

## MEMORANDUM THRU CEMVS-OD-T

FOR CEMVS-PM-E

SUBJECT: Mark Twain Lake, Salt River, Missouri, Supplement No. 6, Design Memorandum No. 9, The Master Plan.

## 1. Reference:

- a. ER 1105-2-100, Appendix E, Section E, Section VII, Recreation, paragraph E-48, 2002.
- b. ER 1130-2-550, Chapter 3: Project Master Plans and Operational Master Plans, approved 15 August 2002.
- c. Mark Twain Lake Master Plan, Design Memorandum No. 9, Salt River, Missouri, 2004.
- d. EM 1110-1-400, Engineering and Design: Recreation Facility and Customer Services Standards, 1 November 2004. All proposed facilities will be in accordance with these standards.

2. Purpose: The purpose of this supplement is to request approval for the addition of new facilities. This proposal will improve safety, customer service, promote quality outdoor experiences, and encourage overall health and well being by providing facilities that meet current standards and visitor demand. Visitation and user fees are projected to increase.

3. Project Description: The proposed actions included in this supplement are described in the following paragraphs. Plates graphically depicting the proposed actions are enclosed at the end of this supplement.

Indian Creek Multi-Use Trail: This action includes construction of a 4.4-mile multi-use trail system, within the Indian Creek Recreation Area. This trail system consists of a connector trail, beach trail, loop 1, loop 2, and loop 3. The trail surface will consist of crushed limestone suitable for bicycle and pedestrian traffic. It would conjoin 190 electric campsites, boat launching access, primitive camping, an educational amphitheatre, 2-acre fishing pond and a swimming beach. The anticipated life span of this trail is 30 years. Periodic maintenance and future O&M costs will be mitigated through the FOREST (Friends of Recreation and Environmental Stewardship) Council and/or volunteer contributions. Construction methods follow EM 1110-1-400: Engineering and Design: Recreation Facility and Customer Services Standards. The Indian Creek Recreation Area is comprised of 2,775 acres of oak and hickory forests and makes up approximately 10% of the lake's population, or 220,000 visitors annually.

Mark Twain Lake, in partnership with Western Illinois University (WIU) and the FOREST Council, was the successful recipient of a \$21,000 FY2013 Handshake Program Grant sponsored by USACE Headquarters. This grant will fund the construction of the Connector Trail and

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Beach Trail, equating to 1.4 miles. The approximate cost basis of partnership initiative is as follows: 33.6% USACE-HQ Grant Funding; 34.4% Corps of Engineers; 7.6% WIU; and 24.4% FOREST Council. The cost estimate for this action is \$62,476.53 without contingencies.

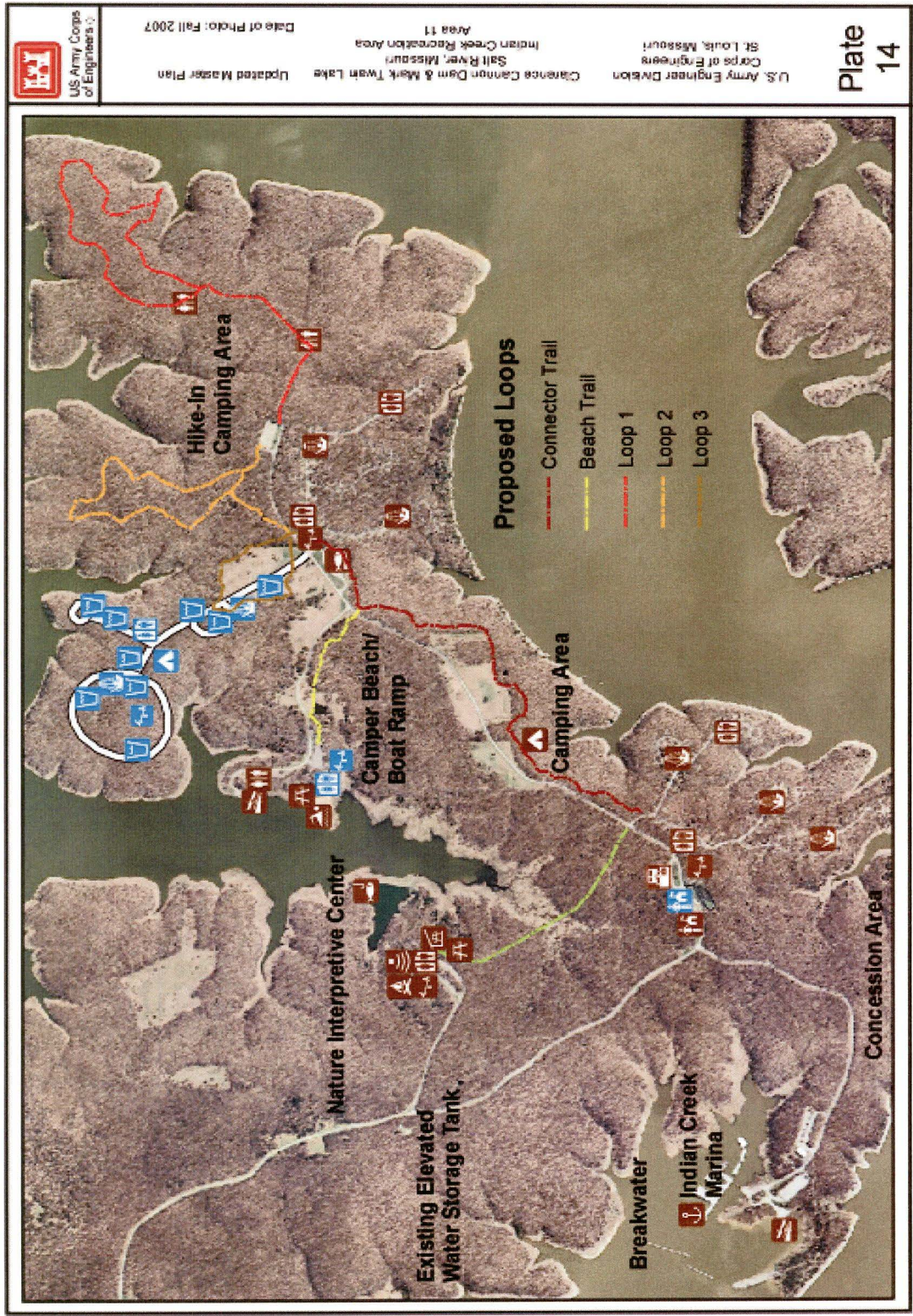
The development of 3 additional phases including Loop 1, Loop 2, and Loop 3 are pending completion of future partnerships, funding, and environmental clearance. It will address customer concerns and demands by providing alternative transportation routes, increasing safety, and encouraging overall health and well being. It is anticipated that this action will increase customer satisfaction, increase visitation, and promote increased volunteer contributions. Mark Twain Lake is currently seeking a partnering opportunity to develop the facility in order to maintain compliance with the Master Plan and Partnering Requirements for installation of additional trails. The cost estimate for this action is \$135,695.80 without contingencies.

4. Cost Estimate: The preliminary estimated cost of the project described above is \$198,172.33. With a 25% contingency, the project is estimated at \$247,715.40; the contingency is presented for any unforeseeable circumstances. A field estimate of costs for the proposed actions is included in Appendix A.

5. Environmental Compliance: Environmental compliance requirements were addressed through submission of Environmental Checklist dated December 12, 2012, for the connector and beach trails. Environmental compliance is required for the remaining trail sections and will be completed at a later date.

6. Conclusions: The proposed projects address identified needs at Mark Twain Lake and are an appropriate proposal to meet the demand for recreational facilities. The proposed actions are in accordance with the Mark Twain Lake Master Plan and Corps of Engineers' regulations and policies. Approval of this supplement is recommended.





U.S. Army Corps of Engineers  
 Indian Creek Recreation Area  
 Sall River, Missouri  
 Area 11  
 Updated Master Plan  
 Date of Photo: Fall 2007

U.S. Army Engineer Division  
 Corps of Engineers  
 St. Louis, Missouri  
 Plate 14



## Appendix A - Field Estimate of Cost - Indian Creek Multi-Use Trail

Location	Proposed Action	Purpose	Qty	Unit	Total Cost	Cost (w/ 25% Contingency)	Funding Source	Environmental Compliance
Connector Trail	Construct Trail	New	1	mile(s)	\$44,626.15	\$55,782.69	Handshake Agreement, WIU, FOREST Council, Corps	Environmental Checklist Completed
Beach Trail	Construct Trail	New	0.4	mile(s)	\$17,850.38	\$22,312.98	Handshake Agreement, WIU, FOREST Council, Corps	Environmental Checklist Completed
Loop 1	Construct Trail	New	1.53	mile(s)	\$68,293.64	\$85,367.05	Funding Source Not Determined At This Time	Environmental Checklist will be Completed at a Later Date.
Loop 2	Construct Trail	New	0.96	mile(s)	\$42,851.71	\$53,564.64	Funding Source Not Determined At This Time	Environmental Checklist will be Completed at a Later Date.
Loop 3	Construct Trail	New	0.55	mile(s)	\$24,550.45	\$30,688.06	Funding Source Not Determined At This Time	Environmental Checklist will be Completed at a Later Date.
TOTAL:			4.44	miles	\$198,172.33	\$247,715.41		

18 July 2013

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Approved \_\_\_\_\_ Disapproved \_\_\_\_\_

19 JUL 2013