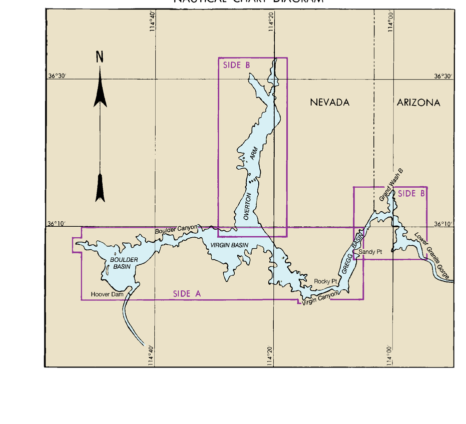
NAUTICAL CHART 18687

ARIZONA - NEVADA
LAKE MEAD



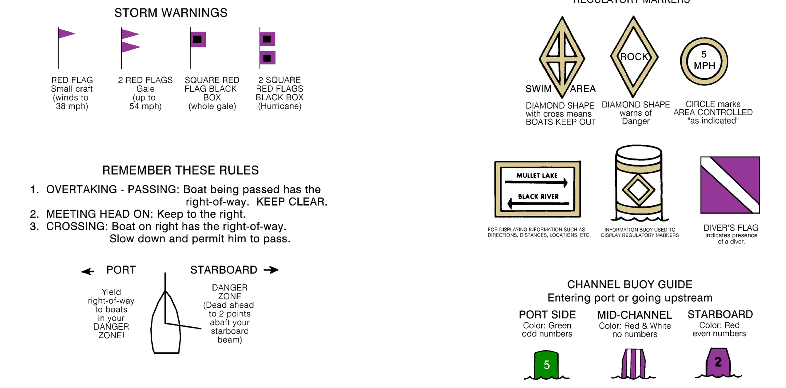
MARINE WEATHER INFORMATION

The National Park Service communications center makes twice daily weather broadcasts of weather conditions in the Lake Mead area. The broadcasts are on marine VHF station KOJ 719 channel 22A (157.1 MHz) located at 35°58'40"N., 114°50'15"W. with prior notice of the broadcasts being made on marine safety and emergency channel 16 (156.8 MHz) so that vessels may switch to channel 22A and listen to the broadcasts.

RULES OF THE ROAD
(ABRIDGED)

Motorless craft have the right-of-way in almost all cases. Sailing vessels and motorboats less than sixty-five feet in length, shall not hamper, in a narrow channel, the safe passage of a vessel which can navigate only inside that channel.
A motorboat being overtaken has the right-of-way.
Motorboats approaching head to head or nearly so should pass port to port.
When motorboats approach each other at right angles or obliquely, the boat on the right has the right-of-way in most cases.
Motorboats must keep to the right in narrow channels, when safe and practicable.
Mariners are urged to become familiar with the complete text of the Rules of the Road in U.S. Coast Guard publication "Navigation Rules".
For emergencies call KOJ719 (National Park Service) on marine band channel 16.

STORM WARNINGS



NOTE

Aids to Navigation on Lake Mead are maintained by the National Park Service. Lights are two types, fixed and movable. Fixed lights are permanently located above any probable lake level. Movable lights are relocated when the lake height requires.

REEF MARKERS
(CAUTION! All reefs are not marked)

Numerous reefs, many of which are submerged, are marked by spar buoys. These are painted white with orange bands at top and bottom and an orange diamond. Buoys mark the edges of reefs.
NOTE: Reef markers are not charted.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for general information, and Superintendent, Lake Mead National Recreational area, National Park Service, for specific details.

CAUTION

Frequent changes in aids to navigation can be expected because of fluctuation in lake level. Current information may be obtained at the Park Headquarters or Area Ranger Office.

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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

MERCATOR PROJECTION AT SCALE 1:48,000
SOUNDINGS IN FEET
NORTH AMERICAN DATUM OF 1983
(WORLD GEODETIC SYSTEM 1984)

Soundings refer to a normal lake level elevation which is 1160 feet above Mean Sea Level.

LAKE LEVELS, WATER DEPTHS AND ELEVATIONS

The 1100 foot elevation (60 foot depth curve) is indicated by the dotted contour and represents a low lake level. The 1160 foot contour represents the normal lake level. The 1200 foot contour represents a high lake level. The blue tint indicates areas with elevations between 1100 and 1160 feet above Mean Sea Level. The green tint indicates areas with elevations between 1160 and 1200 feet above Mean Sea Level. Contour values indicate elevations in feet above Mean Sea Level.

AUTHORITIES

Surveys by the Geological Survey, Soil Conservation, and the National Ocean Service, Coast Survey.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83) and for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.081" southward and 2.938" westward to agree with this chart.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

21 Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

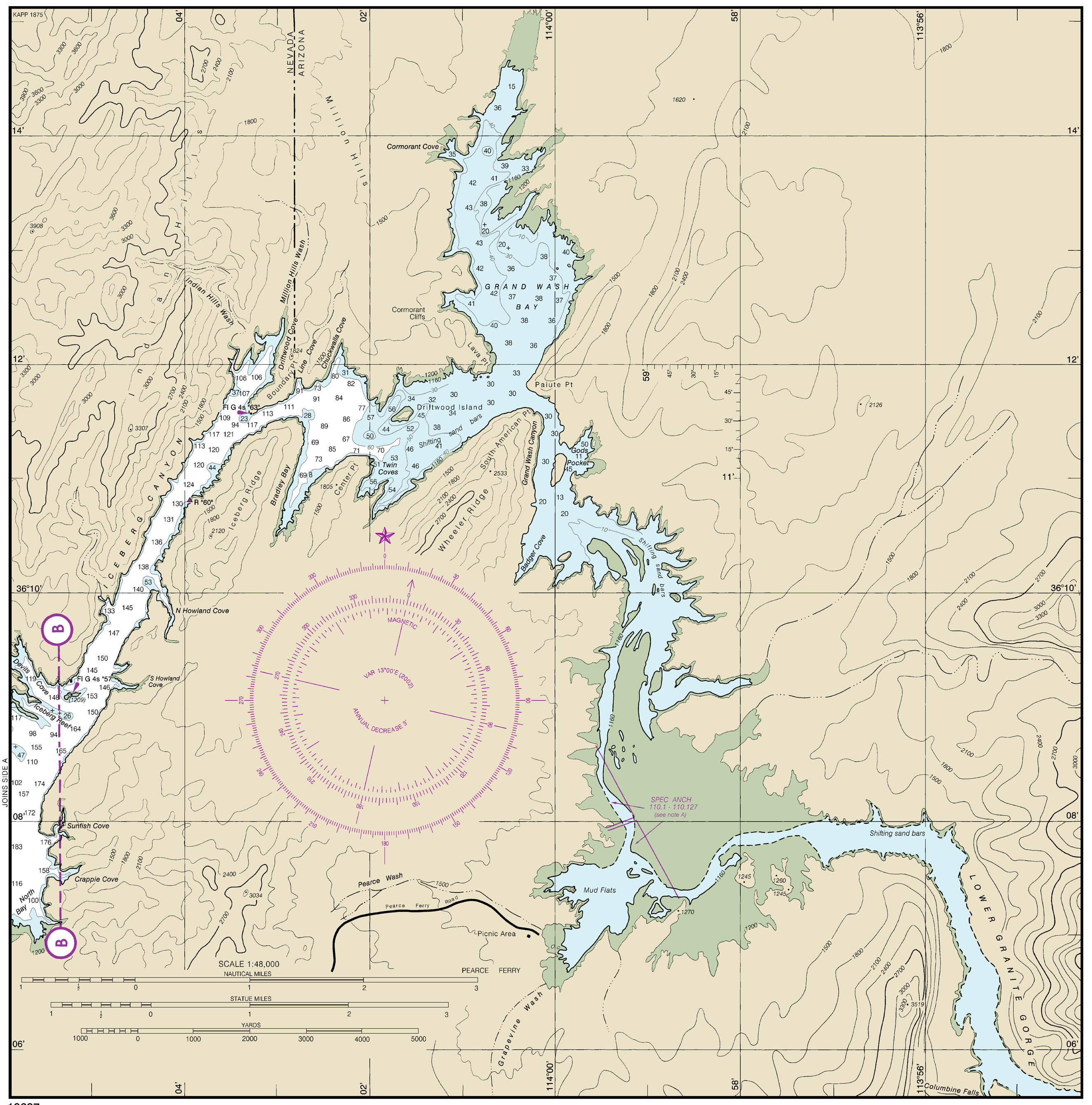
The following symbols were designed especially for this Lake Mead chart. They are not standard nautical chart symbols and are not indicated in Chart No. 1, "Nautical Chart Symbols and Abbreviations."

Ranger Station   Camping Area

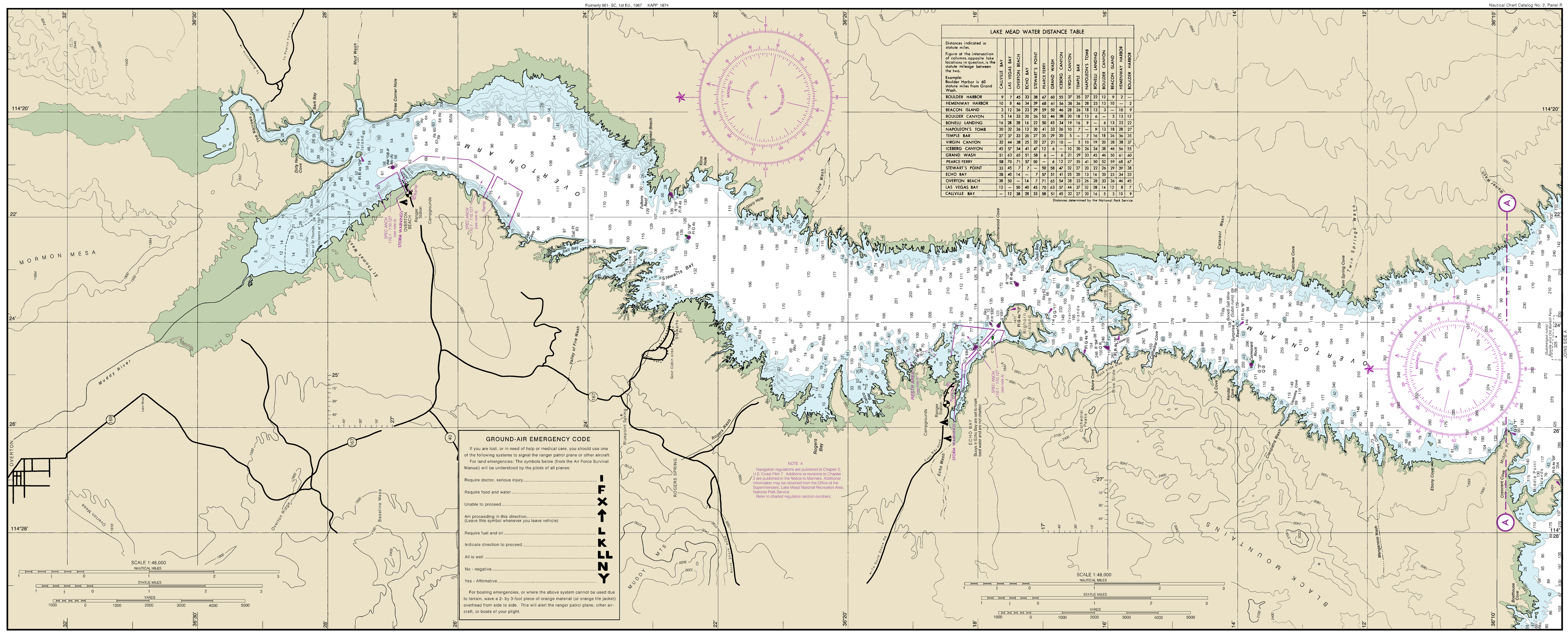
CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Imagery and Mapping Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

Pump out facilities



Formerly 661- SC, 1st Ed., 1967   KAPP 1874



GROUND-AIR EMERGENCY CODE

If you are lost, or in need of help or medical care, you should use one of the following systems to signal the ranger patrol plane or other aircraft.

For land emergencies: The symbols below (from the Air Force Survival Manual) will be understood by the pilots of all planes:

Require doctor, serious injury	I
Require food and water	F
Unable to proceed	X
Am proceeding in this direction (Leave this symbol whenever you leave vehicle)	↑
Require fuel and oil	L
Indicate direction to proceed	K
All is well	LL
No - negative	N
Yes - Affirmative	Y

For boating emergencies, or where the above system cannot be used due to terrain, wave a 2- by 3-foot piece of orange material (or orange life jacket) overhead from side to side. This will alert the ranger patrol plane, other aircraft, or boats of your plight.

ADMINISTRATION

Lake Mead National Recreation Area, established October 8, 1964, is administered by the National Park Service, U.S. Department of Interior.

The National Park System, of which this area is a unit, is dedicated to conserving the scenic, scientific, historic, and recreational heritage of the United States for the benefit and enjoyment of its people.

A Superintendent, whose address is 601 Nevada Highway, Boulder City, Nevada 89005, is in immediate charge.

HOOVER DAM. The Boulder Canyon Project Act, passed in 1928, authorized the Bureau of Reclamation, U.S. Department of the Interior, to construct Hoover Dam. Work began in 1931, and the structure was dedicated in 1935. It is the tallest dam in the Western Hemisphere, rising 726.4 feet from the base rock to the roadway on top. Its crest is 1,244 feet long.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Park Service (702) 293-8932.

WHEN TO VISIT THE AREA

Lake Mead National Recreation Area is open all year with maximum visitor use occurring during the three summer months. Even during July and August when daytime temperatures may rise above 110 degrees, the heat is not oppressive due to the prevailing low humidity. Nights are usually comfortable. However, the weather is most delightful from late September through early December and from early April to June.

WEATHER. Listed below are the average minimum and maximum temperatures throughout the year at Boulder City.

	Jan.	Feb.	Mar.	Apr.	May	June
Avg. Temp.	44	48	55	65	74	82
Max.	57	62	69	80	89	98
Min.	30	35	40	50	58	66

	July	Aug.	Sept.	Oct.	Nov.	Dec.
Avg. Temp.	89	87	80	67	53	46
Max.	105	103	97	83	68	59
Min.	72	71	63	50	37	32

HISTORICAL HAPPENINGS

The Grand Canyon of the Colorado was first seen by white men in 1540 when Cardenas, one of Coronado's captains, led a small party to the rim in northern Arizona.

In 1776, a party led by Father Silvester Velez de Escalante made the first successful crossing of the Colorado River in the canyon country. This occurred at a point now known as the "Crossing of the Fathers" north of Lee's Ferry in Glen Canyon.

The fur trader and trapper Jedediah Smith entered the area now occupied by Lake Mead in 1826-27, when he went down the Virgin River to the Colorado River on his way to the coast.

Later, other parties pushed their way through the region along the Mormon Trail and the Colorado River.

Lt. J. C. Ives, attempting to determine the navigability of the Colorado River for the Federal Government, brought the steamboat "Explorer" upriver into the lower end of the Black Canyon in 1857-58.

A decade later, in 1869, Maj. John Wesley Powell conducted the first expedition down the Colorado River through the Grand Canyon by rowboat.

In 1871, on another Government expedition, Capt. George Wheeler ventured upstream into the lower part of the Grand Canyon, as far as Diamond Creek.

On March 11, 1931, construction was started on Hoover Dam in an attempt to control the waters of the Colorado River. By 1935, water was beginning to be impounded behind the dam. The last concrete was placed on May 29, and the structure was dedicated September 30, 1935.

Other exciting phases of the area's history deal with settlements along the river, river expeditions, and mining.

History is still being made on the waters of Lake Mead and the Colorado River. As late as 1960, the Colorado River had not been completely conquered by boats running upstream. In the summer of that year, a nine-man expedition successfully piloted three boats, propelled by jets of water, up through the rapids of the Grand Canyon from Lake Mead to Lee's Ferry in Arizona. The last barriers of the Colorado River-its rapids-had been conquered!

PREHISTORIC MAN LIVED HERE

Man has inhabited this region almost continuously for thousands of years. In such an arid region, the pre-Columbian Indian inhabitants naturally centered their activities around dependable water supplies afforded by rivers and prehistoric lakes. Many of their campsites have been located.

Along the Muddy River in Moapa Valley, ruins of extensive aboriginal dwellings have been discovered. The popular name, "The Lost City" has been given to this group of Pueblo ruins.

The rising waters of Lake Mead covered many archeological sites, including parts of The Lost City. Careful surveys were conducted to salvage and study this irreplaceable prehistoric evidence before it became lost for all time beneath the water.

Lost City Museum, operated by the State of Nevada, is located at Overton, near the site of The Lost City. Here you may learn more of the fascinating story of the early Basketmaker and Pueblo Indians who lived, farmed, mined, fished, and hunted in this valley hundreds of years ago.

The more recent Paiute, Hualpai, and Mohave Indians, some of whom still inhabit outlying sections of this region, also left evidences of their cultures.

Your are welcome to look at the various Indian sites within the area. However, digging or disturbing any site, or collecting items found on the surface, is not permitted. They are protected by the Antiquities Act of 1906 so that these irreplaceable remains may not be damaged or lost. Only by piecing together the undisturbed cultural materials can skilled archeologists tell us the story of these ancient peoples. Nothing can be learned from material that has been disturbed.

SOME THINGS TO SEE AND DO

Lake Mead National Recreation Area offers you a variety of activities. Listed below are a few suggestions of things to do and places to see.

VISIT HOOVER DAM. Bureau of Reclamation guides conduct tours daily through Hoover Dam from 8 a.m. to 5 p.m. (time subject to seasonal changes). On these tours, you will be able to see some of the interior operations of one of the engineering wonders of the world.

LAKE MEAD. This large manmade reservoir is named after Dr. Elwood Mead, who was Commissioner of Reclamation from 1924 to 1936, it has an area of 229 square miles at maximum capacity, a length of 110 miles, and a depth of 589 feet. Storage capacity of the lake is 26,200,000 acre feet of water - an amount equal to more than 2 years of normal flow from the Colorado River. Wide sandy beaches, shadowed coves, and steep canyon walls carved long ago by the raging waters of the Colorado River make up the shoreline that is more than 550 miles long. Lake Mead has become a major area for recreation in the Southwest.

SWIMMING. Lake Mead is ideal for swimming many months of the year. Public swimming beaches are available during summer at Boulder Beach. Buoys delineate the swim beach area and lifeguards are on duty. Caution should be exercised when swimming elsewhere.

BOATING. As a family sport, boating is unexcelled at Lake Mead National Recreation Area. Free public launching ramps are provided at each developed area on the lake. Boats and motors can be rented or chartered from several concessioners. Mooring slips and buoys are available. Mooring or slip charges should be discussed with the concessioner concerned.

For public safety and health, specific regulations affecting water safety, sanitation, navigation, and boat operation must be observed. These regulations can be obtained from Park Rangers.

FISHING. You can fish throughout the year within Lake Mead National Recreation Area. A fishing license from either Nevada or Arizona is required. To the license must be affixed a Special Use stamp from the other State. Nonresident children under 14 years of age and resident children under 16 years of age are not required to have a license. Before fishing you should read the current regulations concerning creel limits.

WATER-SKIING is rapidly increasing in popularity on Lake Mead. Several concessioners have equipment for rent. Be sure to ask a Park Ranger about water-skiing regulations.

SCUBA DIVING. You may SCUBA dive in Lake Mead, but use caution, and stay away from swimming beaches and harbors. Always display the red and white SCUBA diving flag.

CRUISES ON LAKE MEAD. Leaving Lake Mead Marina daily, these cruises give you an opportunity to become better acquainted with Lake Mead. In summer, a Park Interpreter goes along on many of the trips. Ask about current schedules and rates.

HIKING AND EXPLORING are excellent in the region, except during the warmer summer months. However, water is scarce so take an adequate supply with you.

MOTORING. There are hundreds of miles of roads; many are paved, others are graded, and some are unmaintained 4-wheeled vehicle trails. If you travel off-road in your vehicle, check first at a Ranger station. A map of backcountry roads, approved for vehicle travel, is there for your reference. CAUTION: These roads are not recommended for 2-wheel drive vehicles. Forty miles southeast of Hoover Dam, a graded road leaves Kingman Highway and leads about 40 miles north to South Cove and Pearce Ferry. You will have an excellent view of the Colorado River and the Grand Wash Cliffs, and along the route a view of Gregg's Basin on Lake Mead. The road passes through one of the largest forests of Joshuatrees in the entire Southwest. Ask a Park Ranger about other places to visit.

CAMPING. There are twelve developed campgrounds in the recreation area and they are open year round. Fees are collected under the provision of the Land and Water Conservation Fund Act. There are no entrance fees to the park, but there is a fee for the use of developed campgrounds. There are no individual connections for electricity, water, and sewer. However, comfort stations and water faucets are conveniently located. Trailer sites with hook-ups are available from the concessioners in the park.

The annual Golden Eagle and Golden Age passports are available.

Camping is confined to designated campgrounds, except on trips into remote sections of the park. Camping space is available on a first come, first served basis; consequently no reservations can be accepted. Camping is limited to 30 days within any 90 day period. Firewood is not available, but charcoal is sold by concessioners. Each of the campgrounds has shade trees, water, modern rest-rooms, charcoal grills, and tables. Please place your trash in the containers provided If you camp in the backcountry, use trash receptacles at the launching ramps when you return.

Campfires are permitted in remote areas. No campfires are permitted on beaches near boat harbors or on swimming beaches.

SAFETY TIPS

1. Always use care in navigation. The fluctuating surface level of the lake may be hazardous to navigation in that reefs may become exposed or submerged depending upon the water elevation. Boating is hazardous on the lake during periods of high wind. If you are caught in open water, head for the nearest sheltered spot and wait it out.
2. Always instruct at least one other person on how to operate your boat.
3. Know your boat's fuel capacity and cruising radius.
4. Read the information posted at Ranger stations, launching ramps, and on campground bulletin boards.
5. National Park Service Rangers are at Lake Mead National Recreation Area to provide information and other assistance and to enforce regulations, including safe boating practices. Please check with them if you have any questions.
6. Before you start a trip on water or land always inform some responsible person as to where you are going and when you expect to return.
7. An approved personal flotation device must be available for each passenger in a boat. Carry day and night flares for distress signals.
8. Weather forecasts are available daily at Ranger stations, at the bulletin boards on the launching ramps, and at the offices of concessioners.
9. For protection against the brilliant desert sun, you should have sunglasses available. During the summer, when traveling in the backcountry it is advisable to wear a hat and a long sleeved shirt. You should carry extra water, food, and a shovel. Take a map of the area.

Never camp in washes. They are paths for flash floods.

10. If you become stranded away from the lake and have a vehicle, stay with it. Use a mirror for signaling or build a fire. If you must walk out, walk at night, it's cooler. Leave a note giving your name, destination, date and time you started walking.

JOINS EXTENSION AT LEFT   Formerly 661 - SC, 1st Ed., 1967   KAPP 1873   JOINS SIDE B

Last Correction: 10/7/2015. Cleared through:
LNM: 4015 (10/6/2015), NM: 4215 (10/17/2015)

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