the next update

item	action	item approved	comment attached
A. TABLE OF CONTENTS AND GENERAL SECTIONS			
1. Is recreation included as an authorized project purpose pursuant to the Flood Control Act of 1944?	C		
2. Are the long-term management objectives (or goals) consistent with those described in paragraph 5 of SADvR 1130-2-18?	C		
3. Do the front and side binders identify the project OMP?	C		
4. Is the paragraph numbering system easy to follow?	N		
5. Are pages of the OMP numbered and page numbers listed in the Table of Contents?	N		
6. Has the draft OMP been edited by one person to ensure consistency in writing style?	N		
B. PART I - NATURAL RESOURCES MANAGEMENT			
1. Are specific project objectives included?	C		
2. Have inventories been conducted within the last five years, or are plans included for conducting inventories?	C		
3. Is a summary listing of these project species included:	N		
a. wildlife			
b. fish			
c. vegetative			
d. endangered			
4. Do management prescriptions and work plans include an integrated approach to these activities:	C		
a. forestry			
b. fisheries			
c. wildlife			
d. aquatic plant management			
5. Is a map showing compartment boundaries included?	C		
6. Are wildlife mitigation lands included if applicable?	C		
7. Are plans included for appropriate use of timber revenues?	C		
8. Are only properly trained personnel allowed to apply pesticides?	C		
9. If lands are outgranted for timber and/or wildlife management, is a copy of the lessee's annual work plan included?	N		

CHECKLIST FOR REVIEW OF OMP'S

SOUTH ATLANTIC DIVISION

page ___ of ___

project name _____
date of OMP _____
reviewed by _____
date of review _____

action designations
C = critical, must be incorporated prior to SAD approval
N = non-critical, incorporate before the next update

item	comment attached / item approved / action
C. PART II - PARK MANAGEMENT	
1. Are specific project objectives included?	C
2. Is an inventory of existing facilities included?	C
3. Does the safety section address employee, contractor and visitor safety, and outline employee responsibilities?	C
4. Are these safety programs discussed:	C
a. protective clothing and equipment	
b. personnel safety training	
c. defensive driving training	
d. corrective actions	
e. preventative maintenance	
f. safety performance standards	
g. safety meetings	
h. safety posters	
i. emergency telephone numbers	
j. low water contingency plans	
k. project safety and health policy	
l. periodic safety inspections	
m. annual OSHA inspections	
n. job hazard analysis	
o. medical surveillance	
p. hazard communication (MSDS)	
q. respiratory protection	
r. hearing conservation	
s. health hazard inventory	
t. hazard reductions including powerlines and boat ramp approaches	
u. other project specific safety problems or procedures	
5. Is an existing project physical security plan referenced or are plans included for developing one?	C
6. Does the visitor assistance section include our agency policy for using the lowest level of enforcement necessary to accomplish the desired result?	C

CHECKLIST FOR REVIEW OF OMP'S

SOUTH ATLANTIC DIVISION

page ___ of ___

project name _____
date of OMP _____
reviewed by _____
date of review _____

action designations
C = critical, must be incorporated prior to SAD approval
N = non-critical, incorporate before the next update

item	action	item approved	comment attached
C. PART II - PARK MANAGEMENT (CONTINUED)			
7. Does the lakeshore management section include or reference the project plan, or include a statement of no lakeshore management activities permitted by national policy?	C		
8. Is elimination of private exclusive use addressed where applicable?	C		
9. Is a listing of outgrant information included?	C		
10. Does the maintenance section address quality assurance and inspections?	C		
11. Does the recreation use fee section address appropriate use of SRUF monies?	C		
12. Is the type of visitor center consistent with the Class assigned in the Master Plan and verified by the 1982 SAD letter to OCE?	C		
13. Is a plan for management of historic properties included?	C		
14. Is an ongoing review program for closure and consolidation of facilities included?	C		
15. Are priorities for ongoing renovations included?	C		
16. Do management prescriptions include efforts to separate day use and camping facilities?	C		
17. Are any increases in facilities above those shown in the Master Plan or in the 1984 NRMS well documented?	C		
18. Are existing uses consistent with those shown in the project Master Plan?	C		
19. Are these programs discussed:	C		
a. volunteers			
b. recreation use surveys and project visitation			
c. seaplane operations			
d. handicapped facilities			
e. project sign plan			
f. drought impact levels and action plans			
g. the Natural Resources Management Training Program			

CHECKLIST FOR REVIEW OF OMP'S

SOUTH ATLANTIC DIVISION

page ___ of ___

project name _____
date of OMP _____
reviewed by _____
date of review _____

action designations
C = critical, must be incorporated prior to SAD approval
N = non-critical, incorporate before the next update

item	comment attached	item approved	action
D. COORDINATION / OTHER			
a. Has the draft OMP been coordinated with outgrant agencies?			C
b. Are procedures included in the OMP for proper coordination of lease activities with Real Estate Division?			C
c. Has the OMP been properly coordinated with PD, RE, EN, and SO in the district office?			C
d. Are five year and annual management plans based on fiscal years?			C
e. Is a use indicated for all project lands including future recreation areas?			C
f. Are proposed activities consistent with the lease agreement and division of responsibilities at PL 89-72 projects? Are copies of these documents included?			C

OMP REVIEW COMMENT SHEET

SOUTH ATLANTIC DIVISION

project name _____ page ___ of ___

date of review _____

reviewed by - PD-A / RE-M / SO / EN-G

checklist reference	OMP doc reference	COMMENTS

APPENDIX E: EXAMPLE OF A RANGER OMP TRAINING SESSION

AGENDA FOR OMP TRAINING SESSION
6-7 JANUARY 1988

James W. Shiner, Jr.*

6 JANUARY

1300 - 1400 • Introduction.

• Purpose of the Operational Management Plan (OMP).

• Recommended outline.

1400 - 1410 BREAK.

1410 - 1500 • Important concepts included in Branch OMPs:

a. Management by objective.

b. Primary versus support programs.

c. Action officers (AOs).

1500 - 1510 BREAK.

1510 - 1600 • Important concepts included in branch OMPs (cont'd.):

d. Management coordination.

e. Standard operating procedures.

f. Annual and long-range work plans.

7 JANUARY

0800 - 0955 • What about work not included in the OMP?

(w/10 min. break)

• How to prepare the OMP.

a. Step-down planning.

b. Brainstorming sessions.

c. Pitfalls.

d. Suggested sequence for preparing the OMP.

0955 - 1005 BREAK.

1005 - 1200 • Implementation.

(w/10 min. break)

GOAL: To enable projects with OMPs due in FY 88 to complete effective OMPs in an efficient manner.

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* Park Ranger, Huntington District.

SESSION I - 6 JANUARY 1988

1300 - 1400 INTRODUCTION

- Purpose of training and course objectives.
- Agenda.
- "Disclaimer" on JWF plan - first generation, use for familiarization and examples.

PURPOSE OF THE OMP

- Management - active process involving the selection of appropriate means to achieve a given end.
- Road map of project's resource management operations. An attempt to bring order to a chaotic management problem.
- The OMP serves the following purposes: (Read first, then expound).

a. Describes the means of implementing the objectives of the project's Natural Resources and Park Management Programs. It tells people where they are going and why. [EXERCISE: Ask for 8 volunteers. Ask each person to put a character on a sheet of paper, need 1-1,; 1-2; 1-B,W,K,S; and 2-A's. Ask each person to hold their letter and come up front to spell a phrase. REDO task: Give objective: spell BSA1KAW2 with 8 people, each person to hold one character. Assign 1 AO to assign letters, a second to place the people. I was able to get the job done by simply giving the objective, my AOs completed the job without my getting involved in the details, leaving me free to accomplish other tasks. Follow up with an after-action review: Can it be done with fewer people? Do we even need to be doing it at all? Now lead into next purpose by posing the question, "Is the phrase true?" It depends upon the criteria: If number of projects, yes, if user fee revenues, no.].

b. Consolidates into one document the various components of the project's Natural Resources and Park Management Programs, to permit timely review, periodic updating, and effective evaluation of those programs. [Use 1972 DF for example: Use FRL, how effective was original policy?]

c. Provides management personnel with an estimate of manpower and budget resources needed to accomplish project programs and objectives, as well as a means to estimate the impact of reduction in these resources upon the project. [The "sack" is very heavy, many things we must do, more than can be done given current staff. OMP codifies and allows rational decision-making on what gets done in what priority.]

d. Aids management personnel in determining how to allocate scarce resources to meet customer care requirements.

e. Serves as a reference and training guide for the performance of tasks related to the Natural Resources and Park Management Programs. [Ask older managers if they believe they manage better now than when they started. OMP is a means of passing on that experience to new managers.]

- REFER to the OMP effectiveness criteria [Concept].
- It is dynamic - refer to revisions to Sections 9 and 16.
- Relationship to master plan.

SUMMARY

- New approach to the management of our projects. Represents a change to process-oriented thinking versus "seat of the pants" thinking.
- No plan can replace knowledge of the systems involved or the need to keep up-to-date, "We are what we know."

RECOMMENDED OUTLINE

- REFER to table of contents.
    a. Required material.
    b. INTRODUCTION focus is upon overall management structure.

SESSION II - 6 JANUARY 1988

1410 - 1500 IMPORTANT CONCEPTS INCLUDED IN BRANCH OMPS

Management by Objective

• Approach to management strategies versus reactive management. [tie back into definition of management].

a. Under reactive, we continue to maintain an area as a campground because it has always been a campground, under management by objective (MBO) we ask if a campground is even necessary, before we ask what type of campground is needed.

b. Rethink management (use example of broken cooker). Why replace cooker? Is cooker still needed? Would a different design fit the area better?

• Define the agency/project objectives, then determine management strategies to achieve those objectives.

a. Alternatives need to recognize that other agencies may be better able to accomplish an objective because of fiscal and policy constraints upon the Corps. This entails creating two alternatives in some circumstances, (1) best case where another agency is needed, and (2) fallback if non-Corps is not available.

b. The corps is a multiple-use agency with respect to the Park and Natural Resources Management Programs. Dominant and even single use can occur within individual compartments. Overall, we are a dominant-use agency (flood control).

• Definitions:

a. Objective - what ought to be. A desired ideal. Nebulous ["have a good time"].

b. Subobjective - a defined, measurable product which moves toward accomplishing the objective. These are described in the management plan (achieve objectives subsections).

c. Management actions - the means used to achieve the subobjectives.

• Recommended procedure

a. Determine what ought to be - use regs, etc.

b. Determine what is - do not forget staff and funds.

c. Identify what is needed to get from what is to what ought to be [introduce Section 9 revision].

Primary Versus Support Programs

• PRIMARY PROGRAMS: Primary programs are those programs which meet either one or more of the Corps' management objectives or the mission of the Park and/or Natural Resources Management Programs directly.

• SUPPORT PROGRAMS: Support programs are those programs which do not meet the Corps' management objectives directly, but are developed to increase the effectiveness of the programs created to meet those management objectives.

• EXERCISE: Determine how much time is spent on each of the programs. Classify the programs in the Park Management part.

• GOAL: No magic ratio of time to spend on each, but keep in mind the reason for the existence of support programs and insure that the OMP reflects this philosophy. [First question should not be, "How can I do the job safely?" but, "Do I need to do the job?"]

Action Officers

• An action officer is the employee assigned by the resource manager (RM) or maintenance mechanic leader (MML) to:

a. Recommend and plan the action required to accomplish the assigned task and prepare the implementation plan.

b. Estimate the personnel and materials needed to complete the task.

c. Insure the task is completed, including all required paperwork.

d. Permanent AOs serve as "experts" for their area of responsibility.

The action officer informs the RM or MML, as appropriate, when each subassignment above is completed. Certain routine tasks are assigned to permanent action officers. Employees generally are assigned to more than one permanent action officer position at a time and rotated periodically.

• Assignments need to reflect job descriptions. The RM reassigns permanent action officer positions periodically to insure that employees are familiar with all functions included in their position and grade Office of Personnel Management (OPM) standards for 025 series.

• Why have action officers?

a. Divides responsibilities to reduce overloading key employees.

b. Provides accountability for tasks.

c. Gives employees opportunity to train and gain work experience.

d. Permanent action officers relieve RM and MML of scheduling and assigning routine duties.

e. Permanent Action Officers keep OMP current.

- Discuss JWF action officers and duties assigned [Review AO sheet].
- Key to success is ACCOUNTABILITY, and performance appraisals permit accountability [more on this in the implementation session].

SESSION III - 6 JANUARY 1988

1510 - 1600 IMPORTANT CONCEPTS INCLUDED IN BRANCH OMPS (CONTD.)

Management Coordination

• Concept of micromanagement [do not bog down in details, introduce the "busyness" syndrome].

Management meetings

a. All employees attend.

b. REFER to format. Keep employees informed of new work, completed work, and problems. Provides RM with opportunity for brainstorming and feedback on current conditions.

c. Minimum of once every 2 weeks.

• Staff meetings

a. RM, MML, rangers.

b. Coordination of work, define and resolve problems, set priorities.

c. Recommend daily.

• Outgrant meetings.

a. The RM contacts each organization with a management outgrant, a minimum of once each quarter.

b. The RM institutes annual meetings with each organization having a management outgrant. Real Estate Division will be invited to all annual management meetings, and will be kept informed of all discussions between project personnel and the grantee. The RM and applicable action officers attend.

c. The purpose of the annual meeting is to inform each party of current management objectives, identify problems and determine solutions, and coordinate management actions. The master plan will be used as the guide for promoting the development of outgranted areas. A copy of the minutes of each annual meeting, as well as other management-related documents, will be maintained in the annexes.

Standard Operating Procedures (SOPs)

• Why? Saves reinventing the wheel for routine situations and permits rapid response for unusual situations.

• SOPs permit process-oriented management [frees up thinking].

• Employees know what to do and their place during unusual and routine situations [easier to visualize].

• EXAMPLE: SOP for maintenance tasks

a. Perceived problem - work falling through the cracks, work assignments being lost or forgotten.

b. Developed SOP.

c. Problems identified with original SOP. Brainstorming to define problems and new SOP prepared, including JRF register and job board [New SOP].

d. A new SOP will be implemented when GMAOs develop skills to prepare JRFs and SOWs.

Annual and Long-Range Work Plans

• REFER to Section 19.

• Additional benefits.

a. Helps determine manpower and budget needs. Important, given current budget problems. Managers can identify best area to make cuts instead of arbitrary or across-the-board cuts. Good way to "ease into" the budget process.

b. Establish priorities.

c. Respond to "additional work" requests.

d. Permit monitoring of work done and time required to perform work.

e. Visibly outlines what work is needed.

SESSION IV - 7 JANUARY 1988

0800 - 0855/0905 - 0955 Introduction

- Agenda for today.
- Questions from yesterday's sessions.

Scope

- Restrict to Park and Natural Resources Management. Do not attempt to create "new" procurement policies or reinvent PPSPs.
- Plan will affect other management programs and many of the principles applied can be used with those programs, but do so under separate cover.

EXAMPLES:

a. Spillover will affect job descriptions. AO concept will organize current work and create new work which should be included on new job descriptions and in performance appraisals.

b. OMP may uncover errors in other plans and SOPs which require action.

REMEMBER, YOUR GOAL IS TO COMPLETE AN OMP.

Step-Down Planning

- Technique to determine what information/action is needed to accomplish a task.
- Pose in the form of a question: I can complete/understand A, if and only if I do/know X, Y, and Z. When X, Y, and Z can no longer be divided, then the plan is complete.
- When the plan is completed, the critical path method can be used to schedule the work.
- This method saves time by focusing the work effort on the essentials.

Brainstorming

- Technique to define problems and determine alternatives to solving those problems.
- REFER to the rules.
- If time permits, select an example and work it through.

• Does not remove the need to make a decision, it is just a technique to gather additional information.

Suggested Sequence for Preparing the OMP

• Determine objectives.

a. Brainstorming session - decide which programs should be prepared first, and the sequence in which they will be prepared. Step-down and critical path method helpful for this part.

b. Assign an action officer to prepare the section(s). The action officer will review all the regulations and other references which apply to that section, prepare a draft of the objectives for the section, if applicable, and identify the existing conditions.

c. Brainstorming session - The action officer reports on the results of the literature review and explains the draft objectives. If the objectives are acceptable, the session focuses upon the identification of problems and management actions to overcome those problems. A step-down plan may be prepared at this stage and a schedule developed using the critical path method.

d. The action officer prepares a rough draft of the section.

e. Brainstorming session - review and discussion of the rough draft.

f. The action officer modifies the section and prepares the draft.

g. Brainstorming session - review of the draft.

h. Steps 2 through 7 are continued until all the sections are completed. The OMP is then reviewed during a final brainstorming session before submitting to the area office.

i. Prepare final OMP when comments from the review of the draft are received.

• Pitfalls

a. General writing, do not worry about wording the first time through; get the concepts down. Remember it is easier to edit than create.

b. Beware boilerplating.

c. Continuity (avoid 1 hour here and there).

d. Do not get bogged down on details during drafts.

e. Be realistic.

f. Recognize errors will be there; e.g., contracts, and that first OMP is a framework for future plans.

g. Avoid the "busyness" syndrome.

• Objectives: At the conclusion of the training, project representatives will be familiar with:

a. The purpose for the OMP.

b. The criteria used to evaluate the effectiveness of each OMP.

c. The following concepts required in CEORHOR-R-OMPs.

(1) Management by objective.

(2) Primary and support programs.

(3) Action officers.

(4) Management coordination.

(5) Work plans.

(6) SOPs.

d. The scope of the OMP and the effects of the OMP on other management programs.

f. Techniques for preparing the OMP.

g. Techniques to implement the OMP.

EVALUATION CRITERIA: 85 percent of the projects attending will have draft OMPs submitted by the end of the first quarter of FY 89.

1005 - 1100/1110 - 1200 IMPLEMENTATION

- You do not have to wait for approval to implement portions of the OMP.
- The sooner begun, the better, because problems can be identified before too much effort is expended.
- Project staff need to understand what the OMP is and how to use it; how the processes mesh together to get work done, that the emphasis is upon systems approaches, not native intelligence.
- Promote thinking in terms of management by objectives by informing staff of where the project is going and why.
- Probably the best way to implement is to break into discrete elements and have a training session to be attended by all employees. Give the employees time to "digest" and use the new procedures before introducing a new element. The key is for the chain of command to insist upon use of the new procedures to prevent employees from returning to the business-as-usual mode. We are creatures of habit. Management meetings are a good place to conduct sessions.
- Key to success is accountability.
    a. Job Board.
    b. Get AO involved, assign work, set priorities, and hold them to it.
    c. Clearly identify the lines of responsibility (who assigns priorities, schedules work, determines work to be done, coordinates actions) conduct inspections.
    d. Caution: It takes time to develop these skills, and too much frustration can lead to resentment.
- Periodically review progress on the new procedures with employees to "fine tune". Identify the process for identifying and correcting problems that are identified. How is new information entered into the system? Management meetings are a good place to address problems.
- Remember that other programs are ongoing. Do not manage the Park and Natural Resources Management Programs in a vacuum.