

May / June 1975

Volume 19 / Number 3

Maintenance Awards

An awards program for innovative maintenance ideas provides a new opportunity for park maintenance personnel to share their ideas and experiences with others.

This year's award winners were: Gene C. Baldock, Grand Teton National Park for his warning system to provide protection against freeze-up of heating plants and utilities; John Reed, Colonial National Historical Park, for his design of a mechanical device to prevent accidental dumping of a truck body; and Denny S. Mulford, Capitol Reef National Park for his safety locking device to prevent operation of the load packing mechanism when either rear door is open.

National Park Service Director Gary Everhardt presented the awards at a special ceremony in Washington, D. C. Said the Director: "The criteria for selection of these awards required that the idea be an original contribution to the quality of park and recreation maintenance and that the material appear in one of the Park Practice publications. This year," he continued, "I'm proud to announce, all three winners are from the National Park Service."



Third Prize
Safety Locking Device for Trash Packer

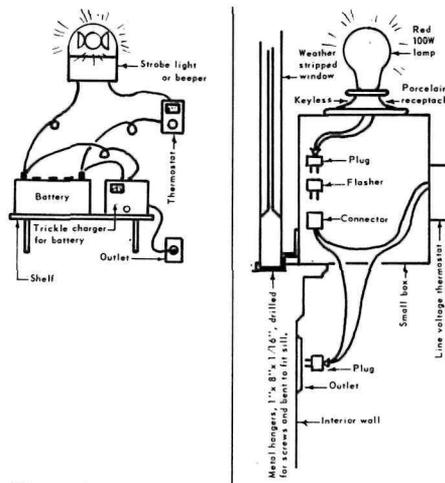


Denny S. Mulford

Gene C. Baldock

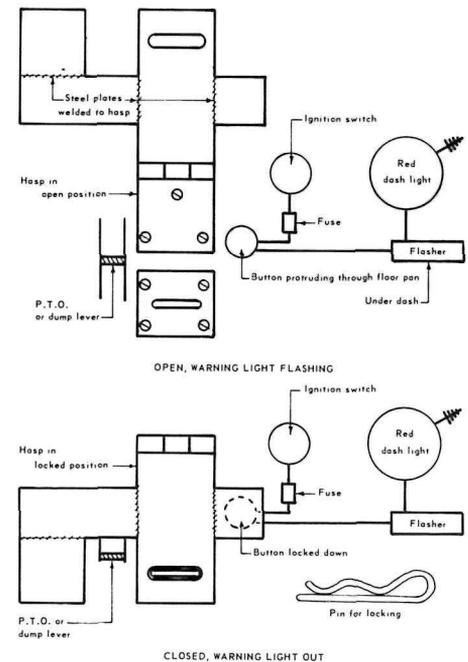
Gary Everhardt

John Reed



First prize
Freeze-up Warning Systems

Prizes ranged from \$100 for first prize, \$75 for second, and \$50 for third prize. Prize money was contributed by the Board of Regents of the Park and Recreation Maintenance-Management School sponsored by North Carolina State University, the body which made the final award selection.



Second Prize
Device to Prevent Accidental Dumping

The National Park Service selected twenty outstanding contributions which appeared in the Park Practice publications in 1974 and the Board of Regents made the final selection of 10 top ideas. All 10 winners receive Awards of Excellence with special cash awards to the top three winners.

Send your ideas to *Grist* for possible consideration for the maintenance awards program.

Recycling

With a little effort and imagination, we can recycle all sorts of things we find around us. As a regular feature, *Grist* will present new ideas for recycling materials you find around you. Send your ideas to Jim Burnett, Editor, *Grist*, Division of Federal, State and Private Liaison, National Park Service, Washington, D.C. 20240.

Hot Coals Receptacle



Dave Phillippi paints sign on drum.

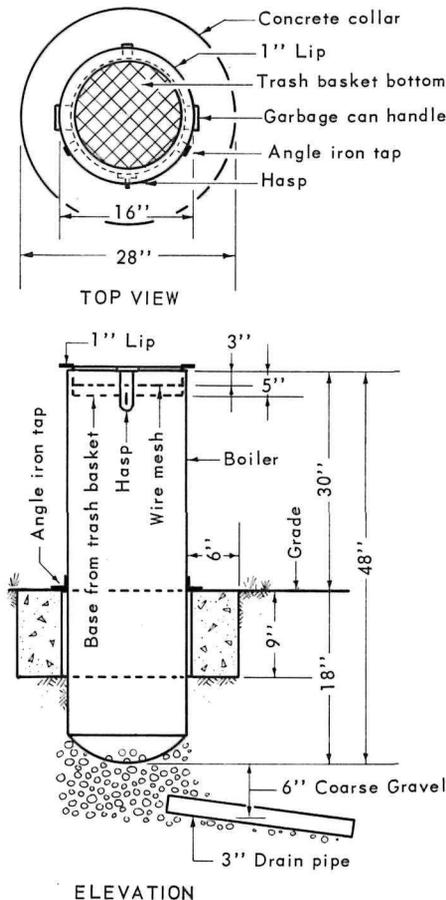
Jack Graham of Yellow Creek State Park and Frank Sayut from Raccoon Creek State Park in Pennsylvania have written *Grist* to suggest hot charcoal receptacles for picnic and camping areas. Their ideas were so useful that Dennis Berchet and Woodrow Colbert, Park Superintendents in the Central Office of the Department of Environmental Resources sent out plans for the final designs to all the Department's field offices in the state for implementation.

A basic receptacle can be made from a recycled 55-gallon drum. One third of the drum is sunk into a hole in which six to eight inches of coarse gravel have been placed. The bottom of the drum is punctured with a series of drain holes and covered with an additional four to six inches of coarse gravel. A large mesh screen is welded to the inside of the barrel, about one third of the way from the top. The grate allows only charcoal into the base and avoids the problem of little children looking for a good hiding place. Finally, large letters are placed on the exterior making it impossible to miss.



Frank Sayut developed his hot charcoal receptacle by using a recycled 30-gallon electric water heater tank, handles from a rusted out garbage can and the bottom of an old trash basket. Sayut, who heads up a think tank called "Contraptions Unlimited" suggests that similar containers can be made from corrugated pipe instead of the water tank and cyclone fence utilizing a rim from an old garbage can instead of the basket bottom.

Much thanks to Sayut, for his creative ideas.



Homemade Honing Device

Next time you need to hone down the interior of a pipe or cylinder and you don't have the right attachment to your drill, try Maintenance worker Renard L. Bray's homemade honing device.

Bray, who hails from Pea Ridge National Military Park in Arkansas, took a 60-penny nail in a drill or drill press and ground it to fit in a drill press. The bottom of the nail is cut off and a slot cut part way up the nail to permit insertion of sandpaper or emery-cloth of the appropriate grade.

The device is simple, inexpensive and handy to use.

Recycled Magazines

Parks and recreation areas all over the country have set up recycling centers. Almost every center faces the same problem when a car pulls up loaded with glossy magazines and has to be turned away—metal staples and glossy covers are not accepted at many recycling plants.

E.H. Motts at Big Pocono State Park in Pennsylvania has recycled thousands of magazines—but not in a recycling plant, but at visitor centers by distributing them free to campers and visitors. The magazines, donated by people in a nearby village, are welcome for campers and people just passing through. "Many times," says Motts, "on a rainy day, there is a line of people waiting their turn to the magazine table, especially people who are camping at nearby parks, sometimes they bring them back, and sometimes they exchange them."

Ingenuity

The following helpful hints will make your job a little simpler, a little more efficient.

Wood Door Hinge-A Good Bet For An Historic Site

Howard S. Medford, Jr., of the Traffic Planning Associates of Hickory, N.C. sends us this idea for a wooden door hinge.

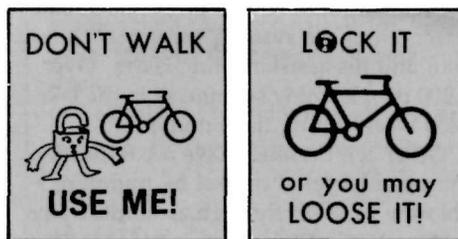
The hinge is made of locust wood. The head of the carriage bolt should be outside if door opens in, opposite if the door opens out. Lag screws and carriage bolts will be 1/2 inch in diameter and the length will be determined by the thickness of the free form part. Hinge and block sections must be flush with the door jamb.

Historic sites interested in an authentic wooden door and door hinge will appreciate this plan.

Stop Bike Theft!

When spring comes, out come the bicycles, crowding bike paths and racks, causing park and recreation people hours of problems as trusting bikers leave their wheels unlocked.

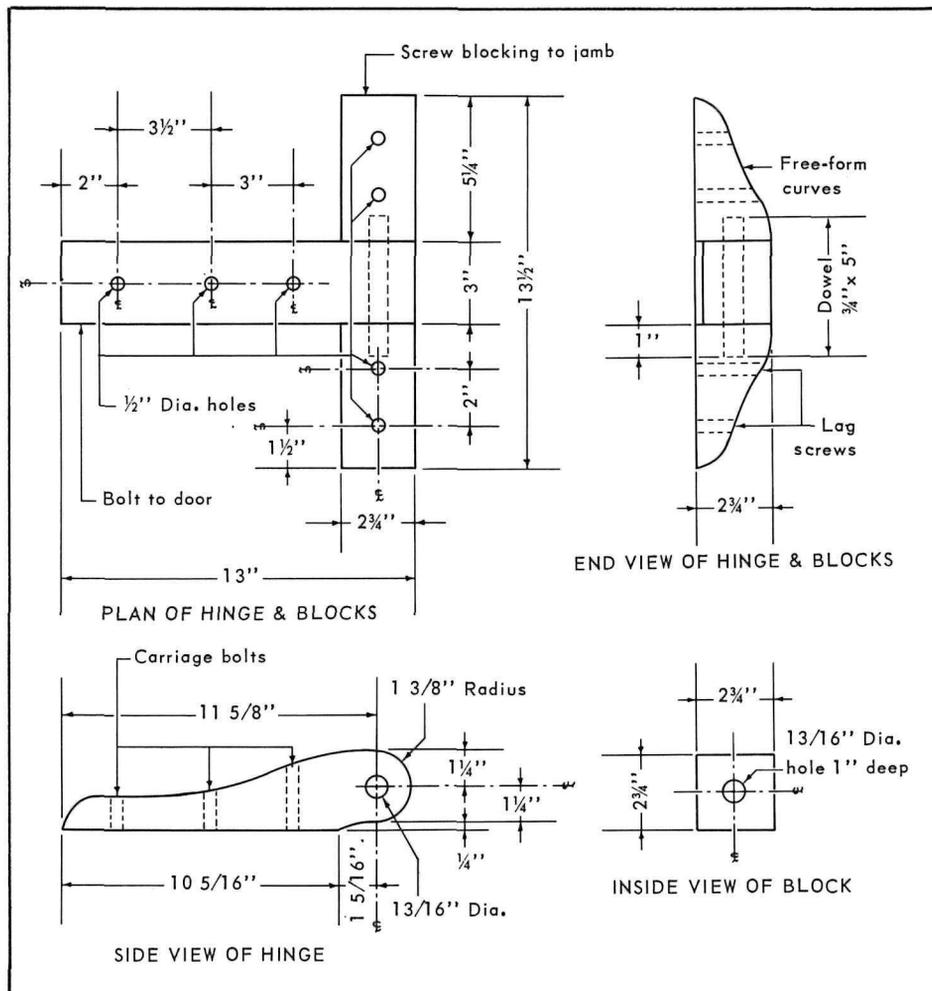
To encourage bikers to lock their bikes, Private Clifford F. Chetwin of the U.S. Park Police in Washington, D.C., suggests a poster campaign to call visitor attention to the likelihood of bicycle thefts.



Don't Fence Me In

Instead of fencing off archeological or historic sites, Kenneth Mabery, a Park Ranger at Canyonlands National Park in Utah suggests that natural barriers—tumbleweeds or brambles—be used to protect a site.

Painting the barrier is unnecessary and the look is more in keeping with the scenery. The photograph of dead juniper wood and Russian thistle shows a barrier started, protecting a pictograph panel in Canyonlands N.P. The barrier extends out about eight feet from the pictographs and when completed will be about 30 feet long and three to four feet high.



Got A Light?

George A. Howarth, a Park Technician at Big Bend National Park in Texas noticed that there are times when you need a light and matches just aren't handy. In an emergency, when flares must be ignited quickly to warn of a hazard, Howarth suggests that inexpensive butane lighters be regular equipment—kept with flares and other emergency packs for search and rescue or float trip packs.

Howarth points out that the lighter can be used repeatedly without refilling or replacing—and its waterproof! No need to hunt up a friend who smokes or try to dry out soggy matches any more!

Let's Go For A Swim

Chlorine Circulation System Solves Bacteria Problem At The Old Swimming Hole

by Robert D. Espeseth

Many communities utilize small bodies of water for swimming in conjunction with an adjacent park area. In many cases the restricted size of the pond and limited water interchange leads to a bacterial buildup which may in turn lead to closing the beach to swimming.

The Village of Mackinaw, Illinois, experienced this problem at their Lake Brock Park, a converted gravel pit area with ponds, which they have been developing over a number of years. The bacteria count in the water however, made the water unsafe for public use. To reduce this hazard to acceptable standards, a circulation system was constructed to help aerate and chlorinate the water.

After consultation with a local representative of the Health Department, to insure that the proposed system would be acceptable, two five-horsepower electric motors were installed on shore to pump water from near the center (and bottom) of the 20 acre lake. Four-inch plastic pipe is used to distribute the water along the beach area (see photographs) where the water is discharged through small holes in the pipe, forming 10-foot high arches of water jetting out into the swimming area. "The kids really like to play under the sprinklers," commented Marion Newman, Park Manager, in describing the system.

The water is drawn out of the lake and



as it passes through the pump house, liquid chlorine is added in prescribed increments from pressurized cylinders. Foot valves at the end of the intake pipe prevent the backflow of water when the pumps have been turned off, so there is no need for priming.

Newman estimated that about 100 pounds of chlorine is added to the lake each week. This amount has not adversely affected the fishing in the lake, a popular visitor activity. The system is operated for six hours a day during the park season from Memorial Day to Labor Day.

"We have had no real problems or bad effects from the system," reported Newman and his assistant, Eric Harm. Over 1,000 people enjoy swimming in the lake each week during the summer.

Other communities have accomplished the same bacterial control by pumping a chlorine solution through an underwater system of pipes. Compressed air has also been used in similar systems to provide a greater oxidizing effect on algae and bacteria.

Be sure to work closely with your local Public Health Department in developing the system you might need so they can review the system before it is installed. Usually chemical treatment is recommended to control high bacterial build-up.

The Mackinaw spray chlorination system provides a simple solution to a maintenance problem. Modifications can be handled easily to meet specific needs.

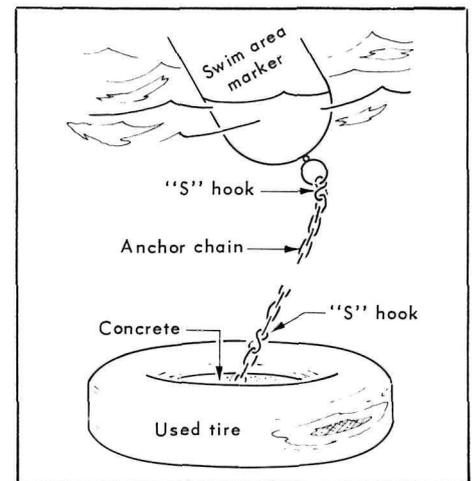
Note: The author wishes to thank Marion and Bob Brown, Resource Development Extension Advisor and Park Manager for information and pictures used in the article.

Mr. Espeseth is an Outdoor Recreation Specialist with the Office of Recreation and Park Resources, Cooperative Extension Service, University of Illinois, Urbana-Champaign.

Keep That Buoy Safe

Swimming areas are often plagued by problems of poorly designed anchor buoys. Two *Grist* readers have sent in ideas to solve the problem.

David Coffin, Park Supervisor of Trap Pond State Park in Laurel, Delaware suggests that instead of using a concrete anchor—which may cause abrasions and cuts to swimmers coming in contact with them, that a concrete-filled tire serves just as well.



Coffin and his staff obtained worn out compact car tires—about 12 or 13 inches. They then bent rebar hoops to fit inside the tires and poured concrete in them. Coffin notes that the concrete was poured in four steps while holding the tire in an upright position. During the last pouring he placed a small piece of chain in the wet concrete to serve as an anchoring point for the marker chain.

Oscar James, a Park Technician at Virgin Islands National Park's Trunk Bay makes another suggestion which netted him a handsome incentive award. Trunk Bay has an excellent underwater trail with interpretive signs for snorkelers marked on concrete bases. The trail is marked by buoys and floats. Oscar suggested that they be attached to their moorings by an easily detached shackle at the point where the chain and the mooring connect. In rough seas, when visitors are advised not to snorkel, the buoys can be removed, making the trail literally invisible to would-be daring swimmers.

A Shift-Less Trail

Maintaining trails in sandy areas can be a real problem. Ron Madsen, Park Manager at Chatfield State Recreation Area in Colorado has a solution to the problem. Using old square cedar blocks and 16-foot lengths of two by fours, he nailed the blocks to the two by fours about five inches apart and buried them along the edge of the trail on both sides with only 1/2 of the blocks showing above the ground. This marked the trail clearly and prevented visitors from carrying the blocks away.



Safe Boating Can Be Dock-less



Darrell Winslow of Northern Virginia Regional Park Authority provides *Grist* readers with three good ideas for docking boats without the expense of building a dock.

At Bull Run Marina, rental boats are

pulled up on a sandy beach, making loading and unloading much easier and safer.

At Fountainhead Regional Park, the shore is used for rental boats. A pontoon boat, used for revenue, docks at the edge of the lake for easy loading and unloading.

A Line For Rescue

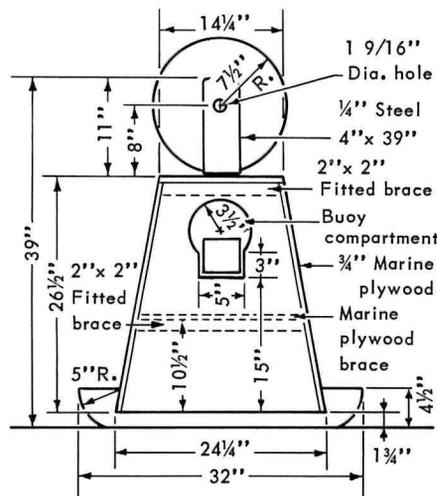
When you need a rescue line to respond to calls of help from a swimmer or a boater, you need it *fast*.

Supervisory Park Ranger Mel Olsen and Seasonal Park Ranger Richard Baker at Assateague Island National Seashore in Maryland have developed an improved version of the line and reel rescue devices which netted them a \$50 incentive award.

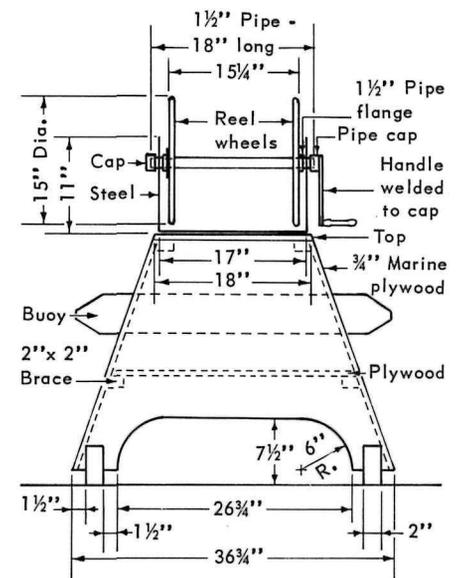
The reel, set on skids so that it can be easily pulled across the sand like a sled, is more efficient than standard manufactured reels, say its creators, and it is relatively simple to make.

This new reel is larger than the man-

ufactured reel; and is better positioned above the ground. There is a greater difference between the edge of the spool and the rope which reduces the chance of rope jump-off and entanglement. The greater weight of the reel causes the momentum movement of the reel to be slower reducing the free spin and entanglement as well. The keyhole cut at the sides allows a space for a buoy to be stowed and transported with the reel. The reel can be easily covered and padlocked at night and chained to a stand on the beach.



SIDE VIEW



FRONT VIEW

Weather Information Displayed For Education

Talking to the people about the weather is one thing, but showing people about weather conditions through a well designed display is another—more meaningful way to help people understand weather conditions.

Darrell Craig, a Park Supervisor at Lahonton State Recreation Area in Valley of Fire State Park in Colorado's Mojave Desert, suggests a chalk board listing the preceding day's high and low temperatures, and a dial showing the present outside temperature. Craig points out that if your park is located several miles from the nearest official weather station, the U.S. Weather Bureau might install a temperature and precipitation recording station free of charge. However, procedures may vary from one area to another. If you are interested in setting up a weather information display, write to the National Weather Records Center, Federal Building, Asheville, N.C. 28801.



Solid Lawn Sprinkler



Larry VanderWall, Park Manager of Ionia Recreation Area in Michigan has developed a unique lawn sprinkler with no moving parts. With the exception of the hose, the sprinkler can be constructed from surplus materials usually found in any park. Construction is simple but must be done in two steps. The inlet pipe must enter the side of the body of the sprinkler one inch from the bottom so that incoming water will have a tendency to swirl around the inside wall before coming out. A 1/4-inch hole for the water works best but local water pressure may dictate an even larger hole. The hole must be tapered at least 45 degrees on the inside so the water will spray outward.

The sprinkler is only four inches high and eight inches wide. Materials needed include: a 1/4-inch flat stock base, eight by eight inches; a 4-inch diameter, 1/4 inch flat stock top; 4 inches of 4-inch pipe; 4 inches of 1/2-inch pipe, the inlet with standard threading on one end; and a 1/2-inch hose connector.

Special thanks to O.J. Scherschligt, Chief of the Parks Division of Michigan's Department of Natural Resources and H. B. Guillaume, the man in charge of revenue services for the Department for sending *Grist* this idea.

Limits On Backcountry Camping

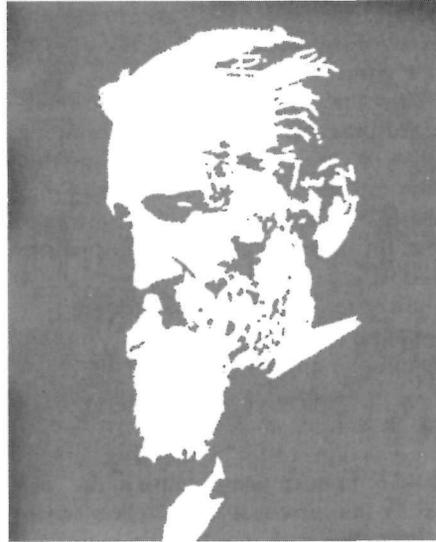
Richard W. Hougham, Oconaluftee Sub-District Ranger at Great Smoky Mountains National Park is concerned about the conditions along the Appalachian Trail and the current practice of unlimited use of available resources.

Hougham suggests that a reservation system for the available shelters be set up to limit the number of people going into any area by campfire permits. To accomplish this, he would maintain at the dispatcher's office a monthly calendar for each of the 21 shelters within the park. On the calendar, within the block for each day, would be a number of blanks corresponding to the number of bunks available at that particular shelter. In day-to-day operation, the individual authorized to issue a camping permit would telephone the dispatcher's office to ascertain that the number of persons to be covered on the permit does not exceed the bunk spaces shown as vacant for the shelter and the day in question. Clearance by the dispatcher would authorize issuance of the permit.

While many may be disappointed, Hougham feels that those who are admitted would find the backcountry cleaner and better maintained—thus reducing the manpower needed to maintain the shelters.

Lobby Sets A Mood For Visitors

Dave Hughes, a designer at the Western Regional Office, has designed interiors for the Visitor Center lobby at the John Muir National Historic Site which sets an important tone for visitors entering the area. Visitors see an effective silhouette of John Muir on redwood paneling and a scene from the forest. The exterior part of the display is a redwood burl cut in half with a plate of glass separating the halves. Both areas are surrounded by ferns. The lobby also contains photographs of other important historic figures who with Muir, established Yosemite National Park and the Petrified Forest. Almost any visitor center benefits by sensitive treatment of the setting in which a park or recreation area is located and carries the theme through for the visitor. Send *Grist* your ideas for Visitor Centers.



GRIST

A bimonthly publication of the nonprofit, educational park practice program cooperatively conducted by the National Park Service, National Society of Park Resources and the National Recreation and Park Association.

Material For Publication should be sent ONLY to:

James A. Burnett, Editor
Division of Federal, State and Private Liaison
National Park Service, Washington, D.C. 20240

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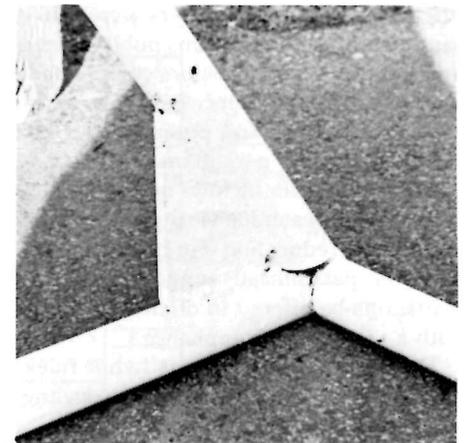
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Portable Soccer Goal Post

Soccer is becoming increasingly popular all over the country. The Town of Needham, Massachusetts, through its Park and Recreation Commission, has recently developed a free-standing, portable pipe soccer goal for use on athletic fields. The design, patterned after commercial models, allows great flexibility in field orientation, introduces increased safety into the playing fields, and is constructed by local staff at one-third the cost of soccer goals commercially available.

A pair of goals can be constructed in eight hours from two-inch black iron or galvanized pipe for rigid support, welded with mild steel welding wire. The triangular end sections are welded as a unit and the two 24-foot crossbars slip over spuds mounted on the triangular end sections for easy dismantling and storage.



Coping With The Public At State Parks

What can park managers do to deal with the constant problems of recreational use in state parks?

The Board of Social Issues of the Oregon Psychological Association took the question in hand and surveyed thirty-six park managers—asking them to identify the problems which plagued their recreation areas. The survey not only identified the problems, but came up with some interesting recommended solutions.

Thanks to Jeff Hicks, Joyce Hops, Knud S. Larsen and Andy Thompson of the Board, *Grist* shares the results of their survey with you.

The most common problems faced by state parks in Oregon seem to be dogs, rule violations, vandalism and vehicular abuse. The most serious problems identified by state park managers were nuisance behavior, vandalism, public safety and litter. Similarly, visitors complained most often about nuisance behavior, problems of vandalism and public safety.

Suggestions by park managers for controlling vandalism include more police, warning or threatening violators and additional public education. For inconsiderate behavior, park officials suggested that explanations be offered to offenders along with a request for compliance.

The survey points out that "while rules and regulations are well defined in dealing with the aforementioned problems, enforcement of the same is weak and inadequate." The survey authors conclude that behavior change approaches suggested by others who have studied the field are not

really considered. They suggest that the state fund a program aimed at researching the type of educational material which could be of effective assistance to the park managers in dealing with public use of state parks.

They further suggest a user incentive award program for responsible camping behavior. "For frequent users," say the authors of the survey, "an incentive may be a free season pass for the following year. This could work by means of a simple check off system, where the camper is required to check in and out of the campground. Upon arrival he is told the meaning of a three color behavior code: red = irresponsible camping behavior (based on litter, nuisance behavior, etc.). The sanction would be that this person could not return to any camp in the state during the current season. Yellow would indicate behavior of which there are no complaints nor reasons to praise. The user may return without penalty. Green: this user is exemplary. His own behavior is above reproach, and he actively assists in anti-litter programs, etc. This person not only may return, but when he has collected about three green tickets he gets a free season pass and a letter of commendation."

The authors also suggest that park managers be offered continuing education in techniques for handling people problems "without an over reliance on authority." They suggest that "park managers ought to be trained in people management, and have an understanding of some of the practical conclusions of the behavioral sciences."

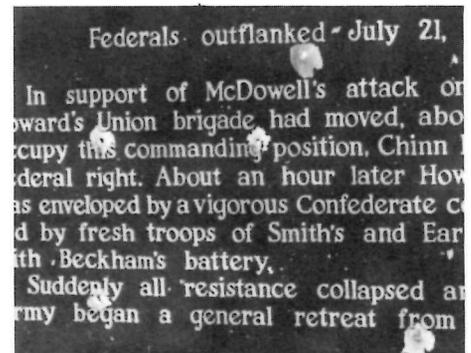
The authors suggest that the desire for managers to seek solutions to these people problems through control and power is

based on their rather ambivalent position in the eyes of the public—they are authority figures without enforcement power. The simple addition of badges might, they suggest, overcome the visitor perception of their power.

In conclusion, the survey authors state: "We feel that solutions to problems related to the public use of state parks are best found in combining efforts of control, with behavior and attitude change efforts as indicated above. Responsible camping behavior is best elicited when the public good is identified with the individuals self interest."



Trees damaged by lantern burn and carving.



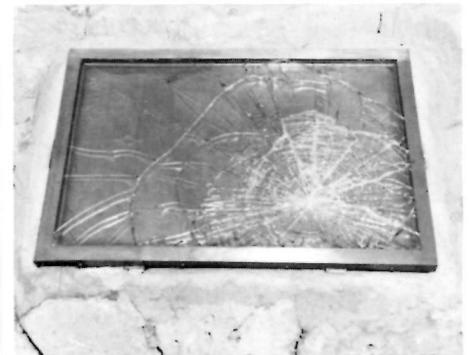
Interpretive marker used for rifle target.



Litter remains at campsite for cleanup crew.



Graffiti painted on rocks.



Glass smashed on location map.