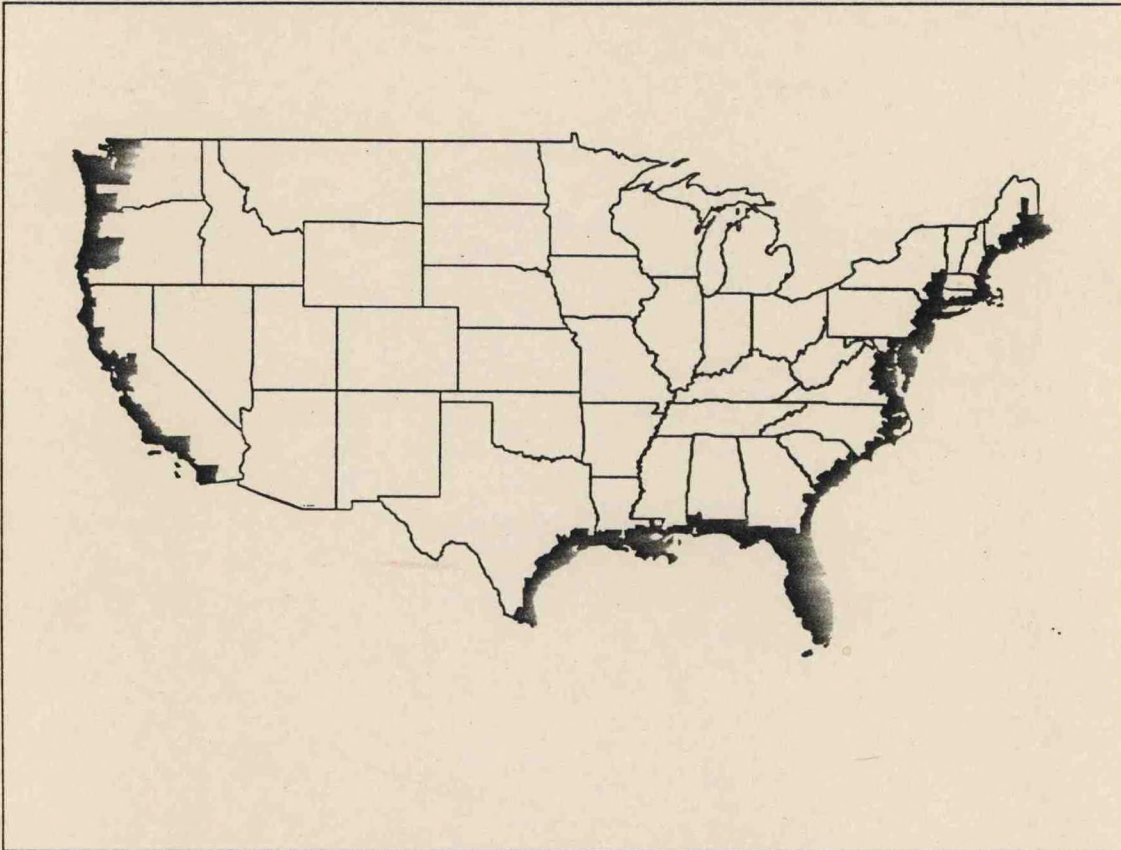


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Inventory and Value of Coastal Recreation

National Coastal Recreation Inventory Project



October 1989

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
and
U.S. DEPARTMENT OF AGRICULTURE
Forest Service



COASTAL AND OCEAN RESOURCE ECONOMICS PROGRAM

The Coastal and Ocean Resource Economics Program develops Nationwide data bases, products and analytical capabilities for conducting economic assessments of activities that directly affect or are affected by the health of the nation's coastal and oceanic resources. The program is conducted by the Strategic Assessment Branch (SAB) of NOAA's Office of Oceanography and Marine Assessment. Its major program elements are described below. Since 1985, the program has also co-sponsored a set of annual economic workshops with the Environmental Protection Agency and the Association of Environmental and Resource Economists to support its major program elements.

Natural Resource Economic Damage Assessments. Increased public concern over oil and hazardous substances spills and waste sites has led to the development of natural resource economic damage assessment methods and their implementation in support of litigation against the responsible parties. Beginning with the AMOCO CADIZ oil spill in 1978, SAB has been an active participant in this rapidly developing field of applied natural resource economics (see Measuring the Social Costs of Oil Spills: The Amoco Cadiz Study). SAB is currently helping to design and implement the governments claim for natural resource damages following the EXXON VALDEZ oil spill.

Inventory and Value of Coastal Recreation. Because outdoor recreation has been identified as the single largest category of benefit from the improvements in water quality, a program was developed to inventory and value coastal recreation. The first product of this program was a data base and report "Public Expenditures on Outdoor Recreation in the Coastal Areas of the U.S.A. (1986)." This led to a three year effort to develop an inventory of all publicly owned and/or managed recreation areas and facilities in the nation's coastal areas. The inventory contains information on over 27,000 areas managed by almost 1,900 local, state and federal agencies. Summaries for 21 states and 25 groups of estuaries, by county and level of government, are available in a recently published atlas titled "National Estuarine Inventory, Data Atlas: Public Recreation Facilities in Coastal Areas (1988)". In 1987, NOAA began to develop data bases to be used for estimating the demand for and value of coastal recreation. NOAA entered a cooperative agreement with the U.S.D.A. Forest Service to extend the Public Area Recreation Visitors Survey (PARVS) into coastal areas. To date, more than 12,000 interviews have been conducted at 40 public outdoor recreation sites in the coastal areas of the U.S.A. Summaries of this information are being included in a five volume set: "Socioeconomic Profiles of Recreationists at Public Outdoor Recreation Sites in Coastal Areas".

National Coastal Recreation Inventory Project (NCRIP). NCRIP is a cooperative research project between NOAA and the U.S.D.A. Forest Service. The project is designed to collect inventory data describing privately owned and operated outdoor recreation areas and facilities comparable to the inventory developed for public facilities. The purpose of this project is to provide for the first time a comprehensive national data base on both the public and private sector outdoor recreation supply in coastal areas.

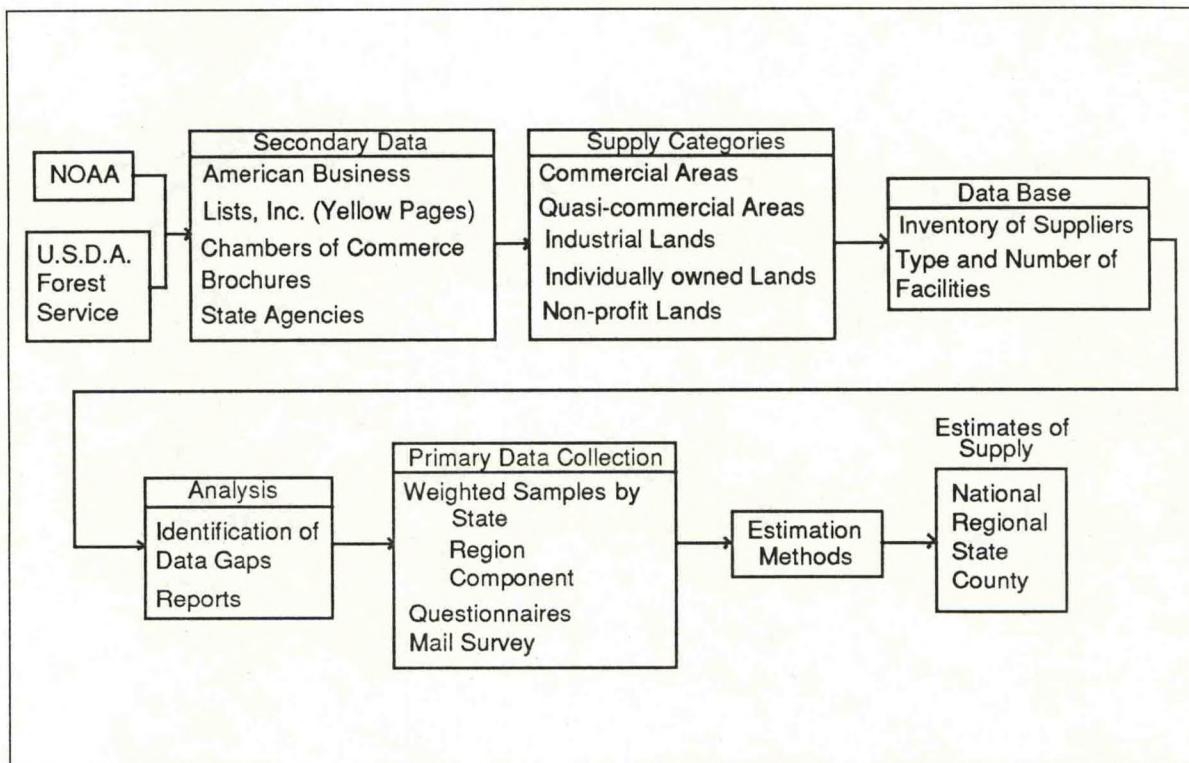
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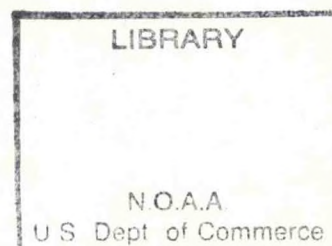
National Coastal Recreation Inventory Project

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National Ocean Service

Outdoor Recreation and Wilderness
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Introduction

One of the most challenging problems in resolving resource use conflicts in coastal areas is how to account effectively and equitably for the market and nonmarket values society places on them. Coastal and oceanic resources are under increasing demand, and are often misused and overused. How these resources are used and valued, and how conflicts between uses can be resolved, requires current and accurate information about the supply of and demand for the services they provide.

The demand for and supply of outdoor recreation resources are major coastal land use concerns. Some have projected that the leisure industry will be the nation's number one industry by the year 2000 (Mason, 1989). With the trend toward shorter, more frequent recreational trips, and the projection that over 70% of the U.S. population will live along the coast by the year 2000, coastal outdoor recreation opportunities will become a major factor in land use and resource allocation decisions into the 21st century. In response to these projections, the National Oceanic and Atmospheric Administration has begun integrated assessments of public and private outdoor recreation supply and demand.

Integrated Assessments

A consensus is forming among decisionmakers, researchers, and analysts, that the recreational values of coastal resources are far greater than previously thought, particularly with respect to other coastal ocean uses such as marine mining and commercial fishing. The Travel Industry Association reports that over three-fourths of travel trips in 1987 were taken for pleasure, and in 1988 weekend trips rose 11% over the previous year (Mason, 1989). Although this evidence indicates a growing demand for recreational travel, valuing recreational resources remains an inexact discipline. How great are the recreational values of the nation's coastal areas, what are their characteristics, and how should public policy consider them? Existing information is inadequate to resolve these issues.

In an effort to help answer these questions, NOAA has recently published a fourth Data Atlas in its National Estuarine Inventory Data Atlas series, "Public Recreation Facilities in Coastal Areas". (Strategic Assessment Branch, 1988). Over 1,900 local, state and federal agencies that manage 27,000 recreation areas were surveyed. Detailed summaries are provided for 21 coastal states and the District of Columbia by county and level of governments, plus 25 groups of estuaries.

However, facility inventory data are not by themselves either sufficient to value outdoor recreation areas, or establish whether they are in scarce or abundant supply. To develop additional information on the public demand for these resources, NOAA is conducting nationwide site surveys in cooperation with the USDA Forest Service's Public Area Recreation Visitors Survey (PARVS). Over 12,000 visitors to 40 state and federal sites have been interviewed. The information obtained is being used to estimate recreation demand and user values. The goal is to determine the values users place on specific types of sites described in the recent data atlas.

In addition, quantifying the public supply of coastal outdoor recreation provides only limited information towards valuing these resources. The recreation industry is present in almost every community, and contains both a public and private sector that supplies opportunities and services.

The National Coastal Recreation Inventory Project (NCRIP) has been designed to develop comparable information on the private sector supply of coastal outdoor recreation opportunities and services. NCRIP encompasses the same geographical area and is designed, within limits imposed by the private sector's composition, to be fully compatible and complementary to the public sector data base. The goal is to combine the NCRIP inventory with the public inventory to provide a comprehensive data base and assessment of outdoor recreation sites located in the 328 coastal counties of the contiguous U.S.A.

Inventory Components and Data Collection

Private sector coastal outdoor recreation supply represents a diversity of ownership goals and objectives, and supplies a wide range of outdoor recreation opportunities, satisfying demands for primitive to amenity-laden facilities. The inventory will include private supply in five categories of ownership, representing a variety of resource-based outdoor recreation. (Table 1).

TABLE 1. Categories of Private Coastal Outdoor Recreation
NCRIP Inventory

Category	Examples
Private Commercial	Marinas, Campgrounds, Charterboats
Private Semi-Commercial	Country clubs, Resorts
Private Industrial	Forest Industry, Electrical utilities
Private Non-Industrial	Farmers, other individual landowners
Private Non-Profit	Conservation lands, Nature preserves

NO GREAT LAKES
DATA.

If additional recreational services are offered by these supply categories, the services will be inventoried as well. Each observation within these categories will include, if available:

- 1) Natural attributes
- 2) Size in acreage
- 3) Access conditions
- 4) Type of recreation opportunity
- 5) Primary purpose for owning
- 6) Developed features
- 7) Services provided (if appropriate)

Should existing data sources prove inadequate, the more expensive primary data collection methods may be required. Because of the large number of private outdoor recreation suppliers in the nation's coastal areas, a sampling methodology rather than a census approach must be used.

One way to proceed is to develop samples stratified by types of facilities supplied and location. Samples drawn from the nationwide list of private suppliers can be used to estimate county, state, regional or national totals for these characteristics. Examples of these characteristics are shown in Table 2. An assessment of existing data is being conducted to determine the extent of primary data collection required.

Table 2. Characteristics to be Considered

Number of Areas Managed

- Total
- Adjacent to body of water
- Adjacent to tidal water
- Adjacent to ocean water

Acres

- Total
- Hunting
- Conservation
- Primarily developed

Facilities

- Boating
 - # of charter boats
 - # of cruise ships
 - # of ramps
 - # of slips
 - # of docks
- Other
 - # of fishing piers
 - # of campsites

Pilot Studies

Standard practice used by state agencies that have compiled recreation inventories has been to conduct a census or a sample survey of suppliers. Although expensive, these methods ensure comprehensive and consistent data. To assess whether existing or secondary data sources can be used without resorting to these more expensive data collection methods, two pilot state studies (North Carolina and Florida) are being conducted. These studies focus on searching for and analyzing existing data sources including: State Comprehensive Outdoor Recreation Plans; local chambers of commerce; state departments of natural resources; state boards of tourism; national directories and guides; tourism pamphlets; and existing inventories from various sources.

Private outdoor recreation areas, facilities, and sites identified through the above sources are being entered into a microcomputer data base to develop a list of all private outdoor recreation suppliers by type of area or facility provided. The data base will also include numbers of areas and facilities by type and location. Figure 1 shows the standard format used for each site record.

Data Base Entry Screens	
FACILITY TYPE: _____ YEAR OF DATA: _____ DESCRIBE ATTRACTION: _____ _____ SITE NAME: _____ ADDRESS: _____ CITY: _____ STATE: _____ ZIPCODE: _____ PHONE: _____ CONTACT: _____ TITLE: _____ WHEN IS SITE OPEN? _____ CHECK IF OPEN TO THE PUBLIC: FREE ____ FEE ____ DESCRIBE FEE STRUCTURE: _____ RESTRICTIONS TO ACCESS (i.e., MEMBERSHIP ONLY): _____ _____	
Screen 1: General Information	
TOTAL SITE ACREAGE: ____ LENGTH OF SHORELINE: ____ DISTANCE TO (ADJACENT =0): OCEAN= ____ BAY= ____ ESTUARY= ____ POND OR LAKE= ____ CAMPGROUNDS: NUMBER OF RV SITES: ____ TENT SITES: ____ PICNIC TABLES (DO NOT COUNT TABLES AT CAMPSITES): ____ _____ MARINAS: NUMBER OF SLIPS: ____ RAMPS/LANES: ____ FISHING PIERS: ____ AVG. LENGTH: ____ TRAILS: LENGTH IN MILES: ____ _____	
Screen 2: Site and Facility Information	

Figure 1. Microcomputer Data Entry Screens

The type and comprehensiveness of available data, and distribution of site locations are then analyzed and evaluated. Preliminary indications are that existing

data are inadequate to answer most questions about the supply status of nationwide private outdoor recreation resources. However, existing data do provide valuable information about the existence and location of some types of coastal recreation resources, such as numbers of marinas and campgrounds. Figures 2 and 3 show the county distribution of the number of marinas and campgrounds in Florida.

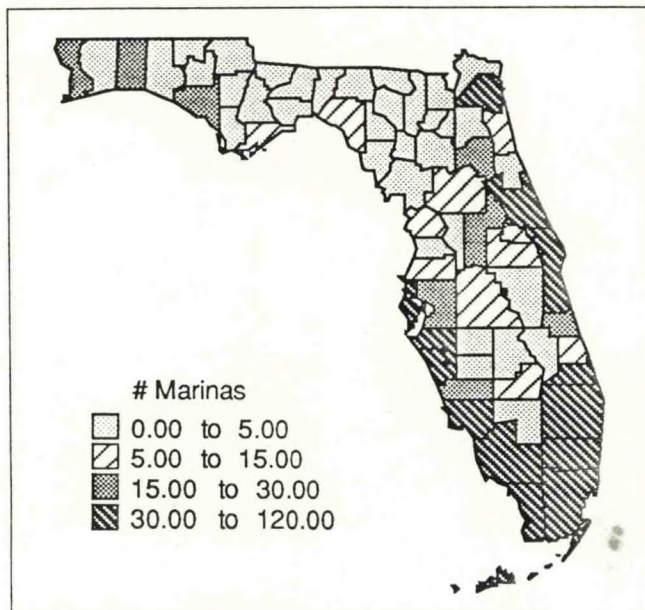


Figure 2. County Distribution of Marinas in Florida

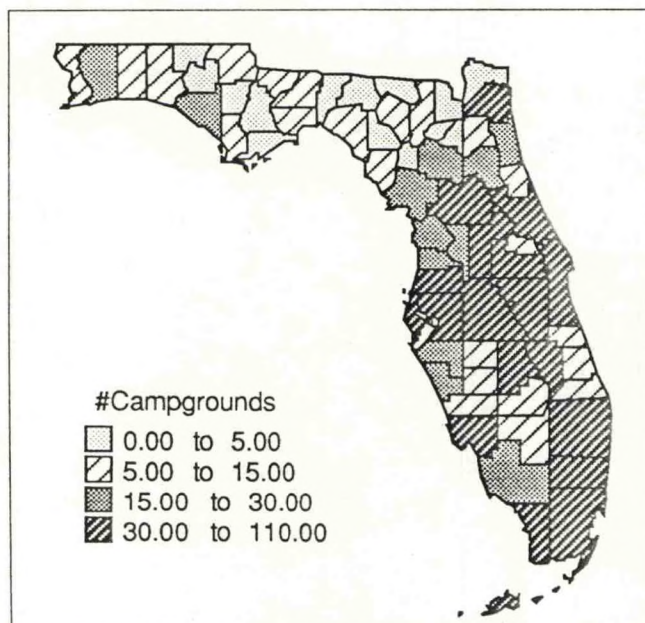


Figure 3. County Distribution of Campgrounds in Florida

Potential Applications

The information developed will be useful for a variety of purposes. For example, gaps in the distribution of private outdoor recreation resources can be identified as opportunities for local economic development in communities. This need is especially important in certain coastal areas, such as in Louisiana (Coleman, 1989). In addition, the current status and roles of the public and private sectors can be examined to reveal potential opportunities for public-private cooperation.

Once the demand data are available, following completion of the Public Area Recreation Visitors Survey, the integrated supply and demand database can yield important answers to the questions of public use valuation of coastal outdoor recreation resources. This information could be used to guide public policy decisions regarding coastal land use allocation.

Schedule

Plans are to conduct the project in three phases. Phase one, which began in the spring of 1989, is to complete the pilot studies in the fall of 1989.

Phase two will be to develop the national secondary data base, based on the framework provided by the two-state prototype developed in Phase one. NOAA expects to complete Phase two by June, 1990.

Concurrent with Phase two, a pilot study to collect primary data in two states will be conducted. This pilot will include a sample from all five private supply categories (Table 1), and will determine if phase three will be conducted.

If a nationwide primary data collection effort is required, Phase three will commence in the fall of 1990. This effort will be completed in a series of questionnaire mailings to coastal regions to fill gaps in existing data. The data entry and editing process will be completed by fall, 1991, with the final data base ready for integration into NOAA's National Estuarine Inventory Data Atlas Series in the spring of 1992.

Summary

An objective of NOAA's Strategic Assessments Program is to organize and synthesize information and knowledge of important characteristics of the nation's coastal and oceanic regions, and to clearly communicate them to public and private decisionmakers and institutions.

The development of information on the private supply of recreation facilities as a part of NOAA's program to inventory and value coastal outdoor recreation resources will further enhance a national assessment capability. It will place comprehensive information on the distribution, characteristics and value of the Nation's outdoor marine recreation resource base into the hands of decisionmakers. Projections indicate that the coastal oceanic regions will sustain increasingly diverse demands on their resources, including demands for all types of outdoor recreation opportunities. Understanding the relationship of these demands will help establish geographical priorities for regulatory, environmental and economic planning. Ultimately, this understanding could aid in maximizing benefits for the nation, or in minimizing environmental damage from poor resource use management.

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