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RECNOTES
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The Regional Recreation Demand Model — a tool for decisionmaking

by
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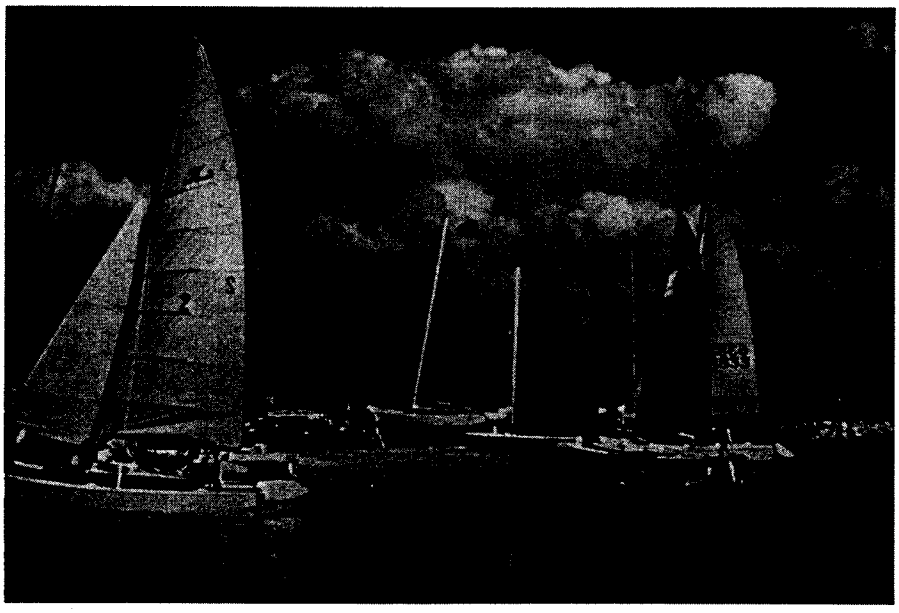
Interest in predicting the response of Corps recreation use to different recreation demand factors dates back at least to the 1970s energy crisis and speculation as to its impact on visitation. Unfortunately, explaining how recreation use both relates and responds to changes in costs, natural resources, and other demand considerations was limited by our understanding of where project visitors came from and exactly what they did when they got there. This situation has greatly improved with the development of more reliable and defensible use estimation methods.

Among these methods is the Regional Recreation Demand Model (RRDM). The RRDM, which was initiated during fiscal year (FY) 1990 under the Natural Resources Research Program, establishes the relationship between Corps recreation use and natural resource and other factors that influence or determine use (Henderson 1990, 1992). Establishing those relationships enables the RRDM to be used as a decision-making tool for evaluating the impact of operations and planning decisions on recreation and its economic benefits. During FY 1993, work was completed on a draft RRDM, and the model is summarized and discussed here.



The demand for water-based recreation is influenced by the size and fluctuation of the recreation pool

The RRDM establishes the relationship between recreation use and four categories of factors that influence recreation demand. The theory underlying RRDM is that

Day use or camping visits =
Natural resource characteristics
+ User characteristics
+ Availability of substitutes for recreation
+ Project facilities

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The RRDM, a regional demand model, is different from previously developed benefit models. Benefit models use visitation survey data (O'Keefe 1985) to evaluate changes at the single-project level, but do not consider recreation alternatives. An important element in regional demand models, on the other hand, is their ability to evaluate the influence of substitute alternatives and to determine how visitation will be redistributed among multiple projects in a region with different operational and planning changes. This interaction between projects and the inclusion of recreation substitutes is the main difference between regional demand models and single-site benefit models.

Once the above relationships have been established and quantified, the model can answer "what if" questions. Issues that could potentially be addressed by the model include

- Changes in operational schemes that alter water levels.
- Supply changes in recreation opportunities, ranging from closure of facilities to construction of new reservoirs.
- Changes in regional demographics, for example, aging and ethnicity.

The incentive to develop RRDM came from different Corps planning and operations elements charged with addressing these types of questions. A major impetus came during the droughts of 1989 and 1990, when, because of the inability of Corps Natural Resource personnel to quantify recreation use and associated economic benefits, recreation was often not considered in water allocation decisions.

The RRDM was developed under an interagency agreement through the Cooperative State Research Service, U.S. Department of Agriculture. Three resource economists worked together in developing the RRDM: Dr. Frank Ward of New Mexico State University, Dr. John Loomis of the University of California-Davis (now of Colorado State University), and Dr. Richard Ready of the University of Kentucky.

Three Corps districts were selected for this developmental effort: Sacramento, Nashville, and Little Rock. This selection was based on the fact that, for these districts, recreation use data were available. Also, the districts' geographical diversity allowed for the assessment of regional differences in recreation demand.

This article summarizes the RRDM work unit through FY 1993 in terms of the RRDM modeling process. In addition, an initial interpretation of RRDM is provided, as well as thoughts on applying the model.

Modeling process

Based on published literature and the expertise of recreation benefit modelers, recreation visits—either camping or day use—are related to four categories of factors. Therefore, the first step in the modeling process was to identify explanatory (or independent) variables within the four categories that could be derived from existing data sources.

Next, the relationship between the dependent variable (day use and camping visits) and the independent variables was established. Some of the original variables proved to be insignificant and were eliminated, leaving the 23 variables presented in Table 1.

The independent variables are categorized as natural resource characteristics, demographic characteristics, substitute variables, and facility characteristics. The first category, natural resource characteristics, represents the project's water and land resources and water management practices. The second variable category includes demographic variables that test for possible differences in recreation demand resulting from differences in age, income, proximity to the recreation site, ethnicity, and unemployment in the visitor's home county.

The third category includes substitute variables that address the assumptions that recreation at Corps projects is chosen from a range of alternatives and that the decision to visit Corps projects is affected by quality and quantity of available recreation opportunities. The fourth category includes variables for fisheries, water quality, and recreational facilities.

With the variables identified, the required data were obtained or calculated. (The data source for each variable is given in Table 1.) Among the most important data were the zip codes collected with the recreation use estimation surveys conducted several years ago. The zip codes establish the county where the day use and camping visits originate, information which is used to calculate distances traveled by visitors to the reservoirs. As a travel cost benefit model, these distances are used to calculate visitor travel and time costs, which are then used to establish benefits.

Developing information on all the reasonable substitutes proved to be a formidable task, involving collecting data from state, local, and private operating interests. These variables are the distance from the county of origin to oceans or Great Lakes, and the total surface acres and distances

Table 1. Variables and Data Sources

Variable	Purpose	Data/Calculation	Data Source
Dependent			
Camping visits and day use visits	Number of camping and day use visits from zip code county of origin data	Camping recreation days derived from percentages reported in NRMS. (Day use rec days = Total rec days - Camping rec days)	NRMS data set, onsite visitation surveys
Independent			
Natural resource characteristics			
Percentage of reservoir surface area full at project	Percentage of reservoir available during recreation season	Surface area weighted by monthly visitation ÷ Surface area at recreation pool	NRMS, District
Coefficient of variation in recreation pool level (COV)	Recreation pool level fluctuation	Standard deviation/Mean of monthly surface acres during recreation season	NRMS, District
Average reservoir surface at project	Average surface acres available for recreation season	Area-capacity tables and elevation readings	NRMS; District area-capacity tables and daily elevation readings; daily surface acre readings
Miles of shoreline at project	Number of shore miles around reservoir at recreation pool level	Not applicable[1]	NRMS
Demographic characteristics			
Population at origin county	Demand for recreation at origin county	Not applicable	*Census of Population*
Price per trip from county of origin to project	Demand for recreation at origin county	Cost of time + Travel costs (vehicle cost × miles from origin)	NRMS; Department of Transportation; software "PCMiler"
Income at origin county	Demand for recreation at origin county	Not applicable	Regional Economic Information System, Bureau of Economic Analysis
Unemployment rate at origin county	Demand for recreation at origin county	Not applicable	*Census of Population*, general economic and social characteristics
Percent of origin county's population under 18 years of age	Demand for recreation at origin county	Not applicable	Department of Commerce, Regional Economic Information System
Percent of origin county's population over 65 years of age	Demand for recreation at origin county	Not applicable	Department of Commerce, Regional Economic Information System
Percent of origin county's population Black or Hispanic	Demand for recreation at origin county	Not applicable	*Census of Population*, general population characteristics
Substitutes			
Miles to ocean or Great Lakes from county of origin	Large water body recreation alternatives	Not applicable	Software "PCMiler"
Substitute index for reservoirs	Water-based recreation alternatives	Sum of all substitute lakes and reservoirs with surface area greater than 500 acres/Distance from county of origin	State and local offices of chief of fisheries, parks and wildlife, natural resources, etc.
Facility characteristics			
Fish productivity, morphoedaphic index (MEI)	Fishing quality at project	Total dissolved solids (TDS)/Mean depth	TDS from District; mean depth from NRMS
Total dissolved solids (ppm) at project	Water quality at project	Total dissolved solids	Secchi disc readings and TDS from District
Number of game fish species at project	Fishing quality at project	Not applicable	Annually published Corps Project facts
Number of picnic tables at project	Recreation facilities available at project	Not applicable	NRMS
Number of campsites at project	Recreation facilities available at project	Not applicable	NRMS
Number of parking spaces	Recreation facilities available at project	Not applicable	NRMS
Number of boat launch lanes	Recreation facilities available at project	Not applicable	NRMS
Number of beaches	Recreation facilities available at project	Not applicable	NRMS
Number of marinas	Recreation facilities available at project	Not applicable	NRMS
Number of boat docks	Recreation facilities available at project	Not applicable	NRMS

[1] No calculations necessary.

to all lakes and reservoirs over 500 acres. The possible importance of Great Lakes and coastal sites as recreation destinations was tested by including these variables in the substitute group.

The fishing quality variables were the Morphoedaphic Index (MEI), which measures fishery productivity, the number of game fish species, and the standing fish crop. The MEI is calculated as the ratio of total dissolved solids (TDS) to mean depth, while the other two variables are obtained from the project and state fishery agencies.

Other data collected include facility information (for example, numbers of campsites) from the Natural Resources Management System (NRMS) and demographic data for the visitors' home county from the Census data (that is, age breakdowns, ethnic make-up, income). The resulting RRDM database was used to produce four day use and camping specifications of the model: three regional specifications and one specification that combined data for all three regions.

Model results

Travel cost models take the form of regression models, with the day use and camping trips being explained, caused, or influenced by the quantitative relationship between visits and some of the 23 explanatory variables. The results of the four specifications are summarized in Table 2 (Day Use) and Table 3 (Camping).

These travel cost specifications incorporate logarithmically transformed values for many of the variables, so that the numerical value of each variable's coefficient is not readily interpretable. To facilitate discussion, the strength and magnitude of the coefficients have been classified in the following manner. The direction of the relationship is shown by a "plus" sign for a positive relationship (that is, as the variable increases, visitation also increases) or a "minus" sign for a negative relationship (that is, as the variable increases, visitation decreases).

The strength or magnitude of the relationship is shown by the number of plus or minus signs. The more symbols, the greater the effect on visitation. Note the differences in the strength of relationships between variables in the regional specifications, as well as those variables that are important in one district but not in another.

Natural resource characteristics. Project water management strategies influence visitation, as demonstrated by the fact that two of the most important considerations influencing visitation are the size of the reservoir pool and fluctuations in the pool level during the recreation season. The "average reservoir surface acres" (the surface area of a reservoir at the summer pool level) positively affects visitation by both campers and day users; the larger the reservoir, the more visitation. For day users, surface acres are increasingly more important to the Little Rock, Nashville, and Sacramento Districts.

Variables addressing reservoir water management strategies are percentage of reservoir capacity used at the project ("percentage of reservoir") and the amount of fluctuation of the reservoir pool during the recreation season, measured by the coefficient of variation (COV). Day users and campers in the Sacramento region are strongly influenced by the percentage of the reservoir full during the recreation season, but less so by the fluctuation of the reservoir. In the Little Rock and Nashville Districts, camping has a moderate negative relationship to water fluctuations during the recreation season.

Demographic variables. "Price per trip" represents the visitor's cost to use the lake and is calculated based on vehicle operating costs multiplied by the distance from the county of origin plus the value of the visitor's time. Visitors to Nashville projects are less sensitive to travel costs, while Sacramento and Little Rock visitors are more so.

Another variable affecting ability to pay is the user's income, measured as per capita income at the county of origin. Income did not significantly influence camping at Little Rock projects and was only moderately important for Nashville, Sacramento, and the three regions combined. In Nashville, day use visitation showed a stronger relationship to income while the other regions were only moderately influenced. This could mean that Nashville project users are less sensitive to increases in cost to use the projects.

The larger the origin county's population, the larger the pool of potential visitors. All regions demonstrated at least a moderate relationship between county population and visitation, with camping at Little Rock and Sacramento showing a strong relationship.

The model's Nashville specifications contain two demographic variables that are not significant in the other regions. Day use visitation is negatively affected by the variables "percent over 65" and "percent Black or Hispanic," while camping is negatively affected by the "percent Black or Hispanic." These results can be interpreted as meaning that counties with higher nonwhite or older

Table 2. Classed Coefficients for Day Use Visits				
Variable Name	Day Use			
	Three Districts	Sacramento	Little Rock	Nashville
Natural Resource Characteristics				
Percentage of reservoir	+++	+++		
Coefficient of variation - reservoir	-	-		-
Average reservoir surface	++	++	+	+++
Miles of shoreline at project	-			
Demographics				
Population at origin county	++	++	++	++
Price per trip, origin	- - -	- - -	- - -	- -
Income at county origin	++	++	++	+++
Unemployment rate at county origin	- -			
Percent under 18 years of age			++	
Percent over 65 years of age				-
Percent Black or Hispanic	-			-
Substitutes				
Miles to ocean or Great Lakes	++			+++
Substitute reservoir acres	- -	- -	- - -	- -
Facilities				
Fish productivity	++	++		++
Total dissolved solids, ppm				
Number game fish species	++	++	++	
Number picnic tables	+	+	+	+
Number campsites				
Number parking spaces	++	++	+	+
Number boat launch lanes	+	++	+	+
Number beaches	+	++	+	+
Number of marinas	++	+	+	++
Number of boat docks	+		+	+

+++ = Strong positive contribution.
++ = Moderate positive contribution.
+ = Low positive contribution.
- = Low negative contribution.
- - = Moderate negative contribution.
- - - = Strong negative contribution.

populations generate lower demand for recreation at Nashville projects.

Substitutes. The inclusion of substitutes recognizes the fact that recreation demand can be satisfied at sites other than those operated by the Corps. As expected, the more substitute reservoir acres, the less visitation at Corps projects. Little Rock visitors appear to be somewhat indifferent to camping substitutes, Sacramento is strongly influenced by them, and Nashville is intermediate. The response by day use visitors to substitute reservoirs is somewhat different in that Little Rock visitors are strongly influenced by substitutes, while the other two regions are only moderately so, suggesting possible differences in quality or number of substitutes.

One would expect that the "distance to ocean or Great Lakes" variable would act as a recreation substitute for both camping and day use at Sacramento projects, but the variable is insignificant. The high negative relationship with Little Rock camping may possibly be explained by the fact that campers in the Little Rock region might prefer trips to the ocean or Great Lakes than to Corps projects. The variable's high positive contribution to Nashville day use would appear to be an anomaly and cannot be explained at present.

Facilities. This last category of variables measures the quality of the recreation experience and the attraction of a given reservoir to visitors. This category can be further broken down into fisheries and recreational facilities, as

Table 3. Classed Coefficients for Camping Visits				
Variable Name	Camping			
	Three Districts	Sacramento	Little Rock	Nashville
Natural Resource Characteristics				
Percentage of reservoir		+++		
Coefficient of variation - reservoir	- -	-	- -	- -
Average reservoir surface	+	+	+	+
Miles of shoreline at project	- -			
Demographics				
Population at origin county	+	+++	+++	+
Price per trip, origin	- - -	- - -	- - -	- -
Income at county origin	+	+		+
Unemployment rate at county origin			- -	
Percent under 18 years of age				
Percent over 65 years of age				
Percent Black or Hispanic				-
Substitutes				
Miles to ocean or Great Lakes			- - -	
Substitute reservoir acres	- - -	- - -	-	- -
Facilities				
Fish productivity	+	+++		+
Total dissolved solids, ppm	- -	- - -		
Number game fish species	+++			
Number picnic tables		+++		
Number campsites	+	+	+	+
Number parking spaces				
Number boat launch lanes	+	+++	+	+
Number beaches	+	+	+	+
Number of marinas	+	+	+	+
Number of boat docks			+	+

+++ = Strong positive contribution.
++ = Moderate positive contribution.
+ = Low positive contribution.
- = Low negative contribution.
- - = Moderate negative contribution.
- - - = Strong negative contribution.

discussed in the following paragraphs.

● *Fisheries.* The quality of sport fishery is a matter of great concern at many Corps reservoirs, both as an activity for day users and as a primary reason for camping at Corps projects. With as much attention as is paid to fisheries by different districts and projects, one would expect MEI, the fish productivity measure, to be more important in predicting visitation than the model indicates. However, fishery productivity is only moderately important to day use visitors in the Sacramento and Nashville Districts and is insignificant for Little Rock day users. For campers, fish productivity plays a strong role in attracting visitors to the Sacramento region and moderately so for Nashville.

The other measure of sport fish quality, number of game species, showed a moderate relationship with day use visitation for the Sacramento and Little Rock regions, while a strong relationship exists between this variable and camping.

● *Recreational facilities.* The last group of variables includes such things as campsites, beaches, parking spaces, and launch lanes. They were included under the assumption that they could be good predictors of visitation. This is not necessarily the case because the larger the project, the more facilities on

hand. Also, many facilities were built without regard to actual demand. Nevertheless, facilities were more important to the Sacramento projects, being moderately related to visits, while only a low relationship was observed at the Little Rock and Nashville regions. The number of boat docks, used to indicate the extent of private development, is important for Nashville and Little Rock day users.

For campers, the number of campsites contributes very little to predicting visitation, suggesting that these facilities are overbuilt in number. Launch lanes, beaches, and marinas are also more important in the Sacramento District than in either Little Rock or Nashville.

How can the RRDM be used?

As is well known, past Corps decision-making procedures have been constrained by an inability to evaluate the impacts of planning and operations decisions on recreation visitation and economic benefits. If these impacts could be assessed beforehand, such as evaluating the trade-offs between recreation and other water resource benefits, recreation decision-making could be vastly improved.

The RRDM can be used to estimate the effects on visitation as the result of changes in the RRDM variables. Applications can address issues such as those described below.

- *Effects of changes in reservoir's water operations, either through increasing or decreasing pool level fluctuations or pool size.*

Few operational changes occur without altering the size of the pool or the degree of water level fluctuation. The importance of these management decisions is shown by the behavior of the natural resource characteristics.

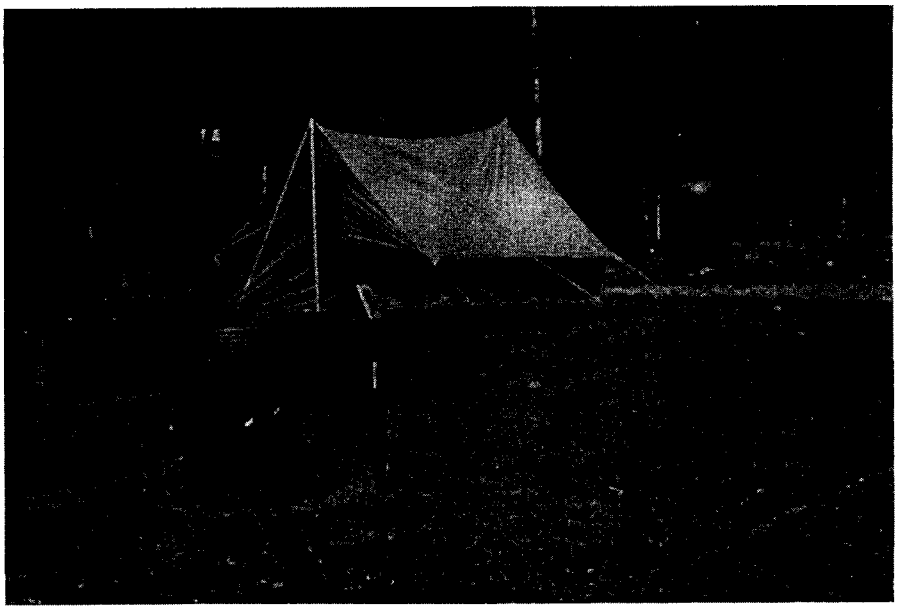
For example, visitation to projects in the Sacramento District is more sensitive to changes in both the "percentage of reservoir surface" and the COV. As a result, proposed changes in operations in Sacramento should be evaluated in light of the effects of changes in recreation pool levels because of the strong, positive relationship between visitation and the amount of water. In the Little Rock and Nashville Districts, the important consideration is pool level fluctuations, since the model demonstrates a negative relationship between the COV (pool level fluctuations) and camping.

Changes in reservoir size, measured by "average reservoir surface acres," occur as a result of almost any planning or operational change. As the model shows, the magnitude of these impacts differs between campers and day users. To better understand the effects of these changes at other projects or districts, the model can be specified for either regional or combined regional analysis.

- *Evaluating projected changes in demographic characteristics.*

Corps planners are becoming increasingly concerned about demographic trends that may change the needs or expectations for different recreation opportunities. These changes could likely result from different ethnic compositions, population aging, or changes in income and the ability to bear increased costs.

The Nashville day use specification exemplifies these planning issues. The strong relationship between income and day use indicates that, if nationwide incomes are projected to increase, there will be a greater increase in visitation to Nashville projects. Similarly, as shown in Table 2, the slightly negative relationship between ethnicity and elderly make-up and day use visitation in Nashville would result in greater decreases in visitation than for the other districts.



The number of available camping facilities is a weak predictor of camping visitation, compared to availability of launch lanes and beaches

Fishing quality is an important predictor for day-use visitation in the Sacramento and Nashville Districts and for camping visitation in the Sacramento District

- *Evaluating the need for and benefits of additional facilities.*

Single-project applications of the RRDM could evaluate visitation and benefit changes resulting from the rehabilitation of existing facilities or new facility development. For example, although campsites, picnic tables, and the like are important inducements to both day users and campers, these facilities are much more important in the Sacramento region than in the other two areas.

A word of caution is in order, however. One would expect that the extent of developed recreational facilities should be correlated with the visitation; however, except for Sacramento, facilities are poor predictors of demand. This occurs for two reasons. First, recreation facilities are highly correlated with each other. That is, the larger the project, the more facilities were built, and there is an obvious relationship between picnic tables, parking spaces, and launch lanes. The second reason is that many projects were overbuilt; that is, high numbers of facilities were built with little regard for demand. To overcome these problems, a two-stage estimation process has been incorporated into the model to remove the effects of these interrelationships.

- *Evaluating the impacts of new projects.*

The RRDM can be used to show visitation changes and use redistribution as a result of alternative recreation opportunities in the form of new large-scale reservoirs. Although new Corps project construction is not foreseen at present, this does not mean that state and local agencies are under the same constraints. The RRDM can be used at the project and district levels to evaluate the impact of new reservoirs, as well as to assist state agencies and others in evaluating the recreation potential and impact of new construction.

Application considerations for the RRDM

So far, discussion has been based on the three regional and combined specifications of the RRDM, but the model is intended to be applied to other districts as well, provided that two requirements can be met. These requirements are, first, the availability of recreation use surveys (which provide the required zip code origin data), and second, the comparability of regional recreation demand conditions. Using the model for other regions assumes that natural resource, demographic, substitute, and facility conditions are similar enough that the model will predict visits and benefits correctly.

Completion of the RRDM work unit

The RRDM work unit is to be completed during FY 1994. With the model specified, the RRDM now needs to be applied to questions at the district or project level to evaluate its usefulness as a decision-making tool. If planning or operations elements within your district are considering questions that you believe could be addressed by the RRDM, and zip code data are available, you may be able to use the RRDM to address these issues.

If you are interested in applying the RRDM to operations or planning questions in your district, contact Jim E. Henderson, CEWES-EN-R, (601) 634-3305, or (601) 634-3726, facsimile.

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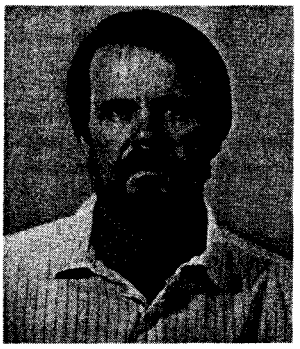

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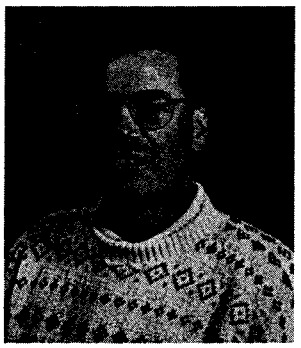

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Recreation policy letters

by Dave J. Wahus, Headquarters, USACE

The 1992 Recreation Policy Review, which was approved by the Assistant Secretary of the Army for Civil Works (ASA(CW)) on January 15, 1993, recommended over 50 policy changes. Some of these were implemented immediately, and others are being implemented as coordination can be completed. In any event, some changes are still being worked on. In order to keep track of the policies as they are issued, we started numbering policy letters issued on recreation issues. The following is a list of recreation policy letters that have been issued to date.

Recreation Policy Letter Number	Subject
93-01	Daily Drive-Throughs of State and Local Government Operated Areas (28 Jan 93)
93-02	Fee Equity at USACE Projects (14 Apr 93)
93-03	Revised Policy on the Sale of Alcoholic Beverages (31 Mar 93)
93-04	Private Exclusive Use of Corps Project Lands (31 Mar 93)
93-05	Policy on Transient Use (Hotels) (2 Mar 93)
93-06	Differential Fees (29 Mar 93)
93-07	Revisions to Park and Recreation Lease Form (23 Mar 93)
93-08	Revisions to Commercial Concession Lease Form (23 Mar 93)
93-09	Variable Pricing of Fee Campsites (21 Jun 93)
93-10	Free Campground Requirement Elimination (20 Dec 93)

One additional policy letter is being coordinated within Headquarters and the ASA(CW):

93-11	Golden Age Passport Fee

We plan to continue to use this numbering system on all future recreation policy letters. A periodic status report on them is distributed to all districts and divisions on CorpsMail. If you do not have all of the policy letters listed above, make a point of getting them. They directly impact what you do!

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NATURAL RESOURCES RESEARCH PROGRAM

This bulletin is published in accordance with AR 25-30. It has been prepared and distributed as one of the information dissemination functions of the Environmental Laboratory of the Waterways Experiment Station. It is primarily intended to be a forum whereby information pertaining to and resulting from the Corps of Engineers' nationwide Natural Resources Research Program can be rapidly and widely disseminated to Headquarters, and Division, District, and project offices as well as to other Federal agencies concerned with outdoor recreation. Local reproduction is authorized to satisfy additional requirements. Contributions of notes, news, reviews, or any other types of information are solicited from all sources and will be considered for publication so long as they are relevant to the theme of the Natural Resources Research Program, i.e., to improve the effectiveness and efficiency of the Corps in managing the natural resources while providing recreation opportunities at its water resources development projects. This bulletin will be issued on an irregular basis as dictated by the quantity and importance of information to be disseminated. The contents of this bulletin are not to be used for advertising, publication, or promotional purposes. Citation of trade names does not constitute an official endorsement or approval of the use of such commercial products. Communications are welcomed and should be addressed to the Environmental Laboratory, ATTN: J. L. Decell, U.S. Army Engineer Waterways Experiment Station (CEWES-EP-L), 3909 Halls Ferry Road, Vicksburg, MS 39180-6199, or call AC (601) 634-3494.

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HQUSACE Natural Resources Management Perspective

The Only Constant

Recently, I was finishing a long week of difficult work with a task force of six Corps team members developing a concept to take practices from the private sector and apply them to the Corps recreation program. We had reached that stage of the week where we were evaluating what we had done, how much more needed to be done, and most importantly, how our products would be received throughout the Natural Resources Management community.

Someone said that this is just one of the many things going on that we have to deal with. We joked that the old bromide "The only constant is change" couldn't be truer. Then, we listed some of the major changes that directly affect us. Obviously, the Clinton Administration has brought significant changes—the most notable of which is the "Reinventing Government" effort. President Clinton has also issued guidance on "Streamlining the Bureaucracy" to reduce the ratio of managers and supervisors to other personnel. And, it's no news to any of us that Corps reorganization plans are still alive. The list goes on.

Then, we talked about some of the efforts in which we are actively involved. There are the performance indicators, the business approach, the peer review program, the O&M study, the Interpretive Services and Outreach Program (ISOP), and the new legislative authorities from the Water Resources Development Act of 1992—the authority to accept contributions and to establish a Challenge Cost Share program, and the expansion of recreation fee by the Omnibus Budget Reconciliation Act of 1993.

As we talked, someone suggested that I should talk about some of these changes in a *RecNotes* article. So, I will. Of course, in this space I can't do justice to any of these topics. I will try to provide a brief note on the status of most. I'll skip the items for which my knowledge is limited, and those that will outdated by the time this reaches you.

- ***Reinventing Government.*** If you haven't picked up a copy of this highly readable book by Vice President Al Gore, you should. It's available from the Government Printing Office for $14 or from your local bookstore in a private sector printing for $9. Each Department has been tasked with a reinventing effort, so it's worth your money to get some insight on what we might see in the future. Some good ideas! No details yet.
- ***Performance indicators.*** While not a new effort, performance indicators for each major program in the operations arena are in place and are yielding results in increased efficiencies. Briefly, PIs represent methods that were established within a program to provide meaningful measures of effectiveness. They allow individual district and division managers to compare their unit's work with that of others. They can then concentrate their management efforts where their performance lags that of others throughout the Corps. The concept is "What gets measured, gets done." The business approach incorporates this concept.
- ***Business approach.*** Previous articles have mentioned this effort as one of the initiatives from the recently completed Recreation Policy Review. We are hard at work, developing a new approach to managing the Corps recreation program. We have consulted with private sector leaders in the recreation industry and other public providers of outdoor recreation. You should have seen draft material on measurable objectives, quality indices, and quality standards. I hope you took the time to provide the Task Force with comments. We are in the process of reaching agreement on what we are doing in the Corps' recreation program and what level of service we will provide.

One thing is clear: The project Operational Management Plan is the key to management. If your project is behind the curve on getting these 5-year management plans up and running, you are going to be handicapped in competing for resources in the not too distant future.

- ***Peer review.*** This concept has been several years in the development phase, but I expect it to start up in 1995. As I have mentioned in earlier articles, the peer review concept is one of sharing. A team of experienced natural resources people is formed and asked to visit selected districts. The team members

will review the district's program in a helping mode. They will make observations on policy compliance and innovative programs that have Corps-wide potential, and will suggest efficiency ideas based on their experience and observations.

- ***O&M study.*** The Corps Operations and Maintenance program is long overdue for modernization. For the past year, several teams have been reviewing the Corps' O&M program and have been preparing recommendations for improvement, in four areas: Standard Operating Procedures, Performance Measurement and Databases, Standard Organizational Structures, and Budget Procedures. This is an important effort that will produce significant proposals for change. Expect to see results in 1994, with additional changes being considered throughout the year.
- ***ISOP.*** We are taking a fresh look at the Corps' Interpretive program. A periodic theme (Environmental Education, currently) and a new concept of outreach are being instituted to encourage this country's increasingly diverse population to consider math and science careers. New materials and information on support capability will be distributed soon.
- ***Omnibus Budget Reconciliation Act of 1993.***
- ***Recreation user fees.*** Draft guidance on establishing and collecting fees for the use of day-use facilities has been circulated, and we are hard at work digesting the many comments and developing final guidance. From the extensive comments we received, it is clear that we all want this program to be a success. Final guidance on this new authority will be distributed in January 1994 and will be implemented at the beginning of the 1994 recreation season.
- ***Water Resources Development Act of 1992.***
- ***Contributions.*** We now have the authority to accept contributions of money, materials, and services. Guidance has been prepared and will be released early in 1994. Until that guidance is made available, we ask that this authority not be used.
- ***Challenge cost share.*** This new authority will allow us to develop a challenge cost share program that allows others to share O&M costs of Corps recreation and natural resources programs. Other land management agencies have developed very successful programs with similar authorities. Guidance on this authority will be available in the near future.

Summary

All of these efforts are aimed at helping the Corps do its mission as effectively as possible. My advice is to track these initiatives. Ask about them. Get hold of any drafts you can, read them, and provide comments. A significant number of the Natural Resources Management family are doing that. It really helps as we put these programs together, and when they do hit the street, you know that you've done your best to make them work.

I hope this brief summary has been helpful. There simply wasn't room for all the details.

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