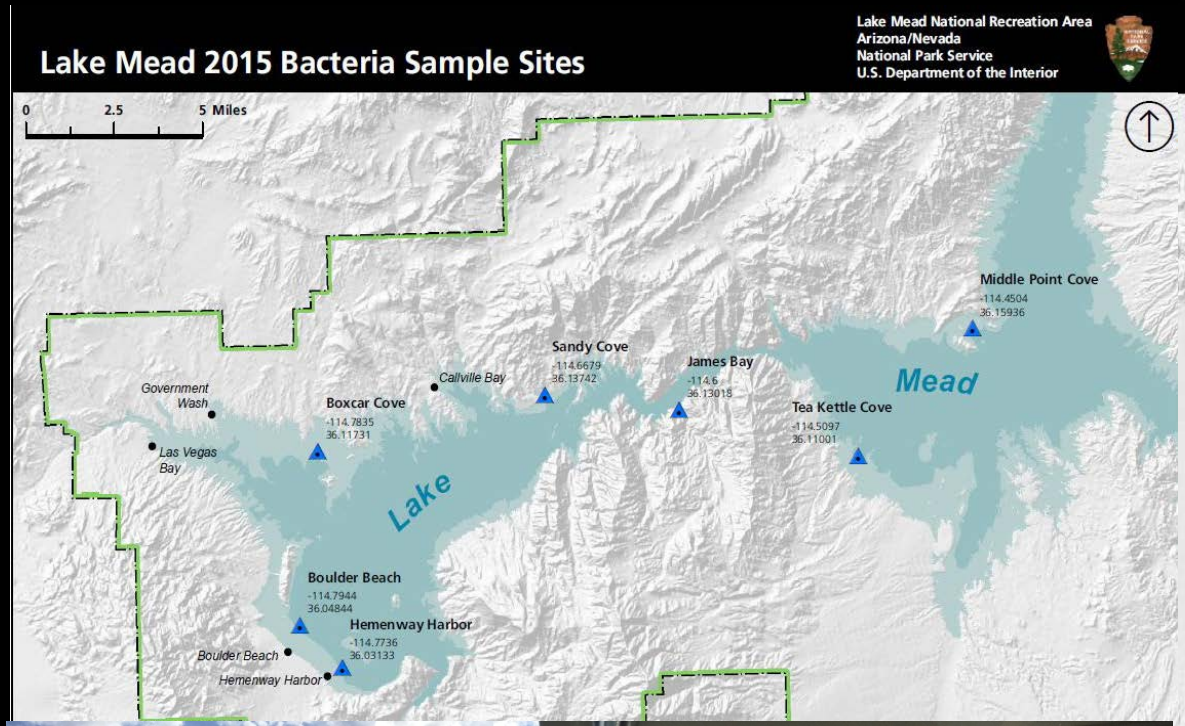
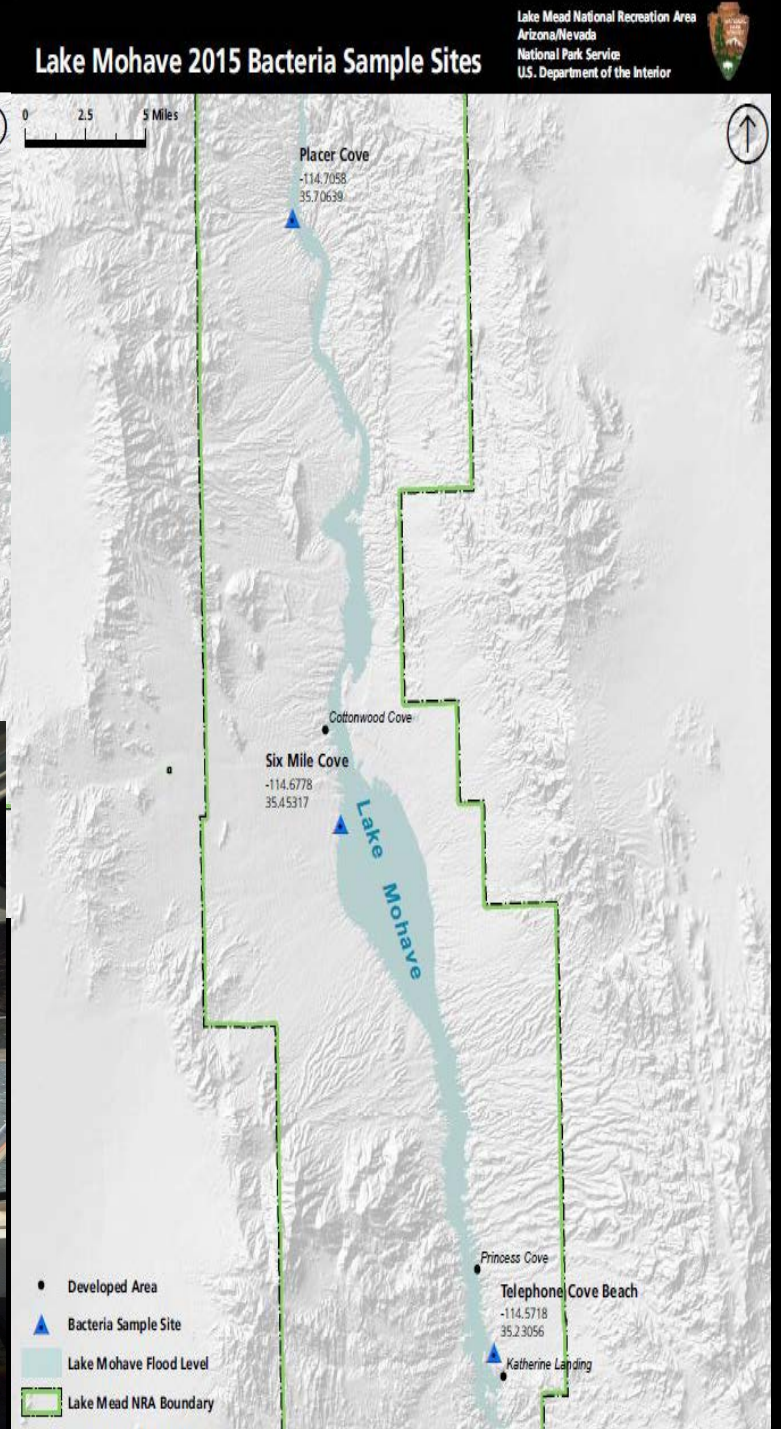
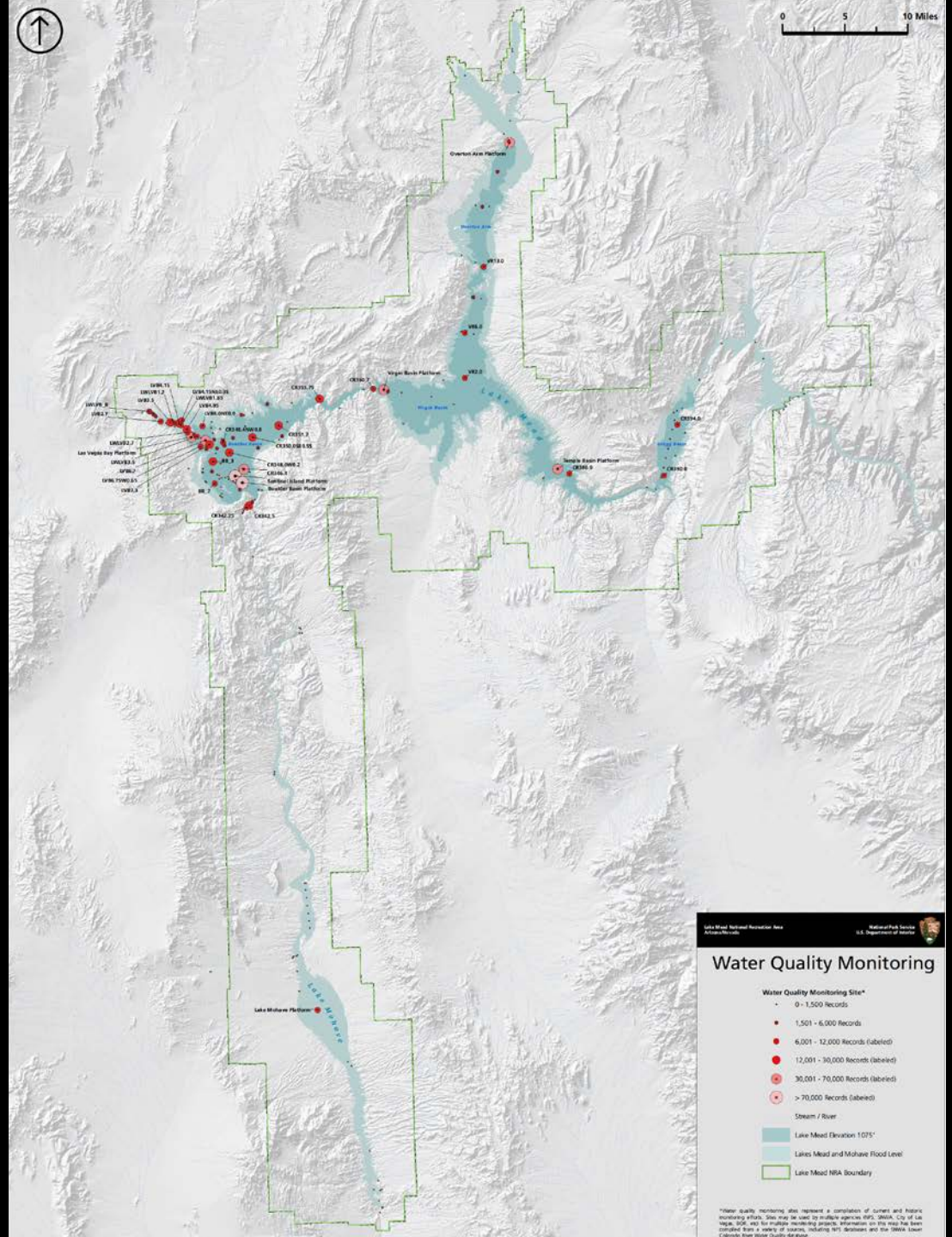
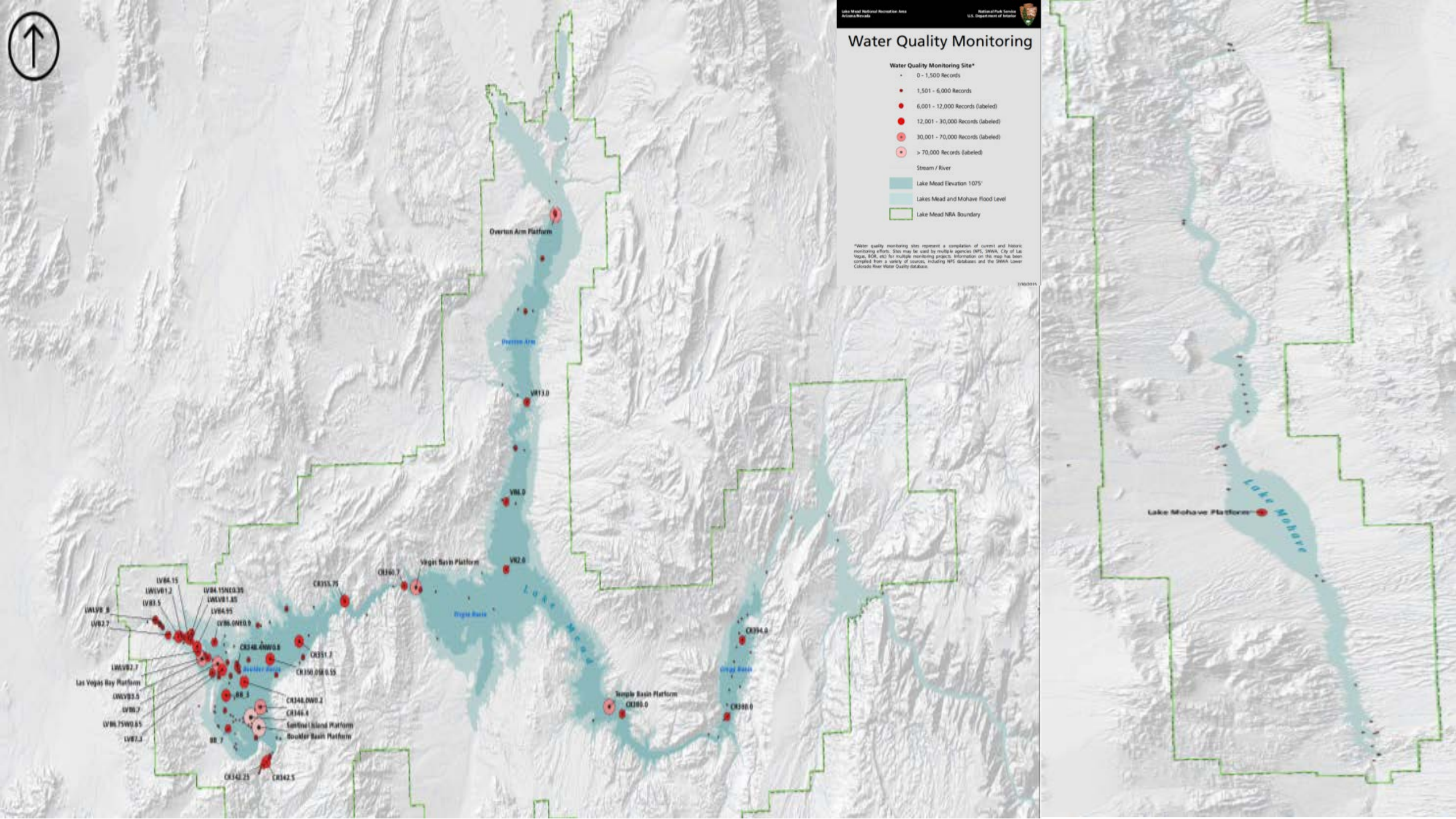
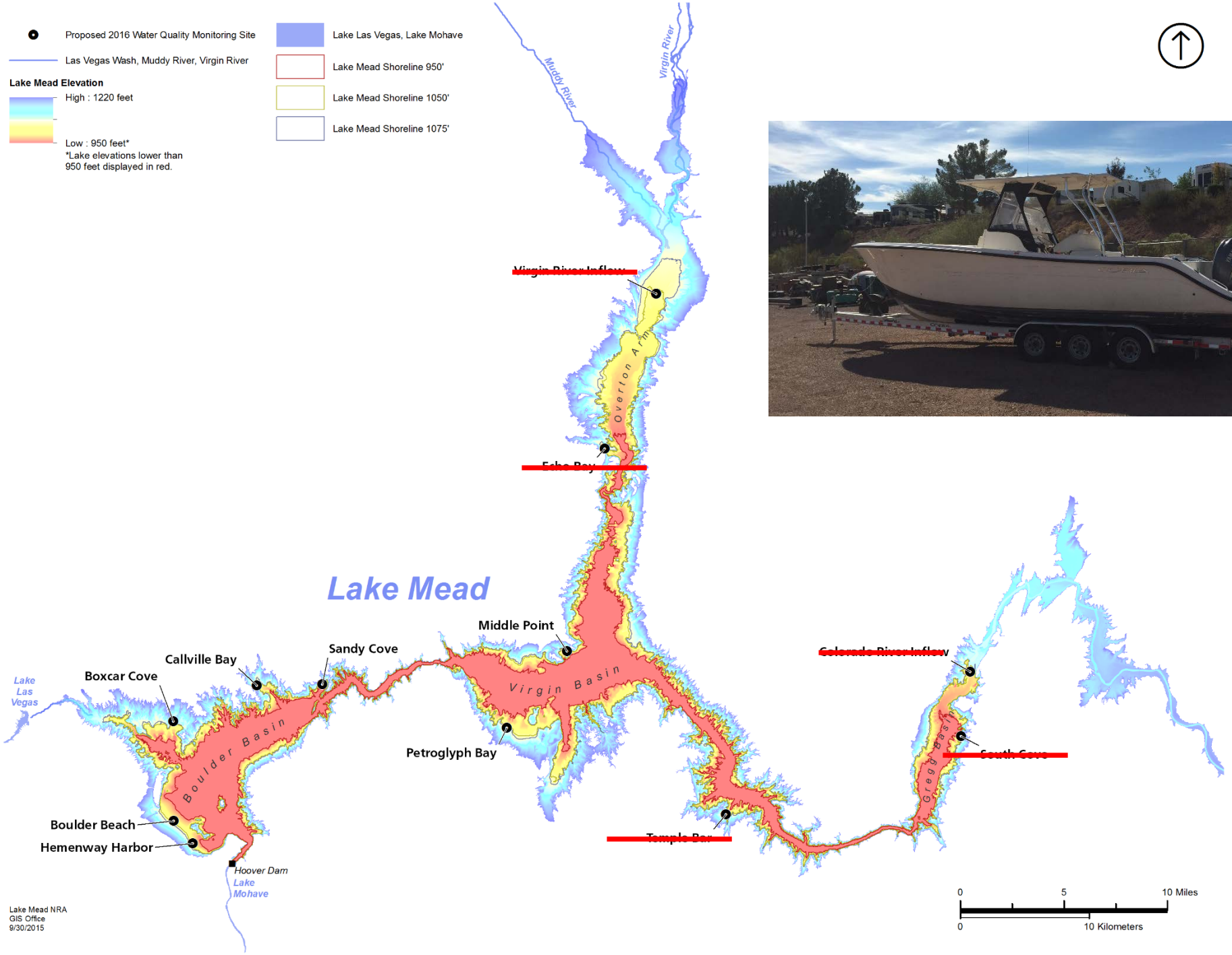
NPS LAKE 2016
Bacteriological monitoring

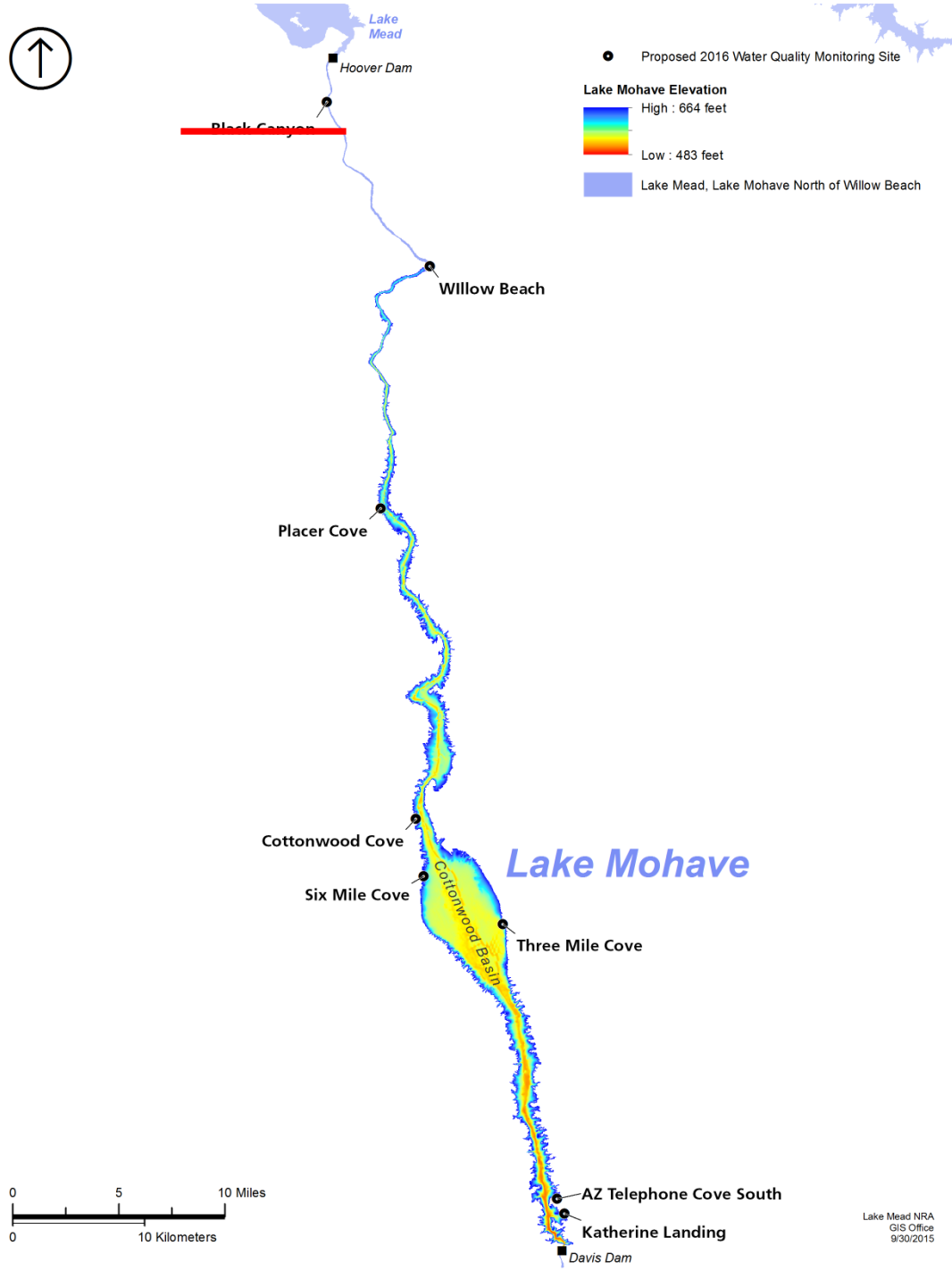

Lake Mead 2015 Bacteria Sample Sites
Lake Mead National Recreation Area
Arizona/Nevada
National Park Service
U.S. Department of the Interior
0
2.5
5 Miles
Middle Point Cove
-114.4504
36.15936
Sandy Cove
-114.6679
36.13742
James Bay
-114.6
36.13015
Tea Kettle Cove
-114.5097
36.11001
Mead
Callville Bay
Government Wash
Boxcar Cove
-114.7835
36.11731
Las Vegas Bay
Lake
Boulder Beach
-114.7944
36.04844
Hemenway Harbor
-114.7736
36.03133
Boulder Beach
Hemenway Harbor


Lake Mohave 2015 Bacteria Sample Sites
Lake Mead National Recreation Area
Arizona/Nevada
National Park Service
U.S. Department of the Interior
0
2.5
5 Miles
Placer Cove
-114.7058
35.70639
Cottonwood Cove
Six Mile Cove
-114.6778
35.45317
Lake Mohave
Princess Cove
Telephone Cove Beach
-114.5718
35.23056
Katherine Landing
Developed Area
Bacteria Sample Site
Lake Mohave Flood Level
Lake Mead NRA Boundary

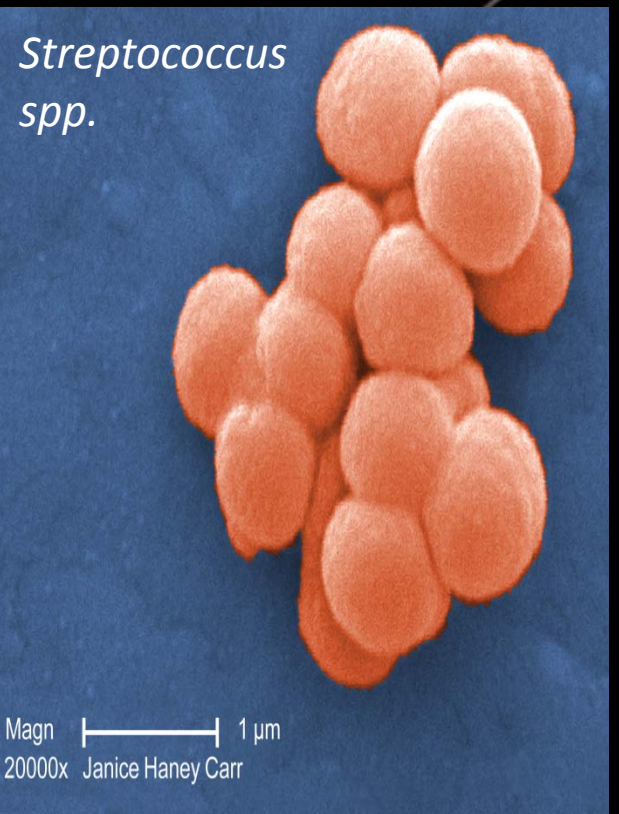

0
5
10 Miles
Overton Arm Platform
Virgin Basin Platform
Temple Basin Platform
Las Vegas Bay Platform
Saddle Island Platform
Boulder Basin Platform
Lake Mohave Platform
Lake Mead National Recreation Area
Arizona/Nevada
National Park Service
U.S. Department of Interior
Water Quality Monitoring
Water Quality Monitoring Site*
0 - 1,500 Records
1,501 - 6,000 Records
6,001 - 12,000 Records (labeled)
12,001 - 30,000 Records (labeled)
30,001 - 70,000 Records (labeled)
> 70,000 Records (labeled)
Stream / River
Lake Mead Elevation 1075'
Lakes Mead and Mohave Flood Level
Lake Mead NRA Boundary
*Water quality monitoring sites represent a compilation of current and historic monitoring efforts. Sites may be used by multiple agencies (NPS, SNWA, City of Las Vegas, DOE, etc) for multiple monitoring projects. Information on this map has been compiled from a variety of sources, including NPS databases and the SNWA Lower Colorado River Water Quality database.


Lake Mead National Recreation Area
Arizona/Nevada
National Park Service
U.S. Department of Interior
Water Quality Monitoring
Water Quality Monitoring Site*
0 - 1,500 Records
1,501 - 6,000 Records
6,001 - 12,000 Records (labeled)
12,001 - 30,000 Records (labeled)
30,001 - 70,000 Records (labeled)
> 70,000 Records (labeled)
Stream / River
Lake Mead Elevation 1075'
Lakes Mead and Mohave Flood Level
Lake Mead NRA Boundary
*Water quality monitoring sites represent a compilation of current and historic monitoring efforts. Sites may be used by multiple agencies (NPS, SNWA, City of Las Vegas, BOR, etc) for multiple monitoring projects. Information on this map has been compiled from a variety of sources, including NPS databases and the SNWA Lower Colorado River Water Quality database.
3/30/2016
Overton Arm Platform
Overton Arm
VR13.0
VR6.0
VR2.0
Vegas Basin Platform
CR360.7
CR355.75
Vegas Basin
Lake Mead
LV84.15
LWLV81.2
LV83.5
LV84.15NE0.35
LWLV81.85
LV84.95
LWLV8.8
LV82.7
LV86.0NE0.9
CR348.4NW0.8
CR351.7
CR350.0SE0.55
Boulder Basin
LWLV82.7
Las Vegas Bay Platform
LWLV83.5
LV86.7
LV86.75W0.65
LV87.3
BB.3
CR348.0W0.2
CR346.4
Sentinel Island Platform
Boulder Basin Platform
BB.7
CR342.25
CR342.5
CR354.0
Gregg Basin
Temple Basin Platform
CR380.0
CR380.0
Lake Mohave
Lake Mohave Platform


Proposed 2016 Water Quality Monitoring Site
Las Vegas Wash, Muddy River, Virgin River
Lake Mead Elevation
High : 1220 feet
Low : 950 feet*
*Lake elevations lower than 950 feet displayed in red.
Lake Las Vegas, Lake Mohave
Lake Mead Shoreline 950'
Lake Mead Shoreline 1050'
Lake Mead Shoreline 1075'
Muddy River
Virgin River
Virgin River Inflow
Overton Arm
Echo Bay
Lake Mead
Middle Point
Sandy Cove
Callville Bay
Boxcar Cove
Lake Las Vegas
Boulder Basin
Virgin Basin
Petroglyph Bay
Colorado River Inflow
Gregg Basin
South Cove
Temple Bar
Boulder Beach
Hemenway Harbor
Hoover Dam
Lake Mohave
Lake Mead NRA
GIS Office
9/30/2015
0
5
10 Miles
0
10 Kilometers


Lake Mead
Hoover Dam
Black Canyon
Proposed 2016 Water Quality Monitoring Site
Lake Mohave Elevation
High : 664 feet
Low : 483 feet
Lake Mead, Lake Mohave North of Willow Beach
Willow Beach
Placer Cove
Cottonwood Cove
Six Mile Cove
Lake Mohave
Cottonwood Basin
Three Mile Cove
AZ Telephone Cove South
Katherine Landing
Davis Dam
0
5
10 Miles
0
10 Kilometers
Lake Mead NRA
GIS Office
9/30/2015

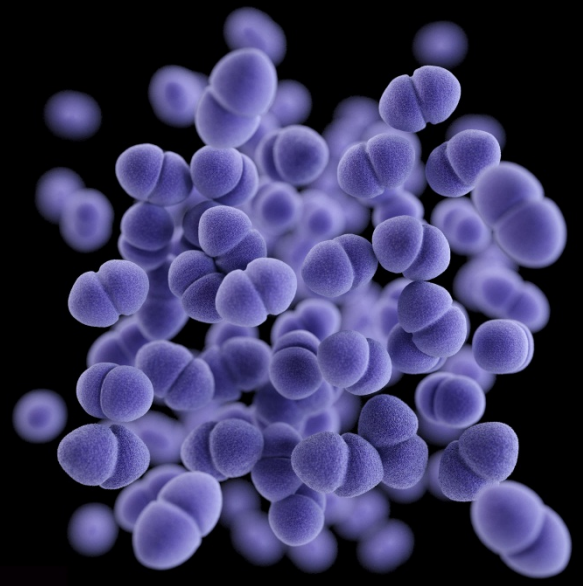
Escherichia coli



Streptococcus spp.

Fecal streptococci

Enterococci spp.



Centers for Disease Control and Prevention

Photo Credit
CDC.GOV

Lake Mead National Recreation Area
Recreation Suitability Guidelines

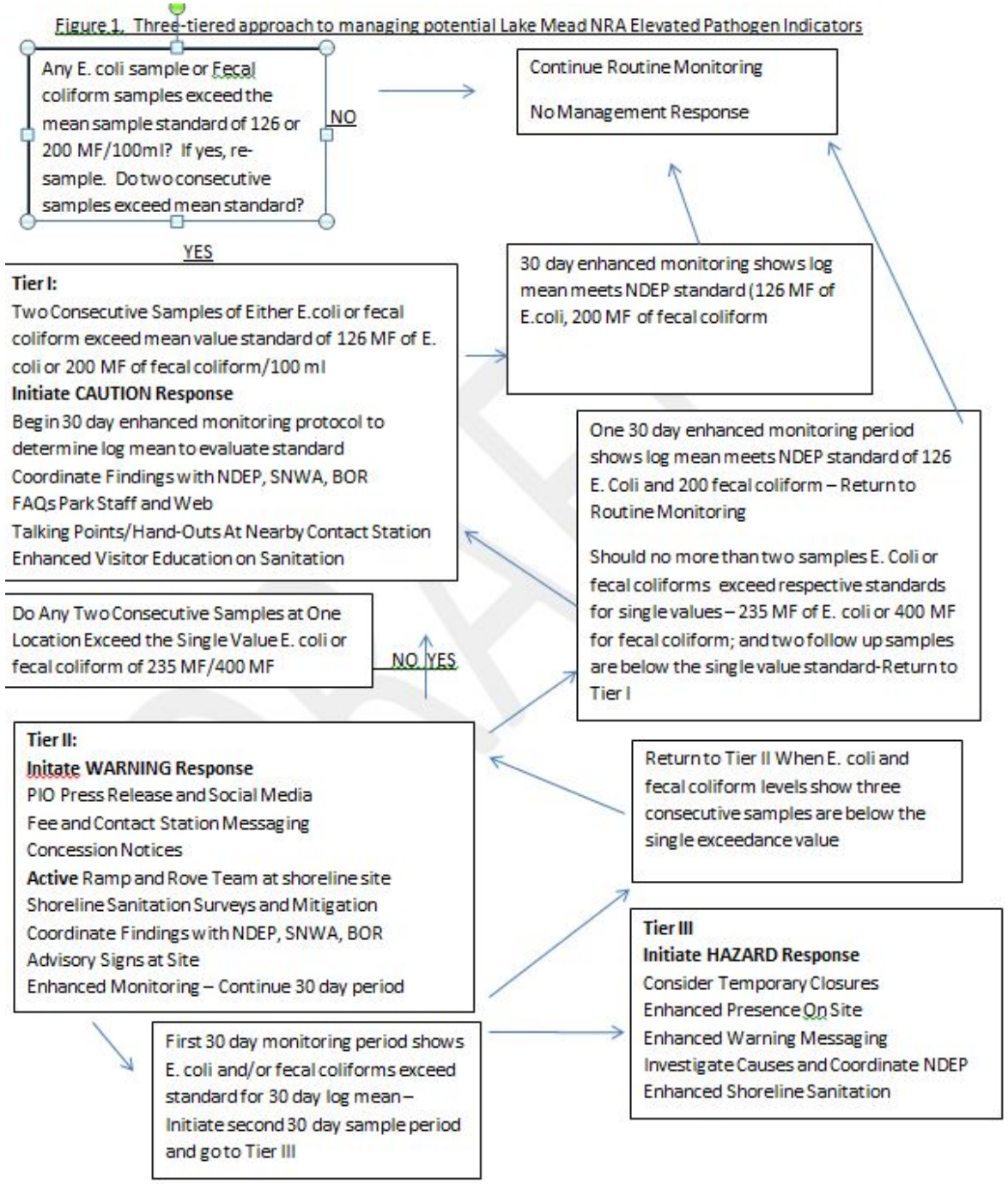
Table 1 - Lake Mead NRA Human Pathogen Indicator Criteria

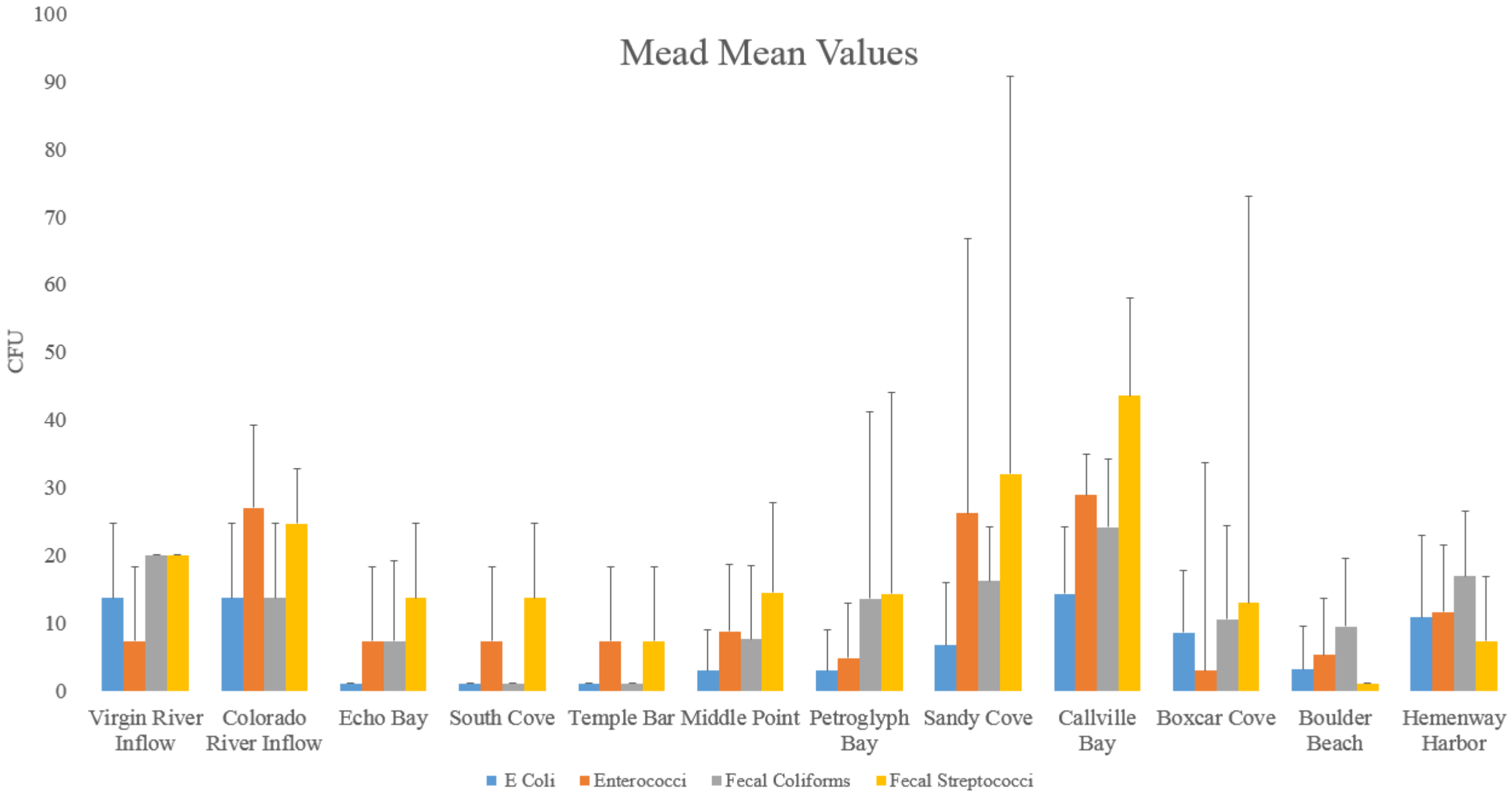
Management Status – Alert Level	E. coli levels	Fecal coliform levels	Monitoring Needs	Recommended Management Actions
Routine Conditions All levels below thresholds	< 126 MF/100 ml All samples	< 200 MF/100 ml All samples	Standard Monitoring Protocol utilized between May through September for high use areas see Appendix 1	No actions beyond routine monitoring
Alert Level **Single Sample Exceeding Stds**	> 235 MF/100 ml Single Sample	> 400 MF /100 ml Single Sample	Re-Sample area as soon as feasible, in no case in more than one week	Alert LAKE Mgmt Team; Prioritize Re-Sample
Tier I – Caution Response **Second Sample Exceeding Stds**	235 MF/100 ml In Second or Follow Up Sample	400 MF/100 ml	Initiate Extended Monitoring Protocol ; Coordinate with SNWA, NDEP and NPS WRD. Extended Monitoring Protocol calls for five samples in broad geographic context over 30 days	Press release on initial findings and follow up monitoring; Alert NDEP and ADEQ; Visitor Notification
Tier II – Warning Response	30 day log mean > 126 MF/100 ml	30 day log mean > 200 MF/100 ml	Coordinate with NDEP, SNWA, NPS WRD, NPS Public Health on Results; Adjust Protocol to Investigate Causes	Public Info Campaign; Public Advisory to Avoid Area; Possible Closures
Tier III – Hazard Response	Extended period > 126 MF/100 ml	Extended period > 200 MF/100 ml	Continue Monitoring Until Results Return Below Advisory Action Levels	Temporary Closures; Advisory Info Campaign

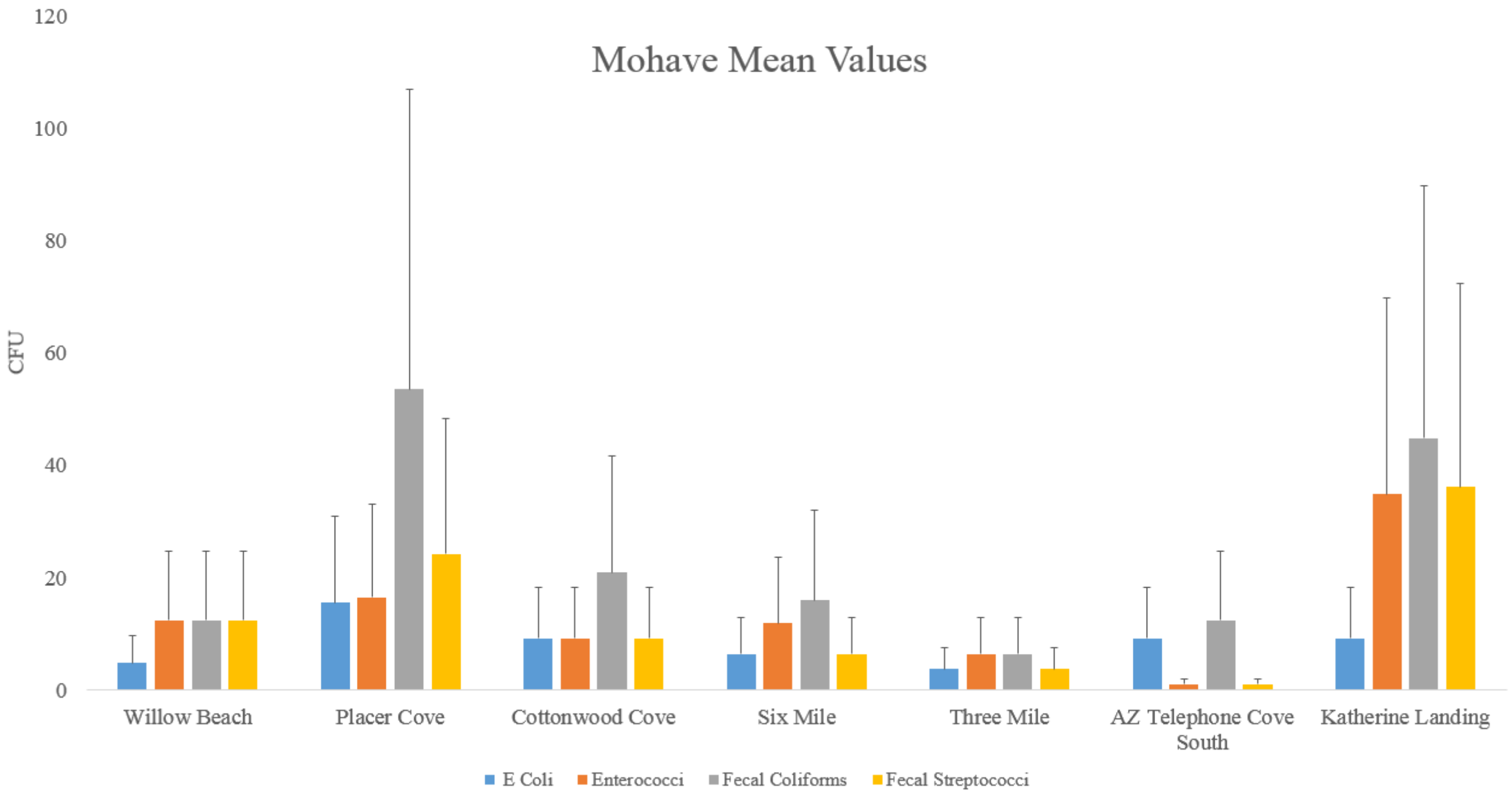
[1] From published NDEP Lake Mead and Lake Mohave water quality standards. Standard for E. coli is: Single Value NTE 235 MF/100 ml; or log mean 30 days NTE 126 MF/100 ml

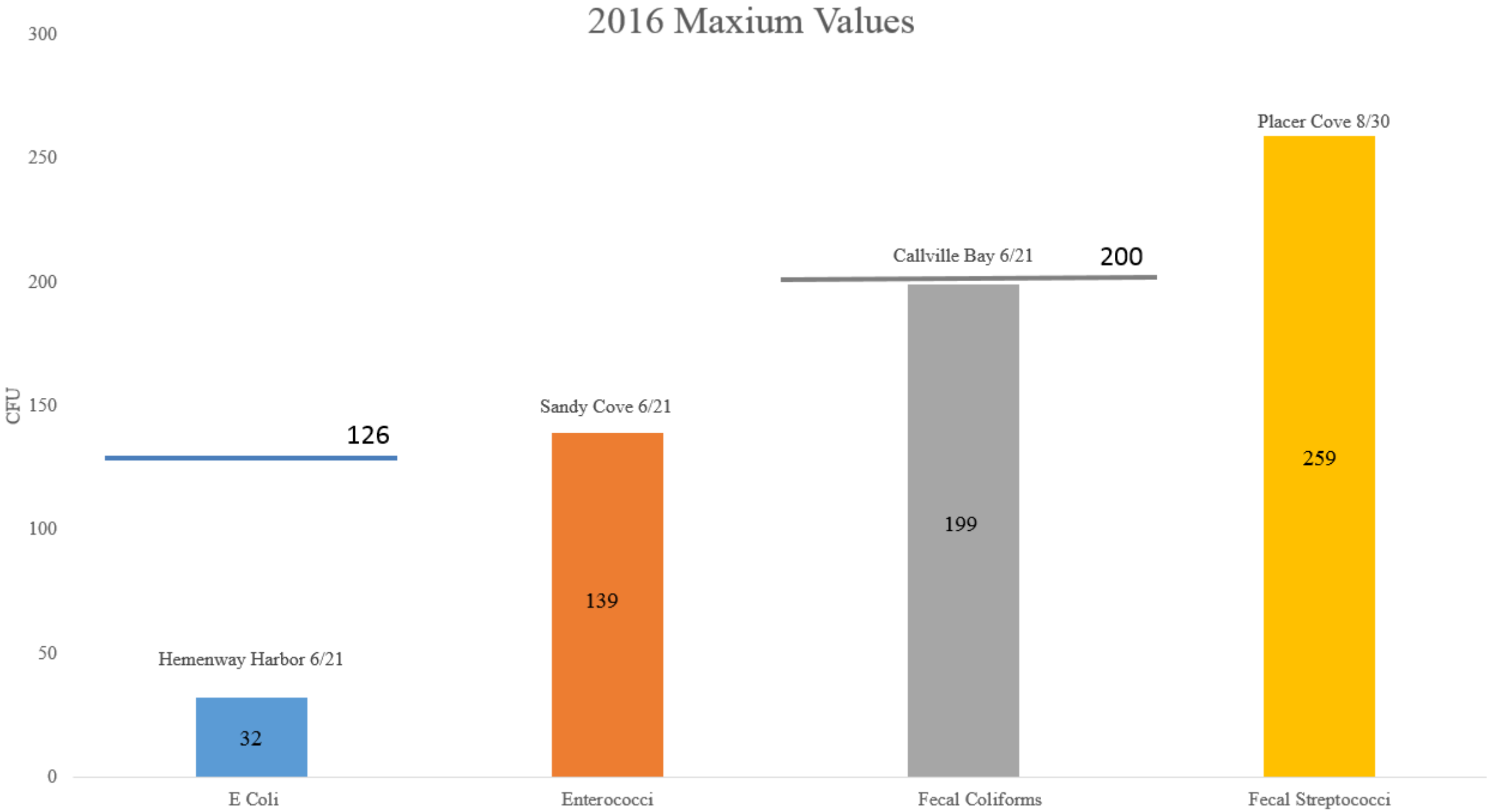
[2] From published NDEP Lake Mead and Lake Mohave water quality standards. Standard for fecal coliform is: Based on a minimum of not less than five samples taken over a 30-day period, the fecal coliform bacterial level must not exceed a log mean of 200 per 100ml nor must more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.

Figure 1. Three-tiered approach to managing potential Lake Mead NRA Elevated Pathogen Indicators




Mead Mean Values
CFU
100
90
80
70
60
50
40
30
20
10
0
Virgin River Inflow
Colorado River Inflow
Echo Bay
South Cove
Temple Bar
Middle Point
Petroglyph Bay
Sandy Cove
Callville Bay
Boxcar Cove
Boulder Beach
Hemenway Harbor
E Coli
Enterococci
Fecal Coliforms
Fecal Streptococci


Mohave Mean Values
CFU
120
100
80
60
40
20
0
Willow Beach
Placer Cove
Cottonwood Cove
Six Mile
Three Mile
AZ Telephone Cove South
Katherine Landing
E Coli
Enterococci
Fecal Coliforms
Fecal Streptococci


2016 Maxium Values
300
250
200
150
100
50
0
CFU
126
Hemenway Harbor 6/21
32
Sandy Cove 6/21
139
Callville Bay 6/21
200
199
Placer Cove 8/30
259
E Coli
Enterococci
Fecal Coliforms
Fecal Streptococci

NOAA/NPS Weather Buoys Lake Mead & Lake Mohave

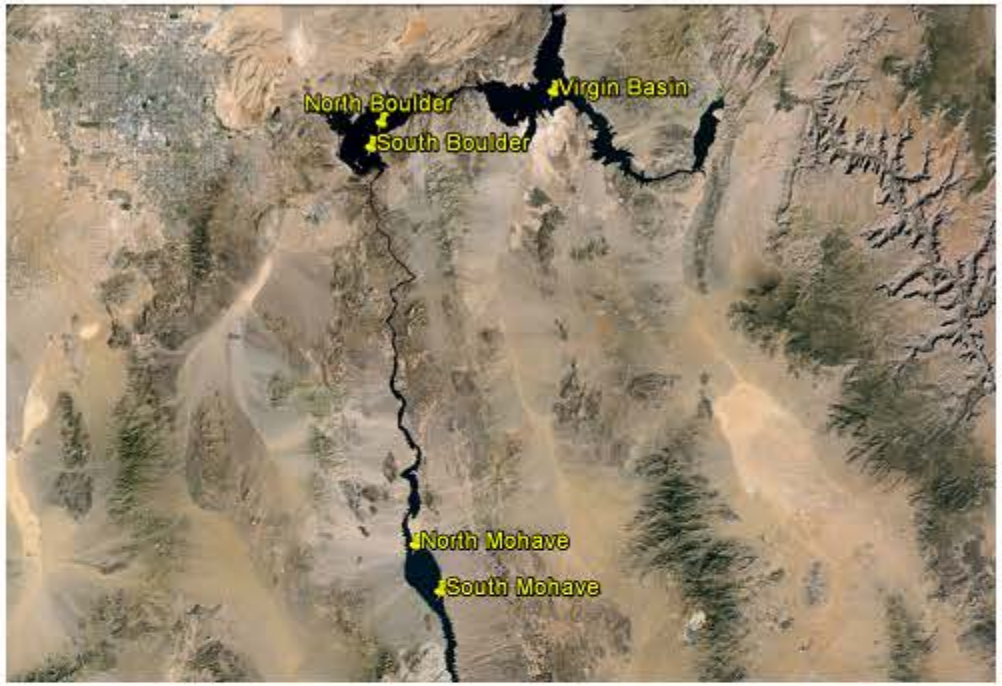
http://smartweb.axys-aps.com/sites/1836/

Lake Mead National Recreation Area

2016-12-29 16:40:37 (UTC)
2016-12-29 08:40:37 (LOCAL)

Weather Buoy System

- North Boulder Basin NBAA3 (WMT00530)
- South Boulder Basin SBBN2 (WMT00540)
- Virgin Basin VBAA3 (WMT00560)
- North Mohave Basin NLMA3 (WMT00570)
- South Mohave Basin SLMN2 (WMT00600)



Login to SmartWeb to view and graph historical data.

powered by
AXYS TECHNOLOGIES INC.
© 2016

Average Water Temperature

Significant Wave Height

Maximum Wave Height

Average Wave Direction

Average Wind Speed

Average Wind Direction

Wind Gust Speed

Average Air Temperature

Barometric Pressure

Average Humidity

North Boulder Basin Buoy NBAA3 (WMT00530)

2016-12-29 16:42:11 (UTC)
2016-12-29 08:42:11 (LOCAL)

Status as of: 2016-12-29 16:40 UTC

Watch Circle	System Voltage	Average Water Temperature
On Position	13.7 V	14.8 °C

Waves as of: 2016-12-29 16:25 UTC

Significant Height (Hsig)	Maximum Height (Hmax)	Average Direction From
0.2 ft	0.4 ft	SW (243°)

Peak Period (Tp)	Average Period (Tz)	Average Spread
1.6 s	1.6 s	51.2 °

Meteorological as of: 2016-12-29 16:40 UTC

Average Wind Speed	Average Wind Direction From	Wind Gust Speed
2.1 mph	NE (32°)	6.3 mph

Average Air Temperature	Barometric Pressure	Average Humidity
10.1 °C	990 mb	65.2 %

Login to SmartWeb to view and graph historical data.

powered by
AXYS TECHNOLOGIES INC.
© 2016

MesoWest Region Alaska GCA Product Surface Weather Maps Go

Download SBBN2 Data

Download Help Page

MesoWest & SynopticLabs offer a number of ways to access environmental data. This download page is intended to provide small amounts of data in a convenient CSV format. You can download data from one station for a day at a time immediately or create a MesoWest account to download a year of day at a time. For larger volumes of data, visit the SynopticLabs Data API Services. Please use the SynopticLabs API services for automated downloading of data.

You can read more about the changes to our download pages on our blog.

Station Details

Station ID SBBN2 Change station

Units in English

Download by Date

End Date 3 January 2017 Local

End Hour 13

Need more than 1 day? Log in to My MesoWest.

Available variables

Several measurement variables are available for SBBN2. To default select all variables available, keep the "All Variables" box checked below.

☑ All Variables

Otherwise, uncheck the "All Variables" box and select only the variables you wish to download for SBBN2.

Make sure to select "Change Station" above if you wish to update to a different station.

- ☐ Temperature
- ☐ Dew Point
- ☐ Relative Humidity
- ☐ Wind Speed
- ☐ Wind Direction
- ☐ Wind Gust
- ☐ Altimeter
- ☐ Pressure
- ☐ Sea level pressure
- ☐ Water Temperature
- ☐ Wind cardinal direction

Retrieve Data

SBBN2 (4).csv - Excel

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW

A1 # STATION: SBBN2

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	# STATION: SBBN2															
2	# STATION NAME: SOUTH BOULDER BASIN BUOY NEAR BOULDER CITY 6NE															
3	# LATITUDE: 36.05333															
4	# LONGITUDE: -114.76250															
5	# ELEVATION [ft]: 1201															
6	# STATE: NV															
7	Station_ID	Date_Tim	altimeter_	pressure_	air_temp_	relative_h	wind_spe	wind_dire	wind_gust	T_water_t	dew_poin	wind_carc	pressure_	sea_level	sea_level	altimeter_set_1
8			INHG	INHG	Fahrenhe	%	Miles/hou	Degrees	Miles/hou	Fahrenhe	Fahrenhe	Code	INHG	INHG	INHG	INHG
9	SBBN2	08/18/2016 23:00 UT(		28.59	100	20	7	137	10	84	52.11	SE		26.98		29.86
10	SBBN2	08/18/2016 23:10 UT(		28.59	99	21	10	142	14	84	52.58	SE		26.94		29.86
11	SBBN2	08/18/2016 23:20 UT(		28.59	99	22	13	177	17	84.99	53.84	S		26.82		29.86
12	SBBN2	08/18/2016 23:30 UT(		28.59	98.01	23	13	183	18.01	84.99	54.21	S		26.79		29.86
13	SBBN2	08/18/2016 23:40 UT(		28.59	98.01	26	14.99	176	18.99	84	57.56	S		26.44		29.86
14	SBBN2	08/18/2016 23:50 UT(		28.56	98.01	24	14	169	18.99	84	55.37	S		26.64		29.83
15	SBBN2	08/19/2016 00:00 UT(		28.59	98.01	26	11.01	152	17	84	57.56	SSE		26.44		29.86
16	SBBN2	08/19/2016 00:10 UT(		28.59	99	21	13	166	18.01	84	52.58	SSE		26.94		29.86
17	SBBN2	08/19/2016 00:20 UT(		28.59	100	19	10	171	17	84	50.74	S		27.1		29.86
18	SBBN2	08/19/2016 00:30 UT(		28.59	99	24	8.01	188	15.99	84	56.21	S		26.58		29.86
19	SBBN2	08/19/2016 00:40 UT(		28.59	99	23	8.01	174	11.01	84	55.05	S		26.7		29.86
20	SBBN2	08/19/2016 00:50 UT(		28.59	100	16	8.01	175	12.01	84	46.2	S		27.48		29.86
21	SBBN2	08/19/2016 01:00 UT(		28.59	100	20	8.99	177	13	84	52.11	S		26.98		29.86
22	SBBN2	08/19/2016 01:10 UT(		28.59	99	21	7	162	8.99	84	52.58	SSE		26.94		29.86
23	SBBN2	08/19/2016 01:20 UT(		28.59	99	22	10	181	13	84	53.84	S		26.82		29.86
24	SBBN2	08/19/2016 01:30 UT(		28.59	98.01	24	8.99	189	13	84	55.37	S		26.67		29.86
25	SBBN2	08/19/2016 01:40 UT(		28.59	98.01	25	8.99	196	12.01	84	56.48	SSW		26.56		29.86
26	SBBN2	08/19/2016 01:50 UT(		28.59	99	20	8.01	196	14	84	51.27	SSW		27.06		29.86
27	SBBN2	08/19/2016 02:00 UT(		28.59	99	21	7	146	11.01	84	52.58	SE		26.94		29.86
28	SBBN2	08/19/2016 02:10 UT(		28.59	99	23	8.99	156	15.99	84	55.05	SSE		26.7		29.86
29	SBBN2	08/19/2016 02:20 UT(		28.59	99	21	11.01	135	15.99	84	52.58	SE		26.94		29.86
30	SBBN2	08/19/2016 02:30 UT(		28.59	99	18	11.01	121	18.01	84	48.47	ESE		27.31		29.86
31	SBBN2	08/19/2016 02:40 UT(		28.59	99	18	10	117	18.01	84	48.47	ESE		27.31		29.86
32	SBBN2	08/19/2016 02:50 UT(		28.59	99	20	13	113	18.99	84	51.27	ESE		27.06		29.86
33	SBBN2	08/19/2016 03:00 UT(		28.59	98.01	23	15.99	123	22.01	84	54.21	ESE		26.79		29.86
34	SBBN2	08/19/2016 03:10 UT(		28.61	98.01	21	18.99	129	24	84	51.75	SE		27.05		29.88
35	SBBN2	08/19/2016 03:20 UT(		28.61	97	25	17	124	27	84	55.62	SE		26.68		29.88
36	SBBN2	08/19/2016 03:30 UT(		28.61	96.01	24	17	115	25.99	84	53.66	ESE		26.88		29.88
37	SBBN2	08/19/2016 03:40 UT(		28.61	96.01	26	17	116	23	84	55.84	ESE		26.67		29.88
38	SBBN2	08/19/2016 03:50 UT(		28.61	95	26	15.99	110	21	84	54.97	ESE		26.76		29.88
39	SBBN2	08/19/2016 04:00 UT(		28.64	95	26	14.99	107	22.01	84	54.97	ESE		26.8		29.92
40	SBBN2	08/19/2016 04:10 UT(		28.64	95	27	15.99	107	22.01	84	56	ESE		26.69		29.92
41	SBBN2	08/19/2016 04:20 UT(		28.64	93.99	30	17	116	24.99	84	58.03	ESE		26.49		29.92
42	SBBN2	08/19/2016 04:30 UT(		28.64	93.99	28	17	109	24.99	84	56.13	ESE		26.69		29.92
43	SBBN2	08/19/2016 04:40 UT(		28.64	93.99	25	14.99	109	24	84	53.04	ESE		26.99		29.92
44	SBBN2	08/19/2016 04:50 UT(		28.67	93.99	29	12.01	105	18.01	84	57.09	ESE		26.62		29.95
45	SBBN2	08/19/2016 05:00 UT(		28.67	93	29	12.01	113	14.99	84	56.23	ESE		26.72		29.95