

As shown below, Type I offenses were also considered a problem by some surveyed rangers.

Rangers Reporting Type I Crimes as
Moderate to Very Great Problems

	<u>Number</u>	<u>Percent</u>
Burglary	458	38
Larceny	436	36
Assault	370	30
Robbery	298	25
Auto theft	216	18
Rape	76	6
Murder	48	4

NPS STATISTICS

Of the six agencies reviewed, only NPS accumulated nationwide statistics on criminal activity occurring on its lands. The schedule below shows NPS' reported statistics for Type I offenses between 1973 and 1975.

	<u>Summary of offenses known</u>		
	<u>1973</u>	<u>1974</u>	<u>1975</u>
Homicide	6	4	8
Rape	15	28	22
Robbery	17	16	27
Assault	121	181	176
Burglary	718	927	893
Larceny	4,292	3,978	4,168
Auto theft	86	137	198

NPS also collects data on other types of offenses, such as fraud, narcotics violations, drunkenness, and vandalism. In 1975 over 24,000 of these other types of offenses were reported to NPS headquarters by the various parks.

VISITS TO NATIONAL
RECREATION AREAS

Since the other agencies did not compile statistics on serious criminal activity, we learned about criminal activity through our visits to their recreation areas. The following are examples of the types of criminal activity occurring on recreation lands we visited:

- l a
- Incident reports and discussions with BLM personnel in California revealed cases of murder and mutilation; illicit drugs dropped by aircraft for pickup; paramilitary activities; and property destruction. In addition, BLM reported 24 homicides, 18 drug overdoses, 7 deaths from unknown causes, and 9 suicides in the California desert alone during 1974.
 - According to a Corps ranger at Allatoona Lake in Georgia, much of the crime problem, which includes theft, rape, and drug use, results from the nearby large urban center. Georgia State Crime Commission statistics showed a 110-percent increase in burglaries in Allatoona lakefront counties from 1972 to 1974.
 - At Pisgah National Forest in North Carolina, most law enforcement incidents involved disturbances and larcenies. However, incidents of homicide and assault have occurred. In one case a State Wildlife Protector was killed while issuing a citation for possession of an undersized fish. An FS officer was also assaulted by four juveniles in a scuffle that was caused by their failure to obtain a permit to enter one of the Forest's Wilderness Areas.
 - Increased criminal activity in the 1970s, according to Crab Orchard National Wildlife Refuge officials, has led to the establishment of an FWS police force at the refuge. In fiscal year 1975, Crab Orchard police reported 54 thefts, 1 rape, and 3 armed robbery cases to police agencies. Refuge personnel also investigated 75 other incidents.
 - . --Local law enforcement officers near TVA's Chickamauga Dam Reservation in Tennessee said that crime was a serious problem in that area. Public use areas and facilities around the lake attract many people, and crimes, including disorderly conduct, theft, and assault, have occurred.
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CHAPTER 3

LIMITED STATUTORY ENFORCEMENT AUTHORITY
AND INAPPLICABLE FEDERAL CRIMINAL STATUTES
HINDER FEDERAL VISITOR PROTECTION SERVICES

Criminal activity is a problem which affects visitors and administering agencies alike. Because of increasing visitor misconduct, all agencies have expanded their resource protection programs to include visitor protection. However, agency efforts in this area are handicapped by a network of limited and differing statutory authorizations. None of the statutes authorized the administering agencies to enforce all Federal laws governing criminal activity. As a result, at some recreation areas agency employees exceeded their agencies' express statutory enforcement authority by providing visitors with police services. At other recreation areas agency employees did not become involved in law enforcement activities concerning the protection of visitors or their property.

Another problem at many recreation areas is that Federal laws prohibiting misconduct against visitors or their property do not apply. These laws include the Assimilative Crimes Act and the Federal statutes which define the crimes of arson, assault, destruction of property, maiming, murder, manslaughter, rape, receiving stolen property, robbery, and burglary. ^{1/} Such crimes fall under State law, and visitors must, therefore, rely on State and local law enforcement officials for assistance.

^{1/}When the Federal criminal code has not specifically defined a particular crime, such as breach of the peace, the Assimilative Crimes Act adopts as Federal law for certain Federal lands the criminal code of the State where such land is situated. See 18 U.S.C. §§7, 81 (arson), 113 (assault), 114 (maiming), 661 (theft), 662 (receipt of stolen property), 1111 (murder), 1112 (manslaughter), 1113 (attempted murder or manslaughter), 1363 (destruction of property), 2031 (rape), 2032 (carnal knowledge of a female under 16), 2111 (robbery and burglary) (1970). See also Assimilative Crimes Act, 18 U.S.C. §§7, 13 (1970).

Recently, legislation relating to the enforcement powers of NPS and BLM was enacted. (See p. 25.) Although this legislation significantly expanded the authority of these agencies to furnish law enforcement services, it does little to improve their ability to provide visitor protection when no Federal visitor protection laws apply.

RECREATION AREA EMPLOYEES ENGAGED
IN LAW ENFORCEMENT ACTIVITIES NOT
EXPRESSLY AUTHORIZED BY FEDERAL
STATUTES

Many recreation area employees engaged in law enforcement activities not expressly authorized by their agencies' enforcement statute. ^{1/} These activities included carrying firearms for law enforcement purposes, making arrests for all types of criminal offenses, and conducting police operations as deputy sheriffs. These activities occurred because

- the agencies instructed employees to engage in them,
- the employees believed the powers could be implied from existing enforcement statutes, or
- action had to be taken against a growing crime problem.

Employees should be aware of several pitfalls when engaging in such activities.

- On much of the land administered by their agencies Federal laws prohibiting misconduct against visitors or their property do not apply.
- Many times when employees make arrests they do so as private citizens.
- When operating as deputy sheriffs, employees may run the risk of being found to have operated outside the

^{1/}Appendix I contains a comparative statement of Federal enforcement statutes which were in force at the time of our review as well as those which were introduced in or enacted by the 94th Congress authorizing law enforcement operations on visitor-oriented Federal lands.

scope of their employment should any suits arise or should they be injured.

ADMINISTERING AGENCY ENFORCEMENT
AUTHORITY IS LIMITED AND VARIED

We reviewed the enforcement statutes applicable during the 1976 summer season to NPS, FWS, BLM, FS, TVA, and the Corps of Engineers. Our basic finding was that the law enforcement tools (express statutory authority to arrest, investigate, obtain and execute warrants, and carry firearms) available to these agencies through the 1976 summer season were, without exception, inadequate to provide effective law enforcement services. 1/

The authorizing language of the agencies' statutes, unlike the enforcement statutes governing such agencies as the FBI, did not expressly permit agency personnel to carry ~~firearms~~ or make Federal felony and misdemeanor arrests for all Federal crimes. 2/ None had clear-cut statutory authority to enforce all Federal laws which prohibit misconduct against visitors or their property.

The statutory enforcement authority of the six administering agencies was not only limited in scope, but it also varied widely. For example, NPS and FS employees could enforce certain resource protection laws which relate to national parks and forests. Although the Congress has authorized these two agencies to arrest violators of these laws, it has not authorized the Corps of Engineers, even though the Corps has some of the same natural resources.

1/The Congress recently expanded the enforcement authority of NPS and BLM. These recent authorizations did not, however, govern NPS and BLM enforcement operations during the 1976 summer season. (See p. 25.)

2/Other Federal agencies which are also specifically authorized to carry firearms include the Defense Department, Bureau of Prisons, U.S. Marshals Service, Secret Service, Drug Enforcement Administration, State Department, Customs Service, Internal Revenue Service, General Services Administration, National Aeronautics and Space Administration, and Central Intelligence Agency.

The absence of express statutory authority has resulted in agency employees either enforcing only those laws and regulations clearly within their agency's enforcement jurisdiction or engaging in extensive enforcement activities not specifically authorized by their agencies' enforcement statutes.

Corps of Engineers

Corps rangers could issue citations for violations of regulations promulgated by the Secretary of the Army, arrest violators of regulations that relate to the collection of recreation fees, and arrest violators of certain laws pertaining to navigable waters. The Corps has strictly construed these enforcement authorizations and believes that general law enforcement is the responsibility of the FBI and State, county, and local enforcement agencies. Therefore, Corps policy does not permit rangers to carry firearms or engage in enforcement activities not expressly authorized by statute. However, some Corps rangers surveyed said they had made felony arrests for crimes against visitors or their property, and carried guns. In addition, some reported that they were deputy sheriffs.

BLM

BLM rangers were authorized to arrest violators of laws and regulations relating to the collection of recreation fees and the protection of wild horses and burros and certain natural resources. Like the Corps, BLM has strictly construed its enforcement authority and, as a general rule, did not permit its rangers to carry firearms (for law enforcement purposes) or engage in enforcement activities involving misconduct against visitors or their property. BLM's policy is to rely on other agencies to provide law enforcement services to visitors. However, we found that some BLM employees were carrying guns for law enforcement purposes and in some instances were deputy sheriffs.

TVA

TVA's employees lacked express statutory authority to carry firearms or conduct any law enforcement activity. However, TVA considers it the agency's responsibility to protect TVA resources and visitors to TVA land. Thus, TVA established an armed and uniformed force of Public Safety Service (PSS) officers to enforce both State and Federal criminal codes. Although PSS officers are considered employees of the United

States, many of these officers have also become city or county deputy sheriffs to conduct enforcement operations on Federal lands. The TVA Act, however, does not expressly authorize PSS officers to exercise the same powers as State sheriffs.

NPS

All NPS employees had statutory authority to enforce Federal laws and regulations relating to national forests and parks. Persons arrested for violating these laws and regulations had to be taken before a magistrate for trial. (A magistrate's trial jurisdiction is limited to misdemeanor cases.) Interior believes that a strict interpretation of this authorization would not permit NPS employees to make arrests for anything more than violations of misdemeanor laws and regulations that relate to the protection and management of the National Park System--much less permit the making of arrests for all Federal crimes. In this regard, the U.S. District Court for Wyoming recently ruled that arrest authority of NPS was limited to certain Federal misdemeanor offenses. According to the court, felony arrests made by NPS employees may be justified only on the basis of a private citizen's power to arrest for the crime involved. ^{1/}

Nevertheless, we found that many NPS rangers surveyed had made felony arrests for such crimes as murder, rape, larceny, and assault; carried guns for law enforcement purposes; and had procured at least one deputy sheriff's commission. These practices occurred because NPS, like TVA, considers visitor protection an NPS responsibility.

FWS

Except for enforcement activities directed toward enforcing FWS-issued regulations--which have some visitor protection aspects--Interior believes FWS relies on other law enforcement agencies for visitor protection. According to Interior, this policy evolved in part because the Congress has not authorized FWS to enforce "non-fish and wildlife resource protection-related crimes."

^{1/}United States v. Burns, Criminal No. CR-76-59B (D. Wyo., filed July 19, 1976) (NPS arrest authority under 16 U.S.C. 10 limited to misdemeanors). See p. 18 for a discussion of citizen's arrest powers.

We visited two FWS recreation areas. One had no employees involved in law enforcement and relied totally on other enforcement agencies for visitor protection services. The other FWS recreation area had four "police officers" who carried firearms and made arrests for felony and misdemeanor offenses involving misconduct against visitors and their property. Two of the "police officers" were also deputy sheriffs.

FS

Designated FS employees may "aid" States in the enforcement of their laws that relate to livestock, the prevention or detection of forest fires, and the protection of fish and game. Designated FS employees may also "aid" other Federal agencies, on request, in performing duties imposed on them by law. However, the statutes governing FS expressly authorize only the making of arrests for those violations of laws and regulations relating to the national forests which are triable by a U.S. magistrate (misdemeanor offenses).

The Department of Agriculture's position, however, is that certain FS employees "may conduct investigations, apprehend suspects, arrest persons in the act of [violating] Federal laws and regulations, and perform other enforcement activities." The Department also pointed out that FS employees carry weapons when necessary for self-protection and to protect others. Nevertheless, at five FS recreation areas visited, the prevailing practice was not to become involved in law enforcement activities concerning the protection of visitors and their property. Among the FS rangers surveyed, however, were some who said that they carried guns, were deputy sheriffs, and had made felony arrests involving misconduct against visitors or their property.

The following chart shows by agency the extent surveyed rangers carried guns, made arrests, or were deputy sheriffs during the fall 1975 through the summer 1976 recreation season.

<u>Agency</u>	<u>Percent of rangers carrying guns</u>	<u>Percent who made arrests for</u>		<u>Percent who were deputized</u>
		<u>Type I offenses</u>	<u>Type II and III offenses</u>	
NPS	81	20	39	23
FWS	80	6	15	24
BLM	8	(a)	(a)	(a)
FS	5	5	6	19
Corps	5	(a)	(a)	(a)

a/Less than 5 percent.

We surveyed over 1,600 rangers to ascertain what effect the presence of a gun had in confrontations and to determine their preferences for carrying a weapon. Of those responding

--534 said a gun's presence acted as a deterrent to crime;

--862 said a gun made it easier to handle serious situations such as making arrests;

--546 said having a gun made it easier to handle mild confrontations such as issuing warnings and citations;

--485 said they needed a gun to protect themselves from visitors; and

--438 said a gun was needed to protect visitors from other visitors.

Overall, 396 rangers (33 percent) responding to our questionnaire stated that they had guns available to them during their normal duty hours. Of these, 266 said they carried their guns at least half of the time when they went out on patrol, and 316 said they usually carried their guns when responding to calls for enforcement assistance.

Detrimental aspects of engaging in activities not expressly authorized by agency enforcement statutes

Merely issuing a firearm to a ranger or training him to perform law enforcement duties is not a sufficient basis for a ranger to assume that he can make arrests, use firearms, or become a deputy sheriff to enforce State laws.

Because the Congress may not have authorized him to make arrests for the crime involved, to carry or use weapons for law enforcement purposes, or to become a deputy sheriff,

--he may be acting outside the scope of his employment when he acts as a deputy sheriff;

--he may be acting as a private citizen when he makes felony arrests; and

--criminal activity for which he is making an arrest may not be a Federal offense.

Deputizations

Some Federal employees were using sheriff's deputizations to cope with criminal activity occurring on Federal land. The practice of Federal employees assuming the powers of a deputy sheriff presents a number of problems. For example, these employees wear uniforms identifying them as Federal--not State--employees, and in many States, these employees are subject to call by the sheriff, who may direct them to perform State policing functions beyond the geographical confines of Federal land.

In addition, the United States does not ordinarily enforce State laws. A limited express statutory exception to this general rule exists with respect to the enforcement authority of certain General Services Administration law enforcement officials and U.S. Marshals and their deputies. ^{1/} No similar express statutory authorizations exist for the

^{1/}While executing their Federal law enforcement responsibilities, these officials have express statutory authority to exercise the same powers as are exercised by sheriffs under State law.

administering agencies. This is not to imply, however, that arrests made by agency employees acting in their capacity as deputy sheriffs are invalid. The validity of such arrests is a matter appropriate for resolution under State and local laws governing the enforcement powers of deputy sheriffs.

When rangers take enforcement actions in a deputy sheriff's capacity, the question arises whether such employees would be found to be operating within the scope of their Federal employment, because no Federal statute specifically recognizes the propriety of Federal employees becoming deputy sheriffs. An unfavorable finding on this--whether the employee was within the scope of his/her Federal employment while acting as a deputy sheriff--would almost certainly mean that the employee involved would lack full entitlements under the Federal Employees Compensation Act in the event of injury or death and would lack protection under the Federal Tort Claims Act in the event of a false arrest suit.

In addition, Federal employees holding deputy sheriff's commissions can usually arrest for State crimes such as homicide, rape, and grand larceny, even though the Congress has not authorized them to arrest for similar offenses under the Federal criminal code. As a result, when employees obtain their enforcement powers from local sheriffs, these powers could be far greater than any expressly granted by the Congress.

Arrests and firearms

Generally, Federal law enforcement statutes conferring the power to arrest are narrowly construed. In interpreting enforcement statutes applicable to Federal employees, courts have required express statutory authority with respect to the Federal crimes for which the employees may make arrests. They have done so to guard against abuses of Federal police power and because of the Congress' role in distributing that power. The courts, therefore, have generally declined to create Federal police powers in the absence of specific statutory authority or to broaden an agency's statutory enforce-

ment authority by resorting to inference, implication, or by the presence of statutory obliqueness and ambiguity. 1/

When not expressly authorized to do so by statute, Federal officers usually have no greater power to make arrests than a private citizen. The right to make a citizen's arrest for a misdemeanor is generally confined to misdemeanors committed in the presence of the person making the arrest and is further restricted, in the absence of a State's citizen's arrest statute to the contrary, to misdemeanors involving a breach of the peace. However, if there exists express statutory authority, a Federal enforcement officer may arrest without warrant for any misdemeanor committed in his presence.

A Federal enforcement officer, if there exists appropriate statutory authority, may make a felony arrest without warrant when he has reasonable grounds to believe that a Federal felony has been committed. In the case of a citizen's arrest for a felony, however, the defense of an individual must ordinarily rest upon proof both of the actual commission of the felony and the existence of reasonable grounds for believing that the person arrested was the one who committed it. If no felony has been committed, a citizen's arrest without warrant may be invalid and may give rise to an action for damages, even though a police officer, acting under appropriate express statutory authority, might have been justified in making an arrest under similar circumstances. Moreover, the validity of a citizen's arrest is generally determined by the law of the State where the arrest took place.

1/See in this regard Alexander v. United States, 390 F. 2d 101 (5th Cir. 1968); United States v. Diamond, 471 F. 2d 771 (9th Cir. 1973); United States v. Bell, 294 F. Supp. 1314 (N.D. Ill. 1968); United States v. Moderacki, 280 F. Supp. 633 (D. Del. 1968); Garland v. Brown, 52 F. Supp. 401 (N.D. Tex. 1943); United States v. Jackson, 423 F. 2d 506 (9th Cir. 1970).

The enforcement statutes of the agencies administering Federal lands were not modeled in the image of the statutes defining the powers of the FBI, U.S. Marshals Service, and Secret Service. 1/ Clearly, the statutes applicable to the FBI, U.S. Marshals Service, and Secret Service include the authority to carry firearms and enforce all Federal laws governing the conduct of visitors.

A comparison of the latter authorizations with the statutes which governed NPS, TVA, FWS, BLM, FS, and the Corps showed that the enforcement authorizations applicable to the administering agencies could not clearly be said to have included the right to carry firearms for law enforcement purposes or the authority to enforce all Federal laws governing the conduct of visitors.

Overall, the statutory enforcement authority of the administering agencies was limited, where it existed, to making arrests for the violation of Federal misdemeanor laws relating to national parks and forests and laws relating to fish, wildlife, and natural resources, plus enforcing certain agency regulations. 2/ To conclude otherwise implies that the Congress expressly limited and defined the enforcement powers of agencies such as the FBI, but inferentially gave the administering agencies "carte blanche" enforcement powers on the lands they administer.

Broad law enforcement authority, in our view, should not be inferred from the fact that an agency administers land or from the fact that an agency may be governed by

1/Certain officers of the FBI, U.S. Marshals Service, and Secret Service have express statutory authority to carry firearms and make arrests for any offense against the United States committed in their presence, or for any felony cognizable under the laws of the United States if they have reasonable grounds to believe that the person to be arrested has committed or is committing a felony.

2/Certain administering agency employees are authorized to enforce recreation area regulations. Each administering agency and, in some cases, each recreation area, has issued its own rules and regulations treating the same types of conduct differently.

an ambiguously worded enforcement statute. We believe case law narrowly construing enforcement statutes and the existence of other Federal law enforcement statutes which are far more explicit than those that applied to the administering agencies support this view. We were therefore unable to conclude that any of the administering agencies had a sufficient Federal statutory basis for enforcing all Federal laws governing the conduct of visitors.

AT MANY RECREATION AREAS CRIMINAL
ACTIVITY AGAINST VISITORS OR THEIR
PROPERTY IS NOT A FEDERAL CRIME

The tools of law enforcement (statutory authority to arrest, carry firearms, etc.) available to the administering agencies were inadequate to enforce all Federal laws governing the conduct of visitors. Even if the Congress made these tools available to the administering agencies, their effective use would hinge on applicable Federal visitor protection laws to enforce. As previously stated, visitor protection laws include Federal statutes defining certain crimes and the Assimilative Crimes Act. ^{1/}

Presently, however, neither the Federal laws which prohibit misconduct against visitors or their property nor the Assimilative Crimes Act apply to many of the Government's recreation areas. For example, at places such as the Grand Canyon, misconduct against visitors or their property is not a Federal crime. Visitors must, therefore, rely on State and local officials since visitor misconduct on such lands falls only under State law. In addition, enforcement efforts are affected by the local enforcement agencies' willingness and ability to respond to reported criminal activity occurring on Federal land. Many rangers surveyed and local officials interviewed stated that local agencies were limited in their ability to become involved with enforcement needs at Federal recreation areas. The local agencies' limited involvement was due in part to a shortage of resources and the fact that their primary responsibility was to handle their own communities' law enforcement problems. Other rangers pointed out that often local agencies which could respond to requests for law enforcement assistance were located several hours away.

^{1/}See footnote, p. 10.

The inapplicability of Federal visitor protection laws is due in part to the three different jurisdictional statuses in which Federal land may be held: exclusive legislative jurisdiction, concurrent legislative jurisdiction, and proprietary interest only. In 1957, the Interdepartmental Committee for the Study of Jurisdiction over Federal Areas within the States undertook to clarify the meaning of these terms. 1/ A summary of its effort follows.

The term "exclusive legislative jurisdiction" refers to situations in which the Federal Government has, with certain minor exceptions, received all of the State's authority over the land. This type of jurisdiction may result from a reservation of jurisdiction by the United States, a cession of jurisdiction by a State, or by operation of Article I, section 8, clause 17 of the U.S. Constitution. 2/

The term "concurrent legislative jurisdiction" refers to situations in which a State has received or retained the right to exercise, concurrently with the Federal Government, authority over the land involved. This type of jurisdiction may result from either a retrocession of exclusive jurisdiction or a reservation of jurisdiction by the United States, or a cession of jurisdiction by a State.

The term "proprietary interest only" refers to situations in which the Federal Government has acquired title to land within a State but has not received any measure of the State's authority over the area. This does not mean that the United States holds proprietary land in the same way as a private landholder. To the contrary, the Congress

1/Report of the Interdepartmental Committee for the Study of Jurisdiction over Federal Areas Within the States, Jurisdiction over Federal Areas Within the States, A Text of the Law of Legislative Jurisdiction, Part II at 10-13 (1957).

2/"The Congress shall have power * * * to exercise exclusive Legislation * * * over such District * * * as may, by Cession of particular States, and the Acceptance of Congress, become the Seat of the Government of the United States, and to exercise like Authority over all places purchased by the Consent of the Legislature of the State in which the Same shall be, for the Erection of Forts, Magazines, Arsenals, dock-yards, and other needful Buildings."

possesses broad constitutional authority to make rules and regulations for all public lands regardless of whatever derivative legislative powers may have been granted the Federal Government when a State ceded title to the land. This is true regardless of the jurisdictional status in which the land is held. 1/

Where do Federal visitor protection laws apply?

Areas over which the Federal Government has acquired exclusive jurisdiction are subject to the entire Federal criminal code. Generally, States can neither define crimes nor punish for crimes committed on such land because misconduct on such land falls only under the Federal criminal code. Since Federal, not State, offenses are involved, Federal law enforcement officers, acting under appropriate statutory authority, may make arrests for crimes committed on this land.

On Federal lands held in a concurrent status, the criminal codes of the Federal Government and the State apply and enforcement officers of each, acting under appropriate statutory authority, may make arrests for offenses falling under their respective criminal codes.

Therefore, when persons engage in misconduct on lands over which the United States has exclusive or concurrent jurisdiction, authorized Federal officers may enforce all Federal laws governing visitor conduct because the Federal

1/The Property Clause of the Constitution provides that "Congress shall have Power to make all needful Rules and Regulations respecting the territory or other Property belonging to the United States." (U.S. Const. Art. IV §3, cl. 2.) And Article I, section 8, clause 18 of the Constitution provides that "The Congress shall have power * * * to make all laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department or Officers thereof." See Kleppe v. New Mexico, 426 U.S. 529 (1976). (The presence or absence of exclusive or concurrent jurisdiction has nothing to do with the Congress' powers under the Property Clause.)

criminal code, including those Federal criminal statutes prohibiting misconduct against visitors or their property, is fully applicable.

Much of the Government's land, however, is held in a proprietorial status and, under present law, the Federal statutes that directly criminalize misconduct against visitors or their property do not usually apply to proprietorial lands. The Assimilative Crimes Act also does not currently apply to proprietorial lands. On proprietorial lands, misconduct against visitors and their property is generally not a Federal crime but, instead, is a crime only under the governing State criminal code. 1/

On lands held proprietorially, therefore, the enforcement of laws prohibiting misconduct against visitors or their property is usually dependent upon State or local police forces and their willingness and ability to respond to criminal activity. Federal financial assistance might insure that States and localities would be better able to furnish law enforcement services on these lands. However, this is not an answer to the circumstance in which, in the absence of State or local police, immediate effective law enforcement measures are necessary to combat serious criminal activity against visitors.

A further complication is that the boundaries of jurisdictional areas may not be readily defined. This may, as shown below, confuse or even hamper law enforcement since an enforcement officer would have to be knowledgeable of both the jurisdictions and their boundaries in order to determine which laws were applicable and enforceable. Some recreation areas, like the Blue Ridge Parkway and Colonial National Historical Park, are composed of parcels of land held in each jurisdictional status. Comments from rangers surveyed at these two areas indicate how these mixed jurisdictions can affect law enforcement services. For example, one Blue Ridge Parkway ranger stated that the overlapping jurisdictions caused confusion for both NPS employees and visitors alike.

1/In contrast, most Federal criminal laws regarding fish, wildlife, and resource protection apply to all Federal land without regard to the jurisdictional status in which the land is held, and certain acts or omissions may constitute a Federal offense if they occur anywhere in the United States (for example, mail fraud, sabotage).

The ranger went on to point out that conflicting jurisdictions cut down on the overall effectiveness of law enforcement services provided visitors since they had to rely on NPS rangers to enforce some regulations, such as traffic regulations, and the county police to handle criminal cases.

An NPS ranger at Colonial National Historical Park commented that the present system of jurisdictions is at best ridiculous. He said it practically requires being a lawyer to understand all of the ramifications of the various jurisdictions and their respective boundaries.

In our opinion, providing effective law enforcement services on visitor-oriented Federal land depends largely on the scope of the administering agency's statutory enforcement authority and upon the applicability of enforceable Federal laws. One way to insure the applicability of all Federal laws governing visitor conduct without divesting the State of its authority to enforce the State's criminal code is to acquire concurrent jurisdiction where practical. All Federal criminal statutes and the Assimilative Crimes Act would then apply. ^{1/}

Where acquiring concurrent jurisdiction is impractical, these Federal laws using the property clause of the Constitution as a basis could be made applicable to lands held in a proprietorial status. This action would give Federal officials a Federal law to enforce when confronted with misconduct against visitors or their property. Since State criminal laws also apply to proprietorial lands, State and local enforcement officers could continue to enforce the State's criminal code. However, because Federal laws would prohibit visitor misconduct against other visitors, Federal officers would not have to become deputy sheriffs to combat visitor misconduct.

RECENT ENFORCEMENT AUTHORIZATIONS-- A STEP IN THE RIGHT DIRECTION

During our review, bills pertinent to the enforcement authority of NPS, FWS, BLM, and the Corps were introduced in the Congress. Each was referred to a different committee or subcommittee, each applied to a particular agency or bureau,

^{1/}See footnote p. 10.

and each advocated a different approach to providing law enforcement. We advised the committees considering the bills that the administration of law enforcement on Federal lands was not uniform. In addition, we suggested changes in the bills to improve the six agencies' ability to furnish law enforcement services to visitors.

Legislation relating to the enforcement powers of NPS and BLM was enacted. This legislation significantly expanded the agencies' authority to furnish enforcement services on Federal land. However, the two agencies received differing amounts of enforcement authority and adopted differing approaches to law enforcement on agency lands.

Public Law 94-458 authorizes the Secretary of the Interior to designate any Interior employee to carry firearms and make warrantless arrests for all Federal crimes committed on National Park System lands. These employees can, under certain circumstances, conduct criminal investigations and execute warrants anywhere in the United States. Moreover, the Secretary of the Interior is authorized to appoint State and local officials as "special policemen" with all the powers and immunities of Federal enforcement officers. On NPS lands held in an exclusive or concurrent status, these special policemen could enforce the entire Federal criminal code and make arrests thereunder.

Public Law 94-579 authorizes the Secretary of the Interior to appoint "Federal personnel or appropriate local officials" to carry firearms and enforce laws and regulations "relating to the public lands or their resources." To enforce these laws and regulations, the appointed local or Federal officials are authorized to make Federal misdemeanor and felony arrests. It is unclear, however, whether this act was intended to authorize arrests for such crimes as homicide and rape because the statutes which criminalize such conduct have no special reference to "public lands or their resources." In addition, the act contains no provision giving BLM any express investigative authority. This contrasts sharply with the authorization given NPS.

BLM's act also authorizes the Secretary to contract with local police departments to furnish law enforcement services on BLM-administered lands. In performing such contracts, "local officials and their agents" are authorized to enforce certain Federal laws--relating to public lands or their resources--and may be reimbursed for enforcement activities

"which assist in the administration and regulation of the use and occupancy of the BLM's public lands."

Neither act, however, specifically addresses what NPS and BLM could do if State and local police are not available when non-Federal felonious activity occurs, such as visitor misconduct against other visitors on proprietorial lands. We believe the Congress should correct this shortcoming because the new authorizations do little to improve the ability of NPS and BLM to provide visitor protection services where no Federal visitor protection laws are in force.

HOW THE CANADIAN GOVERNMENT
PROVIDES VISITOR PROTECTION
SERVICES AT ITS NATIONAL PARKS

In Canadian National Parks, Parks Canada wardens are the law enforcement officials. The wardens have all the powers of police constables, which obviates the need for wardens to try to obtain law enforcement authority from local sources.

Wardens are not armed, although by law they are authorized to carry weapons. Since the wardens' main role is to inform visitors about the rules and regulations relating to the park, they limit their law enforcement activities to issuing citations to visitors who repeatedly or willfully violate park regulations. As a result, wardens do not usually become involved in cases of visitor misconduct against the person or property of other visitors. Also, the Royal Canadian Mounted Police (RCMP) is normally readily available. ^{1/} The Government recognizes, however, that there will be occasions when park wardens should use their broad police power to take direct action when the RCMP is not available.

In addition to establishing recreation area rules and regulations, the Canadian Federal Criminal Code covers all types of criminal activity and applies to all recreation lands. This practice results in more uniform rules and regulations than those established for U.S. recreation areas. The specific rules and regulations governing national

^{1/}The RCMP is the sole police operation in the Canadian North. It is the police force in all provinces except Ontario and Quebec. RCMPs are responsible for enforcing all Federal legislation throughout Canada. (See app. II.)

recreation areas in Canada are not always identical; differences can exist because of an area's unique topography or resources.

By contrast, U.S. national recreation areas are administered by several agencies. Each perceives its enforcement duties differently, each approaches law enforcement administration differently, each has a different amount of enforcement authority and, during our review, each lacked statutory authority to enforce all laws governing the conduct of visitors. In addition, each administering agency issued its own rules and regulations. As a result, visitors to national recreation areas were subject to at least six sets of regulations which treated the same types of conduct differently. This situation was made even more perplexing by the fact that Federal laws criminalizing misconduct against visitors or their property apply to some national recreation areas but not to others.

CONCLUSIONS

Law enforcement on Federal lands is handicapped by a network of limited and differing statutory enforcement authorizations, none of which authorize the administering agencies to enforce all laws governing the conduct of visitors. In addition, Federal laws prohibiting misconduct against visitors or their property apply only to some Federal recreation areas.

Providing effective law enforcement services on visitor-oriented Federal land depends largely on the scope of the administering agency's statutory enforcement authority and upon the existence of applicable Federal laws to enforce. Further, the exercise of enforcement power by Federal employees, whether undertaken in connection with the enforcement of State or Federal laws, should be predicated on the existence of express Federal statutory authority.

Broad law enforcement authority, in our view, should not be inferred from the fact that an agency administers land or from the fact that an agency may be governed by an ambiguously worded enforcement statute. We believe case law narrowly construing enforcement statutes and the existence of other Federal law enforcement statutes which are far more explicit than those which applied to the administering agencies support this view. We were therefore unable to conclude that any of the administering agencies had a sufficient Federal statutory basis for enforcing all Federal laws governing the conduct of visitors.

One way to insure the applicability of Federal laws without divesting the State of its authority to enforce its own criminal code is to acquire concurrent jurisdiction where practical. All Federal criminal statutes and the Assimilative Crimes Act would then apply.

Where acquiring concurrent jurisdiction is impractical, the Congress may wish to consider making Federal laws applicable to lands held in a proprietorial status. This action would give Federal enforcement officials a Federal law to enforce when confronted with misconduct against visitors or their property. Since State penal laws also apply to proprietorial lands, State and local enforcement officers could continue to enforce the State's criminal code. But because Federal laws would prohibit visitor misconduct against other visitors, authorized Federal officers would be able to combat visitor misconduct without becoming deputy sheriffs.

RECOMMENDATION TO THE CONGRESS

To achieve a comprehensive and uniform approach to the legal and policy problems associated with law enforcement on visitor-oriented Federal lands, we recommend that the Congress enact legislation:

- Authorizing the Secretaries of the Interior, Agriculture, and the Army and the Board of Directors, Tennessee Valley Authority, to designate employees to maintain law and order and protect persons and property on Federal lands.
- ~~Authorizing designated administering agency law enforcement officials to carry firearms.~~
- Authorizing designated administering agency law enforcement officials to secure any Federal order, warrant, subpoena, or other Federal process and to execute and serve such process on persons located on Federal land or on persons in contiguous areas in cases involving flight to avoid service.
- Authorizing designated administering agency law enforcement officials to conduct investigations of Federal offenses committed on Federal land in the absence of investigation by any other Federal law

enforcement agency having investigative jurisdiction over the offense or with the concurrence of such other agency. Unless the administering agency has primary investigative jurisdiction over the offense, administering agency investigations should be conducted only on Federal land and in cases related to arrests or serving process on contiguous areas.

- Authorizing designated administering agency law enforcement officials to make warrantless arrests for any Federal offense committed in their presence or for any Federal felony if the officials have reasonable grounds to believe that the person to be arrested has committed or is committing such felony. Unless otherwise expressly provided by statute, allowable geographical areas for administering agency employees to make arrests should be limited to Federal land and, in cases of hot pursuit, to contiguous areas.
- Applying the Federal criminal statutes that define the crimes of arson, assault, maiming, murder, manslaughter, rape, carnal knowledge, robbery, receipt of stolen property, destruction of property, theft, and burglary, and the Assimilative Crimes Act to all Federal land administered by the National Park Service, Bureau of Land Management, Fish and Wildlife Service of the Department of Interior, Forest Service of the Department of Agriculture, U.S. Army Corps of Engineers, and Tennessee Valley Authority.
- Authorizing the Secretaries and the Board of Directors of TVA, where practical, to make arrangements with States to place administering agency land in a concurrent jurisdictional status.

Draft legislation and explanatory comments are included in appendixes III and IV.

AGENCY COMMENTS AND OUR EVALUATION

Agency reactions to our legislative proposals for improving the situation were mixed. Most of the agencies did not embrace our legislative proposal to extend the Federal criminal code to all Federal lands. They were concerned that it might reduce law enforcement assistance from local agencies. We do not agree. We believe the cooperative efforts would be strengthened. (A detailed discussion of agency comments is in ch. 5.)

CHAPTER 4

IMPROVED PROGRAMS AND FEDERAL POLICY

NECESSARY FOR ADEQUATE AND CONSISTENT

VISITOR PROTECTION

The Federal Government needs to improve several aspects of its visitor protection programs if visitors are to receive adequate law enforcement service on Federal lands. The Government must:

- Upgrade its program monitoring and evaluation so it can better assess visitor protection needs and allocate law enforcement resources to recreation areas.
- ~~Insure that personnel assigned law enforcement duties are properly trained.~~
- Insure that law enforcement activities of Federal, State, and local law enforcement agencies which share law enforcement responsibilities at Federal areas are coordinated.
- Establish standards and controls over non-Federal police agencies hired to provide law enforcement services.

To guide agencies in implementing visitor protection programs and to correct the above shortcomings, a Federal policy on visitor protection is needed. Such a policy would assure that visitors to all recreation areas receive the same quality of law enforcement service.

LACK OF MONITORING ENCOURAGES PROGRAM INCONSISTENCIES

Accurate and timely data which could be used to monitor visitor protection programs or to allocate resources to law enforcement needs is generally unavailable. Only NPS and the Corps have established reporting systems. FWS, BLM, FS, and TVA do not centrally collect information on crime occurring at their recreation areas. The absence of this data has made it difficult for headquarters, district management, and law enforcement employees to determine (1) the level and seriousness of crime, (2) if recreation areas were implementing headquarters guidelines, and (3) the effectiveness of efforts to reduce criminal activity.

In 1973 NPS established a uniform crime reporting system designed to help management quantify law enforcement activity and assess the impact of enforcement policies. However, NPS headquarters officials believe that because of the system's design and reporting inconsistencies on the part of park officials, these objectives cannot be met.

According to NPS officials, reports of all incidents occurring in national park areas must be sent to NPS headquarters for tabulation. Some parks, however, do not report criminal acts, fearing such information might reflect negatively upon the park's operation. Other parks do not forward crime data on a timely and consistent basis, resulting in distorted monthly and quarterly outputs of crime information. For example, crimes occurring in any month, if not forwarded to headquarters by the 10th day of the following month, will not be recorded until the end-of-year tabulations. Additionally, NPS officials stated that available information is only raw data and can only minimally assist them in reviewing NPS law enforcement efforts.

The Corps of Engineers has two primary channels of information for law enforcement records--the Provost Marshal Incident reporting system and the Recreation Resource Management System, an annual data collection system managed by the Recreation Resource Branch.

Although both systems purport to reflect the number of warnings and citations issued by Corps rangers, the reports prepared often vary significantly. In addition, overall Corps crime statistics understate the actual level of crime at Corps projects because:

- Visitors cannot easily report incidents to Corps rangers due to a lack of readily accessible communications equipment.]
- No comprehensive crime reporting system exists, which includes incidents reported to State or local enforcement agencies.]
- The Recreation Resource Management System compiles crime data only from projects with annual recreation attendance of over 5,000 recreation days.]

Since both types of reports are of little help in correctly assessing the requirements of law enforcement programs, Corps officials make little use of them.

Because the agencies do not adequately monitor how their agency visitor protection policies are being implemented, many differing practices and procedures have been established at recreation areas. For example, Yosemite National Park established a law enforcement office which issues directives to rangers and has a definitive role in managing the park and its more than 2-million-plus visitors a year. In contrast, Lake Mead National Recreation Area, also administered by NPS, had no centralized law enforcement effort and rangers there relied to a great extent on their own discretion when engaged in visitor protection. In addition, we believe that many rangers involved in law enforcement activities may not be following agency guidelines. For example, 378 respondents (31 percent) stated that they were not provided written guidance concerning their law enforcement duties and responsibilities. Of those who received written guidance, 433 considered the guidance less than adequate. Thus, as many as two-thirds of the respondents may not have been providing the type of law enforcement service headquarters had intended.

UNTRAINED OR marginally
TRAINED RANGERS ENGAGING
IN LAW ENFORCEMENT ACTIVITIES

* The seriousness of criminal activity which occurs at recreation areas underscores the need to train rangers to deal with a wide variety of law enforcement situations. No agency, however, requires that employees be trained before being assigned law enforcement duties, although one agency has established training standards. In addition, none of the agencies maintain records at the headquarters level relating to the type and amount of training employees receive. As a result, the amount of formal Federal law enforcement training which employees receive from their agencies varies greatly--from none to over 400 hours.

Our review revealed the following variances in agency training activities:

- NPS made available an average of 400 hours of training at the Federal Law Enforcement Training Center, Brunswick, Georgia. However, rangers assigned law enforcement duties were not required to attend.
- FWS required no training for refuge employees who performed law enforcement duties. The agency is now considering requiring all refuge employees assigned law enforcement duties to attend a 100-hour program to be held at the Brunswick Center.

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--BLM did not require any type of law enforcement training for its field employees.

--TVA required its Public Safety Service officers to attend a 120-hour basic law enforcement course. However, enforcement personnel employed at the Land Between the Lakes recreation area were not required to attend.

--The Corps of Engineers required only that its rangers given citation authority attend an appropriate orientation/instruction course on citation procedures. On the average, this amounted to about 15 hours of classroom instruction.

--FS has established minimum training standards which its employees assigned law enforcement duties should meet. For example, all employees authorized to issue violation notices should receive 24 hours of training, and forest supervisors and selected regional office staff should receive a 24-hour course on their authorities, responsibilities, and enforcement obligations. However, FS had not established any uniform training programs. Instead, each regional office had been instructed to develop and implement its own programs.

In addition to permanent rangers, all agencies except TVA relied on seasonal and less-than-full-time employees to provide some law enforcement services. Of the NPS and FS rangers surveyed, 352 (40 percent) were less-than-full-time employees. Less than 10 percent of the FWS, BLM, and Corps rangers responded that they were seasonal or less-than-full-time employees. These "seasonals" were given the same law enforcement duties and responsibilities as permanent rangers, and in some cases were issued firearms.

The seasonals surveyed were just as likely to make arrests as were the permanent rangers but had not been trained to the same extent. Seasonals were more likely to have attended training programs, although the content and amount of training they received were less than that of permanent rangers. For example, most seasonals received only 1 to 2 weeks training each year in all aspects of their job, including law enforcement. The following examples best summarize the comments we received from surveyed rangers regarding the training that seasonals receive. One NPS ranger stated:

"Most seasonals only receive 40 hours of training and of that about one-half is related to law enforcement. This is grossly inadequate and puts both the ranger and park visitor in a dangerous situation."

An FS ranger commented:

"As a rule, during the summer the bulk of the law enforcement is done by college students with 24 hours of training. This training is not sufficient to properly prepare them for the bad situations they are likely to encounter. With the meager training sooner or later someone is going to be seriously injured or killed."

Overall, about 26 percent of the 1,216 rangers responding said they had not received any Federal law enforcement training. In addition, many of the rangers who said they had been trained indicated the training had not covered such activities as

--arrest procedures, even though many had made arrests, or

--the use of firearms, even though many carried guns.

The following table shows the number of respondents who had not received Federal training in these as well as other basic law enforcement functions.

<u>Training</u>	<u>Respondents who had no Federal training</u>	
	<u>Number</u>	<u>Percent</u>
Firearms	837	69
Crime prevention	793	65
Drug enforcement	776	64
Search and seizure	639	53
Arrest procedures	621	51
Investigative techniques	552	45

In our opinion, personnel who use weapons or who attempt to make arrests without proper training run an excessive risk of injury or death, of having legal action brought against themselves and/or the Government, or of having the case jeopardized as a result of errors caused by a lack of training.

When we analyzed the questionnaires for the 396 rangers who said they had a gun available to them during their normal

duty hours, we found that 197 had reported that they had received little or no Federal training in the use of firearms. In addition, we analyzed the questionnaires for rangers who said they had drawn and/or fired their weapon and, as shown in the chart below, found that many of these individuals had received little or no training.

	<u>Number of respondents</u>	<u>Percent of respondents who had little or no Federal training</u>
Drew--warning to stop	23	48
Fired--warning to stop	4	50
Drew--issuing citation	7	43
Fired--issuing citation	2	-
Drew--making arrest	69	30
Fired--making arrest	4	25
Drew--crime in progress	66	27
Fired--crime in progress	6	33
Drew--investigating crime	97	31
Fired--investigating crime	6	50

As shown above, lack of training did not prevent the rangers in our survey from having access to a weapon, carrying it, or using it.

CONTRACTING FOR LAW ENFORCEMENT-- CONTROLS AND UNIFORMITY NEEDED

Four of the agencies--FS, NPS, BLM, and the Corps of Engineers--are authorized to contract with State and local enforcement agencies for visitor protection services. Three of the agencies had recently received this authority and therefore had not established any contracting guidelines at the time of our review. However, in 1971, FS was authorized to enter into cooperative agreements with State and local agencies for law enforcement services in national forests. The law authorizes FS to reimburse State and local agencies "for expenditures incurred in connection with activities on national forest system lands." During fiscal year 1976, FS had 365 cooperative agreements involving about \$3.7 million with law enforcement agencies.

FS policy is to use the cooperative agreement program to the fullest extent possible, but it has not established contracting procedures for FS personnel to use or controls over local law enforcement agencies with which it contracts. Instead FS has delegated to its forest supervisors full responsibility for initiating, negotiating, and monitoring all law enforcement contracts. This has been done, according to the headquarters official responsible for monitoring the FS law enforcement activities, because FS believes

- its people can be relied on to use good judgment when negotiating contracts,
- its people can be relied on to monitor contracts to insure compliance without headquarters supervision, and
- headquarters has no authority to establish national criteria which local sheriffs or their deputies must meet regarding their training or capabilities.

The Department of Agriculture has stated that it is generally pleased with its cooperative law enforcement program and believes that relatively few law enforcement problems have arisen since the program's inception. The Department's view is that the cooperative program has produced a more unified approach to law enforcement in the national forests. Further, it believes that its willingness to help local agencies finance their added law enforcement burden of protecting forest users has fostered a degree of cooperation comparatively greater than the amount of dollars spent.

These views are not shared by FS rangers. FS rangers surveyed pointed out many weaknesses in the cooperative program. We were told, for example, that:

- FS was being forced to pay for local law enforcement services which were previously provided free by local sheriffs.
- Holding local enforcement officers accountable to the terms of the contract was difficult.
- Not enough funds were available to allow FS to utilize local law enforcement agencies to the fullest extent possible.
- The level and quality of service varied as new sheriffs were elected or new police chiefs appointed.

--The need to make contractual arrangements with more than one agency in situations in which forests border several jurisdictions resulted in inconsistent levels of law enforcement within the forests.

In addition, we found that gaps in visitor protection occur when FS districts cannot get local agencies to participate. One national forest, for instance, has been unsuccessful in securing cooperative agreements with 4 of the 12 counties bordering the forest. As a result, when incidents such as shootings, knifings, rapes, or larcenies occur on forest land in these counties, the violators usually escape because forest employees have been instructed to rely on local agencies for enforcement actions.

Although the cooperative efforts of FS may be working as intended, we were unable to verify this fact due to administrative weaknesses at the forests visited, such as the lack of itemized bills and/or records on the type and amount of services to be provided.

The shortcomings faced by the FS recreation areas may be present elsewhere, since the Corps of Engineers, NPS, and BLM have also been authorized to use State and local agencies to provide law enforcement service.

An analysis of the recent authorizations revealed several shortcomings. For example:

--The Corps was given the authority to contract for increased law enforcement services, but which statutes or which Federal, State, or agency regulations the hired local officials could enforce are not clear. In addition, the act made no provision as to what degree of training local officials would be required to have.

--NPS is now allowed to use local officials appointed as special policemen by the Secretary of the Interior to enforce the Federal criminal code. When hired as special policemen, these local officials receive all the powers and immunities of NPS enforcement officers. The act makes no provision, however, for the type or amount of training the special policemen are to have or if they will be expected to enforce State criminal laws as well.

--BLM can now use local law enforcement officers appointed and paid by the Secretary of the Interior to enforce the Federal statutes and regulations which relate to the public lands and their resources. The act requires that appointed local officials be trained to the same degree as BLM special agents. However, at the time of our review no training programs had been designed for special agents.

The agencies' authorizations to contract with local officials differ as to the types and amounts of services which are reimbursable. In addition, the authorizations give contracted State and local agencies varying degrees of authority to enforce the Federal criminal statutes which prohibit misconduct against visitors or their property.

If State and local agencies are to be used to supplement law enforcement services at recreation areas, then uniform procedures should govern the contracting or reimbursement for those services. However, we question the desirability of burdening local law enforcement agencies with the additional responsibility of enforcing the entire Federal criminal code. Local law enforcement officials are hired, appointed, or elected to enforce State and local laws in their communities; their enforcement of Federal criminal laws at Federal recreation areas may degrade the services they provide their communities. Moreover, this additional responsibility may create increased police and staff and equipment needs which can only be met with substantial long-term Federal financial aid. Without such aid local agencies may be reluctant or unable to assume additional responsibilities. Local law enforcement agencies are reluctant to put themselves under the direction of the Federal Government and therefore might prefer to conduct Federal enforcement operations independent of any direction or oversight by the administering agency. Finally, the Government could be held liable for the conduct of local law enforcement officials when they are enforcing the Federal criminal code.

WHAT SURVEYED RANGERS
SAY ABOUT LAW ENFORCE-
MENT EFFORTS

We received numerous comments from surveyed rangers regarding the need for well-planned and well-managed law enforcement programs. The examples that follow best summarize the concerns voiced by rangers of all agencies except TVA. (Because the rangers had been assured that their responses would be kept confidential, we requested permission to quote from their questionnaire responses and again pledged

confidentiality regarding the rangers' names and work locations.)

From FS comes this comment:

"Thank you for the opportunity to express myself. This is the first time, to my knowledge, anyone has conducted a study which deals with the law enforcement problems of the field employees. The Forest Service is my life--but someday (I hope never) we may lose a good employee because he didn't have the training necessary to carry out the law enforcement function.

"Times have changed. The image of the ranger is changing. We're not the same people we once were, because the problems we encounter are radically different than 30 years ago. I'm an area director for 15 developed recreation sites with 400 campsites--about 2,000 persons not including any dispersed usage. I'm responsible for recreation operations on three major reservoirs in addition to three major restricted use areas.

"I could talk for hours on my law enforcement problems. But what we need is this:

1. Eliminate co-op agreements.
2. More training and appropriate equipment.
3. Full-time professional law enforcement personnel.
4. We need a streamlined professional law enforcement approach to the problems. Instead we have an approach based on 'other duties as assigned' in our job description.

Thank you for listening."

An NPS ranger writes:

"Until relatively recently, the National Parks were seldom visited and comparatively isolated attractions. The very nature of the Parks themselves dictated this. In recent years however

and particularly with the building of new or improvement of old roads, the Urban American has been visiting the Parks in increasing numbers. With this increased visitation has come the problems of Urbana. When I first entered the Park Service in 1962, Part I and Part II offenses were virtually unknown. Their increasing frequency speaks much more plainly than I can. Defensive equipment for the Park Ranger is an unfortunate outgrowth of this fact. No one seems to question the need for the city police or even the State Police officers to carry weapons, yet a hue and cry arises when this occurs with the Ranger. In an ever increasing number of Parks, this is becoming the case. The Ranger's job is multifaceted, only a part of which is law enforcement--and this only in certain areas. Not all areas have a need for a higher law enforcement profile but some definitely do. Those people, whether in or out of the Service, who refuse to acknowledge the fact are wishful thinkers or, worse yet, OSTRICH-like by ignoring the facts and hoping it will go away."

A Corps of Engineers ranger expresses this concern:

"It appears that the ~~Corps of Engineers~~ is afraid of law enforcement. I don't know why. When a ranger is placed in a marked vehicle with a badge and in a uniform, the general public has a right to expect him to protect them from harm or hardship both from other people and the resources. Because of the limited authority that I have (the public doesn't realize how limited) and the absence of agency backup many local and state officers have told me that they would not have my job under any circumstances. In my opinion the Corps attitude can be summed up in the attitude of one assistant district engineer who in 1972 told a training session that 'All you have heard here forget. I don't want you out there getting into trouble or getting yourself hurt. If you do, don't come running to me.'"

And an FWS ranger says:

"This is a large national wildlife refuge located in a heavily populated area. It is subject to

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approximately a half-million public visits yearly. Since it represents some of the last remaining wild land of this locality it has become heavily used by narcotics addicts, bootleggers, drinking parties, those carrying on questionable practices of all types, etc. Visitors have been harassed and molested. The refuge maintains an adequate patrol from about November 1 through about March 1, but there should be regular patrol throughout all other months, including holiday and weekend patrol and some night patrol. Only by this will future visitors be assured of a safe and respectable experience."

Finally, a BLM employee writes:

"At this time the incumbent is the only official BLM law enforcement officer in the State. Since my primary duties are criminal investigation and presentation of cases to the U.S. Attorney for prosecution on resource crimes, an opportunity is not present for daily observation of crimes committed in the various resource areas. Needs for adequate law enforcement in BLM Recreation Areas include:

1. An act giving law enforcement authority is needed.
2. Promulgation of regulations providing criminal penalties for their violation to be handled in U.S. Magistrate court.
3. Uniformed law enforcement personnel highly trained and equipped to provide visitor protection, with sufficient authority to meet these responsibilities.
4. Additional Special Agents to adequately handle criminal investigations and to provide training and assistance to uniformed law enforcement personnel."

CONCLUSIONS

As crime in the parks and forests increases, the need for professionally trained personnel and more sophisticated techniques to handle crime has also increased. Although

each of the six agencies involved in recreation area management had established visitor protection policies, more must be done to assure visitors of a consistent level of protection at similar areas. Administering agencies can improve their law enforcement efforts by selectively assigning employees to law enforcement duties and providing them with professional training. Yet, employees without proper training are currently providing law enforcement services. The agencies should take action to give rangers who perform law enforcement duties proper training in this aspect of their job.

There should also be uniform circumstances under which the administering agencies could reimburse States and localities for services rendered in connection with enforcement of State and local laws on Federal land.

Improvements also are needed in the agencies' crime-monitoring systems, and those agencies which do not have such systems should establish them. Management would then be better informed on law enforcement problems and the success of efforts to overcome them. Good monitoring systems would also help the agencies insure that uniform law enforcement policies and procedures are being followed at their recreation areas.

Overall, if Federal visitor protection activities are to be uniform and visitors are to receive adequate law enforcement services, a national policy on visitor protection is needed. The Office of Management and Budget should coordinate the effort to develop this policy and the guidelines for Federal agencies to follow in implementing it.

RECOMMENDATIONS TO HEADS OF FEDERAL AGENCIES

We recommend that the Director of the Office of Management and Budget, in conjunction with the Secretaries of the Army, Agriculture, and the Interior, the Attorney General, and the General Manager of the Tennessee Valley Authority, develop and implement a program for visitor protection which should have as its objective the protection of visitors and their property. The Government's program should:

- Delineate acceptable levels of law enforcement service to be made available to visitors.

- Establish visitor protection guidelines and standards for all the agencies to follow. These guidelines and standards should include the philosophy, objectives, and procedures for providing visitor protection. The guidelines and standards should include, but not be limited to, the following areas: purpose of visitor protection, law enforcement principles, law enforcement code of ethics, defensive equipment policy, reports procedures, firearms training and safety rules, physical fitness, and controlled substances.
- Establish information systems so that there will be essential and reliable information available to top management on the seriousness and extent of crime at national recreation areas. Such a system could serve as the basis for a program of supervision and control over visitor protection efforts.
- Develop procedures to promote competent recruiting, provide for adequate training, and assure proper equipment for all rangers assigned law enforcement duties.
- Develop guidelines and procedures to be followed when contracting with State and local law enforcement agencies for law enforcement services.

We also recommend that the Directors of the National Park Service, Bureau of Land Management, and Fish and Wildlife Service; the Chiefs of the Forest Service and Corps of Engineers; and the General Manager of the Tennessee Valley Authority insure that rangers assigned law enforcement duties are adequately trained and equipped to provide law enforcement services.

RECOMMENDATION TO THE CONGRESS

In order to achieve a uniform approach to contract law enforcement, we recommend that the Congress enact legislation authorizing the Secretaries of Agriculture, the Army, and the Interior and the Board of Directors of TVA to cooperate with any State in the enforcement of State laws by providing reasonable reimbursement, where appropriate, to a State or its political subdivisions for expenditures connected with the enforcement of State laws and ordinances on Federal lands. (Draft legislation and explanatory comments are included in apps. III and IV.)

the agency's purpose of management, and the territorial jurisdiction ceded by each State when the areas were established.

We agree that these are the reasons why the Federal Government has so many different approaches to handling visitor protection; however, it is precisely at this wide disparity that our recommendations for a consistent and uniform approach to visitor protection are aimed. We believe that if the legal and programmatic shortcomings disclosed are to be corrected, immediate congressional and agency action is needed.

OMB said that it does not believe that a task force, headed by it, should be established to develop a national law enforcement policy for Federal recreation lands. We disagree. If Federal visitor protection activities are to be uniform and visitors are to receive adequate law enforcement services, a national policy of visitor protection is needed. Since such a policy would cut across numerous Federal agencies, we believe that OMB is the logical agency to develop and coordinate a Government-wide policy for law enforcement on Federal recreation lands. This would insure that a consistent and uniform national policy is developed and implemented.

DEPARTMENT OF THE ARMY

The Department of the Army said it concurs with our recommendations to develop a standard law enforcement policy for providing uniform visitor protection on national recreation lands. (See app. IX.)

The Department pointed out that it is its policy to provide a safe and healthful environment for public use of lands and water at Civil Works water development projects. The Corps of Engineers has the authority to regulate conduct upon its land as it relates to project purposes and uses. According to the Department, however, the Corps does not exercise any traditional police powers, because Corps lands and water are held in a manner analogous to that of a private landowner. Present Federal laws prohibiting misconduct against persons or their property do not apply to most Corps recreation areas. The Corps believes that the responsibility for enforcing State criminal and civil laws which do apply to Corps recreation areas therefore belongs to the States and their political subdivisions.

The Department stated that the State and local law enforcement agencies have been unable to provide adequate visitor protection service on Corps projects for various reasons including limited staff and lack of funds. Therefore, the Congress enacted Public Law 94-587, which authorized the Secretary of the Army, acting through the Chief of Engineers, to contract with the States and their political subdivisions to obtain increased law enforcement services at Corps Civil Works projects. Because this legislation stated that funding was only for fiscal years 1978 and 1979, there has been no opportunity, according to the Department, to evaluate the effectiveness of law enforcement contracting.

The Department said legislation which would provide legal protection for Corps civilian employees, along with implementation of the existing legislative authority to contract for law enforcement, should materially enhance Corps efforts to improve visitor protection services at Corps Civil Works water resource development projects.

We agree that violence against agency law enforcement officers should be a Federal crime. Section 304 of our draft legislation (see app. III) would provide that assaulting, maiming, or killing any civilian of the Corps assigned to perform investigative, inspection, or law enforcement functions would be a Federal offense. We also agree that the Corps' ability to contract for law enforcement services will enhance its visitor protection services. We caution, however, that if the Corps is to make certain that it receives the services for which it is contracting, it will need a system of control and internal review.

DEPARTMENT OF JUSTICE

In February 1977 we submitted our report to the Department of Justice for its review and comment. Because we have received no response and because of congressional interest in the report, we are issuing it without Justice's comments.

HQ AR004100-HQ AR004134

RECREATION MAGNITUDE

BACKGROUND

The purpose of this study is to display the magnitude of the recreation industry in the United States and the importance of that industry, and the opportunities which it provides, to the American people.

Recreation serves a multiplicity of markets rather than a single or small number of markets as do most industries. Direct or indirect benefits accrue to sporting goods and clothing manufacturers and distributors, grocery stores, motels and hotels, restaurants, gasoline stations, marinas and a host of other business enterprises as a result of recreation activities. This situation makes measurement of the economic benefits to the private sector extremely difficult to assess.

Due to this multiplicity of markets accurate data is difficult to obtain. The data contained in this report represents a variety of time periods and comes from a variety of sources. Although specific data may not be completely dependable, the trends which the data overwhelmingly suggest cannot be ignored. The recreation industry is big business and the Corps of Engineers plays a significant role in that industry.

In order to attempt measurement of the recreation industry and what role is played by the private, State and local and Federal sectors and where the Corps of Engineers fits into the overall picture the following parameters have been used:

- a. Economic impact.
- b. Acreage
- c. Shoreline miles

- d. Visitation
- e. Capital investment
- f. Operation and maintenance expenditures
- g. Personnel
- h. Projections of future use.

A graphic description of how each sector fits these categories is at Table I. A similar graph which shows management of Corps projects by agency is at Table II.

ECONOMIC IMPACT

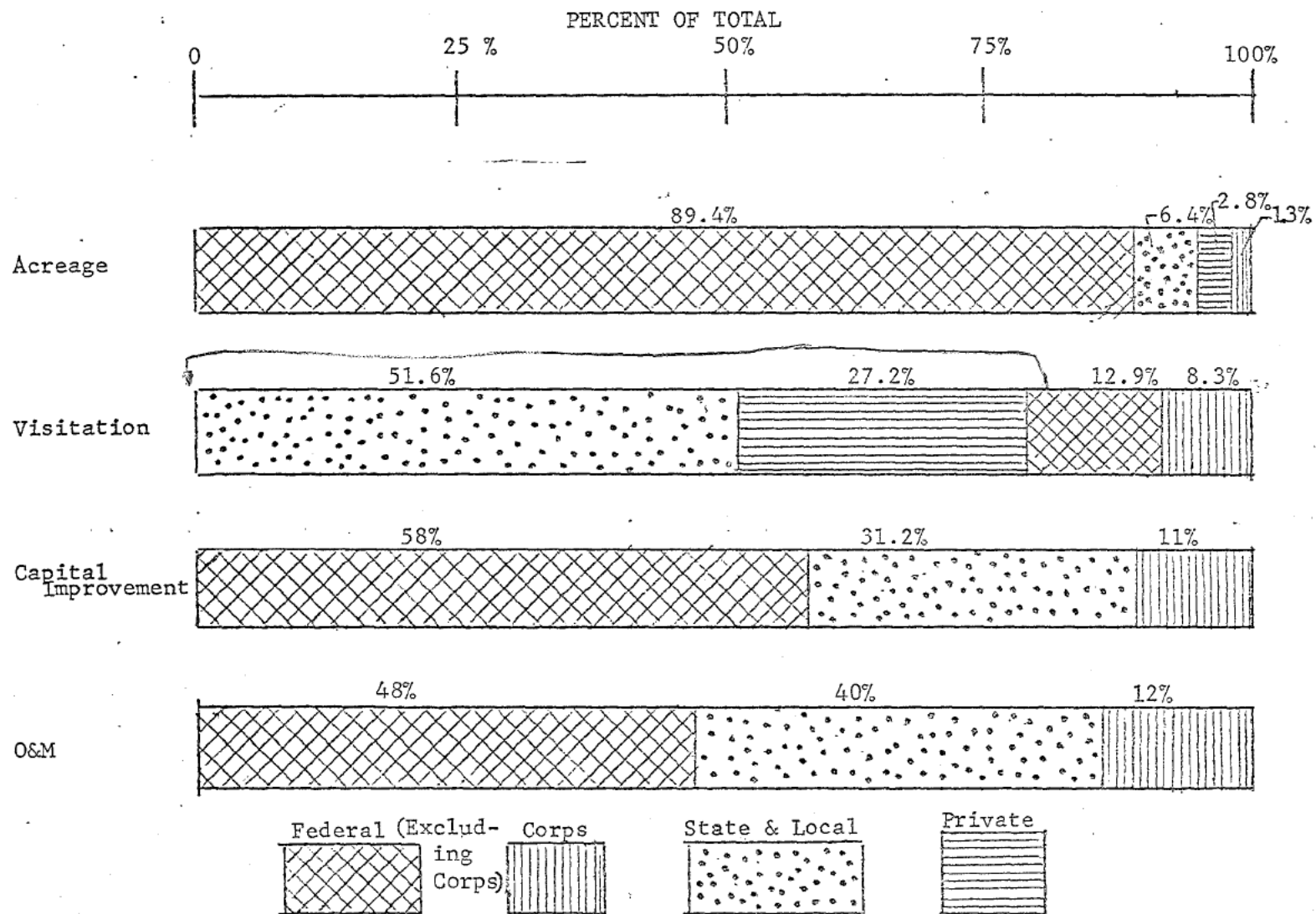
The magnitude of the recreation program in this country can be judged by the following quotes from the Hearings before the Subcommittee on Environmental Problems Affecting Small Business of the House of Representatives Select Committee on Small Business, 24,28 and 29 February and 13 March 1972.

"The United States Travel Agency in the Department of Commerce says that for every \$10,000 to \$12,000 spent by tourists in this country, one job is created, and for every 100 people employed in the travel industry, 60 to 100 backup jobs are created in related industries. With our present unemployment situation, encouraging tourism seems a cheap way to solve a nagging problem." (Congressman J. Herbert Burke, Florida)

"The exact dimensions of the recreation and tourism industry are difficult to assess if for no other reason than it overlaps with, and is complemented by, a wide range of related industries and economic activities. However, conservative estimates have been made on an annual basis by the Department of Commerce which give us some idea of the general

SUMMARY OF ALL RECREATION
NATIONWIDE - ALL STATES

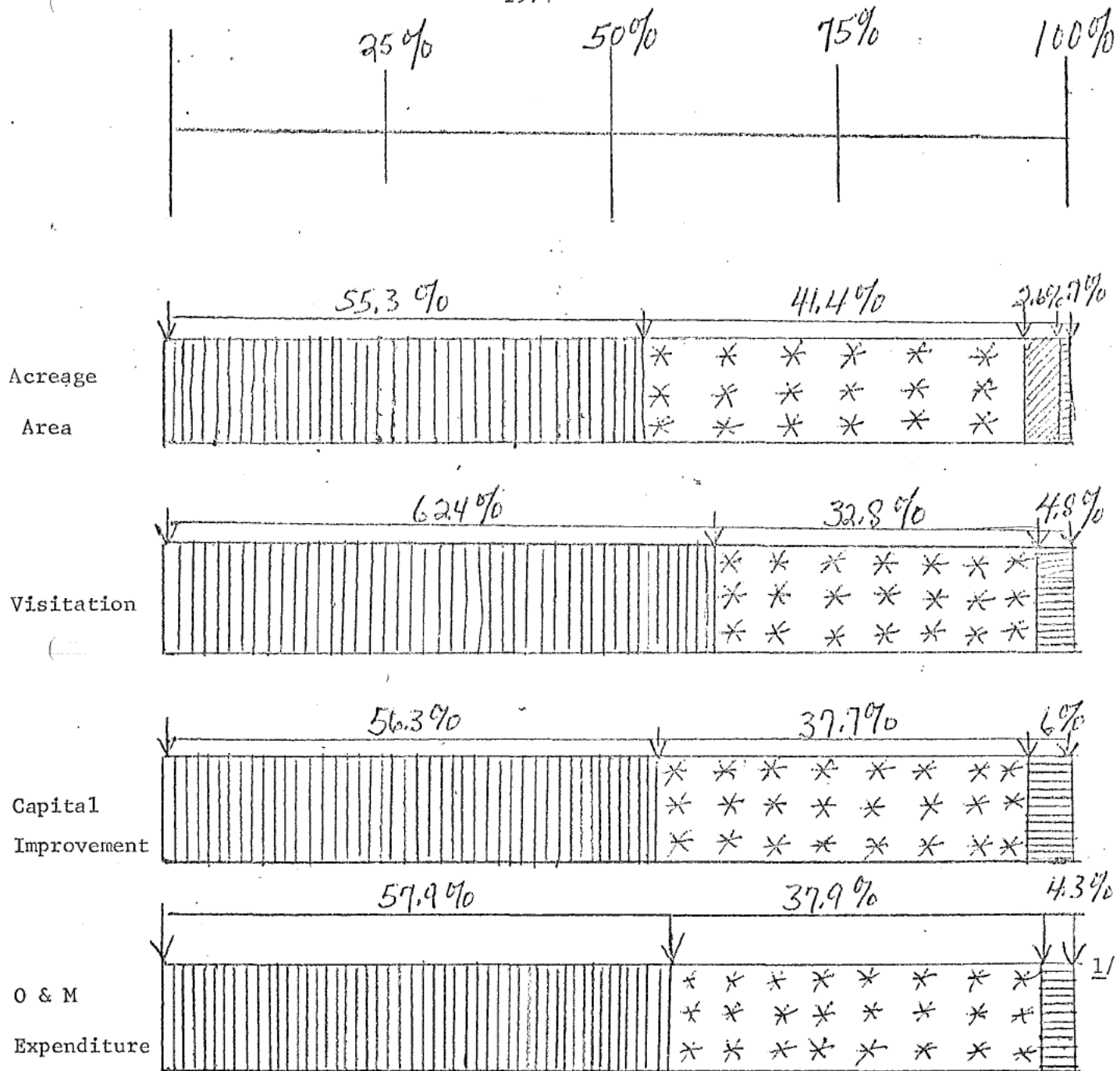
TABLE I



NOTE




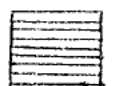
% NOT AVAILABLE FOR PRIVATE O&M AND CAPITAL IMPROVEMENTS

RECREATION RESOURCE MANAGEMENT OF CORPS PROJECTS BY AGENCY
1974



Agency Managing Corps Area

* Quasi-Public^{2/} State & Local Corps Private

^{1/} Dollar value data reported by private sector subject to question

^{2/} Data available for acreage only

Source: RRMS Cy 1974, Report D-16A, D-16 B, D-16C, D-16 D, D-16 E

HQ AR004103

magnitude of the industry in relation to the total U.S. economy. During the recent decade of the sixties, for instance, while GNP rose from \$503.8 billion in 1960 to \$974.1 billion in 1970 at an annual rate of 6.8 percent per annum, personal expenditures on recreation grew from \$18.3 billion to \$39.0 billion at an even higher rate of 7.9 percent. This yielded an increase in the percentage of GNP devoted to recreation from 3.6 percent to 4.0 percent." (Congressman Seymour Halpern, New York).

The National Tourism Resources Review Commission, created by Congress (PL 91-477) 21 October 1970, reported that tourism spending totaled \$50 billion in 1970. The Commission projected tourism spending to increase to \$127 billion by 1980 and to total nearly a trillion dollars for the decade. They further reported that: "For every four dollars of income generated in 1970 in activities directly serving tourism - lodging, transportation and food service - another three dollars were generated in indirectly related activities such as agriculture or real estate."

An information sheet concerning the Report of the Subcommittee on Environmental Problems Affecting Small Business, the Report of the National Tourism Resources Review Commission and data obtained from the Federal Energy Office is at Tab A.

The Nationwide Outdoor Recreation Plan ^{1/} states:

"A report to the President prepared by the Bureau of the Budget reveals that in fiscal year 1965 some 2,470 concessionaires had private investments valued at between \$260 million and \$290 million on Federal recreation lands and waters. These included hotels, motels, trailer and other camping sites, restaurants, stores, service stations, marinas,

^{1/} A Legacy for America, 1973, Bureau of Outdoor Recreation

and skiing areas constructed and operated by private interests under contractual arrangements with the National Park Service, Forest Service, Army Corps of Engineers, Bureau of Sport Fisheries and Wildlife, Bureau of Reclamation, and Tennessee Valley Authority."

Two recent studies of Corps of Engineers lakes further amplify the economic ramifications of recreation. In August 1973 the Oklahoma State University published "The Economic Impact of Tenkiller Ferry Lake." This study found that the value of the total recreation experience at Tenkiller Ferry Lake ranged from \$10.2 million to \$21.5 million during 1972 only depending on the method used to determine the benefits although recreation was not an original authorized purpose. Flood control and hydroelectric power were authorized purposes of the project but have yielded much less benefits; \$3.2 million and \$6.3, respectively. Tenkiller Ferry Lake attracted a total investment in recreation equipment of approximately \$120 million in 1972 alone.

"The Impact of the Denison Reservoir on Surrounding Counties" by the University of Oklahoma, June 1972, states that over \$250 million in retail sales in the surrounding counties resulted from recreation at the project. This study states that Denison Reservoir has yielded \$30 million in benefits for flood control and \$17.5 million for hydroelectric power.

An information sheet regarding these two studies is at Tab B.

The newspaper article from the Southern Indiana Courier - Journal and Times, Tab C, discusses the increased tax valuation caused by the development of Mansfield Lake by the Corps in Indiana.

The following statements are quoted from presentations made at the National Oceanic and Atmospheric Administration's Marine Recreation Conference in Newport Beach, California, 2-4 October 1975:

"Some recreational pressure could be taken off the coastlines, if adequate water recreational facilities were developed inland."

"Boating activity will soar in the years ahead - from 50 million participants this year, to 93 million by 1980 and upward of 150 million by the year 2000, according to government researchers."

"Recreation is not only a necessity for our nation's well-being, it is also a vital industry which contributes more than \$100 billion to the nation's economy and employs more than 4 million people."

"Our tightly-clustered urban population is located, in many cases, closer to water-oriented recreational opportunities than it is to forests, woods and other outdoor recreational attractions. Development of more and better recreational outlets on these waters can produce ample recreation attractions which can hopefully be used with a minimal amount of environmental complications." ^{1/}

ACREAGE

The Nationwide Outdoor Recreation Plan, ^{2/} prepared by the Bureau of Outdoor Recreation, points out that Federal land management agencies control a total of 740.3 million acres. Of this total, 266.7 million acres are primarily used for public outdoor recreation purposes. State agencies manage 41.7 million acres and local agencies manage 10.6 million acres to complete the balance of nearly 320 million acres available for public use. In addition, the Nationwide Outdoor Recreation Plan states that 23 million acres is in the recreation estate of the private sector. A breakdown of this information is at Tab D.

^{1/} OBC Legislative Ledger, 14 November 1975, Outdoor Boating Club of America
^{2/} ibid

The Corps of Engineers manages nearly 11 million acres of land. About one-half of that total is covered by water at the average recreation pool elevation. According to information presented in the Nationwide Plan,^{1/} the Corps manages about 1.5% of the total Federal land available for recreation and attracts over 36% of total recreation use which occurs on Federal lands.

SHORELINE

The shoreline of the Atlantic, Pacific, Gulf and Great Lakes coasts, excluding Alaska equals 36,000 miles. Only 8,500 miles, or 23% of the total, is managed by Federal, State or local government and is available for recreation purposes. The remainder is controlled by private interests or the status is uncertain. The 413 Corps lakes throughout the nation contain a total of 44,000 miles of shoreline at the average recreation pool elevation. With minor exceptions where access may be restricted for safety purposes, all of this shoreline is available to the public for outdoor recreation purposes. Data regarding shoreline use is presented at Tab E.

VISITATION

During 1974 a total of 895.7 million recreation visits were recorded on Federally managed lands. Visitation at Corps projects during that year was 350 million recreation days. This represents an increase to nearly 39% of the total Federal visitation on Corps projects. The latest available data compiled by the National Recreation and Park Association shows that attendance at state parks in 1970 exceeded 482 million visits. The visitation

^{1/} ibid

at recreation areas managed by the private sector is difficult to determine. The Nationwide Outdoor Recreation Plan^{1/} states that 85,000 commercial enterprises received 1,150 billion recreation visits during 1965. Visitation by management agency is shown at Tab F.

Using the foregoing information visitation per acre can be computed (Tab G). The Corps accommodates 32 visitors per acre; a use figure well above any other Federal agency.

CAPITAL INVESTMENT

Capital investment for recreation facilities by the Federal, State and local sectors exceeds \$800 million dollars annually. The latest available data indicate that Federal land management agencies spent \$277 million for capital improvements during 1972^{2/} and State agencies spent \$126 million for capital improvements during 1970^{3/}. An additional \$192 million was expended by the Bureau of Outdoor Recreation in the Land and Water Conservation Fund program for recreation development in 1972. This program requires 50-50 matching by non-Federal public agencies, resulting in a 1972 expenditure of nearly \$400 million. An additional \$101.6 million was expended by Federal agencies^{4/} for land acquisition from the Land and Water Conservation Fund. Data regarding capital investments by local agencies below the State level equalled \$126 million. Data for private entrepreneurs are not available. During 1974, the Corps expended \$44 million for capital improvements at recreation facilities. Data regarding capital investments are at Tab H.

^{1/} ibid

^{2/} 1972 data furnished by Bureau of Outdoor Recreation, unpublished

^{3/} State Park Statistics, 1970, National Recreation and Park Association

^{4/} U.S. Forest Service, National Park Service, U.S. Fish & Wildlife Service,

OPERATION AND MAINTENANCE

Operation and maintenance expenditures for recreation facilities exceed \$450 million annually. The latest available data, the same sources as for capital expenditures, indicate that Federal agencies spent over \$272 million for O&M in 1972 while State agencies spent over \$177 million in 1970 for O&M activities. The Corps spent \$54 million for O&M activities for recreation, fish and wildlife and other natural resource management activities in 1972. Although this represents nearly 20% of the total Federal O&M expenditure during 1972 these figures are somewhat misleading since, at that time, a breakdown in the Corps O&M accounting system was not in effect and all natural resource operation and maintenance expenditures were lumped together with O&M expenditures for recreation resulting in an inflated figure for the Corps. During 1975, the first year the Corps accounting system separated recreation and natural resource O&M costs, \$7.5 million was spent for natural resource management and \$45.9 million was spent for recreation management by the Corps for a total of \$53.4 million. This represents 10.7% of the total Corps O&M for 1975 and further shows no substantial increase over 1972 expenditures. O&M data are at Tab I.

PERSONNEL

During 1970, 34,334 State Park personnel were employed in the United States. 39% of these employees were full-time, year round while 61% were seasonal and part-time. Nine percent, or 3,391, of this total were professional or technical State Park personnel ^{1/}.

1/ State Park Statistics, 1970, National Recreation and Park Association

The Bureau of Outdoor Recreation reports that 18,146 personnel were employed in recreation-resource management activities by Federal land management agencies during 1972^{1/}. 6,424 of these employees were seasonal or part-time, and 11,722 were full-time permanent. A chart showing these data is at Tab J.

The Office of Management, Civil Works Directorate, reports that Corps civilian employment totaled 34,406 as of 30 June 1975, including GS and WB personnel. Nearly 63% of the total Corps personnel, 21,597 employees, held GS ratings. Of the Corps-wide total GS employees, 4,130 (19%) were assigned to Construction-Operations Divisions and 1,700 (7.8%) were assigned to Recreation-Resource Management activities. This latter figure includes personnel assigned to Divisions other than Construction-Operations. These data include both full-time, permanent and part-time, temporary personnel. Tabulation of these data are at Tab K.

The average GS rating for all Corps full-time, permanent personnel is GS-8. The average for Construction-Operations Divisions is GS-7, and the average for Recreation-Resource Management Branches is GS-6.

No average GS ratings for other Federal land management agencies are available. However, the OCE report "Corps of Engineers - Resource Managers", dated July 1969, pointed out the wide margin between grades, as well as ranger staffing between the Corps and the National Park Service. For example, Lake Lanier at that time had an attendance of over 8 million. The Corps manager was a GS-12 and he had a permanent staff of 33, including 5 rangers. Lake Mead National Recreation Area had an

^{1/} Includes National Park Service, Bureau of Land Management, Bureau of Reclamation, U.S. Fish & Wildlife Service, Tennessee Valley Authority & Corps

attendance of 4 million. The National Park Service Superintendent was a GS-15 and he had a permanent staff of 106, including 26 rangers. A table from the OCE report, which illustrates this point is at Tab L.

In his report, "How to Meet Public Recreation Needs at Corps of Engineers Reservoirs," 1 December 1970, Dr. Edward Crafts stated: "Recreation Managers at projects are a mixture of non-professionals and professionals and in grade ranges GS-5, 7 and 9. They are more in the nature of guards or patrolmen than rangers as interpreted by the Forest or the National Park Service. Their backgrounds are varied. Examples are surveyors, policemen, gas station operators, In at least two Divisions a strong effort is being made to professionalize the ranger service. Forest Service rangers are almost entirely professional foresters or from related fields and graded GS-12 or 13....The civilian grade structure of the Corps is believed low compared to the Forest Service and the National Park Service....Despite the vast sums of money the Corps spends and its heavy responsibilities, there are only 14 civilian supergrades in the Corps, the highest being a GS-17. About half of the supergrades are in Washington and not more than 1 per Division, usually the Chief of Engineering. The Project Manager or Engineer may be a GS-11 or 12 and the Reservoir Manager under him, a grade lower.... In contrast, all regional foresters of the Forest Service have been in supergrades for some years; their immediate assistants are usually GS-15; Forest supervisors, GS-14; and Rangers, GS-12 and 13".

Plus Ch

Efforts have been made to upgrade the Corps ranger staff and the GS ratings of Resource Managers since these two studies were conducted, but progress has been rather slow. We now have three GS-13 Resource Managers. One of these managers is at Lake Lanier; another is responsible for Bull Shoals and Norfork Lakes. The Manager at Table Rock Lake was just recently promoted to GS-13. The Corps staff contained 414 permanent rangers in 1974.

The following is quoted from the Land Use Study: ^{1/}

"Evidence developed by the National Recreation and Park Association (NRPA) indicates that one ranger is needed for every 250,000 visits. Based on 339.1 million visits in 1973, a total force of 1,360 rangers would have been required. Instead, in 1973, there were only 310 permanent rangers and 516 temporary rangers. If the temporary rangers worked during the 3-month peak season, the total force for 1973 would be 439 rangers or 921 less than was required."

PROJECTIONS OF FUTURE USE

Between 1960 and 1970, 24 million people were added to the population of the United States, increasing the total to 203.2 million. BOR's Nationwide Outdoor Recreation Plan indicates a possible increase of between 57 and 96 million by the year 2000 based on data which they obtained from the Bureau of the Census. State population densities currently range from over 1,000 people per square mile to less than 5 people per square mile. About 70 percent of our population lives in metropolitan areas which occupy less than 2 percent of the nation's land area. About 90% of all Americans are under 65 years of age, and about 44% of our population is in the adult category - 25 to 65 years of age.

Medium family income of Americans rose from \$5,620 in 1960 to \$10,285 in 1971. The Bureau of the Census predicts that the average family income may reach \$15,000 by 1990. In spite of increasing affluency, 8.3% of American families now earn less than \$3,000 per year, and an additional 16 percent earn less than \$6,000 per year. This segment of the population, along with the handicapped, children and the aged, is most dependent on public recreation facilities near to home.

Mobility and more leisure time, combined with population increases and greater buying power discussed above, serve to generate additional demands for public recreation opportunities. Better highways and mass transportation systems and trends toward the 4-day work week and longer vacation benefits have had their impacts on the recreation industry. Trend lines indicate that these impacts will continue to increase.

To date, no decrease in recreation activity can be attributed to energy shortages. In fact, attendance at recreation areas has continued to increase, although shifts in use from remote areas to those located near metropolitan areas are occurring. A discussion of projected trends in recreation use is at Tab M.

The Land Use Study^{1/} projects the following increases for selected recreation activities in the United States by 1980:

^{1/} ibid.

Activity	Total No. of Days 1970 (Thousands)	Total No. of Days 1980 (Thousands)
Boating	484,994	710,490
Swimming	1,947,828	2,573,080
Hunting	204,231	211,450
Camping	419,559	488,906
Picnicking	574,756	649,702
Fishing	575,825	670,312

The Study further states that "the present Corps WRDP system contributes significantly to Federal, State, and local recreation and fish and wildlife inventories. Corps land comprises:

- (1) Approximately 1.2% (378,028 acres) of the land in USF&WS refuges and game ranges.
- (2) Approximately 8.6% (473,826 acres) of state park acreage and 9.1% (1,440,245 acres) of state fish and wildlife lands
- (3) Approximately 2.4% (22,412 acres) of the area in municipal park systems and 1.8% (23,061 acres) of the land in county recreation use.

Most Federal land is located in areas remote from population centers as shown on the map at Tab N. However, about two-thirds of the 413 Corps lakes are located within a fifty mile radius of Standard Metropolitan Statistical Areas (SMSA). The location of Corps projects relative to SMSAs can be seen on the map at Tab O.

If the predictions outlined above prove to be correct, and the trend of increasing leisure time continues, the Corps lakes will be in an excellent position to continue to serve these growing

population centers. The lakes will also suffer from problems that are typical of areas subjected to intense public use. The problems of encroachment, vandalism, law enforcement and environmental degradation are the most obvious.

Corps lakes will also continue to provide recreation opportunities for the young and older residents of our inner cities.

EXHIBIT

A

RECENT STUDIES ON ECONOMIC VALUE OF TOURISM

NATIONAL TOURISM RESOURCES
REVIEW COMMISSION
1972

- Tourism - \$61 Billion annual expenditure
- 127 Billion estimated by 1980 (Increase of 100% in 8 years)
- Generated 4 million jobs.

FEDERAL ENERGY OFFICE
1973

- Tourism - \$123 billion annual expenditure
- 10-15% of American Workforce employed

NOTE: Discrepancy between figures demonstrates inherent problem in determining economic importance of tourist industry.

REPORT OF
THE
SUBCOMMITTEE ON ENVIRONMENTAL PROBLEMS
AFFECTING SMALL BUSINESS
OF THE
PERMANENT SELECT COMMITTEE ON
SMALL BUSINESS

"Small Business Opportunities in
Outdoor Recreation and Tourism"

90% of all the establishments within the lodging, food service, and travel sections of the tourism industry are small businesses.

Findings of Report

Financial Assistance provided by Government agencies is inadequate to meet the needs of the vast majority of businesses within the tourism industry. Specifically, in regard to SBA they found

1. "that existing congressionally imposed limitations on SBA loans to tourism establishments are too restrictive in terms of the needs of these businesses. To begin with the \$350,000 limitation on guaranteed loans does not sufficiently reflect the high-investment costs in fixed assets needed to successfully operate many tourism businesses."

2. "that in view of these high investment costs, the legislative requirement that all loans be repaid within a maximum of 15 years is counterproductive, in that it necessitates relatively high installment payments,

Also, in terms of definition they recommended,

3. "that the SBA's definition of what constitutes a small business within the tourism industry is in need of review, in that the scale of these establishments has greatly increased."

HQ AR004116

RECENT STUDIES ON ECONOMIC IMPACT OF RECREATION

Recreation-resource management continues to grow in importance to the welfare of the American people. This fact was amply demonstrated by two recent studies.

"THE ECONOMIC IMPACT OF TENKILLER FERRY LAKE" BY OKLAHOMA STATE UNIVERSITY, AUGUST 1973.

This study pointed out that flood control and hydroelectric power were the original authorized purposes of the project. Yet, the following benefits have been realized:

a. Flood Control

1951-1972 averaged \$150,000 per year

Project total - \$3.2 million

b. Hydroelectric Power

Operation began in June 1972. \$6.3 million has been returned to the Treasury.

c. Water Supply (not an original purpose)

Returned \$34,348 to Treasury between 1966 and 1972.

d. Recreation (not an original purpose)

Value of total recreation experience during 1972 only ranges from \$10.2 million to \$21.5 million depending on method used to determine benefits.

Tenkiller Ferry attracted a total investment in recreation equipment of approximately \$120 million in 1972 alone.

"THE IMPACT OF THE DENISON RESERVOIR ON SURROUNDING COUNTIES"
BY THE UNIVERSITY OF OKLAHOMA, JUNE 1972

This study states that the project has provided \$30 million in benefits for flood control and \$17.5 million for hydroelectric power. Recreation at the project has resulted in an increase of over \$250 million in retail sales in the surrounding counties.

The Courier-Journal & Times

Sunday, September 14, 1975

southern indiana

In Mansfield area

Reservoir has increased township's tax valuation

By GORDON ENGLEHART

Courier-Journal Staff Writer

ROCKVILLE, Ind.—Every proposal for an Army Corps of Engineers reservoir is invariably accompanied by dispute over its effect on the local economy and lifestyle.

Opponents claim it will wipe thousands of good cropland acres off the tax base, disrupt school and road patterns and boost police and other governmental costs.

Proponents counter that the temporary loss of tax revenues will be more than recouped in perhaps five years by new homes, businesses and industry attracted to the water-side.

At a July 21 hearing at Greencastle on the proposed Big Walnut Reservoir, foes said that only a few small businesses had taken root at nearby Mansfield (Raccoon Lake) Reservoir in 5 years.

Mansfield is nine miles east of Rockville, with a U.S. 36 bridge spanning its midriff. Nearly all the lake is in Union Township, Parke County, with small segments extending into Greene Township, Parke County, and on into Putnam County.

Mansfield Reservoir is about half the size of proposed Big Walnut, about 15 miles away.

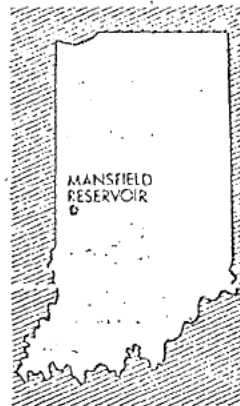
Circumstances vary at every reservoir—but Big Walnut people may be able to draw on the Mansfield experience as some sort of portent of their own future.

A recent visit by this reporter to the Mansfield Reservoir area and the Parke County Courthouse in Rockville revealed that:

✓ More than 1,500 homes, but just a handful of businesses, and no industry, have been built around the lake.

✓ Union Township's net assessed valuation (land, improvements, personal property and utilities) for tax purposes has doubled.

In 11 of 12 other townships, assessed valuations have risen at a lesser rate. In



the 12th. Reserve, a big new development by Panhandle Eastern Pipeline has nearly tripled valuations.

In 1958 and 1959, the Corps of Engineers paid \$891,500 for 3,523 acres in Union Township and 40.8 acres in Greene Township.

The Indiana Department of Natural Resources subsequently purchased 201.4 acres for \$112,648 for a state park it operates along the lake.

The Parke County treasurer's office reported that the Corps and Natural Resources Department purchases removed \$100,515 from the county's total net assessed valuation.

Mrs. Mary Kay Jones, county auditor from 1968 to 1974 and now first deputy Circuit Court clerk, recalled that the land taken was not high quality.

"The best wasn't assessed at more than \$30 an acre," she said. "It was all up and down . . . clay . . . very little good farmland."

These figures from the county treasurer show what happened to valuations in Union and the other townships for four years after land buying began, and then skips to valuations for taxes (in millions of dollars) payable in 1965 and 1975:

	1959	1960	1961	1962	1963	1975
Adams	\$5.2	\$5.2	\$5.1	\$2.9	\$6.1	\$7.4
Florida	2.6	2.6	2.5	1.4	3.3	3.7
Greene	1.8	1.6	1.5	.96	2.0	2.0
Howard	.7	.6	.6	.4	.7	.8

Jackson	.6	.6	.6	.3	1.1	1.1
Liberty	1.3	1.3	1.2	.8	1.2	1.5
Penn	1.2	1.2	1.2	.6	1.4	1.6
Raccoon	1.3	1.3	1.3	.7	1.5	1.5
Reserve	1.3	1.7	1.6	.9	2.0	2.5
Sugar Creek	.9	.6	.6	.3	.6	.7
Union	1.7	1.0	1.0	.6	1.9	2.5
Wabash	1.1	1.1	1.1	1.0	1.2	1.3
Washington	2.3	2.1	2.1	1.1	3.5	2.6

(During this spate, it should be noted, there were two reassessments, cutting valuations in 1962 and boosting them in 1971.)

County Treasurer Jesse H. Stout and Mrs. Jones estimated the number of new residences at 1,500 to 2,000.

Duane Briggeman, who with his father Boyd operates Raccoon Lake Marina just east of the U.S. 36 bridge, said several of the homes are in the \$125,000 class, with the average at \$40,000 to \$50,000.

Other post-lake businesses include two other marinas, a golf course, a restaurant-bar-gasoline station, and a half-dozen trailer courts or campgrounds. The restaurant and one marina also sell groceries.

"We started off in 1972 with five boats, 13 motors and \$1,000 worth of accessories," Briggeman said. "We've grown to over \$1 million a year."

The adjacent 7-acre Running T Camping Ground was opened seven years ago and bought three years ago by Philip E. Thomas, looking to his retirement.

About 140 trailers park there year-round. The project also offers 40 temporary campsites with electrical and water hookups and 20 primitive campsites. Development plans include a small lake.

The 8 1/2-acre Raccoon Lake Restaurant-Cocktail Lounge, started out pre-reservoir as a laundromat. In 1971 it was purchased by William E. and Ruby Anderson and Raymond C. Harrison, converted to a motel, then reconverted to its current multiple uses.

Across U.S. 36 from the restaurant, on the west side of the lake, is a state park of almost 1,000 acres. It features five boat ramps, a big picnic area, a sweeping area and the second largest beach in the state park system.

Mansfield Reservoir may not have turned out to be a magnet to new industry. But Briggeman and Natural Resources Department officials, long that its crappie fishing in spring and fall is unsurpassed in Indiana.

EXHIBIT

D

TOTAL ACREAGE - RECREATION
FEDERAL, STATE, LOCAL AND PRIVATE
1974

AGENCY	TOTAL ACRES (IN MILLIONS)
FEDERAL ^{1/}	740.3
U.S. FISH & WILDLIFE	33.9
NATIONAL PARK SERVICE	31.0
U.S. FOREST SERVICE	187.2
BUREAU OF RECLAMATION	4.2
BUREAU OF LAND MANAGEMENT	473.0
CORPS	11.0
TVA	.9
STATE & LOCAL ^{2/}	52.5
PRIVATE ^{2/}	23.0
TOTAL	815.8

^{1/} Source: Informal contact with individual agency representatives

^{2/} A Legacy for America, 1973, Bureau of Outdoor Recreation

EXHIBIT

E

UNITED STATES SHORELINE OWNERSHIP AND USE

SHORELINE OWNERSHIP

OWNER	U.S. including Alaska		ALASKA		U.S. including Alaska	
	Miles	Percent	Miles	Percent	Miles	Percent
Federal Gov.	3,900	11%	41,300	88%	45,200	54%
State & Loc Gov.	4,600	12%	5,500	11%	10,100	12%
Private	25,800	70%	500	1%	26,300	31%
Uncertain	2,600	7%	0	0	2,600	3%
	36,900	100	47,300	100	84,200	100%

SHORELINE USE

Use	U.S. Excluding Alaska		Alaska		U.S. Plus Alaska	
	Miles	Percent	Miles	Percent	Miles	Percent
Recreation, Public (pri- Recreation, vate)	3,400	9%	0	0	3,400	4%
	5,800	16%	0	0	5,800	7%
Non-Recreational Dev.	5,900	16%	300	1%	6,200	7%
Undeveloped	21,800	59%	47,000	99%	68,800	82%
TOTALS	36,900 miles		47,000 miles		84,200 miles	

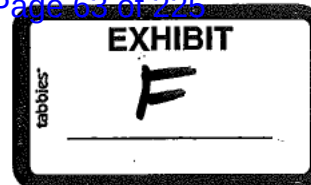
SOURCE: A Legacy for America - 1973, by the U.S. Dept. of Interior, Bureau of Outdoor Recreation p. 33.

CORPS SHORELINE/LAKE DATA

Total Number of Lakes -----	413
Water Acreage -----	6 millic
Corps owned Shoreline -----	44,000 miles
Federal, State & Local-Owned Shoreline (Ocean + Great Lakes) -----	8,500 miles
Private -----	25,000 miles
Total Federal, State, Local + Private -----	33,000 miles

COMMENT: The Corps of Engineers has 10,000 more miles of potential recreational shoreline than the combined total (excluding Alaska) of Federal, State and Local and private ownership.

SOURCE: Recreation-Resource Management Data System, 1974, DAEN-CWO-R

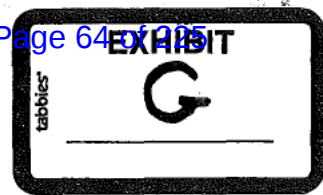


TOTAL RECREATION VISITATION
FEDERAL, STATE, LOCAL AND PRIVATE
1974

AGENCY	VISITATION (IN MILLIONS)	% OF NATIONAL TOTALS
FEDERAL ^{1/}	895.7	21.2%
U.S. FISH & WILDLIFE	22.5	.5%
NATIONAL PARK SERVICE	217.4	5.1%
BUREAU OF RECLAMATION	63.8	1.5%
BUREAU OF LAND MANAGEMENT	49.0	1.1%
CORPS	350.0	8.3%
TVA	.9	.02%
FOREST SERVICE	193.0	4.5%
STATE & LOCAL ^{2/}	2,177.0	52.0%
PRIVATE ^{2/}	1,150.0	27.2%
TOTAL	4,222.7	

1/ SOURCE: Informal contact with individual agency representatives.

2/ A Legacy for America, 1973, Bureau of Outdoor Recreation



DENSITY OF RECREATION USE
FEDERAL, STATE, LOCAL AND PRIVATE
1974

AGENCY	ACREAGE (IN MILLIONS)	VISITATION (IN MILLIONS)	AVERAGE VISITATION PER ACRE
FEDERAL TOTAL ^{1/}	740.3	895.7	1.2
U.S. FOREST SERVICE	187.2	193.0	1.0
NATIONAL PARK SERVICE	31.0	217.4	7.0
BUREAU OF RECLAMATION	4.2	63.8	15.2
BUREAU OF LAND MANAGEMENT	473.0	49.0	.1
U.S. FISH & WILDLIFE	33.9	22.5	.6
CORPS	11.0	350.0	32.0
STATE & LOCAL ^{2/}	52.5	2177.0	41.5
PRIVATE ^{2/}	23.0	1150.0	50.
TOTAL	815.8	4222.7	

1/ SOURCE: Informal contact with individual agency representatives

2/ A Legacy for America, 1973, Bureau of Outdoor Recreation

EXHIBIT

H

CAPITAL INVESTMENT
FEDERAL, STATE, LOCAL AND PRIVATE
1970, 1972, 1974

AGENCY	CAPITAL INVESTMENT (IN THOUSANDS)	% OF TOTAL
<u>1/</u> FEDERAL	277,442.5	68.8
U.S. FOREST SERVICE	42,252.0	10.5
NATIONAL PARK SERVICE	180,679.0	44.8
BUREAU OF RECLAMATION	72.0	.02
BUREAU OF LAND MANAGEMENT	7,818.0	2.
U.S. FISH & WILDLIFE	1,928.0	.5
CORPS <u>2/</u>	44,693.5	11.
STATE/LOCAL <u>3/</u>	126,000.0	31.2
PRIVATE	N/A	N/A
TOTAL	403,442.5	

1/ SOURCE: Unpublished data, Bureau of Outdoor Recreation, CY-1972

2/ RRMS, 1974

3/ State Park Statistics, 1970, National Recreation and Park Association



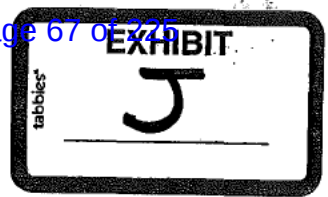
O&M EXPENDITURES
FEDERAL, STATE, LOCAL AND PRIVATE
1970, 1972, 1974

AGENCY	O&M EXPENDITURES (THOUSANDS)	PERCENT OF TOTAL
FEDERAL (TOTAL) ^{1/}	275,966.4	61
U.S. FOREST SERVICE	41,472.	92
NATIONAL PARK SERVICE	163,426.0	36
BUREAU OF RECLAMATION	429.0	.09
BUREAU OF FEDERAL MANAGEMENT	5,032.0	1.1
CORPS ^{2/}	63,679.4	14
U.S. FISH & WILDLIFE	1,928.0	.4
STATE & LOCAL	177,279.	39.0
PRIVATE	N/A	N/A
TOTAL	453,245.4	

1/ SOURCE: Unpublished data, BOR, 1972

2/ RRMS, 1974

3/ State Park Statistics, 1970, National Recreation and Park Association



RECREATION-RESOURCE MANAGEMENT PERSONNEL
FEDERAL LAND MANAGEMENT AGENCIES
CY-1972

AGENCY	SEASONAL	PERMANENT	TOTAL
NATIONAL PARK SERVICE	3868	7955	11823
BUREAU OF LAND MANAGEMENT	115	183	298
U.S. FISH & WILDLIFE SERVICE	60	268	328
BUREAU OF RECLAMATION	6	25	31
U.S. FOREST SERVICE	1288	1275	2563
TENNESSEE VALLEY AUTHORITY	74	71	145
CORPS OF ENGINEERS	1013	1945	2958
TOTAL	6424	11722	18146

SOURCE: Unpublished data, Bureau of Outdoor Recreation, CY - 1972

CORPS OF ENGINEERS
CIVIL WORKS PERSONNEL
NATIONAL TOTALS
30 JUNE 1975

	Full Time Permanent	Percent of GS Total	Temporary Part Time	Recent of GS Total	Total	Percent of GS Total	Average Grade of Full Time Permanent Personnel
Corps Total <u>1/</u>	31857	-	2549	-	34406	-	-
Corps Total <u>2/</u>	20902	100	695	100	21597	100	GS-08
Construction- Operations Div. <u>2/</u>	3893	18	237	34	4130	19	GS-07
Recreation-Resource Management <u>2/</u>	1581	7.6	119	17	1700	7.8	GS-06

1/ All employees - Includes GS and WB employees

2/ Includes GS employees only

SOURCE: Office of Management, OCE.



TABLE 1

RANGER STAFFING COMPARISON: CORPS AND NATIONAL PARK SERVICE

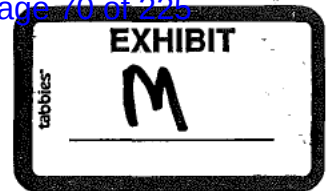
	Corps of Engineers Projects				Reclamation-National Park Service Projects		
	Lewisville Reservoir (Garza- Little Elm)	Table Rock Reservoir	Clark Hill Reservoir	Lake Sid- ney Lanier	Lake Mead National Recreation Area	Glen Canyon National Recreation Area	Coulce Dam Recreation Area (Not a National Recreation Area)
Division	SWD	SWD	SAD	SAD			
District	Ft. Worth	Little Rock	Savannah	Mobile			
Miles Shoreline	183	745	1,060	540	550	1,960	600
Land Area	51,325	61,213	155,886	58,818	1,371,164**	1,025,232**	21,000**
Water Area	23,280	43,100	65,824	38,000	172,814	162,700	80,000
1967 Visitation	2,206,800	3,377,000	3,838,600	8,277,100	4,102,300	390,000	758,400
Total Authorized Permanent Personnel	11	25	34	33	106	50	16
Authorized Permanent Ranger Force	2	2	6	5	26	15	8
Additional Ranger Force Required*	5	6	2	5	?	?	?
Grade of Reservoir Manager (CE) or Superintendent (NPS)	GS-11	GS-11	GS-12	GS-12	GS-15	GS-14	GS-13

*Beyond permanent rangers, each of these projects need additional seasonal employees, comprising from 4 to 6 temporary rangers and 8 to 12 reservoir maintenance workers to handle spring and summer mowing and seasonal facilities maintenance and cleanup.

**The vast majority of lands at these projects are supervised by the Bureau of Land Management and therefore the National Park Service rangers are free to concentrate on public recreation areas and interpretative facilities.

SOURCE: Corps of Engineers, Resource Managers, July 1969, OCE



PREDICTIONS OF RECREATION TRENDS
RELATED TO ENERGY SHORTAGE

If predictions of future fuel shortages prove correct, the type of Recreational Activity will have to change. In a sense, this is already happening. The automobile can be considered a semi-recreational vehicle. In 1965, 25% of the total automobile operating depreciation and other costs went to outdoor recreation uses. The large, luxury car synonymous with long distance touring, is being replaced by the compact, economy family car. Along with this reduction in size, is an increasing tendency to spend vacation or pleasure driving close (within 50 miles) to the home. The close proximity of Corps Projects to highly urbanized areas will provide the nearby recreation sites required.

It is interesting to note that in 1965, 65% of the American population lived in major metropolitan areas, and 69% of all outdoor recreational activities were performed by people living in those areas.

These trends point out future needs for recreation opportunities which require consumption of no, or minimal amounts of fossil fuel. Another consideration for future planning is to provide facilities that do not necessitate moderate to high income levels by the individual for his enjoyment of those facilities (8.3% of the total American families earn less than \$3000 per year plus an additional 16% earn less than \$6000 per year).

The construction of a wide variety of walking trails (cross-country, short loops, environmental interpretive, etc) would accommodate one of the original and most

popular types of outdoor recreation. In 1965, 83 million, or 40% of all Americans participated in this activity. A study of this activity revealed that age, education, and income level had very little influence on the type of person who participated. People who participated the most in hiking were in the \$3000.-\$6000. per year income bracket.

Bicycling is another non-polluting activity that is popular with lower income families (60% of the total families who bicycle earn less than \$8000./yr.) In 1965, 41 million Americans bicycled. By the year 2000, it is estimated that 85 million Americans will participate in this activity. Paved bicycle trails are in great demand by the public, yet their availability is greatly limited. Isolated picnicking facilities (grills, tables, etc.) could be located along the trail to accomodate full day bike hikes.

Camping is experiencing an upward trend in popularity also. The people who go camping are doing so on more occasions than formerly. Man's psychological need to be in a natural environment, the chance to meet other campers, and the growing costs of vacations (motels, meals etc.) all contribute to this trend in weekend outdoor living. The relatively low cost of camping also appeals to the lower income section of our population. Data indicates that in 1965, 35% of the people who camped earned \$6000.0/yr or less.

To provide maximum enjoyment for tent campers, their campgrounds should be located in a different and more isolated area than those for tent trailers and motorhomes.

Recreational areas and facilities are also excellent locations to carry out public relations with the taxpayers of America. By providing trained personnel at Corps Recreation Sites, tours and interpretive programs could be provided (general public, scout groups, schools, etc) that would foster an "environmentally aware" image for the Corps. Perhaps the beneficial effects of this public contact is the biggest payment for an increase in recreation facilities.

Predictions of changes in use for six recreation activities were made in the Land Use Study. The activities studied were boating, swimming, hunting, camping, picnicking and fishing. A summary table of the predicted changes for these activities between 1970 and 1980 follow.

SOURCE:

The Recreation Imperative, Sept 1974, a draft of the nationwide outdoor recreation plan prepared by the Department of the Interior,

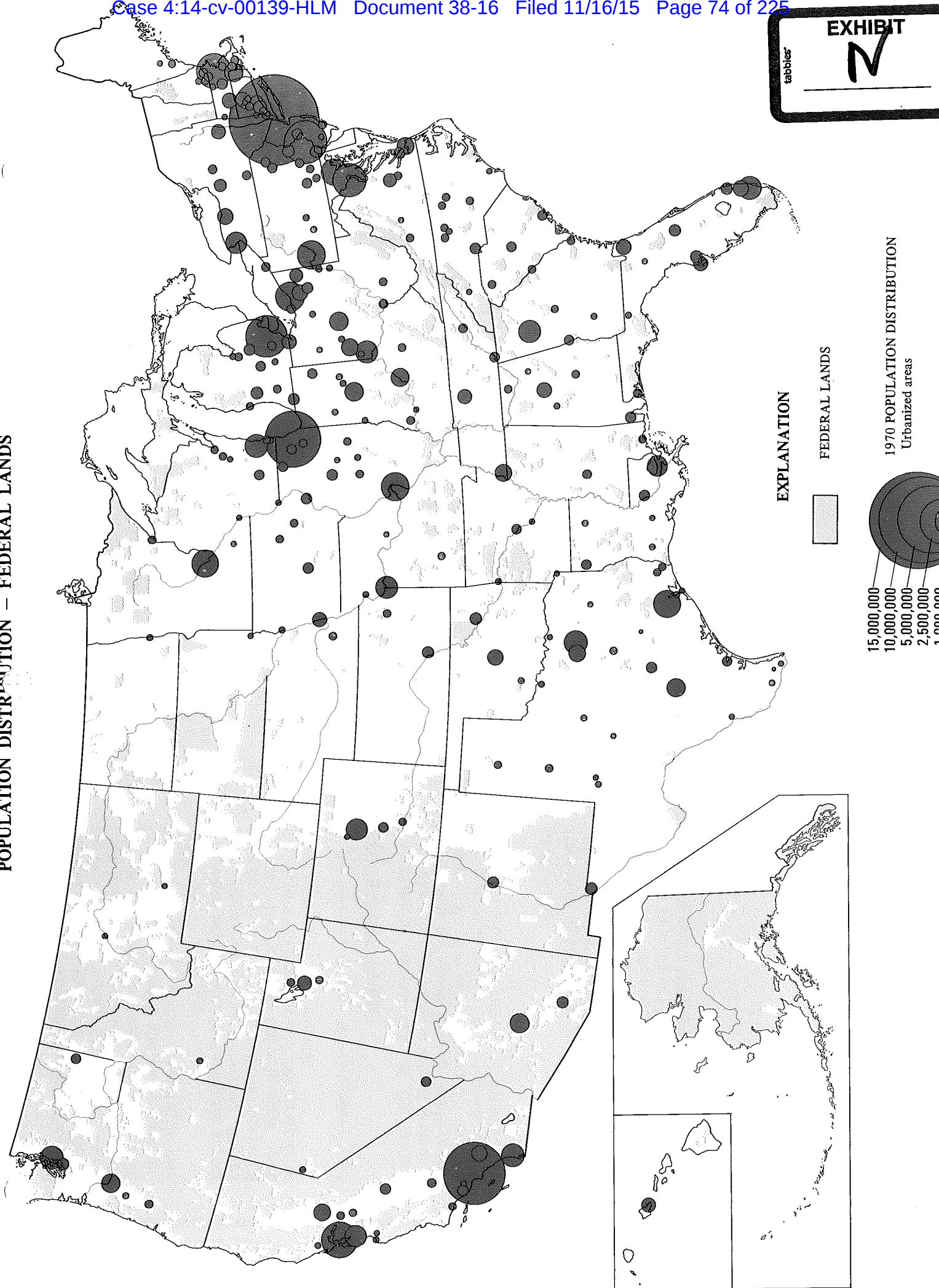
NUMBER OF PARTICIPANTS IN THE U.S. 1970 & 1980
IN THOUSANDS

Activity	Total No. of Days-1970	Projected Total No. of Days-1980	Amount of Increased Days
BOATING	484,994	710,490	225,496
SWIMMING	1,947,828	2,573,080	625,252
HUNTING	204,231	211,450	7,219
CAMPING	419,559	488,906	69,347
PICNICKING	574,756	649,702	74,946
FISHING	575,825	670,312	94,487
TOTAL	4207193.	5303940.	1096747.

SOURCE Study of Land Use for Recreation and Fish and Wildlife Enhancement, May 1975
by the Coastal Zone Resources Corps. , Wilmington, N.C.

EXHIBIT
N
tabbles

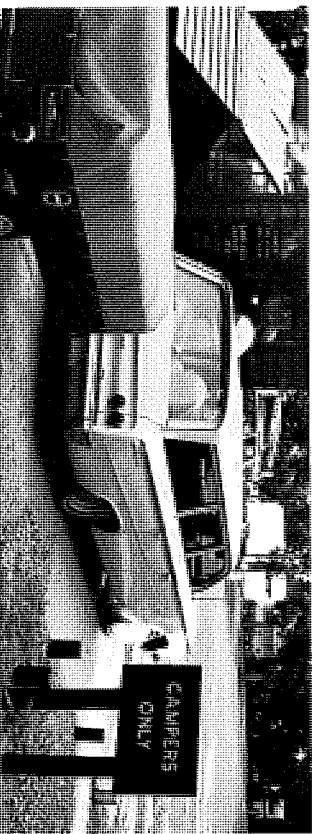
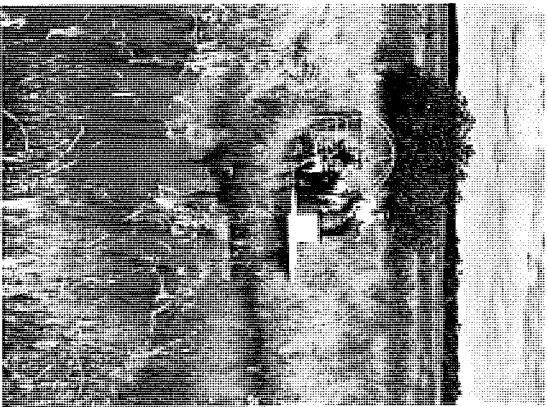
Figure 2-4
POPULATION DISTRIBUTION – FEDERAL LANDS



HQ AR004132

attendant new recreation experiences. It might also increase the need to develop innovative means of protecting or "resting" some recreation resource areas.

Vacations and holidays have become increasingly important in the reduction of working hours in America. Not long ago, vacations and paid holidays were enjoyed mainly by managers, officials, and professionals. Since 1960, paid vacations have become widespread. By 1968, two-thirds of private nonfarm workers received a paid vacation. From 1960 to 1969, total vacation time increased almost 50 percent. Average vacation length increased from 1.8 to 2.2 weeks.



Studies in 1960 showed that most vacations were taken in July, August, and June, with popularity ranked in that order. However, the percentages of people taking vacations during these months in 1969 were lower than they had been in 1960, reflecting "off-season" vacation shifts. Months that gained the most were April and October. Even greater shifts may be in store as winter sports gain popularity with the help of recreation tools such as off-road vehicles.

While these trends—shorter workweek, more flexible employment schedules, more three-day weekends, and year-round school—will act to increase leisure time, they will also help to meet the "peak load" problem. Many recreation areas now must meet tremendous bulges in demand, generally in the summer months and on weekends. As a greater part of vacation time is spread over the year, this peak load problem is diminished. Spreading vacation times also would reduce the need for part-time summer recreation help and provide more year-round professional employment opportunities.

Earlier retirement is another trend that has important ramifications for recreation planning. More and more Americans are retiring before they reach age 65, and the trend likely will continue as more industries and companies make it economically attractive for employees to retire at an earlier age.

At present, less than 50 percent of the Nation's work force is covered by pension plans, and many people interested in early retirement find

that it is not economically feasible. Extended plan benefits and increases in the number of persons eligible for such benefits will have a great impact upon the use of recreation facilities by older persons. Trends toward both increased pension benefits and increased coverage are established and are expected to continue.

Recreation areas already are feeling the impact of increased numbers of the retired. Retired persons are taking to the road in increasing numbers. The "camper" trailer or motor home has given them flexibility and independence to travel widely and economically.

RECREATION TODAY

The following section looks at the general recreation situation today in various geographical settings and points to areas where opportunities for action exist. Figures 2-4 and 2-5 give a general picture of the current public recreation system in relation to population.

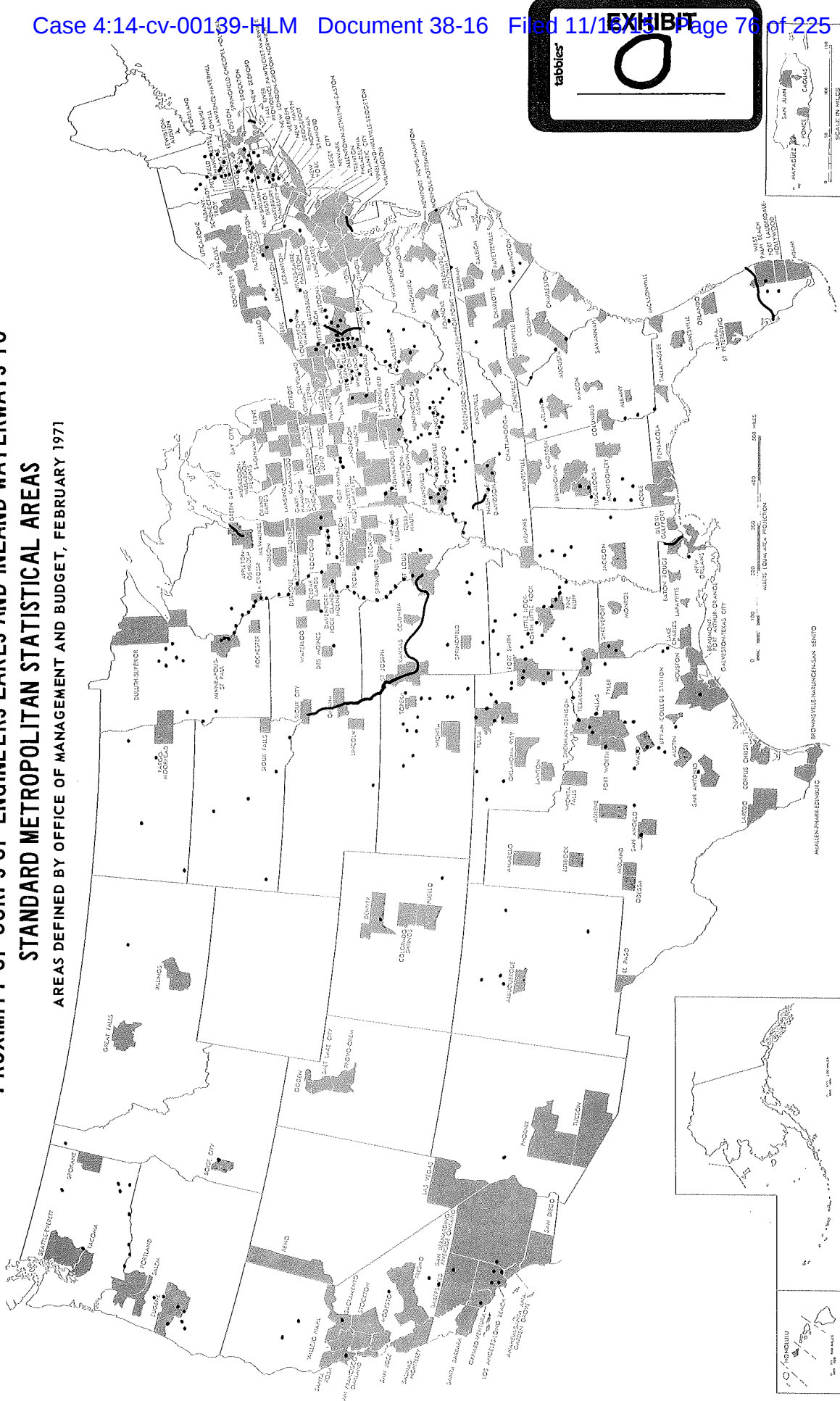
Central City.

The major administrative problems in central cities are obtaining adequate funds for operation and maintenance of existing park and recreation areas and for developing lands already acquired. Many cities are unable to continue new land acquisition until areas already held are properly developed.

EXHIBIT

PROXIMITY OF CORPS OF ENGINEERS LAKES AND INLAND WATERWAYS TO STANDARD METROPOLITAN STATISTICAL AREAS

AREAS DEFINED BY OFFICE OF MANAGEMENT AND BUDGET, FEBRUARY 1971



NOTE: PROJECTS SHOWN ABOVE GRAPHICALLY REPRESENT 390 PROJECTS IN THE CORPS RECREATION ASSESSMENT.

HQ AR004135-HQ AR004551

94th Congress }
1st Session }

COMMITTEE PRINT

(94-13)

VISITOR PROTECTION SERVICES AT
CORPS OF ENGINEERS LAKES

A REPORT TO THE CONGRESS

FROM THE

SECRETARY OF THE ARMY

(As Authorized and Directed by Section 75 of the Water
Resources Development Act of 1974 (Public Law 93-251))



JULY 1975

Printed for the use of the Committee on Public Works and Transportation

U.S. GOVERNMENT PRINTING OFFICE

56-070 O

WASHINGTON : 1975

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(III)

LETTER OF TRANSMITTAL

DEPARTMENT OF THE ARMY
WASHINGTON, D.C. 20310

July 2, 1975

Honorable Carl Albert

Speaker of the House of Representatives

Dear Mr. Speaker:

Transmitted herewith is my Report of the Secretary of the Army to the Congress on Visitor Protection Services at Corps of Engineers Lakes, together with recommendations as authorized and directed by Section 75 of the Water Resources Development Act of 1974 (Public Law 93-251).

My summary and findings report (Incl 1) and main study report (Incl 2) provide for a program to improve the level of visitor protection at Corps of Engineers lakes. The main study contains data which supports these visitor protection measures: (a) Provide the same legal protection to Corps civilian employees engaged in law enforcement type activities as is presently provided to other Federal employees by amending Section 1114 of Title 18, United States Code; and (b) Authorize the Secretary of the Army to contract with State and local law enforcement agencies for increased law enforcement services at times of peak demand by amending P.L. 92-82.

I have attached drafts of legislation with explanatory comments to implement recommendations (a) and (b) of the study:

Legal Protection to Corps of Engineers Civilian Employees (Incl 3)

The first draft is "To amend Section 1114 of Title 18, United States Code to include certain civilian employees of the Corps of Engineers of the Department of the Army within the protective provision of Title 18."

The Office of Management and Budget advises that, from the standpoint of the Administration's program, there is no objection to the presentation of this proposal for the consideration of the Congress. The Department of the Army recommends its enactment.

Contracting with State and Local Law Enforcement Agencies (Incl 4)

The second draft of legislation is "To authorize the Secretary of the Army, acting through the Chief of Engineers, to contract with States and their political subdivisions for the purpose of obtaining increased law enforcement services at water resource projects under the jurisdiction of the Department of the Army."

(V)

2535

HQ AR004138

Manpower and funding requests for this program will be subject to the ordinary budget process in competition with other programs of similar merit.

The Office of Management and Budget advises that, from the standpoint of the Administration's program, there is no objection to the presentation of this proposal for the consideration of the Congress. The Department of the Army recommends its enactment.

Sincerely,



Victor V. Veysel
Assistant Secretary of the Army
(Civil Works)

(VI)

A B I L L

To amend Section 1114 of Title 18, United States Code to include certain employees of the Corps of Engineers of the Department of the Army within the protective provisions of Title 18.

1 Be it enacted by the Senate and House of Representatives of
2 the United States of America in Congress assembled, That Section
3 1114 of Title 18, United States Code is amended by striking out
4 "or any officer or employee of the Department of Health, Education,
5 and Welfare or of the Department of Labor assigned to perform
6 investigations, inspection or law enforcement functions" and by
7 inserting in lieu thereof the following: "any officer or
8 employee of the Department of Health, Education, and Welfare or
9 of the Department of Labor assigned to perform an investigative
10 inspection or law enforcement function, or any civilian official
11 or civilian employee of the Corp. of Engineers of the Department
12 of the Army assigned to perform investigations, inspections, law
13 or regulatory enforcement functions in connection with civil
14 activities of the Department of the Army."

(VII)

Legal Protection to Corps of Engineers Civilian Employees
(Analysis of a Bill, to Amend Section 1114 of Title 18, U.S.C.) -

Purpose of the Legislation

The inclosed Report of the Secretary of the Army to the Congress on Visitor Protection Services at Corps of Engineers Lakes indicates the significance of the law enforcement responsibility of Corps rangers in the administration of Corps outdoor recreation areas. The Corps has approximately 11.5 million acres of Federal lands and waters throughout the United States which are used for outdoor recreation and fish and wildlife purposes. Combined visitation at these areas accounts for about 344 million visitor days of recreation annually.

The Corps directly manages many of these areas and has been authorized to develop and enforce regulations which are necessary to protect visitors and property at these areas. The difficulties encountered by Corps personnel in the enforcement of these regulations have substantially increased as a result of the increasing number of people who participate in the recreation benefits afforded by these areas.

The Congress recognized this increasingly difficult circumstance by its enactment of Section 234 of the Flood Control Act of 1970 (84 Stat. 1313), which makes any violation of the Corps recreation rules and regulations punishable by a fine of not more than \$500 or imprisonment for not more than six months, or both. Section 234 also provides that the Chief of Engineers may designate individuals who shall have the authority to issue a citation for any violation of the regulations requiring the person charged with the violation to appear before a United States Magistrate. Implementation of this would most likely result in an even greater increase in the incidence of violence directed against Corps rangers.

Assaults and other crimes of violence directed against these Corps personnel are, of course, punishable under the criminal laws of the various States where they may occur. However, these State statutory provisions are not a reliable deterrent. They are not uniform in their application and often provide for a minimal punishment which is not commensurate with the gravity of an offense such as an assault on a Federal employee while in the performance of his duties.

In addition, the responsibility for insuring compliance with Federal requirements and prohibitions on work or structures in or affecting navigable waters of the United States, the discharge of dredged or fill material into navigable waters, and the transportation of dredged material for the purpose of silting or filling navigable waters have been delegated to the Corps in various provisions of basic legislation such as the Rivers and Harbors Act of March 3, 1899 (31 Stat. 1151); the Federal Water Pollution Control Act (33 Stat. 596); and, the Marine Protection, Research, and Sanctuaries Act of 1972

(VIII)

(86 Stat. 1052). They involve Corps regulatory personnel in many tasks, such as determining the status of wrecked and abandoned vessels and inspecting the construction of piers, bulkheads, pilings, breakwaters and other structures. These Corps personnel are, of course, further charged with the responsibility to identify violations of Federal laws, report them, and direct the offending parties to desist in their unlawful activities.

Section 1114 of Title 18 of the United States Code lists the branches and departments of the Federal Government whose officers and employees are charged with various investigative, inspection, and law enforcement functions. Their duties expose such officers and employees to the possibilities of violent and intimidating acts in the performance of their duties. The operative provision of Title 18 makes it a Federal offense to kill any of the specified Federal officers or employees while in the performance of their official duties. Anyone committing such an offense is to be punished under the murder and manslaughter provisions of Sections 1111 and 1112 of Title 18, respectively. In addition, Section 111 of Title 18 provides that anyone who forcibly assaults or intimidates a Federal officer or employee specified in Section 1114, while in the performance of his official duties, is to be punished by a fine of not more than \$5,000 or imprisonment for not more than three years, or both. Commensurately, more severe punishment is provided for an offender who commits such an assault while using a deadly or dangerous weapon.

In summary, certain civilian personnel of the Army Corps of Engineers must conduct investigative and enforcement activities in the administration of various civil regulatory and development authorities over navigable waters and land-related activities in the United States. These investigative and enforcement personnel of the Corps are not presently protected by Federal statute against acts of violence as are other similarly employed personnel of other Federal agencies. This unwarranted disparity in the protection afforded these important Corps personnel will be corrected by enacting the proposed legislation.

Cost and Budget Data

The enactment of this proposal will cause no apparent increase in budgetary requirements for the Department of the Army.

Environmental Impact Considerations

The Department of the Army has determined that enactment of this legislation could have no adverse impact on environmental quality.

A B I L L

1 authorize the Secretary of the Army, acting through the Chief of
2 Engineers, to contract with States and their political subdivisions
for the purpose of obtaining increased law enforcement services at
water resources development projects under the jurisdiction of the
Department of the Army.

1 Be it enacted by the Senate and House of Representatives in
2 Congress assembled, That the Secretary of the Army, acting through
3 the Chief of Engineers, is authorized to contract with States and
4 their political subdivisions for the purpose of obtaining increased
5 law enforcement services at water resources development projects
6 under the jurisdiction of the Secretary of the Army to meet needs
7 caused by increased demand during peak visitation periods.

(X)

Contracting with State and Local Law Enforcement Agencies
 (Analysis of a Bill, to Authorize the Secretary of the Army
 to Obtain Certain Law Enforcement Services)

Purpose of the Legislation

The "Summary and Findings" attached to the inclosed Report of the Secretary of the Army to the Congress on Visitor Protection Services at Corps of Engineers Lakes has indicated that a reasonably significant level of criminal activity exists at a majority of the Corps of Engineers lakes. The annual cost of such criminal activity is estimated to be in excess of \$15 million. Criminal activity or the threat thereof also results in a significant but unquantifiable diminution of the value of the recreation experience of the visitor. The study further concludes that such criminal activity is most likely to occur at lakes near urban areas during times of peak recreation use.

While the Federal Government, through the Corps of Engineers, does have the authority to regulate conduct upon its lands as it relates to the purposes for which these lands are held (e.g., recreation), it exercises no traditional police power on such lands and holds them in a manner analogous to that of a private landowner. Thus, State and local laws and ordinances are in force on these Federal lands and the responsibility for their enforcement rests with State and local law enforcement agencies.

While the State and local law enforcement agencies have generally cooperated in enforcing their authorities in these areas on a routine basis, the study has found that they have not been able to respond satisfactorily to misdemeanor and felony offenses during peak use. This is due to the magnitude of the Corps recreation program (344 million visitor days annually, as previously noted), and the geographical extent of these Corps areas.

The enactment of this proposed legislation would remedy this situation by allowing the Secretary of the Army, acting through the Chief of Engineers, to contract with State and local law enforcement agencies in order to obtain increased services to meet law enforcement needs created by peak recreation demands.

The Department of the Army notes that similar local law enforcement problems have existed in regard to recreational and other uses of Department of Agriculture-administered national forest lands. The Congress enacted Public Law 91-62 to deal with these problems. This law, approved 10 August 1969, granted similar though apparently more extensive authority to the Secretary of Agriculture.

(XI)

The remuneration provided pursuant to such contracts would ease the budgetary strain on these non-Federal agencies caused by visitors to Federal recreation areas. Finally, the improved level of visitor protection provided by the affected State and local law enforcement agencies would be an important step toward correcting the law enforcement problem identified by the Report of the Secretary of the Army to the Congress on Visitor Protection Services at Corps of Engineers Lakes, ending the great annual monetary losses to the United States Government and recreation visitors, and providing the visitor to Corps recreation areas with a safe and enjoyable recreation experience. This will be done without diminishing local responsibility for meeting the normal law enforcement requirements at these areas.

Cost and Budget Data

It is estimated that the cost of this proposal upon full implementation will be \$6 million annually.

Environmental Impact Considerations

The Department of the Army has determined that enactment of this legislation would have no adverse impact on environmental quality.

2

(XII)

SUMMARY AND FINDINGS

REPORT OF THE
SECRETARY OF THE ARMY
TO THE CONGRESS

On
Visitor Protection Services
At
Corps of Engineers Lakes

December 1974

Provided in response to
Section 75 of the
Water Resources Development Act of 1974
(PL 93-251)

(1)

SUMMARY AND FINDINGS OF THE STUDY

This document summarizes and presents findings of the comprehensive study of the law enforcement needs and means of providing visitor protection at Corps of Engineers lakes. The Corps of Engineers contracted with PRC/Public Management Services, Inc. (PRC/PMS) to conduct the study, as authorized by Section 75 of the Water Resources Development Act of 1974 (P.L. 93-251), for the purposes of collecting pertinent information in the field and developing findings and alternative courses of action to assist the Corps in planning and decision-making for a future course of administering adequate visitor protection at the lakes.

In particular, the objectives of the current study included the following:

- Analyze the present visitor protection conditions at Corps lakes and determine the adequacy of law enforcement and visitor protection operations and delivery systems.
- Present alternative means for providing future law enforcement and visitor protection services.

In addition, to achieve a desired level of service and assist in immediate and long-range planning, standards and goals were developed for visitor protection at Corps lakes.

This summary will present a concentrated description of the problem at the lakes, the response by the Corps and state and local law enforcement, standards and goals for visitor protection, and alternative courses of action for a more effective response and attendant costs.

Report
Reference: Visitor Protection Problems at Corps Lakes
Chapter 6

In essence, a reasonably significant level of criminal activity exists at the majority of the Corps of Engineers lakes. As Table I indicates, this activity ranges from extensive environmental destruction and vandalism to low occurrence of crimes of violence against persons. The overall estimated cost of crime and damage to the man-made and natural environment at the lakes exceeds \$12-\$17 million annually.

Less serious petty offenses and misdemeanors are predominantly related to vandalism, traffic, and ecological destruction such as the damage caused by off-road vehicles, while the major felony occurrence is larceny.

Criminal activity at Corps lakes is most likely to occur:

- At the developed areas of the largely attended, urban lakes or near highly urbanized areas.
- During the summer, on a week end or holiday (generally Saturday) between the hours of 8 p.m. and 12 p.m.

It should be noted that estimates of crime have been used in the analysis because the actual level of crime cannot be determined due to such factors as: (1) A large percentage of crime remains unreported by victims; (2) There exists confusion on the part of Corps visitors as to which authorities to report the offense; and, (3) There is a lack of reciprocal reporting between state/local authorities and the Corps. As a result, many offenses remain unreported and unrecorded.

TABLE 1

CRIME AND VANDALISM AT CORPS LAKES

OFFENSES AT CORPS LAKES	ESTIMATED LEVEL OF OCCURRENCE OF OFFENSES	TOTAL ESTIMATED COST OF OFFENSES	RESPONSE TO OFFENSES		PRIMARY PROBLEM WITH RESPONSE	
			BY CORPS	BY STATE/LOCAL	BY CORPS	BY STATE/LOCAL
Petty Offenses (Title 36, boating, fish and game, and traffic violations)	EXTENSIVE	\$2 - \$3 MILLION ¹	NOT SUFFICIENT	No Assistance for Title 36 Sufficient Response for boating and fish and game	Understaffed Underequipped Lack of control Lack of emphasis	No emphasis towards Title 36 enforcement Sufficient response for boating and fish and game violations.
Misdemeanor Offenses (includes vandalism)	EXTENSIVE	\$10 - \$14 MILLION	NOT SUFFICIENT	NOT SUFFICIENT	Same as above Lack of surveillance Park design not oriented toward crime prevention	Lack of emphasis Viewed as Corps' problem
Felony Offenses involving property (larceny, breaking and entering, auto theft, etc.)	MODERATE	SEVERAL MILLION DOLLARS ²	NOT SUFFICIENT	NOT SUFFICIENT	Lack of surveillance Lack of reporting mechanism Lack of radio contact Park design not oriented toward crime prevention	Lack of incentive Lack of preventive patrol Lack of thorough investigations
Felony Offenses involving personal violence (homicide, rape, armed robbery and aggravated assault)	LOW	NO ESTIMATE ³	NO RESPONSE	GENERALLY SUFFICIENT	Lack of visitor emergency communications Lack of surveillance	Lack of preventive patrol Response time may be slow

¹Estimated losses due to environmental destruction.²Property losses due to theft and vandalism are impossible to differentiate without a detailed reporting system. Previous studies have shown park vandalism to be far more costly.³Such factors as loss of work-time due to injury, value of life and limb, cost of psychological damage, etc. are significant, however, only an intensive victimization survey could accurately assess value of cost.

Report

Reference:

Response by State and Local Law Enforcement

Chapter 6

State/local law enforcement are providing a mixed response to criminal activity at the Corps lakes. As Table I indicates, the response to petty offenses, especially boating and fish and game violations, is sufficient. As well, the response to serious felonies against persons is generally sufficient. This latter response is also attributed to the low incidence of serious felonies against persons. The response to misdemeanors and felony property offenses is not sufficient. Nonetheless, state/local law enforcement is spending over twice as much on visitor protection at the lakes as the Corps.

The primary reasons for the insufficiency of state/local services include the following:

- Lack of direction and recompense provided by the Corps.
- Calls for service among their own constituency have increased resulting in a decreased ability to perform preventive patrol and surveillance activities at the Corps lakes.
- The various levels and varieties of interrelated and overlapping law enforcement authorities at the Corps lakes makes for a generally uncoordinated "non-system" of law enforcement services.
- Lack of visitor emergency communication equipment makes access to state/local law enforcement difficult and dilatory.

Report
Reference: Response by the Corps
Chapter 6
Chapter 7

Sufficient visitor and resource protection is not being provided by the Corps of Engineers at the majority of lakes. As Table I reveals, the response is not sufficient in all offense categories. Overall, the Corps spent between \$3 and \$4 million last year on services related to visitor protection. This figure is approximately 15 to 20 percent of the annual allocation for operation and maintenance spent on recreation related activities.

In terms of manpower response, the Corps ranger staff appears undermanned. The ranger staff is overwhelmed by visitors and as a result are not capable of properly managing resources and people. This frustration, in terms of not being able to dent the problem, is reflected in the low output of citation issuance. Additionally, the lack of backup management support and "clout" plays a significant part in diminishing the rangers' productivity.

This lack of "clout" is due to uncommitted management objectives both on the part of the Corps and state/local law enforcement.

Report
Reference: Response by Other Park and Recreation Agencies to the Problems of Crime and Vandalism
Chapter 6

Many park and recreation agencies were visited during the study to identify and compare their policies and management techniques for coping with the problem of crime and vandalism. The agencies most similar to the Corps were the National Park Service (NPS) and the U.S. Forest Service.

NPS displayed the deepest involvement in law enforcement at their parks. Extensive use of armed rangers, with full police powers, was evident in the field visits. At Yosemite, NPS even maintains their own detainment facility. NPS reported that in fiscal year 1971-1972 an estimated \$11 million was spent for police protection services in the national parks. Comparing these figures with annual attendance, NPS is spending almost four times more per capita than the Corps of Engineers for visitor protection.

While the expense generally appears justified because of the significance of the crime problem, the scope of the study did not allow for an evaluation of the effectiveness of the NPS response.

The U.S. Forest Service, on the other hand, while hampered by a similar crime problem, has relied on state/local existing law enforcement to provide services. As a result of the Cooperative Law Enforcement Program, initiated by Congress (P.L. 92-82) in 1971, the U.S. Forest Service contracts with state/local law enforcement to provide specific visitor protection services in many of the U.S. forests. In fiscal year 1973-1974, over \$3.5 million was spent to subsidize state/local law enforcement services. As well, the Forest Service still spends several million dollars on their own services and manpower to protect visitors and natural resources.

Since the Forest Service's Cooperative Law Enforcement program has only been in existence a few years, there has not been a thorough evaluation conducted to measure the effectiveness of the program. One point is evident, however, that the program was implemented and is maintained with relatively few administrative or management problems.

Report
Reference:
Chapter 8

Proposed Goals for the Corps of
Engineer Visitor Protection Program

In determining the "adequacy" of the current Corps response to crime and to assist in future planning and decision-making, standards and goals were developed to establish a desirable level of visitor and resource protection at Corps lakes. Once the goal statements were established, the next step was to define precise and measureable objectives. Given this objective, all system components essential to achieving the objective could be identified.

Prior to implementation of these standards and goals, each component of the Corps should be analyzed to determine its contribution to the stated objectives. Then, all activities and resources devoted to this objective could be aggregated into a program. The cost of these program activities could then be determined and judgements made as to the cost/effectiveness of the performance in satisfying the objective.

These type of objective standards provide the public, as well as legislative and executive bodies, with the information needed to determine what they are paying for in terms of protection services and whether additional expenses are required to enable the agency to attain the standards established.

The goal statements that follow are based on a review of relevant literature, Corps of Engineer policy statements, interviews with over 200 federal, state, and local officials, and professional judgement of the recreation and law enforcement specialists assigned to this study.

The first-level goal is formulated to define the basic purpose of Corps of Engineers involvement in recreation and resource management.

The goal of the Corps of Engineers recreation program is to increase the Corps capability to plan, develop

and manage the natural resources available at its lakes for optimum and diverse public recreation opportunity for present and future generations. Public safety, personal security, and environmental protection are fundamental to people achieving a fulfilling recreation experience while visiting a Corps lake.

Next, with specific attention to the visitor protection program at Corps of Engineers lakes, the following goals, which are not in priority order, should be established:

GOAL 1: VISITOR ASSISTANCE--Proper protection and services will be provided to enhance visitor enjoyment of lake recreation resources.

Objective 1-1: Enforcement personnel at Corps of Engineers lakes should be sufficiently aware of the availability of all facilities and procedures at the project and should be able to provide this and other types of appropriate information to the public when requested.

Objective 1-2: All personnel with enforcement authority at Corps of Engineers lakes should be trained in human relations and recreation as well as on the nature and scope of lake resources.

GOAL 2: ENVIRONMENTAL PROTECTION--Protection, maintenance and preservation of the highest standards of environmental quality and attractiveness of the lake will be provided by appropriate law enforcement authority.

Objective 2-1: Ranger personnel should continue to be responsible for environmental protection at Corps lakes. However, it will be necessary to significantly increase the existing level of Title 36 enforcement.

Objective 2-2: The Corps should significantly increase its environmental and resource protection public education program particularly in local school systems in close proximity to Corps lakes.

GOAL 3: PATROL--The lake will be patrolled by officers with law enforcement authority on a regular and continuing basis.

Objective 3-1: High visitation, well-developed Corps of Engineers recreation-resource lakes will require a minimum of 16 hours per day of law enforcement patrol coverage during periods of peak usage. Ranger personnel will supplement these services and provide patrol services during off-peak periods of usage.

Objective 3-2. Low visitation, lightly developed Corps of Engineers recreation-resource lakes will require a minimum of eight hours per day of law enforcement patrol coverage during periods of peak usage. Ranger personnel will supplement these services and provide patrol during off-peak periods of usage.

Objective 3-3: Lakes out leased to other agencies will require that the Corps negotiate appropriate written agreements with these agencies operating outgranted areas to provide for visitor protection services at least equal to those provided by the Corps at similar Corps-operated areas.

GOAL 4: AUTHORITY AND MANPOWER--Law enforcement officers with authority sufficient to apprehend and present suspects to the proper judicial authority will be available.

Objective 4-1: Officers with law enforcement authority providing patrol services at Corps lakes should be competent and trained to perform preliminary investigations of reported crime, accidents, and traffic crashes.

GOAL 5: COMMUNICATIONS--Communication devices will be available throughout the lake area to handle emergencies and other situations requiring law enforcement services without undue delay or difficulty.

Objective 5-1: All developed Corps recreation areas accommodating visitors should have a minimum of one device to enable the public to request law enforcement or other emergency services.

Objective 5-2: The Corps of Engineers should negotiate written agreements with all state, local and federal agencies operating developed recreation areas at Corps lakes to assure that such agencies provide communications devices at their areas.

GOAL 6: COORDINATION--Law enforcement authorities at the lake will develop and maintain effective working relationship with U.S. Magistrates, U.S. Courts, U.S. Attorneys and all applicable Federal, State and local law enforcement and criminal justice agencies.

Objective 6-1: Each Corps lake manager should prepare a detailed descriptive document outlining pertinent facts about the recreation project (e.g., number of visitors, map showing boundary lines, facility descriptions, etc.) and identifying specific law enforcement needs. This document should be submitted to each and every criminal justice agency with jurisdiction at the lake. The lake manager should meet with every agency to determine exactly what services can or cannot be provided. A written report should then be prepared outlining exactly what needs can be met by such agencies; what needs cannot be met; and what problems exist. (Appropriate implications of this report should be considered in the preparation of the annual law enforcement plan for the lake as described under Goal 8.)

Objective 6-2: Corps lake managers will develop effective working relationships with U.S. magistrates and other judicial authorities having jurisdiction over incidents occurring at Corps recreation lakes.

GOAL 7: RECORDS--Adequate and accurate records will be maintained on all situations related to law enforcement needs and problems at the lake so that Corps decision-makers can make informed assessments and plans for visitor protection.

Objective 7-1: Each Corps Lake manager should establish systems and procedures to obtain reports of crimes, arrests, or other unique incidents occurring at the lake from all law enforcement agencies providing such services at the lake. The lake manager should incorporate such incidents into his reports to higher Corps levels.

Objective 7-2: A system of annual sample surveys should be implemented at high visitation, well-developed lakes to maintain a current evaluation of user experience and victimization at the lake. As a minimum, this survey should determine: (1) user opinions about the level and quality of visitor protection services at the lake; (2) any criminal victimization of lake users; and, (3) user suggestions for improving safety conditions at the lake.

GOAL 8: PLANNING--Corps of Engineers lakes will be developed to: (1) enhance the personal safety of visitors; (2) facilitate safety of visitors; and (3) facilitate the effective provision of law enforcement and visitor protection services. Master Plans for Corps lakes and recreation areas will have a law enforcement and visitor protection component.

Objective 8-1: The Corps should establish a position for a professional enforcement specialist at the Division level to assist in the planning and design of recreation areas and to coordinate law enforcement and visitor protection planning and services of the Districts within the Division.

Objective 8-2: The Corps should institute inclusion of law enforcement and visitor protection design concepts in planning efforts for lakes with recreation components. Each District should prepare, or cause to be prepared, a law enforcement and visitor protection plan for each lake. The plan should be based on quantitative and accurate data and should address specific objectives to be addressed and achieved during the planning period.

CONCLUSIONS

There is a significant crime problem at Corps of Engineers lakes. The annual cost of offenses is estimated to be in excess of \$15 million. Criminal activity or the threat thereof at Corps lakes also results in a significant but often unquantifiable diminution of the value of the recreation experience. The crime problem is most severe in the areas of vandalism, theft from users, and minor assaults against recreationists. Severity of the crime problem is not uniform on all lakes but is variable depending primarily upon project location relative to population centers.

The report did not attempt to determine the relationship between the number of police available and the level of criminal activity. Nevertheless, an evaluation of visitor protection needs indicate that Ranger staffing levels on Corps lakes should be increased. Additionally, Corps personnel lack legal protection of their physical safety afforded other federal agency personnel. Local law enforcement agencies generally lack sufficient personnel to respond during periods of peak recreation use. Emergency communications for the public and between the Corps personnel and local law enforcement agencies should be upgraded. Additionally, recreation area access modification should be accomplished to provide better control for visitor protection.

Alternatives I thru V have been evaluated for sufficiency to meet goals providing desirable levels of visitor protection. The alternatives are summarized as follows:

a. Alternatives I, II-A, II-B, III-C, and IV-B are judged not to meet these goals.

b. Alternative III-A and B would meet these goals but would require full subsidy of non-Federal law enforcement agencies thereby establishing the Federal Government as the exclusive program manager of local law enforcement on Federal lands.

c. Alternatives II-C, IV-A and IV-C would meet these goals but substituting federal police for local police would dilute local responsibility for law enforcement on federally owned lands within their jurisdiction.

d. Alternative V would meet these goals by providing for an increased Corps Ranger staff to render more adequate surveillance and visitor assistance in conjunction with a subsidy to local law enforcement for extraordinary services during peak use periods.

The most significant law enforcement needs are in the areas of surveillance, visitor assistance and rapid response to minor crimes against persons and property. The varying nature of these crimes, as well as the varying severity from project to project requires a highly flexible cooperative law enforcement program. Such a program can be achieved most successfully thru a fully integrated program involving Corps of Engineers Rangers and local law enforcement officers.

The nature of criminal activity and response by law enforcement officials make it difficult to assess cost effectiveness of any specific alternative. Accordingly, it is concluded that:

a. A Visitor Protection Program should meet stated goals rather than striving for a police officer to number of persons ratio or similar criteria.

b. A Visitor Protection Program should provide maximum flexibility to deal with the varying nature of type and severity of crime.

c. A Visitor Protection Program is the joint responsibility of the Corps of Engineers and local law enforcement agencies to meet established goals.

The report does not weigh the relative priority of funds and personnel to be used for visitor protection against alternative Corps and other federal uses. Accordingly, specific funding and personnel requirements for the Visitor Protection Program should be established through competition with other Federal programs, in accordance with usual budgetary procedures.

RECOMMENDATIONS

Recommend that a cooperative mutually supporting program for Federal-local visitor protection be implemented. Specific recommendations are:

a. That the Congress extend the protection afforded by Section 1114 of Title 18, U.S.C. to certain Corps of Engineers employees.

b. That the Congress grant authority for contracting with local law enforcement agencies for extraordinary services.

TABLE II
ALTERNATIVES FOR THE ADMINISTRATION OF
VISITOR PROTECTION AT CORPS OF ENGINEER LAKES

Alternatives for Action	Expenditures for Visitor Protection Corps	State/Local	Level of Service Provided at Corps Lakes
Current Expenses	\$3 - \$4 Million	\$7 - \$10 Million	Not Sufficient*
I	No additional expenses	No additional expenses	Not Sufficient
II-A	No additional expenses	Possible added costs	Not Sufficient
II-B	No additional expenses	Reduction in current costs	Not Sufficient
II-C	Some added expenses	Reduction in current cost	Sufficient**
III-A	\$4 Million additional	Reduction in current cost	Sufficient
III-B	\$5.6 - \$6 Million additional	Reduction in current cost	Sufficient
III-C	\$2.7 Million additional	No additional expenses	Not Sufficient
III-D	\$8 - \$9 Million additional	Reduction in current cost	Sufficient
IV-A	\$6.5 Million additional	Reduction in current cost	Sufficient
IV-B	\$4 Million additional	No Additional expenses	Sufficient
IV-C	\$11 Million additional	Reduction in current cost	Sufficient
V	\$10 - \$12 Million additional	Reduction in current cost	Sufficient

(Source: PRC/PMS)

*Thus, the overall cost of crime and vandalism, which is in excess of \$12-\$17 million, will not be abated by this action.

**Should have enough impact and deterrent effect to reduce the occurrence and cost of crime and vandalism.

REPORT ON
VISITOR PROTECTION SERVICES
AT CORPS OF ENGINEERS LAKES

Prepared for
U.S. Army Corps of Engineers

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This report is the final submittal of a comprehensive study of the law enforcement needs and means of providing visitor protection at U.S. Army Corps of Engineers lakes. The study was conducted pursuant to a contract agreement between PRC/Public Management Services, Inc. (PRC/PMS) and the U.S. Army Corps of Engineers.

Executive review responsibilities for this study within PRC/PMS were performed by William Petersen, Vice President and General Manager of Management Services; Jerome Daunt, Executive Vice President; and Donald Roderick, Deputy General Manager of Management Services. Overall supervision and guidance was provided by Edmund Fennessy, Principal Associate-in-Charge, Operations and Policy Analysis Section. The study was directed and coordinated by Edward Connors. Other members of the study team participating in the analysis of the data and the development of courses of action included: Philip Lynn, J. Thomas McEwen, Alexander B. Bigler Associates, and Economics Research Associates. Primary assistance in the field work and report preparation was contributed by the following study team members:

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(I)

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PREFACE

The problem with evaluating such an extensive and previously untouched area of criminal justice is the lack of direction or standards and the multiplicity and variety of findings or problems one uncovers. The first step is the first study.

The current study, while being for the benefit of the Corps management, also sheds light on the state of the art of law enforcement and visitor protection in recreation areas and facilities. The Corps should recognize that with the increasing prominence of leisure activities, recreation use, and natural resource protection, this study only represents the opening of a coming field of endeavor. As these commodities become more precious, the Corps will be called to exercise unique and resourceful management operations. Long-range planning for these operations will help ensure effectiveness.

It is hoped that this study may assist the Corps in developing: 1) A more precise definition of the role of recreation and visitor protection in the Corps present and projected growth; 2) Specific policy relating to the implementation of standards and goals for visitor and resource protection, and, 3) Programs and practices of technical, organizational, and management assistance aimed specifically at policy implementation. Improved law enforcement and visitor protection services are an inextricable part of recreation policy which serves to improve the management of progressively increasing numbers of public users, and ultimately, the recreation user's experience.

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Chapter 1
PROJECT OBJECTIVES

The Corps of Engineers has recognized for several years that the management of visitors at the Corps lakes has become increasingly difficult and that lack of law enforcement and security at the lakes was compounding the problems of the recreation-resource rangers. Immediate reaction to these conditions was not attempted, however, due to the fact that the actual status of the Corps law enforcement "problem" was not accurately known either in terms of severity or priorities.

As a consequence, PRC/PMS was contracted in an effort to more precisely assess the present visitor protection and security conditions, and to determine the cost and adequacy of various alternatives to improving these conditions. These findings are then intended to assist the Corps of Engineers in making decisions for a future course of administering effective visitor protection. More specifically, the study was authorized by Section 75 of the Water Resources Development Act of 1974 (P.L. 93-251) which states that:

"The Secretary of the Army, acting through the Chief of Engineers, is authorized and directed to study the need for and means of providing visitor protection services at Water Resource Development Projects under the jurisdiction of the Department of the Army and to report thereon to the Congress with these recommendations..."

The actual content of the desired study was outlined in the Corps of Engineers' Request for Qualifications which appeared in the Commercial Business Daily, April 1, 1974. The overall objectives of this study have adhered closely, but have not been limited to the articles of the Corps Request.

(1)

In general terms the study has attempted to fulfill two broad objectives namely: 1) to determine the adequacy of current law enforcement operations and procedures as available through the Corps citation program and authorized law enforcement agencies; and 2) to present and discuss various alternative means of providing law enforcement services in the context of operational, fiscal, administrative, and organizational terms.

This report will more closely address the methodological concerns involved in accomplishing these goals in the chapters on methodology and analysis. In the present context it is sufficient to note the various sub-objectives which have gone into fulfillment of study goals. These include:

- The development of standards to achieve adequate visitor protection services and from which to more adequately plan and evaluate law enforcement service sufficiency;
- Analysis of the present level of services available to Corps lakes in operational and fiscal terms as well as those provided by the Corps;
- Correlation of other related park and recreation experiences to that of the Corps through site interviews on federal, state, and local levels;
- Review of the literature pertaining to law enforcement in recreation areas and facilities;
- Development of alternatives for law enforcement at Corps lakes with assessment of merits related to the Corps, state and local agencies, federal and local courts, as well as the recreation users.

Chapter 2

BACKGROUND FOR THE STUDY

A. Overview of the Corps of Engineers in Recreation

The U.S. Army was the first Federal agency to protect public park lands when they were called in to protect the resources of Yellowstone National Park in 1886.¹ The Army's responsibilities were soon extended to complete control of operations of the park. This role lasted for 30 years until terminated at the beginning of World War I when troops were needed elsewhere. Shortly thereafter Congress created the National Park Service to continue with resource protection.

In the years between World War I and II, the civil works activities of the Army Corps of Engineers became extensively involved with constructing and maintaining navigation works along the nation's harbors and rivers. The Corps, along with other Federal agencies, became more involved in reservoir construction with the Flood Control Act of 1936. This Act declared flood control a Federal activity.

The Corps activities in water resources development were reviewed as pursuing the national interest in security, public safety and economic growth, and in recent years with environmental quality.

With the attraction that water holds for outdoor recreation, the waterways, navigation pools and lakes managed by the Corps have always been visited by recreationists. Congress has consistently held that water bodies and surrounding lands developed with public dollars should be accessible to citizens for their enjoyment. What started over a hundred years ago as kids skinny-dipping in a navigation channel and families

picnicking along the shady banks of a waterway has evolved into a major outdoor recreation activity in America. The growth of recreation use of Corps water projects has reflected the overall increase in outdoor recreation activity in America, and has become an important part of the Corps civil works responsibility.

When the National Park Service was established² and replaced the Army at Yellowstone National Park, a ranger force was initiated to serve and protect the park and visitors. The historical need to protect park lands from despoilers was also manifested in city parks and other recreation areas, particularly in the larger cities. At the same time the Army and National Park Service were protecting Yellowstone National Park, many of the large cities in the early 1900's were establishing special park police forces to control vandalism in their park and recreation areas. Most of these were established within the local municipal police departments.

Much of the law enforcement and visitor protection in Federal park and recreation areas was left to the park ranger. The park ranger, however, became known for his interpretation of the environment and his visitor courtesy functions. Not many individuals considered him a law enforcement officer.

As attendance increased at national parks, visitors began to look to the park ranger for control and personal security in concentrated areas where antisocial behavior began to occur. In 1897³ Congress empowered the Secretary of Agriculture to make rules and regulations for the use of the National Forests, and in 1905 extended to the Forest Service the authority to make arrests for the violation of laws and regulations.⁴ The 1905 Act also extended arrest powers to the National Park Service in managing National Park lands.⁵ The 1916 Congress granted full police powers to the U.S. Park Police in the District of Columbia.

It soon became apparent that uncontrolled forces of the industrial society and mass immigration movements were making marked changes in

human behavior. Park grounds were not safe places to be alone. What was once considered a pleasurable experience was now considered in need of armed guards.

While this changing scene in recreation was becoming more apparent, the Corps of Engineers was slowly entering the periphery of the field.

With Corps water impoundments becoming more attractive to recreation use, Congress gave the Corps authority to provide public outdoor recreation facilities at its projects in the Flood Control Act of 1944.* The Corps recreation authority was broadened in 1962 to cover all types of water resources projects, not solely reservoirs, in conjunction with the adaptation of Senate Document 97 which declared recreation as a full partner in the nation's multiple purpose water resources development programs. The Federal Water Project Recreation Act of 1965 further spelled out cost sharing arrangements under which recreation developments can be provided at new projects (after 1965).

While these Acts provide the Corps with an overall legislative mandate to provide recreation facilities at their reservoirs, they do not provide specific guidance on how to cope with the increasing demands of resources management, changing recreation interests of visitors, and needs for public safety and visitor protection. There has not been a specific law enforcement mandate given to the Corps by Congress as with the Forest Service and the Park Service.

What was originally envisioned as minimum basic facilities for public safety, sanitation, and access are being exceeded by increasing standards for public health and water quality. Intensive use of developed recreation areas is placing extreme pressure on the Corps to be resource

*The recreation authority is contained in Section 4 of the 1944 Flood Control Act which states: "The Chief of Engineers...is authorized to construct, maintain and operate public park and recreational facilities in reservoir areas under control of (the Department of the Army), and to permit the construction, maintenance and operation of such facilities."

managers and to provide better recreation support service to visitors. The need for visitor protection has become a sensitive aspect of public use of Corps recreation areas as has the impact of vandalism, littering and environmental damage such as fire and erosion.

Prior to 1968, the Corps of Engineers would complete a project, open it to the public for recreation, and helplessly watch it slowly be despoiled. As this state of affairs finally came to the attention of a few members of Congress, the Corps was granted administrative authority to enforce rules and regulations, contained in title 36 of the Code of Federal Regulations, relating to protection of project resources.

Before this new tool was even oiled, it became apparent that more drastic measures might be in order. In the early 70's, parks all over the United States found themselves in conflict, philosophically and physically, with unwanted counter-culture visitors. Many scenes of alienation were being related by the media, and parks and recreation facilities were just one of the many areas to reflect the mass confusion of those years.

However, it soon became the issue that this "trend" in vandalism and crime was not going to subside unless it was by government intervention. Law enforcement agencies throughout the country began receiving priority funds from Federal and local governments to increase manpower and equipment to quell the rise of crime and its attendant fear.

This fear began to grip the recreation field in full force. It was a fear because few studies uncovered actual findings and few recreation agencies kept crime statistics.

In 1971 three of the major Federal land holding and managing agencies, the National Park Service, Bureau of Land Management,⁶ and the U.S. Forest Service,⁷ initiated internal studies attempting to identify and cope with rising crime and vandalism. The Corps of Engineers, being the

newest federal agency to enter the recreation field, has also found crime and vandalism a problem. A recent evaluation of Corps recreation-resource management found that in the Corps transition from construction to management, it is lagging in its capability to cope with the problems of managing resources and people.⁵

What these studies and others had hoped to find was a new direction for the organization. Direction in the form of goals and objectives to cope with the problem. While one would suspect or hope that the ends of these objectives would all be to promote the recreation experience, the efficacy of the means employed by some of these agencies has become exceedingly questionable.

In this view, the Corps of Engineers has shown welcome restraint, by closely studying the problem and evaluating their first basic enforcement measures. While oftentimes the initial reaction is to seek a law to outlaw certain behavior, this action should only come after thorough and careful analysis of the ramifications of this action. It has been well said that no law is better than a bad law.

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4. Federal Magistrates Act of 1905 (March 3), (16 U.S.C. 559).
5. P.L. 91-383 (August 18, 1970) extends arrest authority of the 1905 Act to all areas administered by the National Park Service.
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7. Joseph Couch, et al., Law Enforcement Organization Study, U.S. Forest Service, Washington, D.C., June 1971.
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Chapter 3

RECREATION AND THE CORPS

A. Organizational Structure

The Corps of Engineers is located in the Army Department within the Department of Defense. The Corps is divided into five functional directorates and 11 staff office units, as indicated in Figure 3-A. The Civil Works Directorate is the primary organization under the Chief of Engineers responsible for recreation. Recreation is included within the Corps Civil Works responsibility for multipurpose water resources management.

At the field level, the nation is divided into 11 Divisions and 37 Districts (the New England Division and District are combined), as shown in Figure 3-A. The chain of command flows up from the individual water project manager, to the District Engineer, to the Division Engineer, and to the Office of the Chief Engineers (OCE). The recreation responsibility is divided among several units within the Civil Works Directorate, as indicated in Figure 3-B. Law enforcement matters also involve the Office of the Engineer Provost Marshal and Office of the General Council at the OCE staff level. Additionally, the Directorate of Real Estate handles real estate transactions at Corps recreation areas administered by Civil Works.

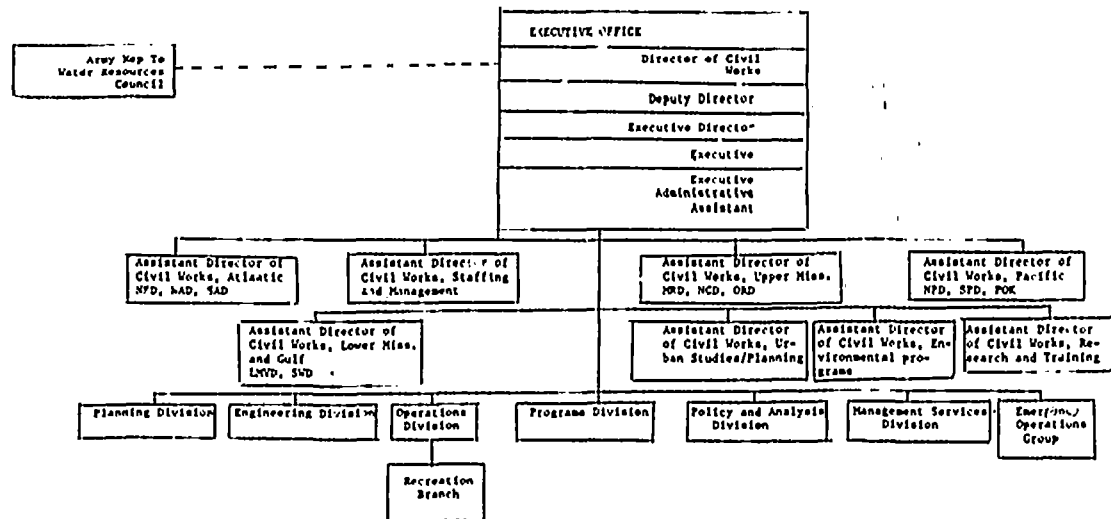
B. Corps Investment in Outdoor Recreation

The increase in outdoor recreation activity since World War II has been reflected in attendance at Corps lakes. In 1962 the Outdoor Recreation Resources Review Commission estimated that almost half of all outdoor recreation activity was water-related. Attendance at Corps recreation



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(Source: U.S. Army Corps of Engineers)

FIGURE 3-8
PARTIAL ORGANIZATION CHART,
DIRECTORATE OF CIVIL WORKS

areas has increased ten percent a year during the last decade. In 1973 attendance at the 333 Corps lakes exceeded 321 million.

There are some 5400 developed recreation areas at Corps lakes. All or part of 44 Corps lakes are managed by other federal agencies, and 700 recreation areas are managed by state or local public agencies. About 400 private concessionaires are operating on Corps-managed recreation areas plus a large number of sub-leases from state and local managed areas. There are over 300 quasi-public areas such as scout and community organization campgrounds.

The range of recreation facilities typically provided at Corps lakes is shown in Table 3-1. These figures indicate the general order of magnitude and character of outdoor recreation activity occurring at Corps lake recreation areas.

The Corps of Engineers program for developing recreation facilities started in fiscal year 1957. Since that time the Corps has initiated over \$89 million in recreation facilities at 281 completed projects through fiscal year 1973.* It is estimated that non-federal investments in outdoor recreation facilities at Corps lakes about equaled Corps investments.¹

The Corps capital investment for recreation development for FY 1973 was about \$19 million. Operation and maintenance (O&M) costs run about the same as capital costs annually.

C. Social Impact of Recreation on the Corps

People visiting (Corps) recreation areas are seeking an enjoyable recreation experience. People on a recreation outing generally have a

*These funds were appropriated for the Corps program for "Recreation Facilities at Completed Projects," referred to as the "Code 710" program. These capital investments are designed to supplement recreation facilities built during initial reservoir project construction. Initial project recreation facilities generally are designed to serve recreation demands for three years following completion of the project.

TABLE 3-1

Kinds of Outdoor Recreation Facilities Built by Corps
and Others at Completed Lakes

<u>Facility</u>	<u>Corps</u>	<u>State/ Local</u>	<u>Concessionairs</u>	<u>Quasi Public</u>
	(1)	(2)	(3)	(4)
Access roads	X	X	X	X
Circulation roads	X	X	X	X
Parking areas	X	X	X	X
Boatlaunch ramps	X	X	X	X
Overlook	X			
Picnic areas	X	X		
Camping areas	X	X	X	X
Swimming beach	X	X		X
Swimming pool		X	X	X
Boat rental				
facilities		X	X	
Playgrounds	X	X		X
Trails	X	X		X
Service & supply				
stores		X	X	
Dining		X	X	X
Hotels		X	X	
Cabins and dormitories		X	X	X
Golf courses		X		
Riding stables		X		
Water systems	X	X	X	X
Sanitary system	X	X	X	X
Electric and				
telephone	X	X	X	X
Misc. support items	X	X	X	X
Admin. & Maint.				
facilities	X	X	X	X

(Source: U.S. Army Corps of Engineers)

lesser propensity to intentionally commit crimes or demonstrate antisocial behavior. On the other hand, in a recreation area people are more vulnerable to opposing forces and buffer zones are less apparent. The value of recreation equipment is increasing and becoming more of a target for theft.

Many misdemeanors, vandalism, traffic violations and personal disturbances which interrupt recreation experience either go unreported, or are not of the kind that are reported in major statistics. However, witnessing the occurrence or the aftermath of antisocial behavior--reported or not--has an impact on the recreation visitor. This impact is amplified because of his increased sensitivity to the environment and social circumstances within which his or her recreation is pursued. Invariably, the impact is a negative one, detracting from the quality of the recreation experience, at times even to the extent of causing anxiety or fear.

While the visitor to a Corps area may be motivated toward a constructive recreation experience, other environmental influences may come into play. Densities build up, traffic increases, people get careless with litter, vegetation becomes trampled, alcohol extends a conversation into an argument, and the Corps ranger has a difficult situation with which to contend.

Many of the visitor protection problems continue with the unintentional assistance of the environment. The older recreation areas were not designed with a view toward visitor control and protection. Inadequate development of recreation areas has resulted in difficulty and increased costs for management and providing law enforcement services. Such developmental deficiencies could be corrected and over the long run would prove to be cost-effective.

One such deficiency concerns the main access to most Corps reservoirs which relies on the roads that were crossing the river valleys before the reservoir was constructed. Some lakes, such as Lake Texoma in

Texas, have many road access points around the shoreline. Consequently, the recreation areas that developed along these existing roads generally are difficult to control.

About two-thirds of the Corps lakes are within 50 miles of a Standard Metropolitan Statistical Area. Many, such as Old Hickory Lake and J. Percy Priest Lake around Nashville, Tennessee, are located within or near concentrated metropolitan areas. In the case of some lakes, like Old Hickory, there was little adjacent land taken in the project, and urban development has occurred right up to the edge of the lake. The panoply of urban problems have carried over in these situations.

Even at some of the rurally located lakes, urban-type growth stimulated around Corps lakes has resulted in increased law enforcement problems. For example, the off-season resident population around Lake of the Pines in Arkansas is around 13,000 people. This increases to about 150,000 people in the summer with the large amount of second-home development around the lake. This heavy population puts additional pressure on the local sheriff to extend law enforcement services.

Local sheriff and police departments often are reluctant to extend their services to Corps recreation areas within their jurisdiction that are heavily used by non-resident visitors. The tax revenues generated by second-home development attracted to the Corps lakes are viewed, in some cases, as generating less revenues than the cost of local services which they incur. State and local agencies have also been reluctant to assume management of Corps recreation areas where use fees are not adequate to cover O&M costs, including law enforcement. The Corps has recently been giving priority budget attention to upgrading existing recreation areas to be able to charge fees under the law and thereby become more economically self-sufficient.

An important point to be made is that in the minds of visitors coming to a Corps recreation area, security has, indeed, become an important concern. It was revealed in one study on user fees of a Corps lake that

people would be willing to pay use fees if the money collected were to be put directly back into the recreation area.² And what they wanted most in that regard was better security. Visitors wanted to see more of the uniformed ranger which signifies security, even if it were only at the entry gate where fees are collected. Seeing the ranger serves as a deterrent to antisocial behavior and provides a sense of security, even though the ranger's actual law enforcement powers are now quite limited. Also, in the interviews conducted under this study, it was frequently indicated by local authorities that law enforcement problems had been significantly reduced by the initiation of the Corps Ranger Citation Program.

On an individual basis, some Corps rangers have done a commendable job in handling visitor control and protection problems. However, it is apparent from this study that, as it is now constituted, the Corps ranger force generally is not prepared in numbers, background, training, or mission to provide the kind of law enforcement measures needed at Corps recreation areas.

The preservation of the opportunity for, and quality of, a visitor's recreation experience is the paramount goal in providing visitor protection at Corps recreation areas. Law enforcement measures to protect the natural resources and developed facilities at a Corps lake may also be viewed as necessary ingredients to a meaningful and fulfilling recreation experience of an individual. Alternative ways to provide visitor protection and law enforcement to these ends are discussed in the rest of the report.

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2. N.C. Wolff, Demand for an Economic Impact of Outdoor Recreation at Lake Tenkiller, unpublished Masters Thesis, Oklahoma State University, Stillwater, Oklahoma, May 1973.

Chapter 4
PROJECT METHODOLOGY

A. Introduction

The significance of the findings in any type of research or investigation rests heavily on the adequacy of the sampling methods. Based on this maxim, the present study effort attempted to devise a sampling plan which would generate universal or national implications.

The scope of work of the project was directed towards an assessment of the current level of visitor protection at the Corps of Engineers lakes and the means of providing adequate protection in the future. In order to obtain the necessary information and data to accomplish the objectives of the study, it was determined to proceed with a multi-phasic approach.

Prior to the initial planning stages, the study approach consisted of combining the unique disciplines of criminal justice and public safety planning with recreation-resource management planning and economics and tourism. Specifically, PRC/PMS teamed with Economic Research Associates, another Planning Research subsidiary, and with Alexander B. Bigler Associates, an independent consultant in recreation-resource management planning.

After establishing clear managerial coordination and management policies between the partners, PRC/PMS met with representatives of the Corps of Engineers to establish mutually accepted goals and objectives for the study. As a result of these conferences, the study team designed the various elements of the multi-phasic approach. Each phase of the study approach will be described in the following sections.

B. Site Selection

This phase of the approach was the most sensitive to design. The basic problem was how to select a representative sample of Corps lakes, considering that the Corps maintains over 333 recreation lakes with annual visitor attendance exceeding 321 million and that these lakes are broadly divergent in size, geographic location, and use. Further complicating the selection planning was the limited time frame of completing the first draft of the study in 14 weeks. Relying on the corporate resources of FMS, the study team was able to draw from a large base of talent to perform the site visits within this narrow time frame.

Planning the selection of a representative sample was directed by the aim of visitor protection. It is logical that this phenomenon should be affected by the factor of population density. Thus attendance statistics naturally served as the starting point for limitation or selection.

It is necessary to point out that the selection analysis was based on data present at the time. This data revealed a total of 333 lakes. Analysis of the findings further in the project will be based on a different number of lakes. Suffice to say at this point, that the Corps of Engineers has constructed many locks and dams, canals, and river pools which are not clearly delineated in the reporting system as a large lake would be and do not have the attendant problems to be considered within the project.

The distribution of attendance among the lakes provided some significant information relating to lake problems. Based on 1971 data, the total reported attendance at the 333 lakes listed by the Corps was approximately 321,977,000. Further analysis, depicted in Figure 4-A, revealed that 26 of the lakes accounted for 118,900,000 visitors. That is, 7.8 percent of the lakes accounted for 36.9 percent of the attendance. At the other extreme, 230 of the lakes accounted for only 21.0 percent of the attendance. Each of these 230 lakes had annual attendance of less than one million.

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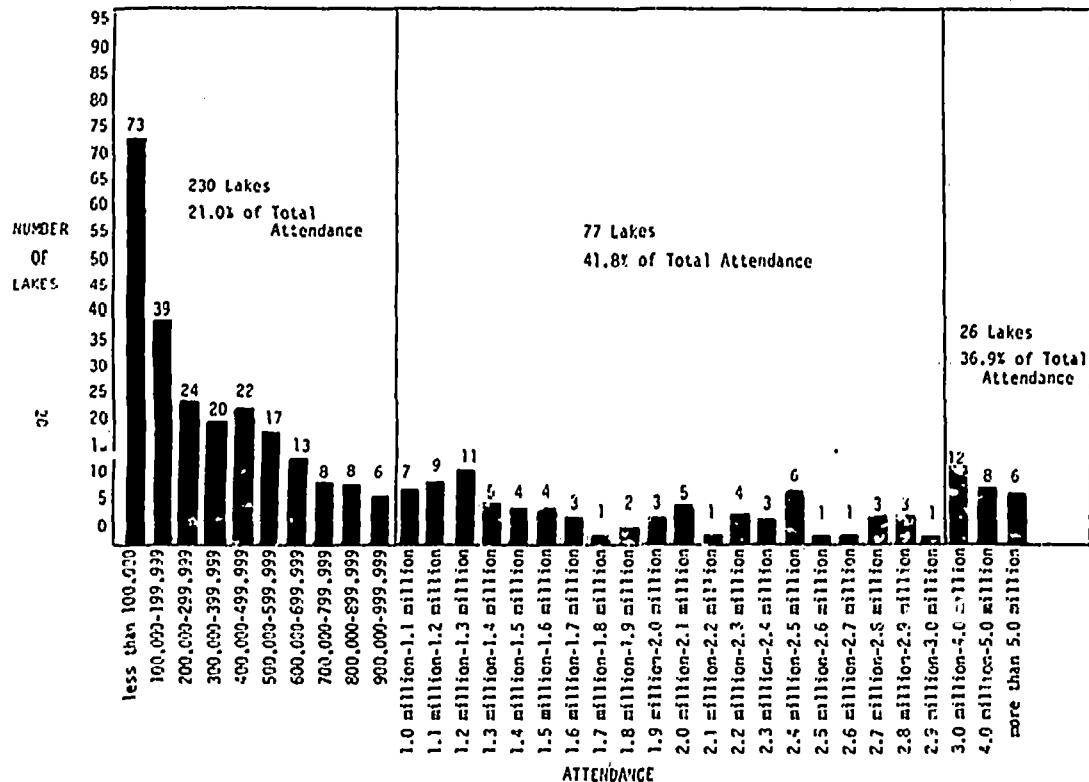


FIGURE 4-11 U.S. ARMY CORPS OF ENGINEERS LAKES GROUPED ACCORDING TO ANNUAL RECREATION ATTENDANCE
(Source: PRC/FMS)

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It was anticipated that in terms of severity of visitor protection problems, the less attended lakes would not reveal the same magnitude of problems as the larger attended lakes and, thus, would not warrant the same consideration in the sample selection. The major concentration, in terms of site visits, was necessary at the 100 or so lakes which accounted for almost 80 percent of the total visitor attendance at Corps lakes.

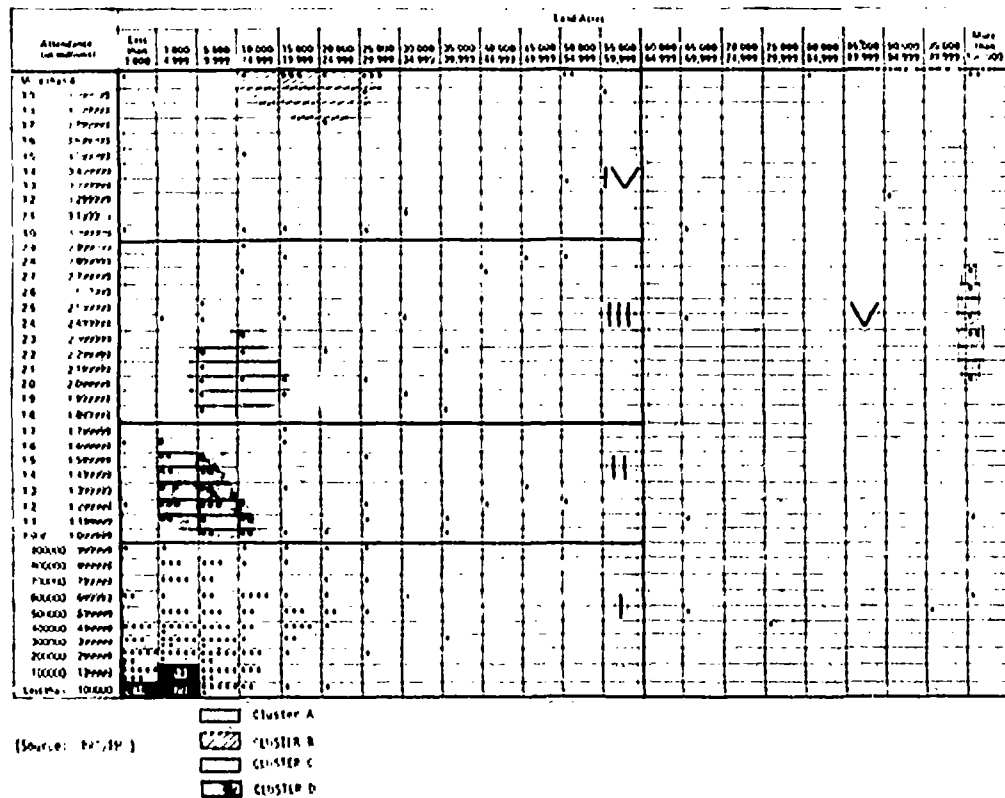
Another dimension of the law enforcement and control problem is size of the lake. Combining attendance with land area, displayed in Figure 4-B, revealed significant similarities among lakes. The preponderance of small lakes with low attendance is obvious in Figure 4-B. Figure 4-B also shows four clusters of similarly situated lakes that deserve special consideration. Cluster A indicates six lakes that are very large in land area and slightly larger than average attendance. Cluster B has small to average land area, but very high attendance. Clusters C and D have small to average land area and average attendance.

These similarly situated lake clusters provide a subdivision of Figure 4-B into five regions:

- Region I -- Land area less than 60,000 acres and attendance less than 1 million
- Region II -- Land area less than 60,000 acres and attendance between 1.0 and 1.5 million
- Region III -- Land area less than 60,000 acres and attendance between 1.5 and 3.0 million
- Region IV -- Land area less than 60,000 acres and attendance greater than 3.0 million
- Region V -- Land area greater than 60,000 acres

It was anticipated that each region would have unique problems of law enforcement and visitor protection and that the lakes within the clusters would be similar. Thus, selecting a lake from similar lakes would apparently be representative of the lakes in the cluster.

CLUSTERS OF CORPS OF EN INTERESTS SITUATED BY LAND SIZE AND VESTING RATINGS



HQ AR004196

Based on the above analysis, it was decided that the site visits should be selected according to the following:

- Region I -- 3 lakes
- Region II -- 2 lakes (both from Cluster D)
- Region III -- 2 lakes (both from Cluster C)
- Region IV -- 3 lakes (2 from Cluster B)
- Region V -- 2 lakes (both from Cluster A)

According to this site selection plan, PRC/PMS staff was able to personally visit and conduct interviews at over 20 percent of the similarly situated clusters within Regions II through V, indicated in Figure 4-B, which accounted for almost 50 percent of the total visitor attendance at Corps of Engineers lakes.

Rather than merely selecting the sample lakes at random from the clusters, it was decided that, as much as possible, the survey should attempt to be geographically representative. Additionally, in order to allow for the possibility of different types of law enforcement problems, the survey included a mix of urban and rural lakes in the sample. This was a complex task due to the obvious misinterpretations of the terminology. It was decided to use the standard Corps definitions and tabulations for urban and rural lakes.

After final consultation with the Office of the Chief of Engineers (OCE), it was decided that the sample lakes to be visited by the PRC/PMS staff for field interviews would consist of the following sites:

- Region I
 - Hop Brook Lake
 - Green Peter Lake
 - Grayson Lake
- Region II
 - Isabella Lake
 - Shenango River Lake

Region III

Pomme de Terre Lake
DeGray Lake

Region IV

J. Percy Priest Reservoir
Lake Sidney Lanier
Grapevine Lake

Region V

Oahe Dam
Lake Wright Patman

Figure 4-C depicts the sample of sites visited according to visitor attendance, geographic location, and urban or rural character. Upon viewing this Figure, it was apparent that a small, urban/suburban lake from the midwest was needed to round out the sample. For this reason, Red Rock Dam was included in the sample.

In addition to visiting the lake sites, PRC/FMS staff also interviewed and collected data from key personnel at OCE, and each Division and District office of the corresponding lakes. Furthermore, all law enforcement agencies with contiguous jurisdiction were surveyed, both on the state and local level, as well as the corresponding judicial officers and Federal Magistrates. It was also important to solicit inputs and data from other agencies involved in recreation for comparative purposes. This sample of non-Corps recreation systems included several other Federal agencies, and a number of state, city, county, and regional park and recreation systems throughout the country. A complete listing of agencies personally contacted by PRC/FMS staff is included in Appendix A.

C. Questionnaire Construction

Specific questionnaires were developed by PRC/FMS to assist the staff in conducting field interviews and to insure maximum uniformity of pertinent information collected. Separate questionnaires were constructed for personal interviews with: (1) Corps of Engineers Divisions, Districts, and lakes; (2) state and local law enforcement; (3) Federal magistrates and local judges; and (4) park and recreation agencies.

FIGURE 4-C

Geographic Presentation of the Sample of Corps Lakes To
Be Visited by PRC/PMS Project Staff

GEOGRAPHIC LOCATION	OVER 1 MILLION ATTENDANCE		LESS THAN 1 MILLION ATTENDANCE	
	URBAN	RURAL	URBAN	RURAL
MIDWEST		Onhe Dam Pomme de Terre Lake	Red Rock Dam	
SOUTHWEST	Grapevine Lake	Lake Texarkana		
NORTHEAST		Shenango river Lake		Grayson Lake
SOUTHEAST	J. Percy Priest Reservoir Lake Sidney Lanier	DeGray Lake		
WEST		Isabella Lake		Green Peter Lake
NEW ENGLAND			Hop Brook Lake	

(Source: PRC/PMS)

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In addition to the field interview questionnaires, a self-report questionnaire was developed to be mailed to each Corps of Engineers lake manager, to increase the data base for analysis of the problems. A copy of this questionnaire is included in Appendix B.

The self-report questionnaire was pre-tested at four Corps lakes and OCE to observe any misinterpretation in the wording of the questions or any problems in obtaining the information requested. As a result of the pretest, PRC/PMS adjusted the self-report questionnaire accordingly and OCE mailed a copy to each District office with instructions to disseminate the questionnaires to each lake manager.

D. Field Visits

The site selection plan discussed in section B was put into action after PRC/PMS assembled the staff for a day of orientation and training. The purpose of this session was to instruct the staff on administering the questionnaires and to anticipate and minimize any problems which might be encountered.

The field visits to the Corps sites and other recreation agencies were, for the most part, conducted by a team consisting of a criminal justice-public safety specialist and a recreation-resource management specialist. Strong efforts in this phase of the project made it possible for the PRC/PMS teams to personally interview over 200 individuals in less than 30 days.

In several cases it was possible for the staff to visit other Corps lakes, law enforcement, and recreation agencies within driving distance of the original sample.* Thus Appendix A, which lists all the agencies visited, includes several Corps lakes and other agencies that were not originally selected.

*The additional Corps lake visits included Lake of the Pines, John Kerr Reservoir, Milford Lake and Philpott Lake.

Upon completion of the field visits, the PRC/PMS teams submitted narratives detailing their observations and findings as well as the data and information collected in the questionnaires.

E. Collection of Available Data

The PRC/PMS project team received excellent cooperation from the Corps personnel in OCE which provided PRC/PMS with all available data from their computer banks. This data, collected by OCE for management objectives, was beneficial in developing a clear concept of the existing conditions at the lakes.

F. Literature Review

A detailed literature search was conducted during the course of the project to catalogue all information revealed in journal and newspaper articles, texts, books, other field projects, studies, and background information and annual reports of other recreation systems.

Sources including the National Criminal Justice Reference Service, National Recreation and Park Association, Department of Justice Library, and the National Institute of Law Enforcement and Criminal Justice were contacted in order to obtain further documentation of related law enforcement and recreation experiences.

In addition to the literature search, PRC/PMS reviewed relevant legislation in order to pinpoint the legal directives and obligations of the Corps of Engineers in the field of recreation and to determine the presence or absence of legal barriers which would prevent the establishment of any recommended law enforcement standards or policies.

Chapter 5
ANALYSIS OF THE DATA

A. Compiling the Data

During this stage of the study, all of the information and data collected from the field interviews, questionnaires, and available data from all sources was compiled by PRC/PMS. Due to the bulk of data, a central filing system was established for retrieving pertinent segments of the data.

The self-report field questionnaires were keypunched and tabulated for computer operations. The program package used for analysis was CROSSTABS.* CROSSTABS is a statistical/retrieval reporting system which automatically provides effective and efficient methods in which to compute the cross-tabulations of multivariate data. This software package enabled the researchers to analyze complex variables according to weighted frequencies. The computer program provided a comprehensive tabulation of all the information.

The information compiled during the Corps lake interviews was extracted for comparison with the data received from other law enforcement and recreation agencies.

B. Methods of Analysis

As previously described, CROSSTABS was used to convert the data in the self-report questionnaires into readable tables. This served to enhance the analysis. A cut-off point for receiving the self-report

*Copyright by Cambridge Computer Associates, Inc.

questionnaires from the field had to be established due to the prompt time frame of the study. A total of 238 self-report questionnaires were received representing a 69 percent reporting from the lakes. This sample size was large enough to be representative.

In analyzing the data, it became apparent that there were acute differences between many of the lakes, while there were also vast similarities. On further examination it became clear that the data lent itself to major divisions according to certain characteristics of the lakes. For ease of comparison and analysis, four classes were developed, and the Corps lakes were divided into these classes. The classes consist of the following:

Class A Lakes---moderate to extensive Corps development for recreation; moderate to heavy attendance; large land area; multiple recreation use; generally staffed with more than one permanent ranger.

Class B Lakes---minimal Corps development for recreation use; light to moderate attendance; small land area; primarily day use; generally little or no permanent ranger staff.

Class C Lakes---no Corps development for recreation; all land area has been leased for state or local recreation development or deeded to other Federal agencies.

Class D Lakes---no Corps development for recreation; primarily consist of river pools, locks and dam sites; principal attendance is for sightseeing.

Figure 5-2 reveals the number of lakes within each class. It is significant to note that over 80 percent of the PRC/PMS field visits were to class A lakes which accounted for over 80 percent of the Corps annual attendance.

FIGURE 5-A
CORPS OF ENGINEERS LAKES
SEPARATED INTO CLASSES

CLASS OF LAKE	NUMBER OF LAKES	ATTENDANCE
A	128	236,381,900
B	83	26,151,500
C	52	59,443,600
D	75	
TOTAL	338	321,977,000

(Source: PRC/PMS)

Reassessing the questionnaire returns, it should be noted that 121 or 55 percent of the A lakes were represented as well as 71 or 86 percent of the B lakes.

The geographic distribution of the Class A lakes is depicted in Figure 5-B. This figure shows that the preponderance of vast, heavily attended class A lakes are found in the lower midwest and south of the United States. Nine states in this area or 18 percent of the United States contain 70 percent of the class A lakes. Only 10 percent are located in the West. The class B lakes, depicted in Figure 5-C, also reveal an interesting distribution. Over 60 percent of the class B lakes are located in 7 states: 34 percent in New England (Massachusetts, Connecticut, Vermont, and New Hampshire); 14 percent in the North Pacific (Washington and Oregon); and 10 percent in Minnesota.

Because of the lack of recreation development at class C and class D lakes, these lakes did not warrant as much consideration as class A or class B lakes. Phone surveys and conferences with OCE confirmed that the problems at these lakes were very minimal concerning this study.

C. Findings

The multiplicity of raw data findings are available for presentation in two basic forms. The first presentation consists of a synopsis of the field visits by the project staff. This section contains encapsulated findings from interviews, discussions, and data obtained from Corps field personnel, local law enforcement agencies charged with providing security in park and recreation environments, park and recreation agencies, judicial officers, and others related to the objectives of the project.

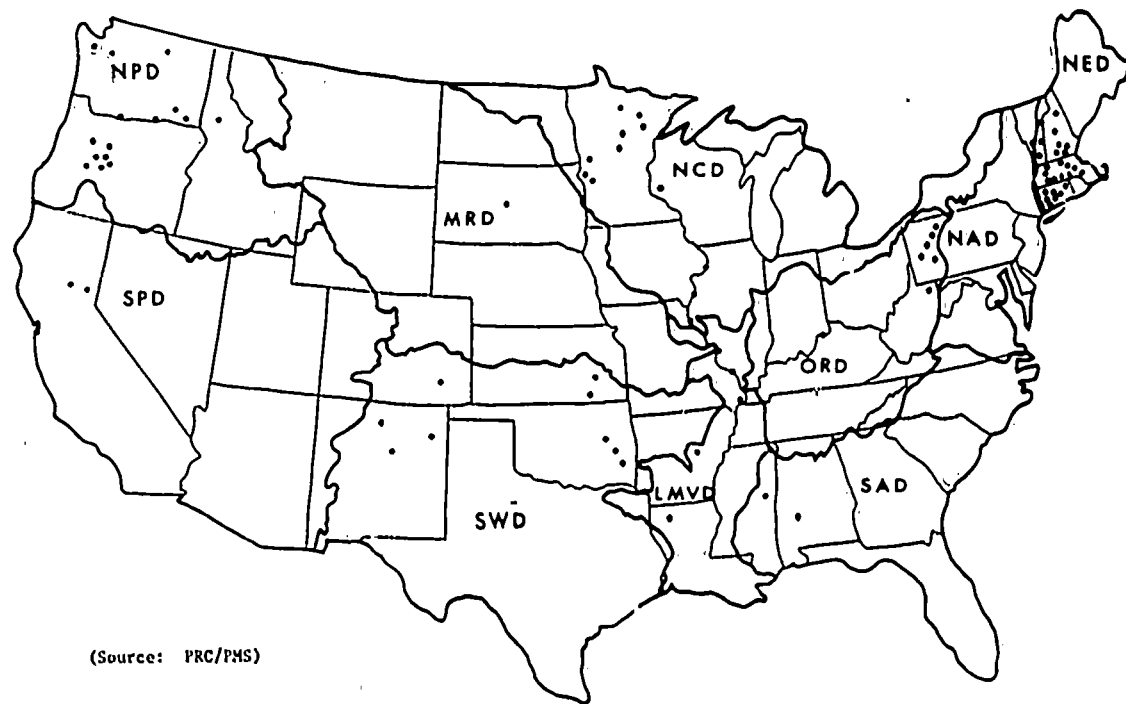
The second presentation consists of the findings from the self-report questionnaire completed by the Corps of Engineers lake managers. These findings will be presented in the form of tables with answers corresponding to the questions on the questionnaire. The information cited



Geographic Distribution of Corps of Engineers
Class A Lakes within the United States

Figure 5-B

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(Source: PRC/PMS)

Geographic Distribution of Corps of Engineers
Class B Lakes within the United States

Figure 5-C

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and the table constructions are a result of the CROSSTABS computation. Both of these presentations are included in a separate volume.

Discussion of the findings and the various implications for Corps policy and operations will take place in later chapters.

D. Critique of the Methodology

While the methodology and analysis of the problem in this study is felt to be the best possible given the time constraints and deficiencies in the availability of the data, the most prominent problem facing the project was the diversity of the lakes. One of the primary objectives of the contract was to ensure that the information and impressions gathered in the field visits was reflective of the overall problems. To the degree possible, this objective was met.

Within this blanket statement, however, there lies two qualifying factors due to the decentralized operations of the Corps. One is the human factor; the other is the environment.

The human factor is represented by the variety of personalities and role characteristics performing functional duties under the Corps. The sheer numbers of personnel involved make this factor difficult to manage. A similar situation exists with the environment. The geography and breadth of the projects is overwhelming for physical coverage.

Considering the nature of the recreation experience, decentralized operations certainly introduce a pleasant element of reflecting more of the local ambience. In this pre-packaged society, this is a welcome relief. However, from an administrative point of view or the perspective of this study, this dispersion presents an unworkable variety of situations with which to deal.

Attempting to communicate through a pyramidal organization with a national base is a frustrating venture. Nonetheless, these caveats

should not serve to demean the significance of the findings and impending alternatives for action. These later discussions have been well-conceived and are felt to reflect the best possible recommendations for the Corps of Engineers to improve their visitor protection capabilities.

The main purpose of this critique is to supply the Corps with the necessary information to plan for these shortcomings in future studies.

Chapter 6

STATUS OF VISTOR PROTECTION AT CORPS LAKES

A primary element in the present study involves the assessment of the present level and nature of crime on the basis of available data, and in the context of the environmental and social realities of Corps projects. These data are essential in the analysis of the present status of vistor protection, the development of projections of potential crime rates and trends for the future, and the development and assessment of Corps law enforcement needs and requirements. Only an accurate picture of the present situation will allow for concise and responsive planning and decision-making at the national level, and provide the adequate framework upon which study conclusions and recommendations have been made and from which they can be interpreted.

A. Introduction

The analysis of any problem or situation on a national level carries with it the unavoidable potential that findings and conclusions may not reflect actual situations in specific areas or locales. The FBI's annual Uniform Crime Reports for example, which purports to be a barometer of crime on a national level, frequently do an injustice to jurisdictions which, for any number of reasons, do not follow national or even regional patterns. This potential situation was recognized during the initial stages of the present study and a comprehensive sampling methodology was applied during the initial stages to insure that survey findings could be truly representative of the Corps lakes. While variances will still exist in some cases, it is felt that the following data is as representative of the Corps national situation as is possible given the general parameters of this study.

In any event, attempts to impose a national interpretation on the "adequacy" of law enforcement at Corps projects will have to utilize normative standards which may not always be entirely applicable to various divisions, districts or projects. What, for example, can one say is an "acceptable" level of law enforcement and visitor protection, and what should one reasonably expect from the Corps? This subject is in fact addressed in the section of this study relating to "Standards for Visitor Protection." In the present discussion one must ask "what is, or can be expected as a reasonable level of crime and when does that level constitute a real and immediate problem?" Of course, any level of crime is unwanted. But, in the context of funding priorities and resource availabilities, needs must be weighed, priorities assigned, and remedial action applied on that basis. As in the previous example, normative judgments may not appear appropriate to various sites or projects. For example, in some regions where crime is less apparent and less "accepted," a modicum of criminal activity can be amplified or overstated in terms of apparent impact and significance. Conversely, where criminal acts are most frequent and more visible, the level of public tolerance is increased and criminal activity more "accepted" as a fact of life. In these situations, individuals involved may underestimate crime and its impact. As a consequence, some normative standard must be utilized rather than local impressions or reactions in order to gain a clear nationwide perspective.

The development of a reasonably accurate "yardstick" for measuring the occurrence and seriousness of crime in Corps projects is a highly difficult task; however, this chapter will attempt to develop this conceptual framework in which such judgment can be made. In this effort, the chapter is divided into four distinct sections:

- Section I draws upon the available data of related experiences with crime in the United States and other recreation environments.
- Section II describes the environment or climate in which law enforcement services are organized and applied.
- Section III provides specific data relating to the level of crime and incidents at Corps lakes.

- Section IV forms summary findings based on the data revealed in the foregoing contexts.

SECTION I

ANALOGOUS CRIME DATA AND SITUATIONS

A. National Crime Trends

While it is not implied that a direct correlation exists between crime statistics on a national basis and crime specific to Corps projects throughout the United States, the crime "picture" for the nation is a reasonable starting point for the Corps analysis.

Reference to Table 6-1 provides an overview of crime in 1972 as reported to law enforcement agencies in various regions and areas throughout the United States. Crime indexes noted in this diagram are based upon nearly 6 million index crimes reported during the year. As can be noted, the crimes used as index crimes are those which can be regarded as the most frequently reported serious crimes. As a consequence, since these offenses are most consistently reported, they are best for computing crime trends and rates.

Table 6-1 provides some insight into the general volume, nature and distribution of serious crime in the United States. An overview of this data warrants some generalized findings to include that, on a per capita basis:

- Crime is at a higher rate in Western states and in the larger cities with more than a quarter of a million population.
- Northeastern states are more frequently areas of violent crime, while property crime has a higher rate in Western states.
- Cities maintain about seven times the rate of violent crimes as do rural areas and more than four times the rate of property crimes.

TABLE 6-1

U.S. CRIME RATES (PER 100,000 INHABITANTS), REGION AND AREA BY CRIME INDEX OFFENSES

Region					Area			
	<u>North Eastern States</u>	<u>North Central States</u>	<u>Southern States</u>	<u>Western States</u>	<u>Cities Over 250,000</u>	<u>Suburban</u>	<u>Rural</u>	<u>Total United States</u>
Total	2840.6	2480.7	2462.7	4030.3	4947.9	2363.6	1084.4	2829.5
Violent	449.8	334.6	391.4	438.0	998.6	221.7	143.6	397.7
Property	2390.9	2146.1	2071.3	3592.3	3949.3	2141.9	940.8	2431.8
Murder	7.3	6.8	12.6	7.7	19.7	4.6	7.4	8.9
Forcible Rape	17.1	20.2	21.6	34.1	47.1	17.1	11.2	22.3
Robbery	263.5	165.2	129.9	177.6	578.8	72.3	16.1	179.9
Aggravated Assault	161.9	142.3	227.2	218.6	353.0	127.3	109.0	186.6
Burglary	1074.6	954.7	1005.8	1687.2	1877.5	963.1	507.5	1126.1
Larceny \$50.00 and over	775.2	808.4	770.9	1349.8	1104.6	890.5	363.6	882.6
Auto Theft	541.0	383.1	294.6	555.3	967.2	288.3	69.7	423.1

(Source: FBI-UCR's)

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- Overall, cities account for over twice the rate of serious crimes than that of suburban areas, and over four times the rate of rural areas.
- Crime rates, particularly property crimes are lowest in Southern states although these states maintain a high rate of violent crime.
- Burglary and grand larceny are the most frequent crimes on a national basis and maintain the highest rates in cities and Western states.

Crime rates, of course, do not reflect gross numbers of crimes, but they do provide a convenient and useful measure by which jurisdictions can gauge their crime problem. It seems apparent, for example, that crime problems are most predominant in cities and, in largest measure, reflect excessive burglary and larceny rates. The maintenance of uniform crime reports by a majority of the nation's law enforcement agencies allows each jurisdiction to weigh its reported crime against national, regional, state and local figures.

To a certain extent the Corps can utilize these data to gauge the relative distribution of crime in recreation projects. One would expect, for instance, that projects closest to urban areas would maintain higher overall rates of crime than those in rural areas; that incidence would be highest in the Western and Northeastern states; and felonies would primarily involve burglary and larceny offenses.

However, it cannot and should not be assumed that "crime", as conventionally portrayed in the Uniform Crime Reports, is readily transferable to the environment of the recreation site. Criminal opportunities and victim vulnerabilities change dramatically by virtue of Corps project design, type and volume of visitors attracted, project location, and numerous other factors. As a result, national crime figures are best viewed and utilized on a generic basis and as general parameters for the interpretation of more specific Corps data.

One additional point involving unreported crime, which also applies to Corps area crime reporting, should be noted in relationship to the present discussion of national crime statistics. It has been long recognized that reported crime does not accurately reflect the actual number of crimes committed. A number of techniques have been employed to more accurately pinpoint the actual level of criminality, the most popular and accurate of which are surveys of victimization. The first comprehensive survey of this kind aimed at a national audience was recently completed by means of the National Crime Panel under sponsorship of the Law Enforcement Assistance Administration.

Covering victimizations during 1972, the survey indicates that the total number of offenses reported in the five surveyed cities represent only about half of the actual crimes committed. Moreover, the number of larcenies, both personal and household, was some four times greater than the number which had been reported to the police. Larceny without personal contact was the most prevalent type of crime in the sample cities. It is apparent on the face of these data that crime is much more widespread than heretofore determined. For the purposes of the present study, it is important to recognize these tendencies not to report crime, especially those crimes such as larceny and robbery. In addition, it becomes clear through survey findings that the causes of unreported crime are intimately related to victim perceptions of himself, the crime, and the role and capabilities of the police. This point seems extremely important in interpreting the crime at Corps projects, to be discussed later. Specifically, the most common reason for failing to report crimes was the feeling that nothing could be done and/or that there was a lack of proof. In either event the ease of reporting, the perceived competence and interest of local authorities, and the local authorities capacity to respond all play a part in whether or not crime is reported.

B. Recreation Crime Data

From the national perspective of reported crime, and in the context of reporting problems, the Corp. crime situation at recreation sites will

assume an added perspective. What is most crucially needed in these crime analyses yet, so far generally unavailable, is more precise data relating to criminal activity in parks, forests, recreational and public use lands generally. Due to the relatively unique nature of recreation areas in relation to their environs, crime data specific to the nation's recreation experience is most appropriate in attempts to formulate some baseline yardstick. Yet relatively few sources exist in these areas, or the level of crime which exists.

One of the few studies aimed specifically at these areas was performed by Gibbons². He studied three contiguous rural counties in Oregon and found serious crime to be an infrequent occurrence while the volume of petty law violations was large.

Crime in Urban Park Areas:

One study performed for the U.S. Department of Housing and Urban Development³ does shed some light on the incidence of crime in parks and recreation areas. In particular, the study reveals that park visitors, as is the case in overall national crime statistics, most frequently are subject to robberies and larcenies among all other index crimes. This is most frequently the case where recreation areas are developed. Their findings indicate that:

"The amount of reported index crime in parks is substantially below popularly assumed levels. Indeed, on the basis of reported crime, parks appear to be much safer than their surrounding areas in general."

Further they state,:

"Nevertheless, it is safe to assume that more crime occurs than is reported, especially in minor crime categories. Since most park departments do not report most of their vandalism, the amount of property crime occurring in parks is substantially greater than shown in police records. There is nothing in the data, however, to indicate that the proportionate relationships shown in this report would be significantly changed, even if all crime of all types were known."

In addition, the findings note that most of the problems in city park areas tended to concentrate in one or two park locations. Unreported crime is again a large problem with justifications generally taking the same form as those found on the national level; for example, too much trouble to report, incident too minor, etc. In any event, law enforcement officers maintain that crime prevention is extremely difficult in parks primarily due to problems of poor visibility.

Another study cited in the HUD report again suggests that actual crime in parks and recreational areas is below that which is commonly assumed.

The Seattle Study⁴, which also dealt with index crimes, addressed reported crime in 34 of Seattle's 200 parks in comparison to discrete geographic areas. In concert with findings of the HUD study and expectations of surveyed police, crime rates were found to be very low in comparison with the immediate surroundings. In terms of violent crime for example, in no case did park occurrences exceed 6 percent of that in the contiguous area, and dropped as low as .39 of 1 percent in one park. These findings become even more glaring when it is remembered that these violent crimes are the most frequently reported.

One additional finding of the HUD study should be recognized. Table 6-2 (HUD Report p.37) below provides data relative to the incidence of crime in 3 categories of parks and in relationship to area served.

While the data reconfirms previous findings that park crime is less than expected through police statistics, it also suggests that as park size and resources increase, so does the occurrence of crime. It also suggests that park crime is more a function of crimes committed outdoors than overall uniform crime statistics. These findings lead one to assume that crime in Corps recreation areas, particularly near the more populous areas, can be expected to reflect a more severe picture than that noted in the above findings. Data from the more closely akin U.S.

TABLE 6-2

Index Crimes in Parks as Proportion to Total Index Crime in
Service Area and Street Crime of Service Area, by Category
of Parks.*

	Total Index Crimes in Service Area	Index Crimes in Street of Service Area	Index Crimes in Parks	Park Crime as % of Service Area Crimes	Park Crime as % of all Outdoor Crime in Service Area
Sub-Neighborhood Parks (5)	1,114	412	2	0.2%	0.5%
Neighborhood Parks (10)	4,386	1,411	25	0.6%	1.7%
Community Parks (5)	2,358	810	81	3.4%	9.1%
TOTALS	7,858	2,633	108	1.4%	3.9%

* Definition of Service Area: the neighborhood surrounding and adjacent to parks, inside and outside including parks themselves.

(Source: H.L. Malt Associates)

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Forest Service, National Park Service, and the Bureau of Land Management will also be discussed to test this notion.

U.S. Forest Service

Under the Department of Agriculture, the U.S. Forest Service (USFS) approach to law enforcement for the most part has relied on state and local existing law enforcement to provide services. As a result of the Cooperative Law Enforcement Program, initiated by Congress (P.L. 92-82) in 1971, the U.S. Forest Service contracts with state and local law enforcement to provide specific visitor protection services in many of the U.S. forests.

In order to gain a more complete picture of law and regulation violations in National Forests, the Forest Service sampled violations of 130 Districts distributed throughout all Regions, as well as from Experimental Forest or Range Units, Forest Supervisor's Offices, and all Regional offices. While the law enforcement problems experienced by the USFS parallel those of the Corps to a reasonable degree, it is, of course, recognized that the Forest Service geographic responsibilities are both larger and somewhat different than those of the Corps. Boating related incidents, for example, are less frequently a problem for the Forest Service than the Corps, while forest related matters, such as fire and timber pilferage, are more Forest Service oriented. Nevertheless, these data are useful in a number of respects including the priorities which they implicitly carry for the various law enforcement problems.

For purposes of this study, a violation was defined as an incident involving infraction of law or regulation, including those connected with contracts and permits. Reference to the complete list in Appendix D reveals the following observations of interest to the Corps:

- Violations in developed recreation sites and areas account for the greatest single category of offenses and over half of all violations. In particular, it reveals that sanitation and littering are the single largest problem in terms of volume facing Forest Service rangers.

- Problems relating to vehicles in recreation areas including speeding, parking, safety and disruption account for the second largest recreation problem; although various violations relating to personal conduct, abusive behavior, and destruction of property or resources seem to be as great, if not greater, depending upon interpretation of terms.
- Although not portrayed in the Appendix, it was found that the majority of State law violations involving crimes against persons or property occurred in public recreation areas. A large majority (3,690) involved theft or damage of private property, while some 366 incidents involved assault or intimations of private citizens. An additional 390 narcotics violations occurred in the public use areas.
- The findings reconfirm the significance of littering, sanitation in regard to refuse at camp locations, and water pollution.
- Five related violations account for approximately 15 percent of all violations.
- Property protection offenses of various types, to include defacement or destruction of signs and other utilities, account for only about 3 percent of reported violations. Of about equal magnitude are problems related to timber use and abuse, of obvious interest to the USFS.

It seems apparent that the USFS's major problem in terms of gross violations involves littering and sanitation related to refuse disposal. Vehicle control and usage in National Forests are an additional primary concern as is regulation of personal conduct and behavior in group recreation areas. Of the estimated 1.2 million offenses, however, about 4,446 involved violation of state laws. It should also be added that, in addition to these, there were some 714 cases of assault or intimidation of Forest Officers during 1969.

In fiscal year 1973-1974, over \$3.5 million was spent to subsidize state/local law enforcement services. As well, the Forest Service still spends several million dollars on their own services and manpower to protect visitors and natural resources. Costs due to vandalism resulted in more than \$2 million in reported losses. Projections from this data, applying to all National Forests, result in estimated losses of nearly \$6.8 million for 1969 alone. From the perspective of monetary loss, vandalism offenses carry a

a significant impact aside from their gross volume.

Since the Forest Service's Cooperative Law Enforcement program has only been in existence a few years, there has not been a thorough evaluation conducted to measure the effectiveness of the program. One point is evident, however, that the program was implemented and is maintained with relatively few administrative or management problems in terms of contracting arrangements, conditions of service, and the like.

National Park Service

The National Park Service (NPS), under the Department of Interior, maintains its own law enforcement contingent, trained, armed and responsible for enforcement of state and federal laws and ordinances on Park Service lands. This approach has evolved because the Park Service frequently maintains "exclusive" jurisdiction over the lands as opposed to the Corps "proprietary" jurisdiction. In addition to their law enforcement duties, however, Park Rangers are responsible for traffic control, resource management, inspection of facilities, visitor protection, and other duties. Also under the Interior Department are the National Capitol Park Police, which are assigned principally to the Washington, D.C. area capital parks and monuments. This contingent of fully-authorized police is separate from the Park Rangers.

Table 6-3 provides overall five-year summary statistics for reported Part I Index crimes for all park service areas and the national capitol parks. It is immediately obvious that the National Park Service must contend with a great many more serious crimes than have been noted in other park and recreation contexts. To a large degree, the added volume of offenses may be due to the nature of National Parks. In a great many cases National Parks resemble urban areas with shopping, entertainment and living accommodations. The concomitant law enforcement problems associated with sophisticated recreation areas of this type are similar proportionately to other developed urban and suburban

TABLE 6-3

NATIONAL PARK SERVICE
SUMMARY OF ACTUAL PART 1 OFFENSES

CALENDAR YEAR		HOMICIDE	RAPE	ROBBERY	ASSAULT	BURGLARY	GRAND LARCENY	PETIT LARCENY	AUTO THEFT	TOTALS
1973	NPS	6	15	17	121	718	1718	2574	86	5255
	NCP	3	38	256	155	108	620	90	47	1317
	TOTAL	9	53	273	276	826	2338	2664	133	6572
1972	NPS	8	10	18	125	566	1315	2264	86	4392
	NCP	1	45	161	138	68	150	352	31	946
	TOTAL	9	55	179	263	634	1465	2616	117	5338
1971	NPS	7	21	22	129	640	1288	2191	90	4388
	NCP	2	40	172	104	75	143	430	51	1017
	TOTAL	9	61	194	233	715	1431	2621	141	5405
1970	NPS	5	8	13	92	783	1437	2138	94	4570
	NCP	3	26	175	166	113	149	635	67	1334
	TOTAL	8	34	188	258	896	1586	2773	161	5904
1969	NPS	11	10	12	78	400	1105	2420	81	4117
	NCP	3	46	191	156	112	176	630	54	1368
	TOTAL	14	56	203	234	512	1281	3050	135	5485

NPS - ALL PARK SERVICE AREAS EXCEPT NATIONAL CAPITAL PARKS

NCP - NATIONAL CAPITAL PARKS

(Source: NPS Annual Report)

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communities. But to an even greater measure, by maintaining constant surveillance by a single police force, it is undoubtedly the case that more offenses are being observed, reported, formally recorded, and prosecuted than is the case in other recreation areas. Therefore, high crime statistics are a product of these factors as well as of actual greater numbers of offenses being committed.

Similar to other findings and crime statistics previously noted, Table 6-3 reveals that burglary and larceny account for the highest percentage of serious crime. In 1973 these crimes accounted for over 93 percent of all reported offenses at National Parks and over 60 percent of those at National Capitol Parks. In Yosemite National Park alone, there were 926 Part I crimes in 1973. Of these, 879, or nearly 70 percent, were larcenies and 25 percent burglaries, a rather representative example of servicewide statistics. In the same instance, the Park Service charged individuals with the following less serious Part II crimes:

- 132 Narcotic/Drug Law Violations
- 190 Liquor Law Violations
- 231 Disorderly Conduct
- 351 Moving Vehicle Violations
- 303 Parking Offenses
- 216 Other Parking Regulations.

Among Part II crimes, NPS devotes a great deal of time, resources and energy to traffic law enforcement as servicewide data in Table 6-4 reveals. The large number of citations issued and traffic accidents reported reflects the immense amount of vehicle usage in the National Parks.

The heavy volume of offense statistics places the National Park Service at what might be considered the height of the law enforcement need and service continuum for park areas.

TABLE 6-4

GENERAL SUMMARY OF TRAFFIC
ACCIDENTS AND ENFORCEMENT
U.S. PARK POLICE SERVICEWIDE

	<u>1972</u>	<u>1973</u>
A. Total number reported motor vehicle traffic accidents	7,290	7,385
B. Number of fatal accidents	65	52
C. Number of non-fatal injury accidents	1,441	1,438
D. Number property damage accidents only	5,441	5,895
E. Number drivers involved	11,517	11,636
F. Number fatal injuries to persons	76	60
G. Number non-fatal injuries to persons	2,186	2,310
H. Total amount of property damage incurred (\$)	2,384,380	3,894,170
I. Total number motor vehicle-pedestrian accidents	62	49
J. Number traffic accidents investigated by NPS officers at accident site	6,784	5,834
K. Number traffic accidents resulting in citation or arrest	3,112	2,344
L. Number persons cited or arrested in connection with traffic accidents	3,121	3,364
M. Number persons convicted for traffic resulting in collision or upset	396	167
N. Number known hit-run accidents	696	533
O. Number of citations or arrests for hazardous traffic violations	41,696	39,319
P. Number convictions for hazardous traffic law violations		
Q. Number of written warnings issued for motor-vehicle violations	26,312	32,753
R. Number of boating violations	1,771	1,227
S. Number of boating accidents	403	310
T. Total property damage resulting from boating accidents	177,779	90,337

Bureau of Land Management

One final example of law enforcement needs and availabilities in the sphere of parks and recreation can be found in experiences of the Bureau of Land Management (BLM). Also under the Department of Interior the Bureau manages some 470 million acres of public domain nationwide. A law enforcement study conducted for BLM in the State of California⁵ provides some corollates with the law enforcement situation at other recreation areas.

In California, BLM administers some 12 million acres of public land which is valuable in economic, archeological and other terms, in addition to its recreational uses. BLM's present capability to enforce laws in these areas is both legislatively and organizationally limited, and state and local law enforcement authorities are limited by virtue of manpower and finances to lend assistance to BLM.

The law enforcement study for BLM in California was conducted in response to high level and "uncontrolled use, abuse, vandalism and thefts" on BLM lands. Unauthorized use of off-road vehicles had, in and of itself, been recognized as a serious ecological and public use management problem. Deaths and serious accidents have resulted from the lack of management and surveillance and little is known of the happenings in remote or sparsely used areas.

Utilizing crime projections from other areas, the study estimated that approximately 490 major crimes (such as, larceny, aggravated assaults and robberies) and 1,280 lesser offenses occurred on BLM lands in 1968 during 5 million visitor days' use. It seems evident on the basis of the study report that BLM's inability to control public use of its lands has resulted in a significant degree of property and resource damage, littering, pilferage and numerous minor violations, in addition to the more serious crimes, many of which go undetected due to reporting problems.

Some of the BLM study findings, which are relevant for this

report, are as follows:

- The limited authority of personnel to enforce rules and regulations aimed at controlling behavior, conduct and protecting natural resources and federal property.
- Littering, vandalism, and rowdiness were among the most widespread and most predominant offenses.
- The non-availability of organizational and managerial structures for the analysis, planning and implementation of responsive law enforcement/visitor protection services.
- The inability to adequately coordinate, communicate with, and utilize existing law enforcement agencies and services for the solution of existing problems.
- The failure to explain and communicate the roles and objectives of recreation and visitor management with that of the overall organizational goal and to develop precise policy statements relative to the compatible achievement of each.

C. Summary of Related Crime Experiences

The foregoing data provides a general impression of the volume, nature, and distribution of crime in the United States and within the context of parks and recreation areas. It is apparent however, that extensive data regarding crime in the recreation context is rather scarce. Only in the case of the National Park Service are concise reporting and recording procedures maintained and statistics subsequently available.

The nature of the crime problems discussed provide some commonalities even though the agencies vary significantly with regard to property under management, visitation levels, and services provided. Among the most apparent similarities between these experiences are the following:

- On both a national level and in the recreation context, larceny is the primary law enforcement problem involving serious reported crime.
- A great deal of crime is going unreported among serious crime but even more among Part I or the less serious crimes. While findings conflict to a certain degree, it is indicated that

actual crime levels are well above that level which is reported, even where formal reporting practices exist.

- Less serious crime is predominately related to vandalism, traffic, and ecological disturbances, such as the damage caused by off-road vehicles.

SECTION II

ENVIRONMENT OF CORPS LAW ENFORCEMENT AND VISITOR PROTECTION

The previous section of this chapter has attempted to lay the groundwork for the discussion of law enforcement and visitor protection at Corps lakes. The objectives of this section will be to portray the overall environment and context in which law enforcement and visitor protection is being addressed at Corps lakes and to lay the factual and conceptual framework upon which later discussion of crime and incident statistics will be made.

Data utilized in this discussion was compiled from self-report questionnaires completed by 238 Corps lake managers and by in-depth field study of 18 projects selected on a structured sampling basis, as detailed in the foregoing methodological component of this report.

As explained in Chapter 5, to assist in analysis, Corps lake were classified into four major classes. Classes C and D are those lakes which are not geared in any significant manner to recreation. Lakes of the A and B class are primary management concerns of the Corps; are geared to recreation; and have the vast majority of personnel, visitor attendance, and visitor protection problems. The present study is, of course, almost totally concerned with this latter group. The findings presented here are extremely representative of these two major classes as data is based on questionnaire returns from 94 percent of all class A lakes and 86 percent of all B lakes. Continued reference to Table 7.1 throughout the following section on Corps law enforcement will add a greater perspective to these findings relative to demographic classification, attendance levels, personnel availabilities and the like.

A. Characteristics of Corps Lake Projects

As data from previous discussion indicates, the physical environment in which law enforcement must operate has great bearing upon the level and quality of that service. As a general overview of the character of Corps lakes and reservoirs in terms of demographic setting and acreage, the chapter on analysis related that the largest proportion of lakes fall within the small to moderate-sized lakes in rural areas. However, these are less attended lakes. The largely attended lakes, twice as many of which are also rural, fall into the moderate to large sized category. With respect to shoreline, size, a great variability also exists. Nearly 12 percent, for example, have perimeters of less than one mile; 34 percent, less than 20 miles; 36 percent, between 20 and 100 miles; 22 percent, between 100 and 500 miles; and an additional 8 percent, between 500 and 2,500 miles.

The study team analyzed demographic and socioeconomic data of 11 of the field survey sample lakes and found no correlations with the incidence of crime. Table 6-5 provides a summary of some of these data in relationship to the selected Corps lakes.

Access to Corps Projects. The size of Corps lakes is about as varied as is the nature of their physical setting and surroundings. Surveys of Corps lakes throughout the country by PRC/PMS staff found several consistencies, however, associated with the geography and natural surroundings of the lakes which have bearing on visitor protection.

Access to Corps projects in general and lakes in particular is dependent primarily upon the terrain of the project area. Where foliage is sparse, as in the midwest for example, access is virtually unlimited. In other areas where trees and foliage are plentiful and dense, access can only be accomplished through off-road vehicles or by foot. Little is directly known of the number of violations which are occurring in these undeveloped and little used areas. There is little evidence that serious crime is being committed, rather it is more the case that minor violations of

(Source: Lines 7-9, & 5 Bureau of the Census; Line 11, Corps of Engineers; Lines 11-15 = estimated figures.)

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Corps regulations, as well as vandalism, pilferage, destruction of natural resources, and rowdiness, are prevalent. Fire destruction has been uncommonly low and is primarily due to the close perimeter of the Federal boundaries to the shoreline. It is feared in many areas that these secluded havens are the scene of numerous youthful "drug parties" and illicit activities. While this is to some extent probably true, particularly among the urban and suburban projects, there is little evidence to support this general feeling. In any event, the point to be made is that control in the more remote areas is commonly non-existent because of the terrain and the lack of rangers to perform visual checks.

Compounding this problem is the large increase in development just outside the Federal line. With the increase in vacation homes, as well as permanent dwellings, these developments are adding significantly to the problems of control and access which project managers are facing. Frequently unauthorized roadways are cut to the lakes edge and others created simply by recurrent travel by off-road vehicles. One moderately sized rural lake in Missouri, for example, has found over 165 known access roads, the bulk of which were unauthorized.

Encroachment is a common problem along the perimeters of these subdivisions and is fostered by the generally non-marked or poorly marked boundaries of the Federal land. Ecological damage including unauthorized timber cutting, fires, effluent wastes to the lake, soil erosion, and impactation are an oft-found result. For the general public this often results in numerous non-public lake accesses which would not otherwise exist and for which the Corps is unable to perform safety and assistance functions.

For purposes of visitor protection, security and safety, therefore, the natural setting, as well as human design, has some impact on the overall question. Table 6-6 adds some additional perspective to the scope of this issue. While ecological problems, as has been indicated, involve a variety of differing concerns, they do impact the level and quality of recreation use and the geophysical context in which visitor protection

TABLE 6-6

TYPE OF LAKE VS. PRIORITY OF VISITOR PROTECTION
PROBLEM HIGHEST PRIORITY PROBLEM

CLASS OF LAKE	NONE	TRAFFIC	VANDALISM	ECOLOGICAL	BOAT VIOLATIONS	THEFT	PEACE DISTURBANCE
Urban Within 30 Miles	5	6	26	18	1	1	4
Urban Other	2	6	14	9	1	1	3
Rural	8	21	41	30	0	4	12
Other Parks	1	0	12	8	0	0	4
TOTAL LAKES	16	33	93	65	2	6	23
PERCENT OF TOTAL	6.7	13.9	39.1	27.3	0.8	2.5	9.7

(Source: PRC/PMS Self-Report Questionnaire)

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services must function. As previously indicated, ecological concerns in this context are also most closely related to protection of the natural and man-made environment from abuse and destruction. Of the 238 projects which responded to the question, over one quarter indicated that such ecological concerns were their highest priority problem in terms of visitor protection. Whether urban or rural in nature, ecological concerns appear to be high on the list of priorities.

B. Relationship Between Recreation and Visitor Protection

Between 1961 and 1971 visitor attendance at Corps recreation sites increased over 250 percent to 310 million in 1971. With this increase has been a corresponding spiral in the need for recreation services and facilities as well as for public safety measures. Corps sources suggest that this trend will continue as data in Table 6-7 indicate.*

TABLE 6-7

CORPS OF ENGINEERS
PROJECTED 1983 RECREATION ATTENDANCE AND
ADDITIONAL FACILITIES BY WATER RESOURCE REGION

	Total Attendance	Picnic Sites	Camp Sites	Boat Launch Lanes
1970 Total Attendance/ Existing Facilities	276,000,000	67,540	48,734	5,309
1983 Total Attendance/ Total Additional Facilities Required	345,000,000	31,853	141,877	1,776

(Source: U.S. Army Corps of Engineers, FY-1973 Code 710 Program Recommendations)

*Corps future recreation development is stringently limited by Federal Policy (P.L. 89-72) which requires a local match for development. Thus, the future trend is dependent upon local government resources and priorities.

One result of this has been that managers and the ranger . . . for all general purposes, to establish for themselves the relative importance of recreation and corresponding visitor needs in the context of funding capabilities. This is not to say that there is a systematic neglect of recreation and other public needs but more to indicate that there is a general lack of understanding on the project level with regard to what is expected and required by way of recreation and visitor services. The feeling in many cases is that project personnel have been placed in a situation for which they are only partially prepared and for which they are not totally equipped. The Corps primary mandate in the development of public works projects apparently does not provide the needed directive associated with public use management and control. As a necessary element of recreation, law enforcement and visitor protection have gone a similar way and the link between the two not fully addressed in environmental and resource design.

For example, establishment of limitations on camping in public use areas is not only a sound recreation practice but one which tends to avert tension and personal confrontations. At present, however, such policy is not uniformly recognized and certainly not enforced. In many State and National Parks maximum levels on visitor use areas are controlled by registration points and gate guards. This of course, would be a most desirable solution to frequent overcrowding in Corps public use areas. Yet, where numerous independent public use areas exist at a lake, the cost of additional personnel required for such an operation may be fiscally unfeasible. An alternative could be the use of innovative park practices which is thoroughly discussed in Chapter 18.

While many projects are utilizing various approaches to controlling area use, they are doing so in a more or less random manner and predominantly by virtue of the individual project manager's initiative, his knowledge of recreation and visitor protection practices and approaches, and the significance which he places upon the recreation and visitor use role of the Corps.

As a result, it was found that camping is frequently well above the level which public use areas can reasonably support and users are forced to camp where they can find room; toilet facilities, water, and other necessities are inconvenient to use or difficult to obtain; trees and vegetation are destroyed by uncontrolled vehicle use; and, access and utilization of boat launching areas, picnic tables, and other recreation items becomes a competitive enterprise rather than an enjoyable experience.

The repercussions in terms of visitor protection in these cases are typically visitor confrontations and strained associations, increased availability and chances of theft, pilferage and destruction of government property, excessive disturbances and rowdiness and generally uncontrolled conduct among certain segments of visitors. It should be noted that these problems are also not uncommon in related State and National Parks which generally enjoy more control authority and recreation design features.

By in large, while the Corps situation does not appear critical in this regard it need not and should not be overlooked. Short of increased law enforcement presence or other control measures, a great deal can be more economically accomplished by improvements in the design and delivery of recreation resources which are more attuned to human factor requirements. At this point, however, it is stressed that the beginnings of this approach should be based in (1) a more precise definition of the role of recreation in the Corps present and projected growth; (2) the development of specific policy relating to recreation management and public use development at the project level; and (3) the development of programs of technical, organizational, and management assistance at the District

and project levels aimed specifically at policy implementation. Improved law enforcement and visitor protection services are an inextricable part of this recreation policy which serves to improve the management of progressively increasing numbers of public users, and ultimately the recreation users experience.

C. Present Organization of Law Enforcement and Visitor Protection Services

The pattern of visitor protection and law enforcement varies to a degree throughout the nation depending in largest measure upon law enforcement availabilities. But, in addition, the pattern varies according to statutory requirements, the relationship of Corps personnel to state and local law enforcement agencies, and their perceptions of the needs and requirements of Corps areas with respect to law enforcement.

Available Agencies

The largest majority of lakes and reservoirs can call upon any one or combination of the following agencies.

- Federal Agencies

As Federal property, the Corps can call upon the many services of agencies such as the Federal Bureau of Investigation, the Drug Enforcement Administration, the Treasury Department, and the U.S. Marshal Service. Although some investigatory requests have been made of the F.B.I., these agencies are rarely used or considered in the course of day-to-day enforcement responsibilities.

- Corps Rangers

Enforcement of Title 36 Rules and Regulations is the responsibility of the Corps of Engineers Ranger. This authority does not allow for the power of arrest, search or seizure, nor the right to detain or otherwise restrict personal movement, although the ranger's staff retain citizen's power of arrest.

- Provost Marshall and Security Officer

These individuals can be called upon by project personnel in cases involving assistance and support in the utilization of law enforcement services or in cases of emergency, although this is rare.

- State Police

Otherwise known as the Highway Patrol or Motor Patrol, State Police are available to all Corps project areas for the enforcement of federal, state and local laws. In many cases, however, the primary enforcement responsibility of this organization falls in the area of traffic enforcement and violations occurring in close proximity to state and county highways. Patrol and surveillance on a random or controlled basis is most frequently performed by State Police in Corps public use areas and as public highways cross Corps projects. State Police are not typically called by Corps personnel or users but more frequently respond to highway accidents and problems, and issue citations on sight.

- County Sheriff's Department

County Sheriff's Departments border Corps projects throughout the country with over 50 percent of all lakes falling in more than one jurisdiction. The County Sheriff's Departments are the predominant source of law enforcement for Corps projects and are most frequently called in response to problems or assistance.

- County Police Department

County police departments are the exception rather than the rule in terms of police agencies in the United States. In a number of instances, however, the services of county police agencies are available to Corps projects. In these cases their services are useful due to high visitation rates, and particularly if the County leases park land along a Corps lake. These are located almost exclusively in urban areas which can support, and which require an extra layer of law enforcement.

- City or Town Police

Cities or towns which maintain any substantial population generally support an independent city/town police or sheriff's department. Enforcement of city ordinances forms the bulk of their services, although they also enforce county and state laws. Generally, city and township police are not called into service for Corps needs, although there are a number of bordering municipalities at Corps projects which provide services in the contiguous areas. This is particularly the case in the instances where the city leases public park or shoreline property from the Corps.

- State Park Police

States frequently lease land from the Corps for park development and nearly all maintain Park Police to specifically control these areas. Park Police are armed and sworn state law enforcement agencies although they do not generally enforce state law outside park land. As state law enforcement officers, they may theoretically enforce the law on Corps property; yet, in many instances this authority is questionable to Park Police and their utilization at Corps projects is rare.

- County Park Police

Although less common than State Parks, a sizeable number of counties lease property for recreation around Corps projects. In the case of sizeable, more populous counties many maintain a separate County Park Police force. Enforcement of county ordinances and state law is within the purview of these policemen although they are almost exclusively utilized in county parks.

- State Fish and Game

Most states maintain a separate authority for the enforcement of fish and game laws throughout the State. One or more "agents" or "officers" are typically assigned to a given county or region although they maintain authority throughout the state for enforcement of fish and game laws as well as overall state law. The presence of these individuals

in and around Corps projects is generally high and relationship with Corps personnel good, although they are rarely called upon to provide enforcement services for state law violations. Lesser violations such as littering or vandalism are more frequently causes for citations issued by these individuals.

• Water Authority

As in the case of Fish and Game Departments, State Water Authorities are not infrequent. As a result of the Federal Boating Safety Act of 1971, most states have established a state administrative office to develop, administer, and enforce Federal and state laws and regulations pertaining to boating safety. Enforcement of state water safety regulations, boat registration and inspection is the primary function of these individuals, although they may also enforce state laws. Most Corps projects make maximum use of these officials or other water patrol authorities which may alternately be subsidized by the state through the counties. Rarely are these individuals involved or called upon to assist in law enforcement activities on shore areas. The U.S. Coast Guard also acts as the water authority for many Corps lakes. While they thoroughly enforce boating and safety violations, they rarely, if ever, provide full enforcement.

As is apparent, the various levels and varieties of interrelated and overlapping enforcement authorities make for a generally uncoordinated "non-system" of law enforcement services. While this was found to be the case in many instances, it was found that a reasonably functional relationship had been established in others. The pattern of these relationships varies according to the nature of available law enforcement agencies and the level and type of violations at each lake. Generally, however, one finds the county sheriff as the primary law enforcement agency on a functional level, or the county police department where they are available. State parks, which predominate at Corps lakes, maintain their own authority, and county and city parks utilize the services of respective county and city police departments, or sheriff's offices.

Water surface enforcement is commonly provided by a state agency as are fish and game regulations.

Coordination and Utilization of Services

The problems associated with the coordinated use of these agencies, of relevance to this discussion, include the following:

- The majority of Corps lakes and reservoirs are in rural areas and are served almost completely by sheriffs departments. These agencies are among the least well-equipped, trained and paid of law enforcement agencies. Confronted with a massive influx of visitors to their areas, many cannot provide needed visibility, surveillance, traffic control, and investigation which are required. Increases in calls for service among their own constituency have generally increased in the past few years resulting in a decreased ability to perform preventive patrol and surveillance activities. The economic profile of many communities does not allow for increases in personnel or improvement in resources. As well, it is sometimes the case that these departments are restricted by law from performing preventive patrol and surveillance activities and can only respond to calls for service.
- Reporting and recording of crime and violations is an unsystematized process. At the project there is a consistent lack of telephones or other communications devices available to visitors (see Chapter 14 of this report entitled Communications). Reporting can be made to the Corps project office, a Corps ranger (if available), the State Police, County Sheriff or other law enforcement agency. The actual volume and nature of visitor protection and law enforcement problems can, as a consequence, remain somewhat obscure to project personnel. And certainly, statistics on violations and incidents reported through Corps channels do not accurately reflect the volume of offenses actually committed.
- While law enforcement agencies are legally committed to provide services to the Corps as they would any other private individual, the level and consistency is in large measure due to other factors such as:
 - The ability and willingness of project managers to interrelate with police departments and sheriffs' offices. The level of service is frequently not determined solely by project needs but by the project managers demands as they are presented in the context of the police departments related demands for service. Since the Corps can and does maintain a certain level of control, an overwillingness to "drop" the problem upon the police can cause ill feelings if not negative results.

-- Conversely, law enforcement assistance is dependent upon the initiative which managers and their staffs assume in attempting to handle visitor protection on an internal basis. The extremes of this effect were viewed during survey team field visits. One extreme finds project managers and staff assuming an extremely high volume of responsibility for internal control when at all possible, while another extreme finds this responsibility generally relinquished to the control of local law enforcement agencies. The perceived role of project staff and rangers in particular, with regard to their role, is at the heart of this determination. Needless to say, the various interpretations which are given to the need for, and use of, external law enforcement assistance has great impact upon: 1) the volume of project citations and warnings issued; and, 2) external agencies' perceived needs with regard to the status of project law enforcement.

- Finally, the random and unsystematized utilization of various types and levels of law enforcement agencies is a less cost-effective and efficient approach to visitor control and protection. While from its economic perspective this might initially be viewed as a problem specific to the agencies themselves, it has a direct bearing upon the quality of services provided to Corps projects. Duplication of record keeping, multiple levels of communication, uncoordinated patrol routines, general difficulty in transferring information between these various agencies, and confusion over jurisdiction and boundaries are frequent problems which impact Corps projects.

D. Surveillance and Preventive Patrol

The relationship between routine patrol, surveillance, and reported crime has long been recognized as a cause-effect relationship. That is, added patrol, on either a random or controlled basis, has been assumed to be a deterrent to crime. Recent studies of "saturation" patrol have begun to cause some reconsideration of this commonly held notion. A recently completed study of this type in Kansas City conducted by the Police Foundation found no relationship between concentrated or saturation patrol and normal or reduced levels of reported crime.

However, while the debate continues, it is important to note that the natural setting of parks varies significantly from urban environments. By in large, most park crimes are open, or potentially open, to surveillance more so than urban crime. Vandalism, theft, traffic violations,

and destruction of natural resources are among those crimes which are more subject to control by the mere presence of law enforcement officers. Thus, while the efficacy of preventive patrol remains moot, it is apparent that the potential for deterrence of crime by implementing this measure at the lakes exists. Surveying the actual use of preventive patrol, PRC/PMS found that, on a regular basis, preventive patrol or surveillance in Corps developed areas was:

- Available to just over one-fourth of all lakes by the state police, to just over one-third by county sheriffs or police departments, to about 20 percent of lakes by city police, and to less than one percent by private police;
- Provided by Corps rangers in more than half (55 percent) of all cases.

As is apparent, regularly scheduled preventive patrol by fully-authorized peace officers is the exception rather than the rule at Corps lakes. While the utilization or employment of preventive patrol is minimal, the perceived need for it is abundant. Table 6-8, for example, reveals the perceived need for patrol and surveillance of sworn police officers on a regular interval schedule during the summer season.

There is no appreciable difference between the rate of perceived need for 24-hour, 7 day-a-week surveillance between those in urban and rural areas. The largest majority in all three demographic categories indicate that project personnel feel regularly scheduled patrol is needed on a less than 24-hour basis, seven days a week.

E. Corps Citation Program

The Corps of Engineers citation program is a recent development aimed at the improvement of Corps control of, and assistance to, the public. Under the authority provided to Corps rangers in this effort is the enforcement of Title 36, code of Federal Regulations, which does not involve the authority to arrest, detain or restrict personal movement or to perform search or seizure. Title 36 Regulations primarily involve restrictions on visitor use of facilities and protection of lake natural resources through the use of citations.

TABLE 6-8
TYPE OF LAKE VS. TYPE OF PATROL WHICH CORPS
PERSONNEL FEEL IS NEEDED

PREVENTIVE PATROL NEEDED	TYPE OF LAKE RESPONDING		
	URBAN WITHIN 30 MILES	URBAN OTHER	RURAL
24 Hours per Day 7 Days per Week	9	7	16
Less Than 24 Hours per Day 7 Days per Week	20	14	49
Only on Weekends	5	3	12
Only on Holidays	0	0	0
No Regular Patrol Access Only	20	8	27

(Source: PRC/PMS Self-Report Questionnaire)

190 = Total Respondents

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Personnel

The majority of Corps lakes are presently authorized to have on staff a ranger with citation authority. The ranger contingent at most Corps lakes appears to be a generally concerned and involved cadre of individuals, as well as being relatively well-equipped to function in their positions and to perform duties which are involved in Title 36 enforcement. For example, about 57 percent of all respondent lakes to the survey questionnaire maintained one or more four-year college graduates on their ranger staffs, 40 percent maintained two-year college graduates and an additional 21 percent presently have full-time rangers who are enrolled in college or junior college. As well, an additional 42 percent of all recreation lakes have full-time staff with law enforcement working experience.

Time Devoted to Visitor Protection

The amount of time which rangers devote to the visitor protection duties and responsibilities is an indication of both the level of visitor protection problems and needs of the project, and the emphasis which is placed on such ranger duties. There is, nevertheless, a great deal of variance between the estimate of time which rangers devote to these chores regardless of the demographic location of the project. Questionnaire results indicate most clearly a variance between the amount of visitor protection time spent during the summer, which is the highest, and that which is spent during the remainder of the year. This finding is, of course, expected in view of the fact that all lakes average between 62 and 72 percent of total visitation during the summer periods regardless of the size or location of the project. Nearly 12 percent of respondents indicate that they spend no time at all on visitor protection while 13 percent spend more than 80 percent of their time on these activities. Disregarding the extreme cases, a pattern developed which indicated that the average ranger spent between 40 and 60 percent of his time on law enforcement and visitor protection during the summer and 10 to 20 percent of his time in the off-season.

Equipment for Visitor Protection

A survey of available law enforcement or visitor protection/ security equipment available at Corps locations reflects the same generally low priority which is given to visitor protection needs at the project level and funding priorities at other echelons. For example, 58 percent of all Corps ranger trucks and jeeps and 68 percent of all other passenger vehicles are not equipped with police radios. The result, as revealed in some cases in field interviews, is that rangers have no effective means of communication readily at hand in case of emergency. The best alternative is frequently the telephone with which to call the project office or the local police, if in fact a public telephone is easily available. In addition, the lack of communications in the form of two-way radio increases the feeling, if not the reality, of isolation of rangers during the performance of their field work. In large and generally remote projects this is particularly pronounced, as well as during late evening field shifts and for female employees who are often in the field performing technician duties. Trucks and other passenger vehicles are quite plentiful at most locations and at least several of these should be equipped with permanent radio gear. Portable remote units which can utilize these vehicle mounted sets are also currently on the market and would be well worthwhile in the most heavily used areas.

Alternative means of travel of particular utility in parks and recreation areas are almost completely unavailable to Corps areas. For example, in only two areas are horses used; bicycles are available in only six project locations; and two-wheel motorcycles in only three others. Of particular importance is the fact that all these approaches are more economical than the traditional passenger car or cargo van. But also, these means of transportation are more effective tools of public relations, mobility, and access in other than public use areas, and in increasing Corps visibility and the visibility of the public. Presently, project areas are limited in their transportation availabilities, generally to one or more passenger vehicles and a number of utility and cargo vans. Only the four wheel drive vehicles are capable of use in the remote

or otherwise undeveloped areas, and even then access to many areas can only be accomplished by foot. In the larger project areas and among those which have the greatest visitor protection problems, off-road modes of transportation, such as horses and dirt bikes, should be considered. For the summer technician, who is assigned a limited area, use of a bicycle would be more economical and convenient.

Water patrol equipment is somewhat more plentiful in respect to the apparent need. As previously noted most states assume the largest share, or the total responsibility, for water patrol and frequently in conjunction with the U.S. Coast Guard. The resources of these agencies, organization and management, law enforcement capability, and authorization make water control and safety a minimal concern at the majority of Corps lakes. The Corps has access to the water by means of boating equipment at over 80 percent of the lakes surveyed. In most cases, however, they do not perform regular patrol but leave this operation to state and local authorities. This situation is further discussed in Chapter 7.

Related law enforcement equipment such as firearms or riot sticks are extremely rare at Corps sites, and understandably so in view of the lack of legal authority to utilize these weapons in the course of their regulatory duties.

Consistent with the foregoing findings is the relatively low level of budgetary funding devoted to security and protection. For example, nearly 40 percent of all projects provide no personnel salaries for security and protection, and an additional 40 percent provide only between 1 and 9 percent toward this purpose. In only six separate cases do personnel expenditures in this context exceed 19 percent of total budgets. In part, these low personnel costs for law enforcement reflect a number of lakes which do not have a ranger contingent and a great many others whose rangers are primarily involved in other types of recreation duties at the lake.

A similar picture is found with regard to percentage of expenditures involved in operating costs. In this case 95 percent of all lakes incur less than 10 percent of their operating costs through security and protection functions. In other areas the situation is essentially the same; contract maintenance services and construction connected with security and protection are not of measurable significance nine times out of ten, and about 25 percent of all lakes spend between 1 and 9 percent of their budgets for equipment.

Ranger Perception of Citation Authority

The sufficiency of the authority of Corps rangers is a question upon which there is a significant amount of disagreement at the project level. The data in Table 6-9 represents project personnel response to the statement that: "The citation power and ranger authority is sufficient to maintain order at the lakes." Data indicates that overall, nearly half of the projects disagree, indicating the need for additional authority, while approximately one-third agree with the statement.

Interpolation of data in Table 6-9 also reveals a difference in opinion between those at urban lakes and those at rural lakes. Over half of those in rural areas feel or strongly feel the need for additional authority, while only about one-fifth of those at urban lakes feel the same way. Yet, reference to Table 7.1 in Chapter 7 indicates that urban lakes more frequently indicate that they have a law enforcement problem and issue a proportionately greater number of warnings and citations.

There is at least one plausible explanation for this difference of response between urban and rural lakes. That is, while urban projects are more prone to spill over of crime from nearby areas they also have a greater number and variety of law enforcement agencies upon which to call for assistance. Previous data indicated the prevalence of city and county authorities to urban projects. Apparently, a good number of these are being used on a level which is more adequate to project personnel in urban than rural areas. A corollary to this involves the fact that less law

TABLE 6-9
TYPE OF LAKE VS. CORPS PERSONNEL'S PERCEPTION
OF THE SUFFICIENCY CORP RANGER AUTHORITY

TYPE OF LAKE RESPONDING	RESPONSES					
	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE	OTHER
Urban Within 30 Miles	2	18	17	10	3	11
Urban Other	2	10	4	14	5	1
Rural	6	28	18	39	16	9
Other Parks	1	6	5	9	2	2
TOTAL LAKES	11	62	44	72	26	23
PERCENT OF TOTAL	5.1	28.8	20.5	33.5	13.0	11.0

(Source: PRC/PMS Self-Report Questionnaire)

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enforcement is readily available in rural areas and that which is available is frequently less well-equipped and organized. In many rural areas this can give rise to a feeling of isolation and vulnerability to real and potential problems. In some rural areas, this is an observed reality. Use of citation authority in these areas, if not throughout the Corps, is greatly dependent upon the individual who is confronted, as well as the situation in general. By himself, in some instances, rangers would prefer to avoid issuance of citations if at all possible, for in reality the violator need only refuse to cooperate with the ranger or simply walk away to avoid receiving the citation. And too, it is typically the case that, on the estimate of rangers and local authorities, a good number of firearms are being carried into these recreation areas by campers and day users which adds to the potential threat.

In any event, it is a reality that some of the feeling in rural areas regarding the insufficiency of citation is based upon both a psychological and a real threat of ranger insecurity during the course of performing their duty. This point is substantiated to a degree in Table 6-10, which reflects the level of cooperation that visitors give to rangers when reprimanded. Although only a few serious problem locations of this type exist, nearly all of them are associated with rural projects. That the threat to ranger security is partially psychological is indicated by the fact that only four lakes reported that any actual assaults on rangers had occurred.

The feeling that rangers need more authority, such as the power of arrest and firearms, is also more prevalent among rural Corps projects than among urban projects as data in Table 6-11 and Table 6-12, respectively, indicates for those who responded.

With regard to the desire for arrest power and carrying firearms, 38 percent and 37 percent of urban lakes agree or strongly agree that these are needed, respectively, while 59 percent and 45 percent of rural lakes hold the same respective opinion. On the negative side of this issue, 30 percent

TABLE 6-10
TYPE OF LAKE VS. RESPONSE OF VISITORS
TO VERBAL WARNINGS

TYPE OF LAKE RESPONDING	RESPONSES				
	NOT GIVEN	VERY COOPERATIVE	SLIGHTLY COOPERATIVE	UN- COOPERATIVE	VERY UN- COOPERATIVE
Urban Within 30 Miles	5	25	30	0	1
Urban Other	1	19	14	2	0
Rural	4	41	64	5	2
Other Parks	2	14	8	1	0
TOTAL LAKES	12	99	116	8	3
PERCENT OF TOTAL	5.0	41.6	48.8	3.3	1.2

(Source: PRC/PMS Self-Report Questionnaire)

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TABLE 6-11
TYPE OF LAKE VS. PERCEIVED NEED FOR MORE AUTHORITY
SUCH AS ARREST

TYPE OF LAKE RESPONDING	RESPONSES					
	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE	OTHER
Urban Within 30 Miles	7	14	16	16	1	1
Urban Other	5	11	11	8	1	0
Rural	22	42	16	28	3	5
Other Parks	5	4	8	3	3	2
TOTAL LAKES	39	71	51	55	8	14
PERCENT OF TOTAL	16.3	29.8	21.4	23.2	3.4	5.8

(Source: PRC/PMS Self-Report Questionnaire)

TABLE 6-12
TYPE OF LAKE VS. PERCEIVED NEED FOR
MORE RANGER PROTECTION BY CARRYING FIREARMS

CLASS OF LAKE	RESPONSES					
	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE	OTHER
Urban Within 30 Miles	8	12	8	19	7	7
Urban Other	5	6	10	9	6	0
Rural	18	33	19	19	22	5
Other Parks	3	5	3	4	8	2
TOTAL LAKES	34	56	40	51	43	14
PERCENT OF TOTAL	14.4	23.5	16.9	21.4	18.0	5.8

(Source: FRC/FMS Self-Report Questionnaire)

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and 40 percent of urban projects indicate that they either disagree or strongly disagree with the need for arrest power and firearms in that order; while in rural settings, 27 percent and 36 percent maintain the same respective feelings. While not overwhelming, there is an obvious trend in this data which finds rural projects more desirous of increased authority and personal protection.

SECTION III
CRIME AND INCIDENT DATA

Thus far, we have confined the discussion of the status of Corps law enforcement to general and typically pervasive issues relating to the environment and organizational framework in which law enforcement and visitor protection is being conducted. These have included the characteristics of the areas under discussion as they impact the issue at hand, recreation and visitor management and control, the network and interrelationship of available law enforcement agencies, and an overall perspective of the Corps citation program to include personnel availabilities and perspectives, roles and allocation of law enforcement resources. These issues have been meant to provide a context in which statistical data on the incidence of crime and violations can be interpreted. It is necessary to proceed in this manner as these statistics, in and of themselves, cannot be used as the basis for conclusions. In particular, problems relating to reporting and recording of crime and incident statistics should be kept in mind in the present discussion.

A. Citations and Warnings

Table 7.1 in Chapter 7, indicates the actual volume of citations and warnings issued at Class A and B lakes. In 1972, there were 9,830 warnings and 1,641 citations issued at the lakes in these categories.

These figures are somewhat deceiving since other data also indicates that no citations were issued at 41 A lakes and 81 B lakes. This is due in part to the attitudes and perceptions of authorized personnel concerning the issuance of citations and in part to the fact that some lakes simply have an insignificant level of offenses. In the case of B lakes

an additional problem exists in that there are simply not enough personnel available with the citation authority.

The geographical location of these citations and warnings are rather unevenly distributed throughout the various Corps Divisions in the United States. On the basis of data collected by the Provost Marshal's Office, citations and warnings were issued on the following levels:

	<u>Warnings</u>	<u>Citations</u>	<u>Total</u>
Lower Mississippi Valley	4,381	560	4,941
Southwestern	2,415	308	2,723
Ohio River	1,994	394	2,388
South Atlantic	958	342	1,340
South Pacific	956	41	997
Missouri River	545	22	567
North Atlantic	0	440	440
North Central	53	0	53
North Pacific	23	1	24

These data provide a fairly good prioritized picture of the areas in which citations and warnings are most prevalent and which maintain the most notable law enforcement concerns. Reference to Figures 5-B and 5-C in Chapter 5 reveal that the priority Divisional areas (Lower Mississippi Valley, Southwestern Ohio River and South Atlantic) correspond with the mapping of Class A lakes which are being addressed here.*

*The total differs from the total in Table 7-1 since the Provost Marshal's Office and Corps Recreation Management Division use somewhat different collection schemes.

Conclusions on the basis of citations and warnings alone must be approached cautiously, but the situation as portrayed by these data indicates that problems of law enforcement are relatively more acute in urban lake locations. It should be clear, however, that available citation data can at best only indicate the relative location of law enforcement problems and not their actual level. Several reporting problems intervene to reduce the potential number of violations which could be cited by rangers. Some of these factors have been discussed previously but should be briefly reiterated here.

- The vast majority of violations of Title 36 regulations are not reported by visitors as they are not typically of a nature that involve complainant parties. The majority have to be observed by a ranger in order to be cited.
- Most violations are committed out of the view of rangers given the great size of most lakes, the lack of large numbers of patrolling rangers with citation authority, the geographical characteristic of the lakes and the general obscurity of the offenses committed such as petit larceny, vandalism and traffic violations.
- When confronted with a violation, rangers frequently prefer to: (1) disregard it depending on its nature and circumstances or (2) give the individual(s) a verbal warning rather than a written warning or citation. The actions of the ranger are significantly influenced by his understanding of the project manager's philosophy, his perception of his role as a "ranger" who is involved in recreation and visitor protection, and his perception of the significance and effectiveness of the citation program. In all, there is a great deal of difference of attitude, opinion and action in this area depending upon the individual project situation.

As a result of these and other factors, a great many "citable" violations of Title 36 go unnoticed or are not enforced. While it is difficult to estimate the actual level of Title 36 violations, nevertheless, on the basis of field visits and surveys, and discussions with project personnel, it would be conservatively estimated that between 8 to 10 times the number of recorded violations are actually being committed. Again, however, even if rangers were aware of these additional violations, it is doubtful if more than half would be cited in addition to the present level.

The primary reason for issuance of these citations is presented in Table 6-13. Those who did not answer the question are almost exclusively among those lakes which did not issue citations. Among the reporting lakes, motor vehicle violations rank as the number one reason for the issuance of citations, with rural lakes indicating about three times the ratio of citations in this area as urban lakes.

3. Traffic Incidents and Violations

Incidents related to parking are considered to be the number one traffic problem. Thirty-one percent of those completing the survey indicate parking as the first problem, while an additional 43 percent note it as the second or third reason for issuance of traffic citations.

Twenty eight percent indicate that the illicit use of off-road vehicles is the primary reason for the issuance of motor vehicle related violations. As indicated in a previous section of this chapter, trail bikes and four-wheel drive vehicles are commonly used in Corps recreation areas and are frequently the causes of soil compaction around camping areas and resultant destruction of trees and shrubbery. Also, they are often the cause of related ecological damage, as well as the illicit development and use of unauthorized access ways.

Moving traffic violations is the third most cited problem associated with motor vehicle offenses. Just over 30 percent of all respondents note this as their first or second priority in the area of motor vehicular control. A less significant concern, although worth noting, are problems relating to traffic congestion, with about 30 percent of lakes indicating that this is their second or third area of priority concerning motor vehicles. It is also interesting to note that traffic accidents and vehicle breakdowns are not considered as prevalent issues.

Traffic violations, among most law enforcement agencies, are the most frequently reported offenses in the Part II classification. There is little doubt that, with sufficient surveillance, Corps rangers could

Table 6-13

TYPE OF LAKE VS. NUMBER ONE REASON
FOR ISSUANCE OF CITATIONS
VIOLATIONS

TYPE OF LAKE	NO ANSWER	MOTOR VEHICLE	VESSELS	EXCESSIVE NOISE	DESTRUCT PROPERTY	CAMPING VIOLATION	NONPAYMENT OF FEE	INTERFERE GOVT. EMPLOYEE	SANITATION VIOLATION
Urban Within 30 Miles	41	11	4	0	0	3	1	0	1
Urban Other	18	9	2	0	1	2	1	0	3
Rural	69	24	0	2	5	8	3	0	5
Other Parks	18	4	0	0	0	0	1	0	2
TOTAL LAKES	146	48	6	2	6	13	6	0	11

(Source: PRC/PMS Self-Report Questionnaire)

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issue a great many more citations than current levels indicate. For example, the National Park Service charges over 30,000 persons annually for driving violations and about the same for parking violations or about 80 percent of all Part II citations. While the NPS situation is not directly analogous to that of the Corps, it does illustrate the upper limits of driving/traffic law violations that exist in the recreation environment.

While traffic control is considered to be one of the Corps primary law enforcement problems, it generally has less harmful repercussions than direct offenses against persons or property. As well, the largest part of the problem at Corps locations, as previously noted, has to do with parking violations which can in great measure be remedied through adequate posting and more frequent surveillance.

C. Law Enforcement Problem

While motor vehicle related problems are the number one reason for the issuance of citations, they are not considered to be the most pressing law enforcement problem. Table 6-14 indicates that over 40 percent of all respondents report that vandalism is the most significant problem which they face. Apparently, even though motor vehicle violations are prominent, regulations in this respect are more readily enforceable than acts of vandalism, and vandalism is significantly more widespread and destructive. For example, respondents were asked to estimate the annual governmental cost including labor of replacement and restoration of equipment, furniture, buildings, embankments and so forth, at the lake due to crime, vandalism and littering. The greatest majority of respondents indicate that it costs approximately \$2500 annually for this task with one respondent listing as much as \$100,000 annually. It is estimated that the annual governmental cost due to crime and vandalism is almost \$1.6 million. (Further discussion of this section under Part E will readdress this issue; at this point it is sufficient to note this figure as an underestimate.) While over half stated that these costs have remained essentially the same over the previous year, nearly one-quarter of the lakes

TABLE 6-14

TYPE OF LAKE VS PRIORITY OF PROBLEMS

LAW ENFORCEMENT PROBLEM

TYPE OF LAKE	TRAFFIC	VANDA- LISM	ECOLO- GICAL	BOATING VIOLATIONS	THEFTS	PEACE DISTUR- BANCE	NO RESPONSE
Urban Within 30 Miles	6 2.521	26 10.924	18 7.563	1 0.420	1 0.420	4 1.681	5
Urban Other	6 2.521	14 5.882	9 3.7821	1 0.420	1 0.420	3 1.261	2
Rural	21 8.824	41 17.227	30 12.605		4 1.681	12 5.042	8
Other Parks		12 5.042	8 3.361			4 1.681	1
TOTAL LAKES	33	93	65	2	6	23	16
PERCENT OF TOTAL	14.9	41.9	29.3	.9	2.7	10.3	7.2

(Source: PRC/PMS Self-Report Questionnaire)

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indicated that these costs have increased over last year. The increasing trend was slightly more significant at mean lakes.

Table 6-15 indicates that the second most prevalent problem faced by lake personnel is ecological damage and destruction. To a great degree this area interrelates with other problem areas already noted, such as ecological damage due to use of off-road vehicles, littering, dumping, sanitation problems and destruction of the natural and man-made environment. Traffic-related issues are listed as the third most prevalent problem. Although many rangers and other project personnel frequently emphasize the incidence of order disturbances at the lake, it is interesting that this is not given any significant weight in the context of problem issues. Similarly, theft is apparently not of major significance to project personnel. This is in large measure due to the fact that thefts are reported to police or sheriffs' departments directly and project personnel frequently do not receive these reports and do not become involved.

D. Extent of Part I Crimes

A second layer of law enforcement problems relate to the more serious classification of crime which generally falls outside the authority of rangers and Corps personnel to handle. These categories have been previously referenced as Part I and Part II crimes as classified by the FBI's Uniform Crime Reports, or felonies and serious misdemeanors.

Two sources were used to estimate the number of Part I crimes occurring at the lakes during 1973. One source was a report prepared by the Engineer Provost Marshal based on information provided by each lake. The second source was a question in the survey which requested the number of Part I crimes by crime category from Corps personnel and local law enforcement.

TABLE 6-15

TYPE OF LAKE VS. SECOND PRIORITY PROBLEM

LAW ENFORCEMENT PROBLEM

TYPE OF LAKE	TRAFFIC	VANDALISM	ECOLOGICAL	BOAT VIOLATIONS	THEFTS	PEACE DISTURBANCE	NO RESPONSE
Urban Within 10 Miles	13	12	22	2	3	1	6
Urban Other	4	10	15	1	3	1	2
Rural	30	27	33	2	6	6	12
Other Parks	7	8	6	0	2	1	7
TOTAL LAKES	54	57	76	5	14	11	21
PERCENT OF TOTAL	22.7	23.9	31.9	2.1	5.9	4.6	8.8

(Source: PRC/PMS Self-Report Questionnaire)

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The complete inconsistency of results from the two sources is reflected in the following tabulations:

<u>Offense</u>	<u>Number of Offenses</u>	
	<u>Provost Marshal Report</u>	<u>Survey Question</u>
Homicide	10	17
Rape	3	20
Robbery	4	123
Aggravated Assault	6	93
Auto Theft	25	46
Larceny	713	3,354
TOTAL	761	3,653

None of the figures are even remotely close. The survey estimates almost five times the number of Part I crimes reported to the Provost Marshal.

There is also considerable evidence that the survey results grossly underestimate the actual number of Part I offenses. Comparisons were made between the survey results and some of the projects visited by members of PRC/PMS. It was found, for example, that the survey response from J. Percy Priest Reservoir indicated 31 thefts in 1973, but records from the Metro Nashville Police Department show between 88 and 100 thefts reported. Similarly, the survey from the Grapevine Reservoir reflected no assaults, but the Grapevine Police Department recorded three aggravated assaults, seven simple assaults, four cuttings and 15 affrays. Compounding these statistics is the fact that the Grapevine Police Department has jurisdiction over only a portion of the project. Finally, the Green Peter/Foster Lake project stated 15 to 20 thefts but the Linn County Sheriff reported 40 to 50 thefts.

The reporting problem is easy to identify. Corps personnel are simply not notified when an incident occurs. The victim is much more likely to call the locally recognized law enforcement agency rather than Corps personnel. Additionally, the local law enforcement agencies fail to notify the Corps project manager that any incident has occurred. No mechanism exists for ensuring feedback of information pertinent to law enforcement and visitor protection.

It is therefore, impossible to accurately pinpoint the exact level of Part I offenses either at individual sites or on a national basis.

The PRC/PMS project team considered several alternate procedures which could give reasonable estimates of the extent of Part I crimes in the parks. One alternative discussed was the use of an enforcement report produced by the State of California on the crime in its parks. It was anticipated that the results could be extrapolated to the rest of the country. This approach was rejected because (1) the data in the report appears to suffer from the same reporting problems previously cited and (2) no extrapolation procedure seems reasonable based on only one state.

However, as indicated in Section I, of this chapter, the National Park Service (NPS) has developed a comprehensive system for recording Part I crimes based on the Uniform Crime Reporting system. Crime information is channelled through the NPS and summarized into reports showing the number of offenses reported, unfounded reports, offenses cleared, and persons arrested. The NPS, in fact, have a significant advantage over the Corps since it usually has exclusive jurisdiction over its territory both legally and geographically. Thus, a crime victim is more likely to report an offense to NPS authorities rather than the local authorities. Crime statistics on a national basis can then be developed for NPS parks since there is a requirement and mechanism for each NPS park to forward its statistics.

It is reasonable to assume that the NPS crime statistics can be used to approximate the amount of crime in Corps parks. Previous studies have shown that visitors to recreation areas base their choice on convenience and availability (or lack of alternatives) with "unique features" of the area being a lesser consideration. Thus, individuals seeking use of federal recreation areas are generally similarly-oriented; that is, an individual visiting a national park is also likely to be the type to visit a Corps recreation area with the exception of more water activities at Corps lakes.

There are two major difficulties with this approach. First, it is generally believed that persons visiting a national park have a longer average stay than persons visiting a Corps lake. It is more likely they will spend the night at a national park. This phenomena is a problem in trying to compare recreation day statistics between NPS and the Corps. NPS employs the following definition in developing its recreation day statistics:

Visit: The entry of any person into a national park such that he makes some use of the services or facilities provided by the National Park Service.

Overnight Stays: Park visitors in campgrounds and in commercial accommodations within the parks.

The Corps uses the following definition:

Recreation Day: The attendance of one person at the project for the purpose of engaging in one or more recreational activities for one day or a fraction thereof.

The second problem is that it is now a well established fact, as previously discussed in this chapter, that a significant percentage of crimes are not reported by victims to any authority. Thus, the NPS crime summaries underestimate the problem as well, since only reported crimes are reflected. Victimization surveys by the Law Enforcement Assistance Administration indicate that the percent of crimes reported to the police is approximately as follows:

<u>Crime *</u> <u>Category</u>	<u>Percent Reported</u> <u>to Police (R₁)</u>	
Rape	50%	
Robbery	52	
Assault	42	(1)
Burglary	54	
Larceny	31	
Auto Theft	94	

*It is believed that virtually all homicides are reported.

In 1971, the NPS recorded 200,543,300 daily visits and 13,411,200 overnight stays. These data were the most currently available for the present study. It is assumed that the average length of a daily visit is eight hours and the average length of an overnight stay is 24 hours. Thus an estimated number of visitor days for NPS is given by

$$NPS_D = \frac{8(200,543,300) + 24(13,411,200)}{24} = 85,259,000 \quad (2)$$

For 1971 the NPS reported the following Part I crimes:

<u>Crime Classification</u>	<u>NPS Crime Statistics (NSI(C_i))</u>
Homicide	9
Rape	61
Robbery	194
Assault	233
Burglary	715
Larceny	4,052
Auto Theft	<u>141</u>
Total	5,405

For the purpose of this section crime at the Class A lakes will be estimated. According to Figure VI, the number of recreation days at these parks was 236,381,900. It is assumed that the minimum amount of time spent in a recreation day is five hours and the maximum amount of time is eight hours. Thus, the number of visitor days ranges between

$$CE_D^{Min} = \frac{5(236,381,900)}{24} = 49,246,200 \quad (3)$$

and

$$CE_D^{Max} = \frac{8(236,381,900)}{24} = 78,794,000 \quad (4)$$

Using all the information developed above, the range of the actual crime statistics can be estimated by assuming proportionality and adjusting for unreported crimes. The relationships are

$$CE_{D}^{Min}(C_i) = \frac{CE_{D}^{Min} \times NPS(C_i)}{NPS_D \times R_i} \quad (6)$$

and

$$CE_{D}^{Max}(C_i) = \frac{CE_{D}^{Max} \times NPS(C_i)}{NPS_D \times R_i} \quad (7)$$

where $CE_{D}^{Min}(C_i)$ = Estimate of the minimum amount of crime type C_i in the Corps lakes;

$CE_{D}^{Max}(C_i)$ = Estimate of the maximum amount of crime type C_i in the Corps lakes;

CE_{D}^{Min} = Estimate of the minimum number of visitor days at Corps lakes from (4)

CE_{D}^{Max} = Estimate of the maximum number of visitor days at Corps lakes from (5)

$NPS(C_i)$ = Number of reported crimes of type C_i at NPS from (3)

NPS_D = Estimate of the number of visitor days at NPS parks from (2)

R_i = Estimate of percent reported to the police of crime type i from (1).

Applying (6) and (7) to the NPS crime statistics gives the following estimates of crime at the Corps lakes:

<u>Crime Classification</u>	<u>Corps Crime Estimate</u>	
	<u>Minimum</u>	<u>Maximum</u>
Homicide	5.5	8.8
Rape	74.9	119.8
Robbery	228.9	366.3
Assault	340.4	544.6
Burglary	812.4	1,299.9
Larceny	8,020.2	12,832.4
Auto Theft	92.0	147.3

The above statistics are rough estimates of the amount of Part I crimes because of the estimation procedure involved and because no valid crime data from Corps lakes are available. However, these estimates indicate that the Corps lakes have a reasonable Part I crime problem. What these figures reveal is that on the average an estimated 75-80 serious crimes are committed at Corps class A lakes annually. Thus, on an average seasonal weekend between four and five serious crimes are committed at those lakes.

It seems apparent that one incurs a reasonable degree of risk at Corps lakes of becoming a victim of serious crime. Thus, at a lake with a weekend population of 30,000, one out of every 6,000 visitors is likely to be a victim of serious crime. The probability is far greater that this crime will be a property crime than a crime of personal violence. These rates do not apply uniformly to all lakes in the A classification, since averages are being applied and should not be considered necessarily as a representative picture of all Corps recreation areas. What should be conclusive and most significant from these estimates is the fact that a significant amount of crime is not being reported to the Corps personnel at all lakes throughout the nation, and because of this, the severity of the problem can only be generalized. One is left with the legitimate impression that the crime which is known to the Corps, as well as local law enforcement agencies surrounding Corps lakes, is only a microcosm of the actual level of crime being committed.

E. Vandalism

Overshadowing the Part I crime problem is the extent of vandalism at the lakes. Virtually all respondents to the survey indicated vandalism as a significant problem at the lakes.

Again, however, Corps incident reports provide only a partial picture of the actual level of the problem. For example, the Corps Incident Report for 1973 records 579 incidents of vandalism to government property and an additional 38 incidents involving private property for

total losses of \$64,903 and \$454,095, respectively. Yet, based on field visits, observation, and conversations with park personnel, it can be said that this is only a small percentage of actual losses.

In many cases, the vandalism to government property, while of a costly nature, may not necessitate a capital or replacement expense, but may be repaired through a labor expense. In these cases, the actual or total cost of the vandalism may not be recorded and reported because it did not involve a material expense but rather a manpower expense. The administrative burden and time required to fill out an incident report, given the volume of vandalisms, are prohibitive and generally avoided. In addition, because of the above factors, the cost of vandalism to government property, when reported is often underestimated.

Data for private visitor losses due to vandalism, if reported, are more likely to be recorded by the Corps lake personnel. If one uses the data on financial loss of vandalism incurred by visitors, a more reasonable and accurate approximation of the vandalism problem can be determined. For example, data from a research study conducted for the U.S. Forest Service⁶ indicated that vandalism of campground facilities is about seven times more than that of private property and damage to the environment about two to three times that incurred by private individuals. These findings are not only logical but consistent with data and observations of field surveys. Applying these adjustments to the Corps cost figures for recorded visitor losses, we find governmental losses due to vandalism of approximately \$3.2 million for facilities and an additional \$.9 to \$1.1 million in damage to natural resources. We know that vandalism of private property is also under-reported, and possibly by a factor of four or more based on the previously referred to LEAA surveys. To that extent, it is entirely possible that Corps annual losses due to vandalism, abuse, and neglect could range between \$7 and \$10 million in facilities and resources and an additional \$2 to \$3 million in natural environment destruction. This is a reasonable figure when one considers for example, that the cost of park vandalism in New York City alone last year was \$1,167,904.⁷

There is little wonder why vandalism is considered as the Corps' foremost problem, notwithstanding the relatively high occurrence of larceny and traffic offenses. The destructiveness which can be performed in a short period of time by one or more individuals makes offenses in this area more significant and more visible to project personnel if not to the average visitor. In addition, the costs incurred by visitors in terms of lost recreational opportunities and decreased enjoyment are unmeasurable.

F. Factors Associated with Violations and Offenses

Due to the low number of reported offenses by Corps lakes, no statistical correlations could be developed with regard to the distribution of Part I crimes between urban and rural areas.

However, within each project there are a number of factors which seem to correlate with the occurrence of incidents, citations and statutory violations. For example, the largest number of both urban and rural lakes indicate that the majority of their citations are issued at day use locations while the second most frequent place is at overnight camp sites. Obviously, there are the two major public use areas and would be expected to carry the greatest percentage of violations. However, it is interesting to note the greater volume of offenses attributable to day use areas. In these locations there is less "commitment" to maintenance and control in the area, and, the general transience of users in these areas would tend to make visitors feel less obligated to regulations. Less than 10 percent of the lakes reported any significant criminal activity on the water surface or the undeveloped areas.

The majority (66 percent) of lakes note that they feel law enforcement problems are primarily due to adults. However, a substantial 40 percent also feel that juveniles are the primary cause. There is little evidence to indicate which violations it is felt these age groups are responsible for, although many feel that youths are most frequently involved in recreation and vandalism.

The foregoing two points have implications for the difference in the volume of problems at urban and rural lakes. That is, urban lakes are utilized to a proportionately greater degree by day users than rural lakes and can be considered more convenient to a great many youths. These factors combined with the greater concentration of attendance at urban lakes augments their overall vulnerability to violations as has been indicated.

In terms of time of occurrence, the indications are significant from the survey that three times as many respondents listed Saturday as the day on which the greatest number of law enforcement problems occur, rather than any other day. Sunday was listed next, followed by Friday. In this respect, holidays are rated as even worse for law enforcement problems, as over 90 percent of the Corps lakes responded in this fashion. In addition, the vast majority of respondents listed the hours between 8 p.m. and 12 p.m. as accounting for the occurrence of their primary law enforcement problems, both during the summer and the rest of the year. The hours between 12 p.m. and 3 a.m. were listed next.

Thus, a law enforcement problem at a Corps lake is most likely to occur on the weekend, preferably Saturday, between the hours of 8 p.m. and 12 p.m. at a developed area during the summer. In over half the cases the offender will be an adult.

Section IV
IMPLICATIONS AND SUMMARY

The implications of these law enforcement trends described in this chapter should be made clear for Corps recreation program development. In reference to inadequate law enforcement and visitor protection, over 70 percent of the Corps lakes responding to the question reported that inadequate law enforcement and visitor protection arouses fear and anxiety in visitors and may be a significant factor in their choice to use other recreation areas. Also, over 80 percent reported this laxity attracts troublemakers. As well, nearly 40 percent of the lakes reported that inadequate law enforcement and visitor protection causes an unwillingness in visitors to pay use fees, a finding which reconfirms a previous Corps study.⁸

If the law enforcement and visitor protection were improved, the majority of Corps lakes reported that this feature would increase facility usage, and, more significantly, 70 percent of the respondents reported that improved law enforcement and visitor protection would increase the users willingness to pay use fees.

The impact of these findings, while probably not new to the Corps, should serve to reaffirm the currentness and importance of the issue of adequate law enforcement and visitor protection for Corps decision-making.

The overall status of the visitor protection problem at Corps lakes can be generally summarized as follows:

- A reasonably significant level of criminal activity is present at the majority of the Corps of Engineers lakes.

- The nature of criminal activity is analogous to the national trends for index crimes (Uniform Crime Report) in that:
 - Property offenses are significantly the most prominent.
 - The majority of the criminal activity is located at lakes near urban areas or which attract large numbers of urban residents.
 - A large percentage of actual crime is unreported.
- The estimated cost of vandalism and other damage to the man-made and natural environment exceeds \$14 million annually.
- Criminal activity is most likely to occur:
 - at a developed area of a largely attended urban lake,
 - during the summer,
 - on the weekend (usually Saturday), and
 - between the hours of 8 p.m. and 12 p.m.
- The actual level of crime cannot be determined because of confusion on the part of victims as to which authorities to report the offense to and a lack of reciprocal reporting between local/state authorities and the Corps.
- The low level of citation issuance indicates that Corps rangers could be more productive and increased in numbers of ranger personnel
- Preventive patrol by local and state peace officers is generally unsystematic and below an adequate level to ensure immediate response to emergencies.
- Corps equipment, related to visitor protection, is limited.

A recent analysis conducted by PRC/PMS will provide a final reference point for these findings. This analysis was performed for the American Park and Recreation Society, and the National Recreation and Park Association on their National Survey of Vandalism, Crime and Violence in park and recreation areas. Over 340 park and recreation organizations in the country responded to the survey.

The conclusions revealed a completely similar trend to the current findings at Corps lakes. To summarize the APRS study, PRC/PMS concluded the following from the data:

- Crime is more prevalent and of a more serious nature in urban parks.
- Vandalism committed in urban parks is far more costly than in other areas.

- The major crimes in all park and recreation areas are property crimes.
- Crimes are most likely to occur:
 - in open park and playground areas of largely attended, urban parks,
 - during the summer and spring, and
 - in the evening hours.

These findings provide confirmation that the crime and vandalism found at Corps lakes is typical of a trend throughout the nation. The APRS study also revealed a lack of coordination between park and recreation agencies and local law enforcement and a noticeable amount of crime remaining unreported.

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CHAPTER 7

ANALYSIS OF THE LOCAL LAW ENFORCEMENT
AND CORPS RANGER MANPOWER AT THE LAKESA. Current Staffing Levels

Most law enforcement management studies analyze an agency's manpower in terms of workload and productivity. Criteria used in this assessment generally includes patrolmen per beat, calls for service, response time, caseload per investigator, etc. Similar criteria, while present in a limited capacity and form in the Corps organization, nonetheless, lends itself to an internal comparison of manpower utilization. The data in Table 7-1 is presented according to a division of Class A lakes using attendance as the main variable; the lakes are separated as follows:

(1) urban lakes with attendance over one million, (2) rural lakes with attendance over one million, (3) urban lakes with attendance under one million, (4) rural lakes with attendance under one million, and (5) all Class B lakes.

As the table reflects, recreation use of the A lakes accounted for approximately 75 percent of the Corps annual attendance figures. Recreation use at the urban and rural lakes with attendance over one million accounted for 62 percent of the total alone.

The staffing at the lakes presents a similar situation. The lakes with attendance over one million are staffed with 68 percent of the total compliment of permanent rangers. While it is apparent that these largely attended lakes contain the majority of the rangers, the rangers at these lakes also reflect a significantly higher level of productivity than the other lakes. Combining written warnings with citations, it is apparent

TABLE 7-1

CHARACTERISTICS OF CORPS OF ENGINEERS LAKES,
CLASSIFIED BY ATTENDANCE

Class of Lakes	Number	Attendance	Land Area	Corps Developed Areas		Number of Rangers		Total Infractions	Percent of Lakes With Law Enforcement Problem
				Day	Night	Permanent	Temporary		
Total A Lakes	128	236,381,900	3,869,857	735	781	313	598	9,764	.54
Average		846,730	30,225	5.7	6.1	2.65	4.67	76.3	
Urban A Lakes With Attendance Over 1 Million	32	114,797,400	964,311	237	314	118	232	5,423	.69
Average		3,587,418	30,135	7.4	9.8	6.69	7.25	107.0	
Rural A Lakes With Attendance Over 1 Million	39	82,578,900	1,565,986		243	94	227	3,716	.54
Average		2,117,408	40,154		6.2	2.41	5.82	95.3	
Urban A Lakes With Attendance Under 1 Million	11	5,694,600	127,406	17	35	17	26	503	.55
Average		517,691	11,582	1.5	3.2	1.55	2.36	45.7	
Rural A Lakes With Attendance Under 1 Million	38	20,866,700	963,346	105	129	64	94	1,421	.47
Average		549,124	25,351	2.8	3.4	1.68	2.47	37.4	
Total B Lakes	83	26,151,500	553,663	136	37	7	17	66	.29
Average		315,078	6,752	1.6	.4	.08	.20	.80	

(Source: FRC/PMS)

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that the rangers at the lakes with attendance over one million are responsible for producing 73 percent of all recorded infractions.

A closer analysis, reflected in Table 7-2, reveals that an average of 3.69 rangers working the urban lakes with attendance over one million are writing and processing 107 infractions annually or an average of 29.0 per ranger. This workload is exceeded by the rangers at the rural lakes with attendance over one million where an average of 2.41 rangers per lake are writing and processing 95.3 infractions, for an average of 39.5 infractions per ranger. Placing this analysis in perspective, approximately 85 percent of all infractions are committed during the summer season with the majority of these occurring on weekends. Thus, it can be safely stated that even at these largely attended lakes the rangers are averaging one written infraction per day with the smaller lakes producing even less.

Comparing this finding to the number of recreation visitors reveals an interesting point. The data in Table 7-2 reveals that peak weekend attendance during the season at the urban and rural lakes with attendance over one million is between 25,418 and 28,148 per ranger. This would mean that out of this number only one person committed an infraction. While these averages obviously contain many extremes, both high and low, it is fairly supportive of the field survey findings that Corps rangers are overwhelmed by visitors and as a result are not capable of properly managing resources and people. This frustration, in terms of not being able to dent the problem, is reflected by the low output. Additionally, the lack of backup management support and "clout" plays a role in diminishing the rangers productivity.

In essence the rangers are shying away from the problem or at best relying on verbal warnings. This situation is also apparent, as revealed by Table 7-2, in the finding that the average ranger at the largely attended lakes has between 4.7 and 6 well-developed areas and 8,172 to 16,659 acres to surveil for proper use by recreationists.

TABLE 7-2

CORPS OF ENGINEERS LAKES,
CLASSIFIED BY ATTENDANCE, DEPICTING RANGER WORKLOAD

CLASS	AVERAGE # OF PERMANENT RANGERS PER LAKE	INFRACCTIONS PER LAKE	INFRACCTIONS PER RANGE	ANNUAL VISITORS PER RANGER	VISITORS (1) ON PEAK WEEKEND PER RANGER	ACRES PER RANGER	DEVELOPED ACRES PER RANGER
TOTAL A LAKES	2.45	76.3	31.2	755,210	21,852	12,361	4.8
URBAN A LAKES WITH ATTENDANCE OVER ONE MILLION	3.69	107.0	29.0	972,859	28,148	8,172	4.7
RURAL A LAKES WITH ATTENDANCE OVER ONE MILLION	2.41	95.3	39.5	878,499	25,418	16,659	6.0
URBAN A LAKES WITH ATTENDANCE UNDER ONE MILLION	1.55	45.7	29.6	334,976	9,692	7,494	3.0
RURAL A LAKES WITH ATTENDANCE UNDER ONE MILLION	1.68	37.4	22.2	326,042	9,433	15,052	3.7
TOTAL B LAKES	0.08	0.8	9.4	3,735,928	108,093	79,095	24.7

(1) ANNUAL $\times 0.62$ = SUMMER
SUMMER $\times 0.79$ = WEEKEND TOTAL
WEEKEND TOTAL $\div 15$ = PEAK WEEKEND

(Source: FRC/PMS)

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It is necessary to explain at this point that these lakes also utilize the assistance of seasonal or temporary employees, generally below the equivalent GS-4 level, for purposes of fee collection, tour guides, and litter clean-up. Corps regulations state that these temporary personnel are not to be given citation authority, and, although the study team found many that were, these assistants are generally less trained or inclined to promote visitor protection than the rangers.

Although the study team received an accurate accounting of the number of temporary employees, as reflected in Table 7-1, it was impossible to determine for each lake the working hours, extent, and purpose of these employees. It was apparent that in the rural, southern lakes, the temporaries were providing more visitor protection than the permanent rangers or local law enforcement. This was not often the case, however, and as the norm could not be developed, temporary employees were not emphasized. They will play a role in a further discussion.

Improvements in the manpower situation will be discussed in Chapter 9. The remaining sections of this chapter will be devoted to an analysis of the costs of visitor protection.

B. Costs of Current Law Enforcement

Further analysis into the Corps visitor protection problem revealed the cost of current services, both by the Corps and local law enforcement. The Corps operation shall be discussed first.

Corps of Engineers

As previously stated, while the statistics do not reveal the findings that the rangers are maximally productive, in terms of objective criteria such as written infractions, the data and site visits thoroughly revealed that the Corps ranger staff was substantially deficient in number.

In 1973 the Corps was spending over one-third of a ranger's salary on visitor protection. Based on an average working scale (GS-5

salary) of \$8,400 per year plus 30 percent benefits, total salary for a ranger is approximately \$10,920 per year. The self-report questionnaires revealed that the Corps was spending between 40 and 60 percent of ranger time on visitor protection and patrol during the summer and 10 to 20 percent the rest of the year. This means that, based on these percentages, the Corps was spending between \$598,143 and \$1,025,388 on direct personnel salaries of permanent personnel for visitor protection. Additionally, the temporary ranger program contributes half its time to visitor protection related activities. Assuming a figure of approximately \$2,000 per year for the average temporary, this comes to \$598,000 annually for visitor protection. Adding this figure to the converted percentages of time calculated on the permanent rangers salary, we arrive at a figure of between \$1,196,143 and \$1,623,388 spent by the Corps on personnel expenditures for visitor protection.

As mentioned, these figures are only personnel related and only from the Class A lakes. Another assessment of visitor protection expenditures was revealed by the self-report questionnaires. The lake managers were asked to estimate the amount of money they were spending on visitor protection and security from all budget items including personnel, operating expenses, contract maintenance, construction, and equipment. A large sample of the A lake respondents revealed an average of \$30,000 per lake spent on visitor protection annually. This amounts to a total expenditure in excess of \$3.8 million. Assuming the major portion of this figure is for personnel salaries, this extrapolation is slightly higher than the previous one. Adjusting the calculations, the total expenditure for visitor protection and security is between \$2.0 and \$3.2 million annually. Adding to this figure, an approximation of \$100,000 to \$150,000 for the B lakes, which are minimally staffed and barely developed, the total for Corps of Engineers annual expenditures on visitor protection is between \$2.1 million and \$3.35 million. This amounts to approximately 15-20 percent of the Corps annual O&M expenditure for recreation.