

Appendix H

Recreation Survey Training Package



Recreation Survey Team Training

March 30, 2012

Eufaula Lake – Oklahoma

U.S. Army Corps of Engineers

Environmental Impact Statement

Introductions

- ◉ U.S. Army Corps of Engineers

- Steve Johnson – Lead Park Ranger – Eufaula Lake

- ◉ CDM Smith (*Primary Contractor*)

- Michael Belvin – Socioeconomics/Recreation Team Leader
 - Recreation Survey Team Leaders
 - Larry Schwartz (Team 1 & 2)
 - Rodger Menendez (Team 3)
 - Michael Belvin (Team 4)
 - Jennifer Pearson
 - Shannon Adams
 - Brendan Brown



- ◉ Lemke Land Surveying (*Sub-contractor*)

- ◉ Recreation Specialist (*Sub-Contractor*)

- Brad Keshlear

EUFAULA LAKE

- ◉ Located in East-Central Oklahoma
- ◉ Managed by U.S. Army Corps of Engineers
- ◉ Largest Lake Located Entirely in Oklahoma (5 Counties)
- ◉ Watershed = 47,522 Square Miles
- ◉ 105,500 Water Surface Acres
- ◉ 54,231 Acres of Recreation & Wildlife Management Land
- ◉ 600 Miles of Shoreline
- ◉ Over 2 Million Visits Annually
- ◉ 25 Recreation Areas
- ◉ 925 Campsites
- ◉ 1,100 Marina Slips



RECREATION STUDY

Part of Environmental Impact Statement (EIS)

◉ U.S. Army Corps of Engineers (USACE)

- Shoreline Management Plan (SMP) Update (1998)
- Supplement to Project Master Plan (1977)

◉ Recreation Study - Four Major Components

- Land-Based Recreation
- Land/Water Interface Recreation
- Water-Based Recreation
- Dispersed Use Recreation



Recreation Study Detail

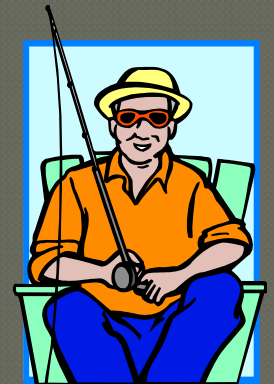
- ◉ Collect Existing Land-Based Recreation Data
- ◉ Conduct Land/Water Interface Recreation Surveys
 - Swim Beaches *
 - Boat Ramps *
 - Marinas *
- ◉ Conduct Water-Based Recreation Surveys
 - Boat Density & Carrying Capacity *
- ◉ Conduct Dispersed Use Recreation Surveys
 - Private/Community Boat Docks
 - Mail-in Survey (Lake Area Residents)



Focus of This Study Initiative

◉ Collect Visitor Use Data/Conduct Surveys

- Swim Beaches *
- Boat Ramps *
- Marinas *
- Lake Surface (Boat Density)*



Survey Components

- ◉ **Swim Beach Surveys**: Quantify Existing Use at Swim Beaches to Help Establish Carrying Capacity
- ◉ **Boat Ramp - Parking Lot Surveys**: Quantify Existing Use at Boat Ramps to Help Establish Carrying Capacity and Identify Boat Origination Locations
- ◉ **Marina Surveys**: Quantify Existing Use at Marinas to Help Establish Carrying Capacity and Identify Boat Origination Locations
- ◉ **Boat Density Surveys**: Quantify Boat Density by Type of Vessel, Recreation Activity & Lake Area to Help Establish Carrying Capacity

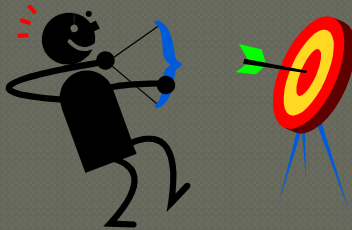
Importance of Survey Data

○ Recreation Study-Primary Component of EIS

- Typical Studies of this Magnitude = 24 Months
(Two Recreation Seasons)

- Schedule for this Study = 5 Months

(Less Than One Recreation Season)



- **Accuracy of Survey Data is Critical !!!**

(One Shot to Get it Right)

When Will Surveys Be Conducted?

○ Primary Survey Dates

- 7-8 April
- 26-27 May
- 16-17 June
- 30 June & 1 July

○ 2 Surveys Each Day

- 1 Morning
- 1 Afternoon

○ 4 Surveys Each Weekend

○ 16 Total Surveys

○ Alternate Survey Dates

- 14-15 April
- 2-3 June
- 23-24 June
- 7-8 July

○ 2 Surveys Each Day

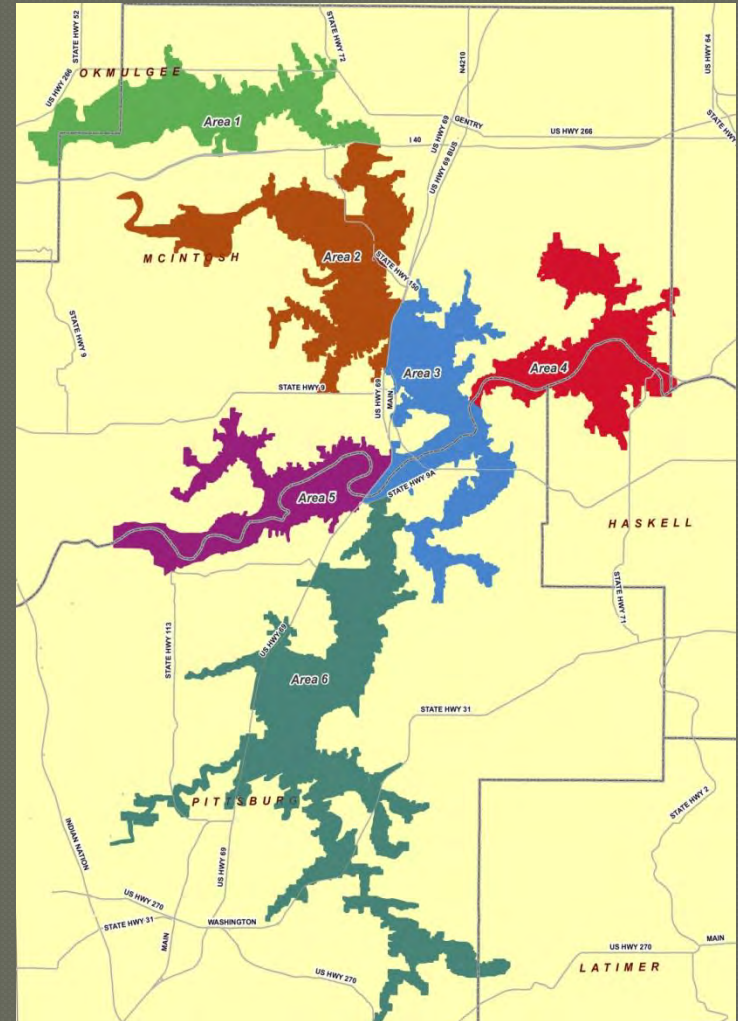
- 1 Morning
- 1 Afternoon

○ 4 Surveys Each Weekend

○ 16 Total Surveys

Where & How Will Surveys Be Conducted?

- 6 - Lake Areas
- 25 - Recreation Areas
- 10 - Teams
 - 4 CDM – Team Leaders
 - 13 Lemke Staff Members
 - 9 Vehicles
 - 1 Helicopter
- Simultaneous Surveys



Survey Teams & Recreation Facility Counts

Survey Team's
and
Recreation Facility Count

Team Number	CDM Team Leader	Lemke Staff #	Lake Area #	Recreation Area Name	# of Beaches	# of Boat Ramps	# of Launch Lanes	# of Car Spaces	# of Car/Trailer Spaces	# of Wet Slips
1	1	1	1	Gentry Creek	0	1	2	0	23	0
			2	Eufaula State Park (Marina)	1	2	2	300	150	82
			2	Holiday Cove	0	1	1	28	36	0
Team 1 Totals		2	3 Recreation Areas		1	4	5	328	209	82
2A	1	1	3	Belle Starr CG	0	1	2	339	100	0
			3	Belle Starr Marina	0	1	1	60	35	130
2B	1	2	3	Eufaula City Park	1	4	4	115	150	400
			3	Eufaula Cove (Eufaula Marina)	0	1	1	40	10	0
2C	1	1	3	Mill Creek	0	1	1	7	10	0
			3	Hwy 9 Landing CG	1	3	3	112	72	0
			3	Hwy 9 Landing Marina	0	0	0	63	52	232
Team 2 Totals		5	7 Recreation Areas		2	11	12	736	429	762
3A	1	2	4	Brooken Cove CG	0	1	1	80	20	0
			4	Coles Evergreen Marina	0	0	0	30	10	95
			4	Dam Site CG	0	2	3	138	83	0
3B	1	1	4	Duchess Creek Marina	0	0	0	40	10	140
			4	Forum Laning CG	1	2	3	49	31	0
Team 3 Totals		4	5 Recreation Areas		1	5	7	337	154	235
4A	1	1	6	Arrowhead State Park (Area 31 Marina)	1	1	2	158	46	18
			6	Oak Ridge	0	1	1	0	28	0
			6	Gaines Creek	0	1	1	0	17	0
4B	1	1	6	Crowder City Park	0	1	2	3	27	0
			6	Cardinal Point	0	1	1	10	0	0
			6	Crowder Point	0	3	4	83	22	0
4C	1	1	6	Juniper Point	0	2	2	28	69	0
			6	Elm Point	0	1	1	5	20	0
			6	Hickory Point	0	1	1	5	20	0
			6	Hwy 31 Landing	0	1	1	20	55	0
Team 4 Totals		4	10 Recreation Areas		1	13	16	312	304	18
Helicopter Sub-Total		2	Helicopter Team							
Grand Total		17	25 Recreation Areas		5	33	40	1,713	1,096	1,097

Survey Team #1

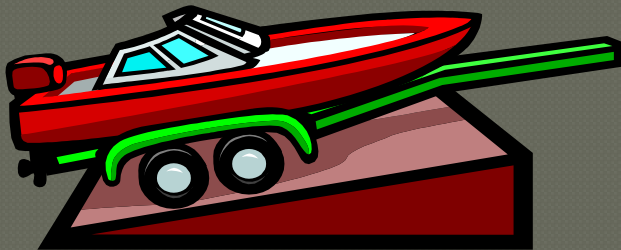
- 1 CDM - Team Leader
- 1 Lemke Staff
- 1 Vehicle



- Lake Area #1 and #2
 - 3 Recreation Areas
 - 1 Swim Beach
 - 4 Boat Ramps
 - 5 Boat Launch Lanes
 - 328 Car Spaces
 - 209 Car/Trailer Spaces
 - 82 Marina Boat Slips

Survey Team #2

- 3 Groups (2A-2B-2C)
- 1 CDM - Team Leader
- 4 Lemke Staff
- 3 Vehicles



- Lake Area #3 and #5
 - 7 Recreation Areas
 - 2 Swim Beaches
 - 11 Boat Ramps
 - 12 Boat Launch Lanes
 - 736 Car Spaces
 - 429 Car/Trailer Spaces
 - 762 Marina Boat Slips

Survey Team #3

- 2 Groups (3A-3B)
- 1 CDM - Team Leader
- 3 Lemke Staff
- 2 Vehicles



- Lake Area #4
 - 5 Recreation Areas
 - 1 Swim Beach
 - 5 Boat Ramps
 - 7 Boat Launch Lanes
 - 337 Car Spaces
 - 154 Car/Trailer Spaces
 - 235 Marina Boat Slips

Survey Team #4

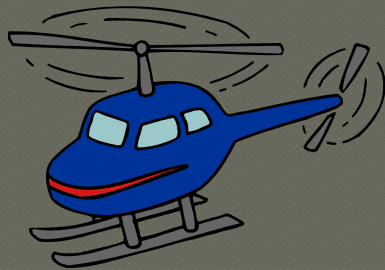
- 3 Groups (4A-4B-4C)
- 1 CDM - Team Leader
- 3 Lemke Staff
- 3 Vehicles



- Lake Area #6
 - 10 Recreation Areas
 - 1 Swim Beach
 - 13 Boat Ramps
 - 16 Boat Launch Lanes
 - 312 Car Spaces
 - 304 Car/Trailer Spaces
 - 18 Marina Boat Slips

Helicopter Team

- 1 Pilot
- 2 Lemke Staff
 - (1 counting, 1 Photographer)
- 1 Helicopter



- 2 Motion Sickness Bags

- 6 Lake Areas

- Vessel Type/Activity
 - Power Boat/Activity
 - Pleasure Boating/Cruising
 - Fishing
 - Water Skiing/Tubing
 - Personal Water Craft/Jet Ski
 - Non-Powered Boat/Activity
 - Kayak/Canoe/Row Boat
 - Sail Boat

Power Boat/Activities

- Cruising/Pleasure
- Fishing
- Water Skiing/Tubing
- PWC's/Jet Ski

• Non-Powered Boat

- Kayak/Canoe/Row
- Sail Boat

• Digital Photograph

- Large number of Boats
- Rafted Together
- Partying

• Identify Location on Map

• Do NOT Count

- Boats at Docks
- Boats on Shoreline

AERIAL BOAT COUNT SURVEY FORM

Date: _____ Day of Week: _____ Time: _____ Lake Area number: _____

Weather Conditions: _____

Survey Team Number: _____ Survey Team Member Names: _____

Information: This form is used to document the number of boats and water-based recreation activities that occur on the lake during periods of heavy use for each Lake Area (1-6). To accomplish this, the survey team will fly over (via helicopter) each of the six lake areas two times each survey day; once in the morning and once in the afternoon. During each fly-over the number of boats that are un-tethered from the shoreline or any docking apparatus, whose occupants are pursuing recreational activities, will be documented for each lake area. This will be accomplished using hand-held electronic counters. Boats that are tethered together for partying will be counted. **Boats not to include in the count are boats tethered to the shoreline or moored at docks.** When a large number of boats are congregated in one location, a digital photograph will be taken and the location of the photo will be identified on a map.

Each boat and/or recreational activity will be counted in **only one** of the following categories:

Power Boats & Activities	Number of Boats
1. Power Boat/ Cruising - Pleasure Boating	
2. Power Boat/Fishing	
3. Power Boat/Water Skiing - Tubing	
4. Personal Water Craft (PWC's & Jet Ski's)	

Non-Powered Boats & Activities	Number of Boats
5. Kayak/Canoe/Row Boat	
6. Sail Boat	

Photograph #	Description	Identify Location on Map

Please use other side for Notes/Comments

What to Count/What Not to Count

○ Aerial Boat Count Surveys

• Do Count:

- Boats Underway
- Boats that are Stationary on the Water
- Boats Tethered Together for Partying



• Do Not Count:

- Boats Moored at Boat Docks
- Boats Moored at Marinas
- Boats Tethered to Shoreline



- Take Photo of Entrance Sign
- # of Car/Trailer Spaces
- # of Empty Car/Trailer Spaces
- # of Empty Boat Trailers
 - Boat Ramp Parking Lot
 - Camp Sites
- # of Car Spaces
- # of Empty Car Spaces
- Photograph
- Notes/Comments
 - Overcrowding
 - Cars Parked on Grass
 - Photo # & Description
- Notify Gate Attendant when entering Campgrounds

BOAT RAMP PARKING LOT SURVEY FORM

Date: _____ Day of Week: _____ Time: _____

Lake Area Number: _____ Recreation Area Name: _____

Weather Conditions: _____

Survey Team Number: _____ Survey Team Member Names: _____

Information: This form is used to document the number of empty boat trailers located at boat ramp parking lots within designated recreation areas. By counting the number of empty boat trailers we are able to determine the number of boats on the lake as well as the origination location for that boat. Some recreation areas may have more than one boat ramp and associated parking area. When the boat ramp is located within a campground, or is within walking distance of a campground, the number of empty boat trailers located at campsites or parking areas within the campground, must also be counted. When entering a campground, you must stop at the entrance station and advise the gate attendant. Count the total number of car/trailer spaces and total number of car spaces located within the boat ramp parking area. Then count the number of empty car/trailer spaces and empty car spaces, and enter the number for each. Then count the number of empty boat trailers and enter the number. **Photograph:** Take a digital photograph to document conditions.

Total number of car/trailer parking spaces: _____ Total number of car parking spaces: _____

Number of empty car/trailer parking spaces: _____

Number of empty boat trailers: _____

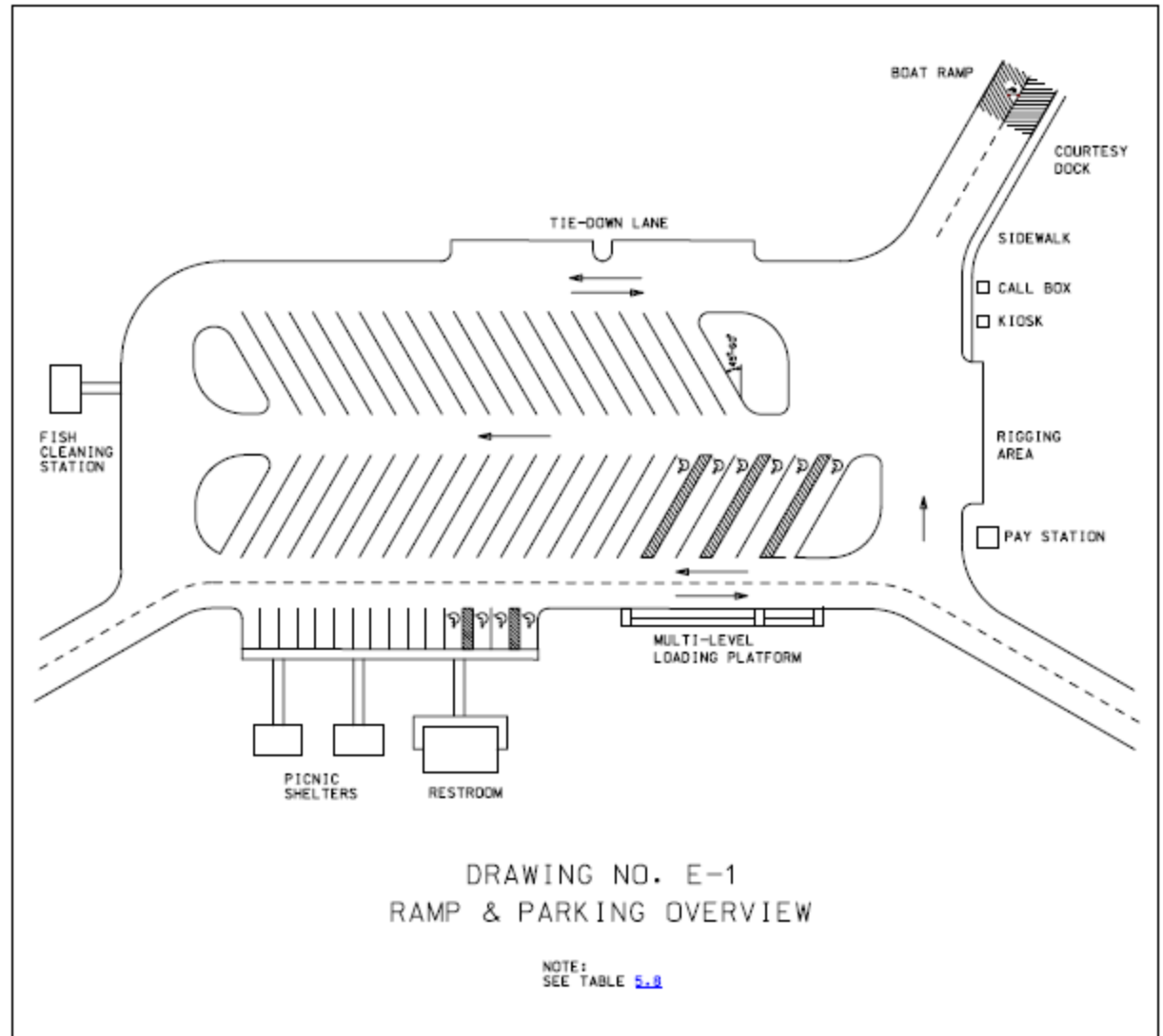
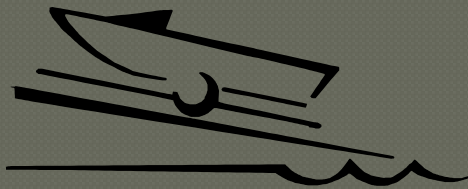
Number of empty Car Spaces: _____

If this recreation area is a campground, enter the number of empty boat trailers located at campsites or other parking areas, within the campground: _____

Notes/Comments: _____

(Please document conditions of overcrowding such as parking on the grass or undesignated areas)

Boat Ramp And Parking Area Diagram



- Take Photo of Entrance Sign
- # of People in the water (buoyed swim area)
- # of People on the beach (sand area)
- # of People on Turf Areas
- # of Car Parking Spaces
- # of Empty Car Parking Spaces
- Photograph
- Notes/Comments
 - Overcrowding
 - Parking on grass
 - Photo # & Description

SWIM BEACH SURVEY FORM

Date: _____ Day of Week: _____ Time: _____

Lake Area Number: _____ Recreation Area Name: _____

Weather Conditions: _____

Survey Team Number: _____ Survey Team Member Names: _____

Information: This form is used to document the number of people recreating at a designated swimming beach located inside of a developed recreation area. There are three general design features associated with a swimming beach.

1) **Water Area:** The area used for swimming and delineated with a buoy line.

2) **Sand Area:** The sand area immediately adjacent to the delineated swimming area.

3) **Turf & Other Land Area:** The land areas immediately adjacent to the sand area. This area may include restrooms, picnic shelters, picnic tables, benches, outdoor showers, playgrounds, etc. It is important to count the number of people in each of these three areas.

Car Parking Spaces: From the facility count form, enter the number of car parking spaces for this recreation area. Then, enter the number of empty car parking spaces in the recreation area.

Photograph: A digital photograph should be taken to document overall conditions at the swim beach.

Number of People in Water Area: _____

Number of People on Sand Area: _____

Number of People
on Turf & Other Land Areas: _____

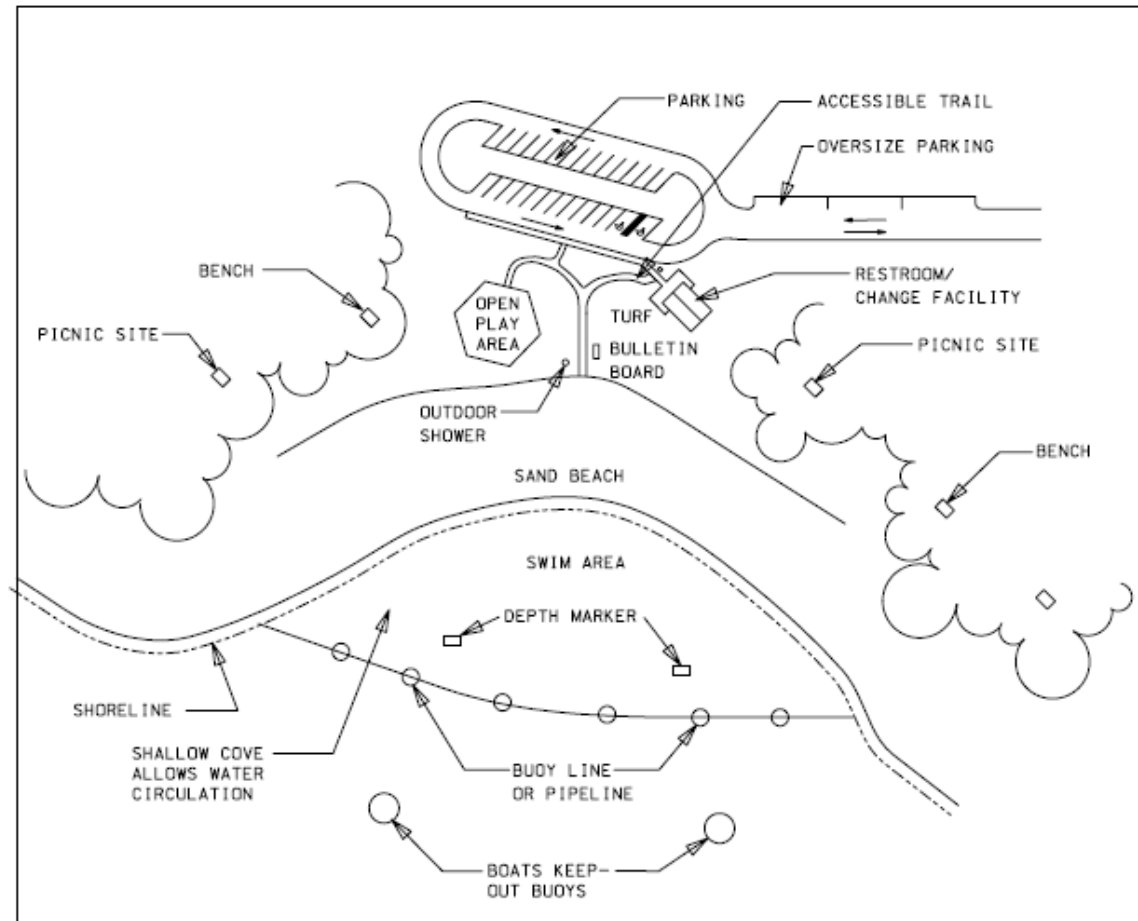
Total Number of Car Parking Spaces: _____
(See Facility Count Form)

Number of Empty
Car Parking Spaces: _____

Notes/Comments: _____

(Please document conditions of overcrowding such as, parking on grass or undesignated areas)

Swim Beach Diagram



DRAWING NO. G-2
SWIM AREA OVERVIEW

NOTES:

1. STANDARD PARKING SPACE FOR EVERY 250 SQUARE FEET OF BEACH AREA.
2. OVERSIZE PARKING SPACE FOR EVERY 10,000 SQUARE FEET.

- Inform Marina Operator
- # of Wet Slips
- # of Rented Wet Slips
- # of Wet Slips Available for Rent
- # of Empty Wet Slips
- # of Dry Dock Spaces
- # of Rented Dry Dock Spaces
- # of Dry Dock Spaces Available for Rent
- # of Empty Dry Dock Spaces
- # of Car/Trailer Spaces
- # of Empty Car/Trailer Spaces
- # of Empty Boat Trailers
- # of Car Spaces
- # of Empty Car Spaces
- Notes/Comments
 - Overcrowding
 - Parking Undesignated Areas
 - Photo # & Description

MARINA SURVEY FORM

Date: _____ Day of Week: _____ Time: _____

Lake Area Number: _____ Marina Name: _____

Weather Conditions: _____

Survey Team Number: _____ Survey Team Member Names: _____

Name of Marina Staff Person Contacted: _____

Information: This form is used to document the number of rented, but empty boat slips at a marina. It is extremely important that before each survey you notify the marina operator that you are on-site to conduct the boat slip count. Also, you will need to find out from the marina operator the number of boat slips currently rented at the facility. This same information is needed for dry-dock storage spaces. Also, if there is a boat ramp operated by the marina, you must count the number of empty boat trailers located at the boat ramp parking lot. **Remember, the purpose of this survey is to determine the number of boats from this facility that are actually out on the lake and being used for recreational purposes at this time.** So, you must physically count the number of empty slips and spaces.

WET SLIPS

Total Number of Wet Slips at this Marina: _____ (See Facility Count Form)

Number of Wet Slips Currently Rented: _____ (Ask Marina Operator)

Number of Wet Slips Available for Rent: _____ (Ask Marina Operator)

Number of Empty Wet Slips: _____ (This will equal the number of boats from wet slips that are out on the lake)

DRY DOCK BOAT STORAGE SPACES

Total Number of Dry Dock Storage Spaces at this Marina: _____ (Ask Marina Operator)

Number of Dry Dock Storage Spaces Currently Rented: _____ (Ask Marina Operator)

Number of Dry Dock Storage Spaces Available for Rent: _____ (Ask Marina Operator)

Number of Empty Dry Dock Storage Spaces: _____ (This will equal the number of boats from dry dock storage on the lake)

BOAT RAMP - CAR/TRAILER SPACES, CAR SPACES & EMPTY BOAT TRAILERS

Total Number of Car/Trailer Spaces: _____ Total Number of Car Spaces: _____

Number of Empty Car/Trailer Spaces: _____ Number of Empty Car Spaces: _____

Number of Empty Boat Trailers in Parking Lot: _____

Notes/Comments: _____

(Please document conditions of overcrowding such as parking on the grass or undesignated areas)

- While Traveling from one location to another
- Shoreline Outside of Developed Recreation Areas
- Identify Type of Recreation Activity
- Photograph
- Identify Location on Map
- Notes/Comments
 - Overcrowding
 - Parking Along Roads
 - Photo # & Description

SHORELINE ACTIVITY OBSERVATION FORM

Date: _____ Day of Week: _____ Time: _____

Lake Area Number: _____ Location Description: _____

Weather Conditions: _____

Survey Team Number: _____ Survey Team Member Names: _____

Information: This form is used to document observations of people participating in recreational activities along the shoreline, outside of designated recreation areas. These activities include; swimming/wading along the shoreline, fishing from the shoreline or pier, walking/hiking along the shoreline, and wildlife/nature viewing/photography from the shoreline.

As you are driving from one location to another, if you notice significant recreational activity occurring along the shoreline in areas that are not developed and designated recreation areas, please use this form to document the type of recreational activities.

Photograph: Take a digital photograph to document the activity and mark the location on a map.

Place an 'X' next to the activity observed, take a photograph and mark location on map

Fishing from Shoreline: _____

Swimming/Wading: _____

Walking/Hiking: _____

Wildlife/Nature Viewing/Photography: _____

Other Recreation (Please Describe): _____

Notes/Comments: _____

Safety – Safety - Safety

◎ Safety is Top Priority!

- Safety Information Sheet & Hazard Analysis
 - Copy Will be Provided to Everyone
 - Read It – Learn It – Live by It

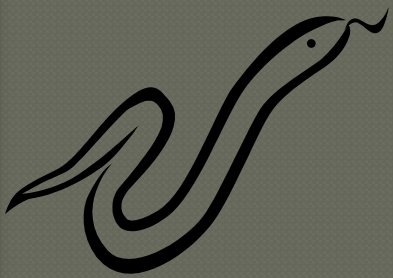
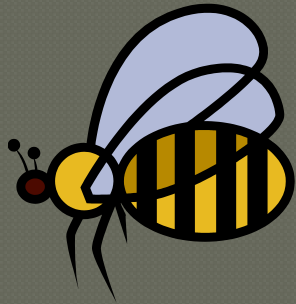
◎ Emergency Information Sheet

◎ Phone Number Contact Sheet

- Everyone Must List Your Cell Phone Number



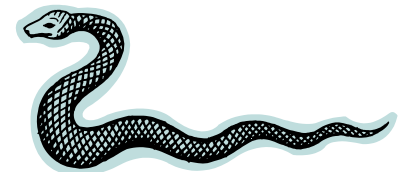
Activity Hazard Analysis



Activity Hazard Analysis Recreation Study Surveys

HAZARD	CONTROLS
Walking	Be alert of walking surface.
Prolonged Standing/Walking	Be in good physical condition. Take breaks as required.
Physical assault from irritated, distraught, or intoxicated individuals	Knowledge of non-threatening communications. Know how to get assistance. Knowledge of self-defense and avoidance procedures.
Ankle Injuries	Wear proper field boots with ankle height of at least 4 inches.
Slips/Trips/Falls	Wear proper field boots and be observant of terrain.
Walking on Boat Docks over water	Be alert of walking surface. Be aware of tripping hazards. If you don't know how to swim, wear a life jacket.
Falling on slippery or rugged terrain	Wear proper field boots and be observant of terrain.
Snake Bites	Wear proper field boots. Do not harass/kill snakes.
Animal Bites	Wear proper clothing. Do not approach animals. Use caution and composure when encountering animals.
Insect Bites & Stings	Knowledge and avoidance of such insects. Caution and knowledge of any allergies to such bites or stings. Do not wear perfume or cologne. Know where to obtain first aid.
Tick Bites	Wear proper clothing. Light colored long sleeved shirts tucked inside pants. Make frequent checks for the presence of ticks and use proper removal techniques if found.
Poisonous Plants	Knowledge and avoidance of such plants. Wash after contact.
Exposure to the Elements	Wear proper clothing. Be aware of exposure duration and limit duration if necessary. Be knowledgeable of the symptoms of exposure related illnesses.
Cuts & Bruises	Wear proper clothing. Use caution.
Motor Vehicle Operation/Accidents	Obey traffic laws. Adjust vehicle operation to road and weather conditions. Watch out for pedestrians. Reduce speed appropriately. Employ defensive driving techniques. Stay alert.
Air/Motion Sickness	Focus on the horizon. Minimize reading. Limit viewing through binoculars and cameras. Breathe fresh air. Take over the counter medication to help minimize motion sickness.

Eufaula Lake EIS - Recreation Study



Maps



- Each Team & Team Member will be provided Maps

- Lake Map

- Team Area Map

- Recreation Area Maps

Team Member Cell Phone Numbers



Date: _____

Cell Phone Contacts

Team Number	Team Leader Name and Number	Team Member Name	Cell Phone Number
1			
1			
2			
2A			
2B			
2B			
2C			
3			
3A			
3A			
3B			
4			
4A			
4B			
4C			
Helicopter			
Helicopter			
All	Michael Belvin	Michael Belvin	210-439-9486
All	Brad Keshlear	Brad Keshlear	404-309-4598

Materials – Supplies - Equipment

● What You Need to Bring:

- Vehicle
- Clip Board
- Pen/Pencil
- Insect Repellant
- Sun Block
- Cell Phone
- Digital Camera
- Digital SLR Camera
(Helicopter Team)

● What Will Be Provided:

- Survey Forms
- Maps
- Emergency Contact #'s
- Binoculars (Helicopter Team)
- Letter of Authorization

Start/End of Day Meeting Locations

- **Survey Team #1:** Lake Eufaula State Park (Visitor Center)
- **Survey Team #2:** Lake Eufaula Association Office
(701 S. Main, Eufaula, OK)
- **Survey Team #3:** USACE Project Management Office
(Hwy 71 – south of dam)
- **Survey Team #4:** Crowder City Park

QUESTIONS ?



**Survey Team's
and
Recreation Facility Count**

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			5	Mill Creek	0	1	1	7	10	0
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			6	Elm Point	0	1	1	5	20	0
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Sub-Total	4	13								
Grand Total	17		25 Recreation Areas		5	33	40	1,713	1,096	1,097



DEPARTMENT OF THE ARMY
EUFULA LAKE OFFICE, CORPS OF ENGINEERS
102 E. BK 200 Road
STIGLER, OK 74462-1693
(918) 484-5135 or (918) 799-5843

R.S. KERR LAKE OFFICE

WISTER LAKE OFFICE

March 20, 2012

Eufaula Lake Office

SUBJECT: Authorization to Conduct Recreation Surveys on Eufaula Lake

Brad Keshlear
Project Contractor, CDM Smith
4835 East Cactus Road, Suite 360
Phoenix, Arizona 85254

Dear Mr. Keshlear:

This letter serves as official authorization for employees of CDM Smith and Lemke Land Surveying companies to enter Corps owned or managed lands located at Eufaula Lake to perform recreation surveys. These surveys are conducted as part of a recreation study and Environmental Impact Statement for Eufaula Lake. The purpose of these surveys is to document and obtain information about the amount and type of recreational use occurring at Eufaula Lake.

These surveys may be conducted at all major recreation areas, including marinas, state parks, county parks, city parks and parks managed by the U.S. Army Corps of Engineers located on Eufaula Lake. The surveys may take place on heavy use weekends from April through July 2012.

Facility managers and leaseholders of Corps-owned land should allow reasonable access to your employees to conduct your surveys. You are encouraged to coordinate with each facility prior to arriving to conduct surveys.

Should you or any leaseholder have any questions, you may contact Steve Johnson, Lead Ranger, at 918-799-5843.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Knack".

Jeff Knack
Operations Project Manager

**Helicopter Fly-Over Sequence
By Lake Area Number**

			Fly-Over Sequence					
Day	Date	AM/PM	Lake Area #					
Saturday	7-Apr	AM	1	2	3	4	5	6
	7-Apr	PM	6	5	4	3	2	1
Sunday	8-Apr	AM	6	5	4	3	2	1
	8-Apr	PM	1	2	3	4	5	6
Saturday	26-May	AM	6	5	4	3	2	1
	26-May	PM	1	2	3	4	5	6
Sunday	27-May	AM	1	2	3	4	5	6
	27-May	PM	6	5	4	3	2	1
Saturday	16-Jun	AM	1	2	3	4	5	6
	16-Jun	PM	6	5	4	3	2	1
Sunday	17-Jun	AM	6	5	4	3	2	1
	17-Jun	PM	1	2	3	4	5	6
Saturday	30-Jun	AM	6	5	4	3	2	1
	30-Jun	PM	1	2	3	4	5	6
Sunday	1-Jul	AM	1	2	3	4	5	6
	1-Jul	PM	6	5	4	3	2	1

AERIAL BOAT COUNT SURVEY FORM

Date: _____ Day of Week: _____ Time: _____ Lake Area number: _____

Weather Conditions: _____

Survey Team Number: _____ Survey Team Member Names: _____

Information: This form is used to document the number of boats and water-based recreation activities that occur on the lake during periods of heavy use for each Lake Area (1-6). To accomplish this, the survey team will fly over (via helicopter) each of the six lake areas two times each survey day; once in the morning and once in the afternoon. During each fly-over the number of boats that are un-tethered from the shoreline or any docking apparatus, whose occupants are pursuing recreational activities, will be documented for each lake area. This will be accomplished using hand-held electronic counters. Boats that are tethered together for partying will be counted. **Boats not to include in the count are boats tethered to the shoreline or moored at docks.** When a large number of boats are congregated in one location, a digital photograph will be taken and the location of the photo will be identified on a map.

Each boat and/or recreational activity will be counted in **only one** of the following categories:

Power Boats & Activities	Number of Boats
1. Power Boat/ Cruising - Pleasure Boating	
2. Power Boat/Fishing	
3. Power Boat/Water Skiing - Tubing	
4. Personal Water Craft (PWC's & Jet Ski's)	

Non-Powered Boats & Activities	Number of Boats
5. Kayak/Canoe/Row Boat	
6. Sail Boat	

Photograph #	Description	Identify Location on Map

Please use other side for Notes/Comments

MARINA SURVEY FORM

Date: _____ Day of Week: _____ Time: _____

Lake Area Number: _____ Marina Name: _____

Weather Conditions: _____

Survey Team Number: _____ Survey Team Member Names: _____

Name of Marina Staff Person Contacted: _____

Information: This form is used to document the number of rented, but empty boat slips at a marina. It is extremely important that before each survey you notify the marina operator that you are on-site to conduct the boat slip count. Also, you will need to find out from the marina operator the number of boat slips currently rented at the facility. This same information is needed for dry-dock storage spaces. Also, if there is a boat ramp operated by the marina, you must count the number of empty boat trailers located at the boat ramp parking lot. **Remember, the purpose of this survey is to determine the number of boats from this facility that are actually out on the lake and being used for recreational purposes at this time.** So, you must physically count the number of empty slips and spaces.

WET SLIPS

Total Number of Wet Slips at this Marina: _____ (See Facility Count Form)

Number of Wet Slips Currently Rented: _____ (Ask Marina Operator)

Number of Wet Slips Available for Rent: _____ (Ask Marina Operator)

Number of Empty Wet Slips: _____ (This will equal the number of boats from wet slips that are out on the lake)

DRY DOCK BOAT STORAGE SPACES

Total Number of Dry Dock Storage Spaces at this Marina: _____ (Ask Marina Operator)

Number of Dry Dock Storage Spaces Currently Rented: _____ (Ask Marina Operator)

Number of Dry Dock Storage Spaces Available for Rent: _____ (Ask Marina Operator)

Number of Empty Dry Dock Storage Spaces: _____ (This will equal the number of boats from dry dock storage on the lake)

BOAT RAMP – CAR/TRAILER SPACES, CAR SPACES & EMPTY BOAT TRAILERS

Total Number of Car/Trailer Spaces: _____

Total Number of Car Spaces: _____

Number of Empty Car/Trailer Spaces: _____

Number of Empty Car Spaces: _____

Number of Empty Boat Trailers in Parking Lot: _____

Notes/Comments: _____

(Please document conditions of overcrowding such as parking on the grass or undesignated areas)

SWIM BEACH SURVEY FORM

Date: _____ Day of Week: _____ Time: _____

Lake Area Number: _____ Recreation Area Name: _____

Weather Conditions: _____

Survey Team Number: _____ Survey Team Member Names: _____

Information: This form is used to document the number of people recreating at a designated swimming beach located inside of a developed recreation area. There are three general design features associated with a swimming beach.

- 1) **Water Area:** The area used for swimming and delineated with a buoy line.
- 2) **Sand Area:** The sand area immediately adjacent to the delineated swimming area.
- 3) **Turf & Other Land Area:** The land areas immediately adjacent to the sand area. This area may include restrooms, picnic shelters, picnic tables, benches, outdoor showers, playgrounds, etc. **It is important to count the number of people in each of these three areas.**

Car Parking Spaces: From the facility count form, enter the number of car parking spaces for this recreation area. Then, enter the number of empty car parking spaces in the recreation area.

Photograph: A digital photograph should be taken to document overall conditions at the swim beach.

Number of People in Water Area: _____

Number of People on Sand Area: _____

Number of People on Turf & Other Land Areas: _____

Total Number of Car Parking Spaces: _____
(See Facility Count Form)

Number of Empty Car Parking Spaces: _____

Notes/Comments: _____

(Please document conditions of overcrowding such as, parking on grass or undesignated areas)

BOAT RAMP PARKING LOT SURVEY FORM

Date: _____ Day of Week: _____ Time: _____

Lake Area Number: _____ Recreation Area Name: _____

Weather Conditions: _____

Survey Team Number: _____ Survey Team Member Names: _____

Information: This form is used to document the number of empty boat trailers located at boat ramp parking lots within designated recreation areas. By counting the number of empty boat trailers we are able to determine the number of boats on the lake as well as the origination location for that boat. Some recreation areas may have more than one boat ramp and associated parking area. When the boat ramp is located within a campground, or is within walking distance of a campground, the number of empty boat trailers located at campsites or parking areas within the campground, must also be counted. When entering a campground, you must stop at the entrance station and advise the gate attendant. Count the total number of car/trailer spaces and total number of car spaces located within the boat ramp parking area. Then count the number of empty car/trailer spaces and empty car spaces, and enter the number for each. Then count the number of empty boat trailers and enter the number.
Photograph: Take a digital photograph to document conditions.

Total number of car/trailer parking spaces: _____

Total number of car parking spaces: _____

Number of empty car/trailer parking spaces: _____

Number of empty boat trailers: _____

Number of empty Car Spaces: _____

If this recreation area is a campground, enter the number of empty boat trailers located at campsites or other parking areas, within the campground: _____

Notes/Comments: _____

(Please document conditions of overcrowding such as parking on the grass or undesignated areas)

SHORELINE ACTIVITY OBSERVATION FORM

Date: _____ Day of Week: _____ Time: _____

Lake Area Number: _____ Location Description: _____

Weather Conditions: _____

Survey Team Number: _____ Survey Team Member Names: _____

Information: This form is used to document observations of people participating in recreational activities along the shoreline, outside of designated recreation areas. These activities include; swimming/wading along the shoreline, fishing from the shoreline or pier, walking/hiking along the shoreline, and wildlife/nature viewing/photography from the shoreline.

As you are driving from one location to another, if you notice significant recreational activity occurring along the shoreline in areas that are not developed and designated recreation areas, please use this form to document the type of recreational activities.

Photograph: Take a digital photograph to document the activity and mark the location on a map.

Place an 'X' next to the activity observed, take a photograph and mark location on map

Fishing from Shoreline: _____

Swimming/Wading: _____

Walking/Hiking: _____

Wildlife/Nature Viewing/Photography: _____

Other Recreation (Please Describe): _____

Notes/Comments: _____

Survey Team Schedules, Safety Information and Emergency Contact Numbers

Safety First:

ALWAYS THINK ABOUT SAFETY! The safety of you and those around you is of utmost importance and is top priority. Do not put yourself or those around you in an unsafe or compromising situation. You are going to be working in an outdoor environment where hazards exist. You will be operating vehicles in areas where there are large numbers of pedestrians, including children. Always, exercise extreme caution while operating your vehicle. Drive slowly and pay attention to the environment and situations around you. You will be around people that are recreating, which means they may be socializing, drinking and not paying close attention to what they are doing. Do not allow yourself to become involved in situations that you are not responsible for. If you observe situations that require the attention of law enforcement or emergency services, remove yourself from harm's way and notify the proper authorities, by dialing 911. US Army Corps of Engineers Park Rangers as well as county law enforcement officers routinely patrol designated recreation areas. Their vehicles are clearly marked. Also, remember that most campgrounds have a gate attendant on duty at the entrance station. They are trained on how to handle most emergencies. Again, **THINK SAFETY AT ALL TIMES!**

Daily Schedules:

There will be two surveys conducted each survey day; one in the morning and one in the afternoon. The preferred time for the morning survey is between 11AM and 1PM. The preferred time for the afternoon survey is between 2PM and 5PM. Lunch should be taken in between the two survey periods. We have tried to balance the workload among teams as best as possible. However, depending on the recreation area being surveyed, number of visitors and traffic, there may be times that a team will complete their surveys in a short amount of time. If this occurs, please check with the other survey teams within your group to see if they need assistance in completing their surveys. Please use your time wisely and gather as much data and information as possible. The only opportunity we have to obtain this data and information is through these surveys. So, be productive and gather as much useful information as possible. Help other team members when they need help.

Start of Each Day: Each team should meet at a designated time and location each day. Team Leaders will provide you with any specific instructions for the day.

End of Each Day: Each team should meet at a designated time and location each day. Team Leaders will be collecting your survey sheets from that day and will also lead a lessons learned discussion.

Questions:

If you have questions related to the surveys you are conducting you can contact either of the following people:

- * Brad Keshlear: 404-309-4598
- * Michael Belvin: 210-439-9486

Also, please share your cell phone numbers with everyone on your team.

Activity Hazard Analysis

Recreation Study Surveys

HAZARD	CONTROLS
Walking	Be alert of walking surface.
Prolonged Standing/Walking	Be in good physical condition. Take breaks as required.
Physical assault from irritated, distraught, or intoxicated individuals	Knowledge of non-threatening communications. Know how to get assistance. Knowledge of self-defense and avoidance procedures.
Ankle Injuries	Wear proper field boots with ankle height of at least 4 inches.
Slips/Trips/Falls	Wear proper field boots and be observant of terrain.
Walking on Boat Docks over water	Be alert of walking surface. Be aware of tripping hazards. If you don't know how to swim, wear a life jacket.
Falling on slippery or rugged terrain	Wear proper field boots and be observant of terrain.
Snake Bites	Wear proper field boots. Do not harass/kill snakes.
Animal Bites	Wear proper clothing. Do not approach animals. Use caution and composure when encountering animals.
Insect Bites & Stings	Knowledge and avoidance of such insects. Caution and knowledge of any allergies to such bites or stings. Do not wear perfume or cologne. Know where to obtain first aid.
Tick Bites	Wear proper clothing. Light colored long sleeved shirts tucked inside pants. Make frequent checks for the presence of ticks and use proper removal techniques if found.
Poisonous Plants	Knowledge and avoidance of such plants. Wash after contact.
Exposure to the Elements	Wear proper clothing. Be aware of exposure duration and limit duration if necessary. Be knowledgeable of the symptoms of exposure related illnesses.
Cuts & Bruises	Wear proper clothing. Use caution.
Motor Vehicle Operation/Accidents	Obey traffic laws. Adjust vehicle operation to road and weather conditions. Watch out for pedestrians. Reduce speed appropriately. Employ defensive driving techniques. Stay alert.
Air/Motion Sickness	Focus on the horizon. Minimize reading. Limit viewing through binoculars and cameras. Breathe fresh air. Take over the counter medication to help minimize motion sickness.

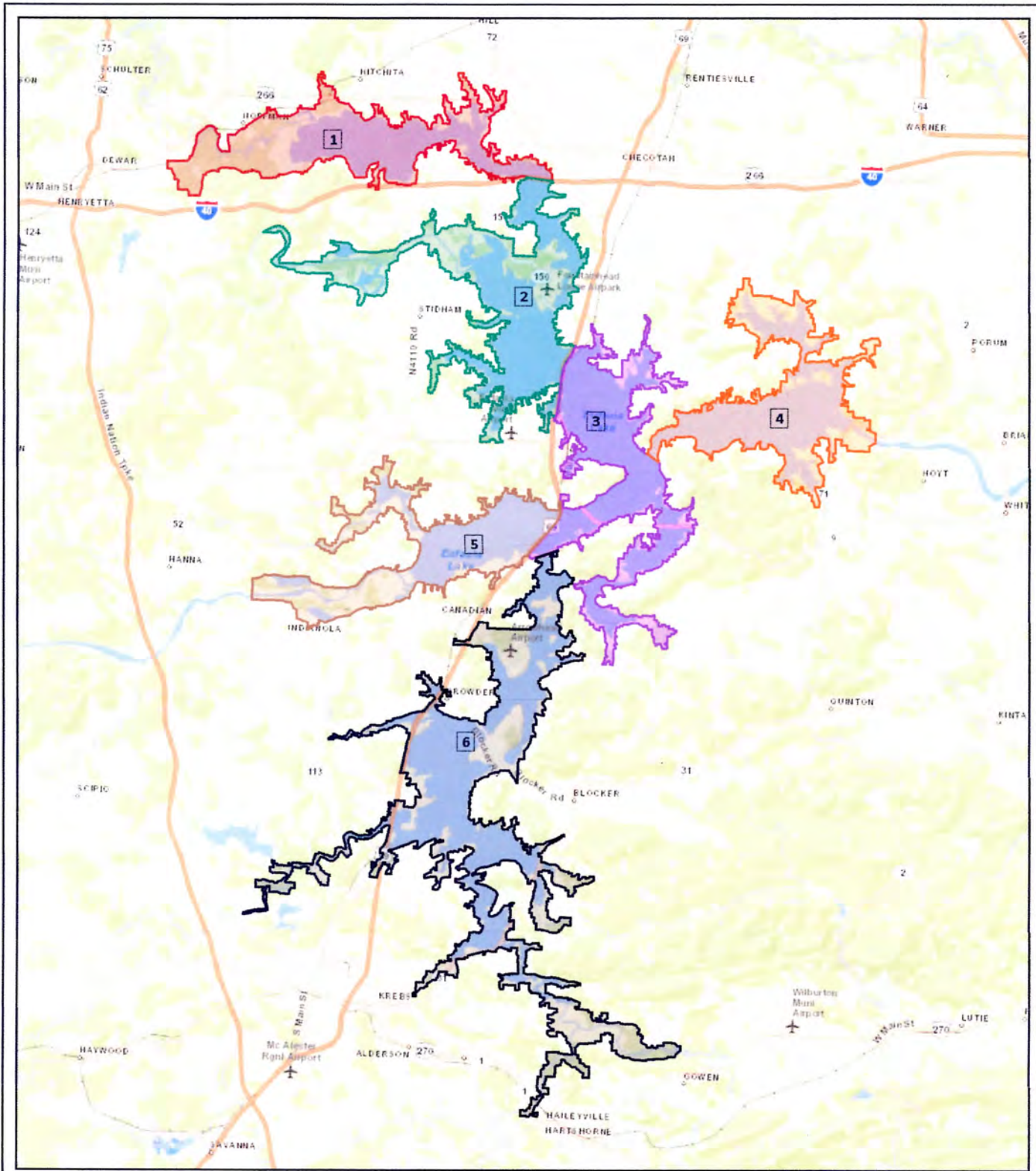
Date: _____

Cell Phone Contacts

Team Number	Team Leader Name and Number	Team Member Name	Cell Phone Number
1			
1			
2			
2A			
2B			
2B			
2C			
3			
3A			
3A			
3B			
4			
4A			
4B			
4C			
Helicopter			
Helicopter			
All	Michael Belvin	Michael Belvin	210-439-9486
All	Brad Keshlear	Brad Keshlear	404-309-4598

Recreation Study/Survey Terminology

Terminology	Description/Definition
Boat Launch Lane	The lane used for launching a boat on from a boat ramp. A boat ramp can have multiple launch lanes.
Boat Ramp	A developed, improved surface for the launching of boats. Concrete is the standard surface for boat ramps.
Car Parking Space	A marked or painted stripe, delineating the area for parking a vehicle.
Car/Trailer Parking Space	A marked or painted stripe, delineating the area for parking a vehicle with a trailer attached.
Designated/Developed Recreation Area	An area designed, developed and operated to provide outdoor recreation opportunities.
Dispersed Use Recreation	The visitation that occurs on USACE land and water that is located outside of designated recreation areas and which is not captured via any type of traffic counting device.
Dry Dock/Rack Storage	Boat storage on land or stack system. Boats are moved to and from the water using a specialized fork lift
Gate Attendant	A Person that controls entry to a recreation area, where fees are typically charged.
Lake Area Number	For this recreation study, Eufaula Lake has been divided into six areas and each assigned a lake area number one through six.
Land/Water Interface Recreation	Outdoor recreation activities and/or facilities that require the use of both land and water. Examples include; fishing from the shoreline, boat ramps, swimming beaches, etc.
Land-based Recreation	Outdoor recreation activities and/or facilities that occur entirely on land.
Moorage	A location, on the water, where a boat is securely stored when not being used.
Project Master Plan	The primary document that provides overall guidance for recreation area and facility development at a USACE Civil Works Project, such as Eufaula Lake.
Recreation Facility	Facilities in a recreation area, designed and used for outdoor recreation purposes. Examples include; campsites, boat ramps, swim beaches, picnic sites, etc.
Shoreline Management Plan	A plan, which establishes guidelines for balancing public and private use of shorelines, to ensure resource protection and safety for use by the general public. The plan designates segments of shoreline for certain public and private uses.
Tethered Boat	A boat that is temporarily tied to a stationary object when not actively being used for recreation.
Undesignated Parking	Vehicular parking that occurs anywhere not specifically designed or designated to accommodate vehicle. Examples include; parking on sides of roads and parking on grass areas.
Undesignated Recreation Area	An area used for recreation that was not designed or intended to be used for recreational purposes. Examples include natural sand bars or areas of sandy shoreline not within the confines of a developed and designated recreation area.
Vessel	Any type of craft that can be operated on or in the water.
Water-based Recreation	Recreation that occurs solely on or in the water. Examples include; boating, water skiing, swimming, etc.
Wet Slip	A designated space on the water for storing a boat. Typically located at a marina or private boat dock.



Legend

Lake Area	
 1	 4
 2	 5
 3	 6



U.S. Army Corps of Engineers
 Tulsa District
 Lake Eufaula SMP & EIS
 Lake Areas

Created: February 28, 2012

Basemap Source: ESRI World Street Map

