

21 September 2011

MEMORANDUM THRU CEMVS-OD-T/Schutte

FOR CEMVS-PM-E

SUBJECT: Mark Twain Lake, Missouri, Supplement No. 5, Design Memorandum No. 9, The Master Plan.

1. Reference:

- a. ER 1130-2-550, Chapter 3: Project Master Plans and Operational Master Plans, approved 15 August 2002
- b. EM 1110-1-400, Engineering and Design: Recreation Facility and Customer Services Standards, 1 November 2004
- c. Mark Twain Lake Master Plan, Design Memorandum No 9, Salt River, Missouri, 2004

2. Purpose: The purpose of this supplement is to request approval for the construction of two new restroom facilities, three equine campsites and a trail in the Frank Russell and John F. Spalding Recreation Areas at Mark Twain Lake. These proposals will address recreational facilities that have been identified as insufficient for providing quality outdoor experiences. It is projected that subject proposals will improve customer service by providing quality facilities that meet current standards, visitor demand and operational needs. It is also projected that the proposals will realize an increase in visitation and user fees.

3. Project Description: The proposed projects in this supplement are described in the following paragraphs.

a. Frank Russell Recreation Area/Northeast Missouri Environmental Stewardship Demonstration Area Restroom Facility (Plate 1). This action includes the development of a restroom facility in the Frank Russell Recreation/NEMOESDA Area. Mark Twain Lake, in partnership with the Show-Me Missouri Back Country Horsemen/NEMO River Valley Chapter, was the successful recipient of the 2010/2011 Recreational Trails Program Grant. A portion of this \$75,000.00 grant, sponsored by the Missouri Department of Natural Resources and the Federal Highway Administration, will fund the acquisition and some of the installation costs of a pre-fabricated concrete, ADA compliant, dual compartment, waterborne restroom facilities as shown in Figure 3.

The approximate cost basis of the partnership initiative is as follows: 78% MODNR/FHWA Grant Funding; 17% Corps of Engineers; and 5% Show-Me Missouri Back Country Horsemen. The Friends of Recreation and Environmental Stewardship (FOREST) Council have agreed to perform long term maintenance activities to support the structure through volunteer efforts, reducing project O&M costs. This action is in compliance with the current project Master Plan and the Corps' partnering requirements for installation of new recreation structures.

This project will serve the visitors of the Joanna Multi-Use Trail, the Frank Russell ADA Recreational Pond, and NEMO Environmental Stewardship Demonstration Area by addressing public health and safety issues at the respective facilities. This action supports the missions of environmental stewardship, recreation, and meets customer demand. The cost estimate for this action is \$65,226.00.

b. Joanna Multi-Purpose Trailhead/John F. Spalding Recreation Area Restroom Facility (Plate 2). This action includes the development of a restroom facility in the John F. Spalding Recreation Area supporting the Joanna Multi-Purpose Trailhead. Mark Twain Lake, in partnership with the Show-Me Missouri Back Country Horsemen/NEMO River Valley Chapter, was the successful recipient of the 2010/2011 Recreational Trails Program Grant. A portion of this \$75,000.00 grant, sponsored by the Missouri Department of Natural Resources and the Federal Highway Administration, will fund the acquisition and some of the installation costs of a single compartment restroom facility as shown in Figure 2.

The approximate cost basis of the partnership initiative is as follows: 57% MODNR/FHWA Grant Funding; 35% Corps of Engineers; and 8% Show-Me Missouri Back Country Horsemen. The Friends of Recreation and Environmental Stewardship (FOREST) Council have agreed to perform long term maintenance activities to support the structure through volunteer efforts, reducing project O&M expenses. This action is in compliance with the current project Master Plan and Corps' partnering requirements for installation of new recreation structures.

This project will serve the visitors of the Joanna Multi-Use Trail by addressing public health and safety issues at the facility. This action supports the missions of environmental stewardship, recreation, and meets customer demand. The cost estimate for this action is \$43,366.00.

c. Frank Russell Recreation Area Equine Camping Facility: This action includes the development of three hardened campsites in the Frank Russell Recreation Area in proximity to the Joanna Trail Corral. Currently, equine recreational users are permitted to board their horses/mules in the corral, but have to camp in the Joanna Loop of the Frank Russell Campground. Because of numerous factors, such as the horse/mule care requirements, distance between corral and campsites, and limited visibility of the corralled stock from the campsites, many equine recreational users find the camping conditions undesirable. Many seek alternative boarding and camping accommodations due to these factors.

It is proposed to develop three hardened campsites in the area directly adjacent to the corral. The campsites will feature hardened surface trailer pads, gravel impact areas, a picnic table, ground grill, lantern hanger, and 50 amp electric service. See Figure 1 for a typical campsite design. There is also potential to include water and sewer utilities in the future. The hardened sites will provide a favorable recreation environment for most equine recreational users, as most enthusiasts possess stock trailers that are outfitted with living quarters. This activity will occur outside the developed campground maintaining a defined separation of recreational uses, but close enough to utilize existing facility utility infrastructure. It will address customer concerns and demands by providing a camping facility that permits equine enthusiasts to maintain their equipment and stock at the same location.

It is anticipated that this action will increase customer satisfaction, increase visitation, and promote increased volunteer contributions. Mark Twain Lake is currently seeking a partner to develop the facility in order to maintain compliance with the current Master Plan and Corps' partnering requirements for installation of new recreation structures. The cost estimate for this action is \$45,000.00. The benefit-cost ratio for this facility has been estimated at 2.9 as shown in Table 1.

d. NEMOESDA Environmental Adventure Trail. The Northeast Missouri Environmental Stewardship Demonstration Area, located in the Frank Russell Recreation Area, is a regional cooperative project that provides a consolidated venue for multiple responsible stewardship and recreational disciplines. As part of the initiative, a recreational/interpretive trail will be developed to foster outdoor experiences, educational opportunities, and interaction between the cooperating partners and the visiting public. The trail will be approximately 5.0 miles in length, possess a natural surface, and traverse through mature oak/hickory forests, immature mixed hardwood forest, native prairie, and old field environments.

Trail construction will be accomplished through contributions of the Friends of Recreation and Environmental Stewardship (FOREST) Council. It will be in compliance with the current project Master Plan and Corps' partnering requirements for new recreation structures. It is anticipated that the trail will increase visitation and address recreation use demands. The cost estimate for this action is \$15,000.00.

4. Cost Estimate: The estimated cost of the proposed projects is \$168,592.00.

5. Environmental Compliance: Environmental compliance requirements are being addressed through submission of an Environmental Checklist dated September 21, 2011. A biological assessment was also prepared for impacts associated with the John F. Spalding restroom.

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

Table 1 – Cost Benefit Analysis for Frank Russell Equine Campsites								
Frank Russell Recreation Area Equine Campsites	Days	Occupancy Rate	Total Days Occupied	Daily Increase in Fee	Subtotal Per Campsite	Number of Campsites	Total Annual Revenue	Initial Cost
New hardened equine sites	180	0.45	81	\$16.00	\$1,296.00	3	\$3,888.00	\$15,000.00
Benefits					\$3,888.00			
Costs								
Increased O&M expenses					\$300.00			
Annual Construction Cost					\$1,024.64			
Total Costs					\$1,324.64			
Benefit/Cost Ratio					2.9			

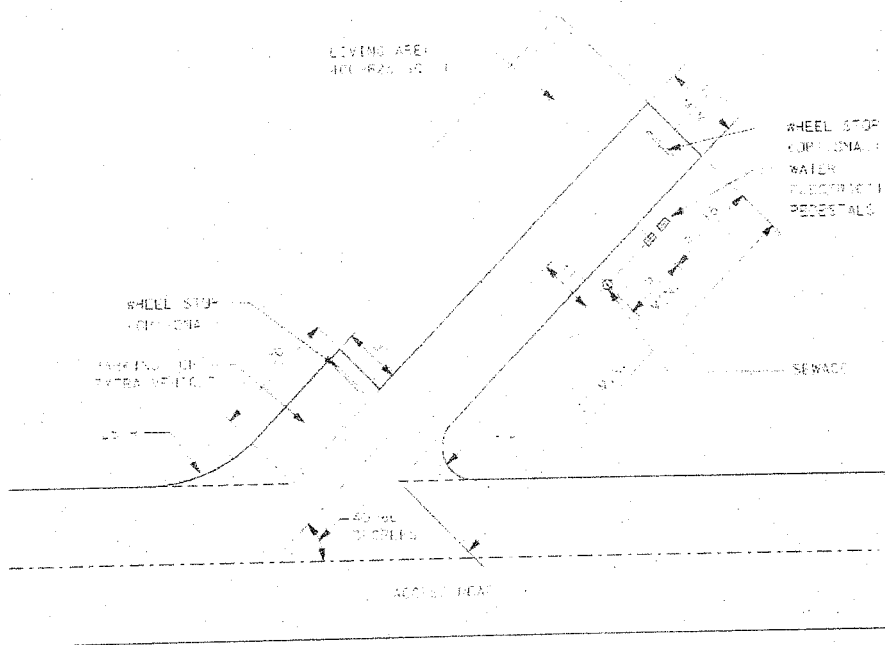


Figure 1- Typical Design for Campsite

- A. EXTERIOR FINISH - SIMULATED BARNWOOD EXTERIOR FINISH;
CONCRETE PIGMENT OR STAIN
- B. ROOF - SIMULATED CEDAR ROOF; CONCRETE PIGMENT OR
STAIN
- C. DOOR - (TYP 2 PLCS) 3'-0" X 6'-8" 1/2 GAUGE, GRADE II HEAVY
DUTY GALVANIZED DOOR WITH POLYURETHANE FOAM CORE,
VANDAL PROOF TENSION HINGES, DOMESTORY STYLE LOCK,
ADA ACCESSIBLE
- D. VENTS - 16" X 16" FIXED LOUVER & ROBERTI SCREEN
- E. WINDOW - (TYP 2 PLCS) 10" X 30" POLYCARBONATE WINDOW
WITH STEEL FRAME
- F. EXHAUST FAN - LOUVERED EXHAUST FAN TO ACTIVATE WITH
LIGHTS, FAN TO BE COVERED WITH STEEL FAN SHROUD,
PAINTED TO MATCH DOORS.
- G. EXTERIOR LIGHT - EXTERIOR 35WATT PROTECTOR LIGHT
- H. EXTERIOR SIGNS - ADA ACCESSIBLE AND RESTROOM SIGN
- I. INTERIOR WALLS & CEILING TO BE COATED WITH TWO PART
EPOXY COLOR WHITE
- J. FLOOR - COATED WITH TWO PART EPOXY COLOR GRAY
- K. GRAB BARS - 36" (SS) 1/2 42" (SS) 1/2 19" (SS) GRAB BARS
- L. TOILET - VITREOUS CHINA, WALL MOUNT TOILET WITH
CONCEALED PUSHBUTTON FLUSH VALVE
- M. URINAL - VITREOUS CHINA, WALL MOUNT TOILET WITH
CONCEALED PUSHBUTTON FLUSH VALVE
- N. TOILET PAPER HOLDER - (SS) SLOW ROLLING ADA DOUBLE
TOILET PAPER HOLDERS, LOCKABLE
- O. SINK - VITREOUS CHINA, WALL MOUNT SINK, INDEX
PUSHBUTTON SINK FAUCET
- P. SERVICE PANEL - 100 AMP SERVICE PANEL
- Q. GFI RECEPTACLE - (TYP 2 PLCS) 30 RECEPTACLES LOCATED
NOM TO SINK & CLOSET AREA
- R. HAND DRYER - CONCEALED HAND DRYER
- S. COAT HOOKS - (SS) TWO PRONG COAT HOOK
- T. MIRROR - 18" X 24" STAINLESS STEEL MIRROR

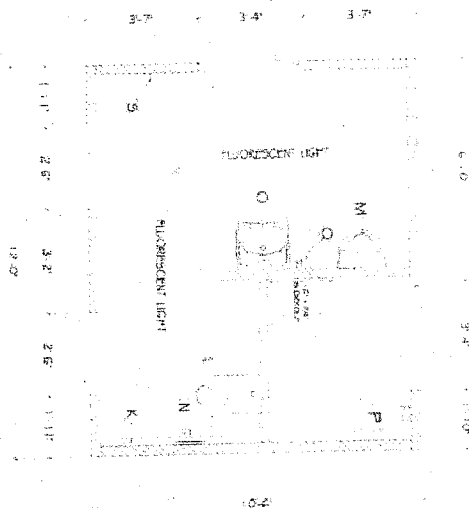


Figure 2- Typical Single Restroom Design

- 1A (2) VENTILATION FAN
- 1B (2) EXTERIOR PHOTOCELL
- 1C 150AMP NEMA SERVICE PANEL
- 1D FLUORESCENT L (3) BULB

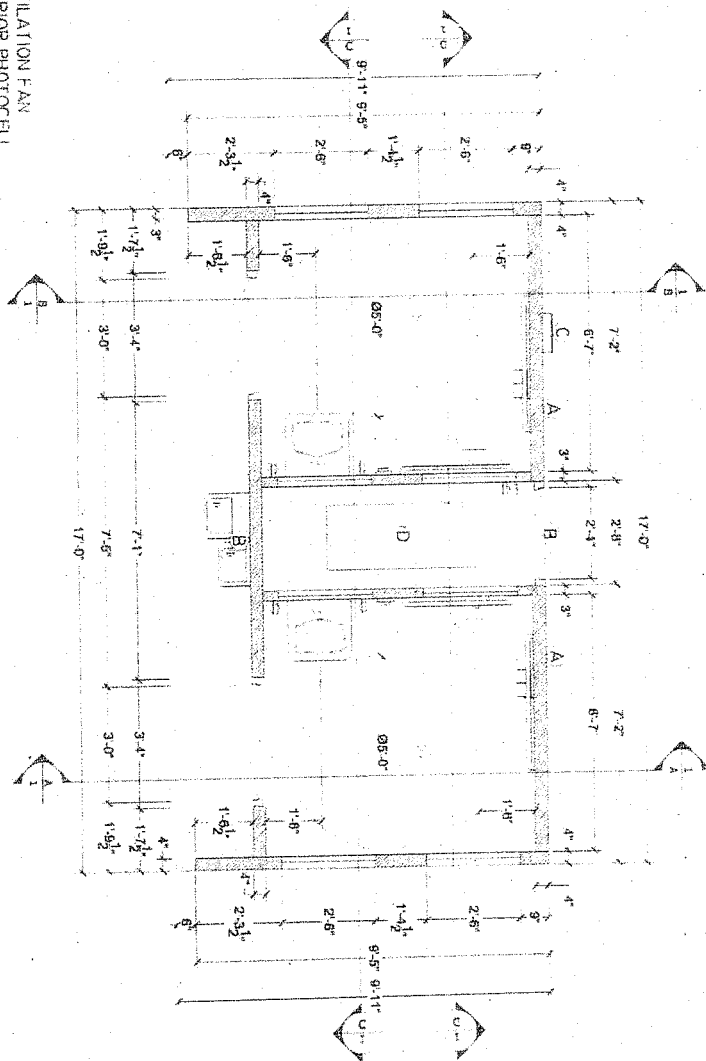
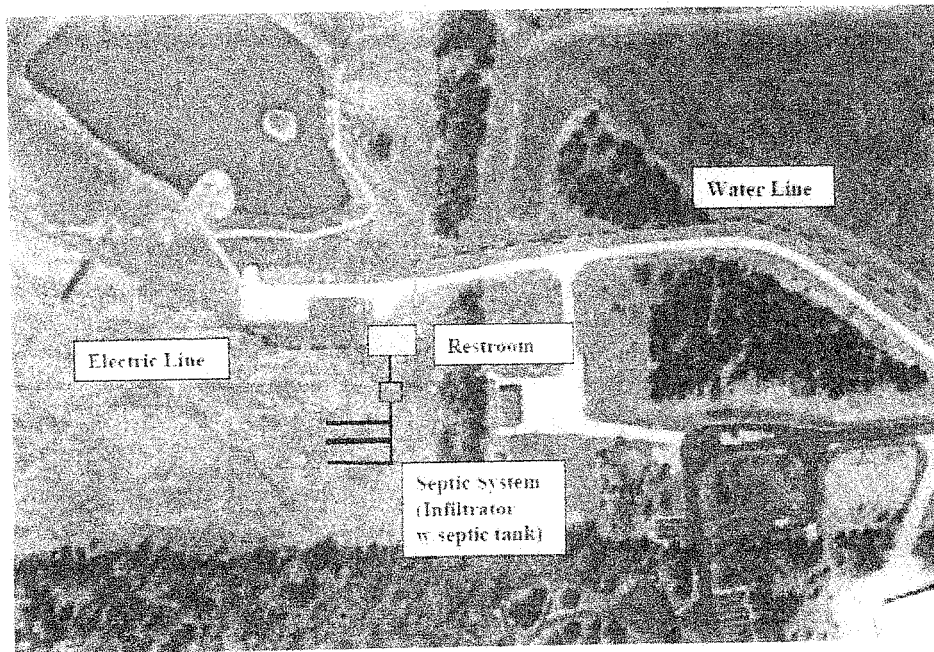


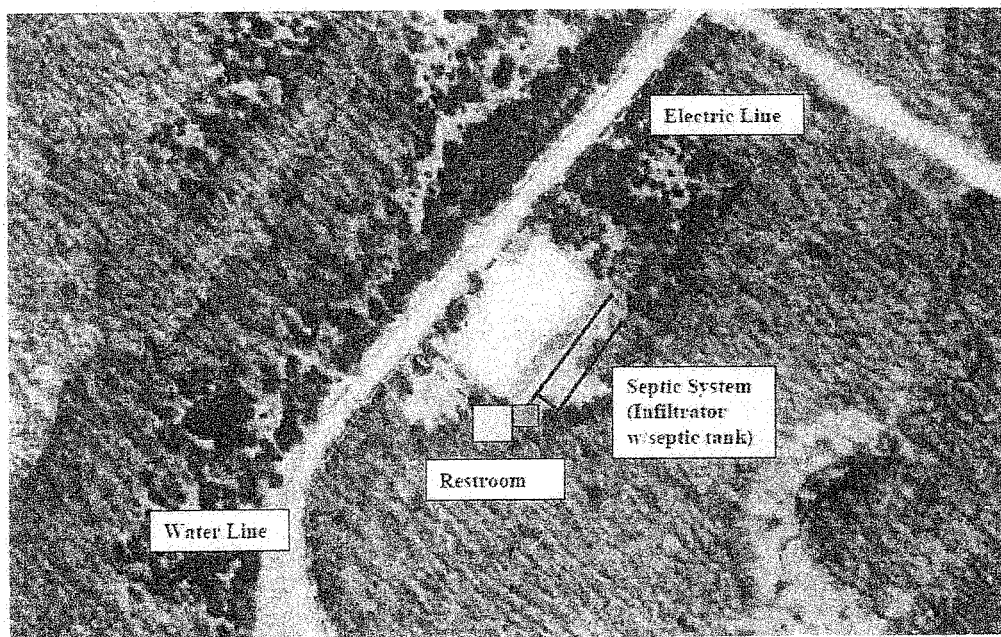
Figure 3 - Typical Double Restroom Design



US Army Corps
of Engineers

Clarence Cannon Dam and Mark Twain Lake
NEMOESDA Area
Frank Russell Recreation Area
Dual Room, Waterborne ADA Accessible Restroom - Utility Locations
T55N, R7W, Section 23
Missouri Department of Natural Resources Recreational Trails Program

Plate 1



US Army Corps
of Engineers

Clarence Cannon Dam and Mark Twain Lake
Joanna Multi-Purpose Trail
John Spalding Recreation Area
Single Room, Waterborne ADA Accessible Restroom - Utility Locations
T85N, R7W, Section 15
Missouri Department of Natural Resources Recreational Trails Program

Plate 2

1

DATE: September 24, 2011

LOCATION: Frank Russell Recreation Area

LEGAL DESCRIPTION: T 55N R 7W S 23 COUNTY: Ralls County

The scope of the project is the development of a restroom facility in the Frank Russell Recreation/NEMO/USDA Area, Mark Twain Lake, in partnership with the Show-Me Missouri Back Country Horsemen/NEMO River Valley Chapter, was the successful recipient a \$75,000.00 Recreational Trails Program Grant. The grant will fund the acquisition of a pre-fabricated concrete, dual compartment, ADA compliant, waterborne restroom facility. The project also includes installation of underground electric service, waterline installation, sidewalks, and on-site septic system installation. (Reference attached map.)

IS THIS ACTIVITY INCLUDED IN THE MASTER PLAN? YES ☐ NO ☒ Initial 2/20

IS THIS ACTIVITY INCLUDED IN THE OMP? YES ☐ NO ☒ Initial LE

IS THIS ACTIVITY INCLUDED IN A WORKPLAN? YES ☐ NO ☒ Initial:

IS THIS ACTIVITY INCLUDED IN THE PMP? YES ☐ NO ☒ Initial *[Signature]*

Project Manager initiating Environmental review 10/2/2014 10:00 AM DAF: 10/2/2014 10:00 AM

Operation Manager's review _____ DATE _____

Technical Operations review (OD-T) Dyn 11 Weber DATE: 9/23/11

Recommended Action

PM-1 (Biological review required) YES ☐ (9/2/80)

11-2 Cultural review required YES ☐ (YES) ☐ (NO)

Did anyone contact you? YES ☐

11-111 Further action required YES ☐ Action

111

✓ ☒ 100

Initials: TKG

initials

100

Initial X

DATE: 9/23/2011

DATE: 9/23/11

DATE: 9/23/11

DATE: 9/26/11

CERCLA/RCRA REVIEW

Will the activity involve the storage of hazardous substances or materials (flammable/combustible, compressed gases, pesticides or acids)? YES ☐ NO ☒

If yes, list substances/materials: _____

If so will the site be covered in the spill plan? YES ☐ NO ☐

Will the activity result in a change of the hazardous waste generator status? YES ☐ NO ☒

Will the site store, accumulate or transfer hazardous waste? YES ☐ NO ☒

Will the activity result in a real property transaction? YES ☐ NO ☒
If yes, has a Environmental Baseline Survey been conducted? YES ☐ NO ☐

Is there a change in land use or the site Development Plan requiring a state permit or license? YES ☒ NO ☐

Will fuels be dispensed (temporarily or permanently) at the site? YES ☐ NO ☒

Does the activity involve the installation, removal or upgrade of storage tanks containing petroleum products, hazardous substances or wastes? YES ☒ NO ☐

Are there any pipelines located on the site? YES ☐ NO ☒

Will solid waste be generated at the site? YES ☐ NO ☒

Will construction, demolition or remodeling of facilities result in disturbance of asbestos, PCB's or Lead-Based Paint? YES ☐ NO ☒

Are there wastewater discharges associated with the activity regulated by outside agencies creating any of the following:

Stormwater runoff

Dredge fill

Wastewater treatment

Septic systems

Vehicle washing

Industrial waste systems

Lines which bypass treatment structures

requiring a National Pollution Discharge Elimination System (NPDES) permit?

YES ☒ NO ☐

Does the activity result in the operation of a public drinking water system, wellhead, swimming pool or beach regulated by state EPA or Public Health agencies or federal agencies enforcing the Clean Water Act? YES ☐ NO ☒

Will the activity involve construction, painting, venting or open burning that will require an Air Emissions Permit? YES ☐ NO ☒

NATURAL/CULTURAL RESOURCES REVIEW

Does the activity result in the removal of trees?

YES ☐

NO ☒

If YES, list the species name and number to be removed.

Are state and/or federal threatened/endangered/candidate species located in the project area?

YES ☒

NO ☐

If YES, list the species. Indiana Bat, Gray Bat

Will the project result in the modification or destruction of wetlands or the discharge of dredge material into the waters of the United States?

YES ☐

NO ☒

If YES, estimate the acreage to be altered.

Will the project result in the modification or destruction of farmland? YES ☐

NO ☒

If YES, estimate the acreage to be altered.

Does the proposed project area contain known cultural properties?

YES ☐

NO ☒

If YES, describe and list site numbers.

Has all or a portion of the proposed project area previously been professionally surveyed for cultural resources?

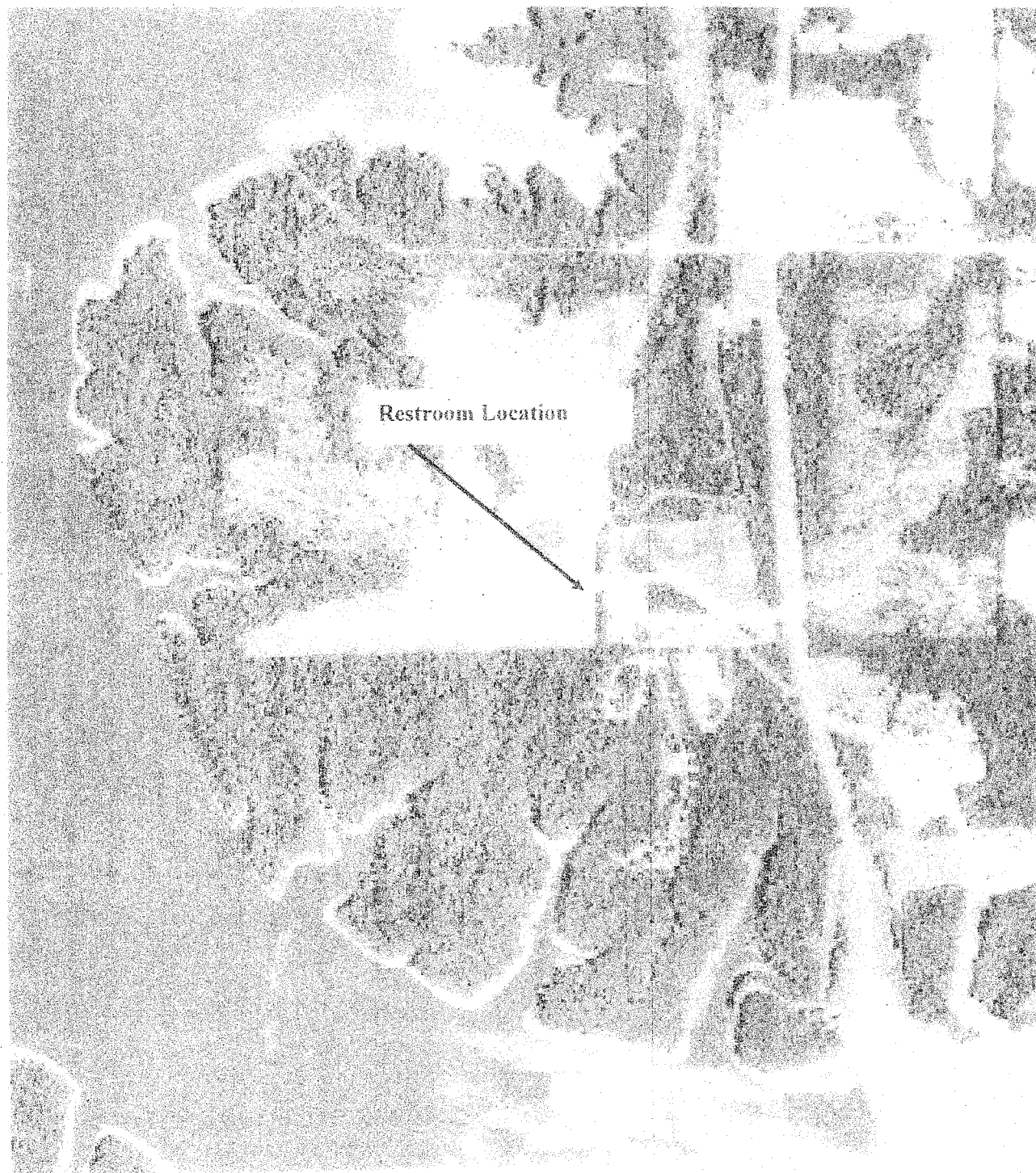
YES ☒

NO ☐

If YES, list dates. Reference the St. Louis District Historic Properties Management Report No. 47.

Historic Properties Data Synthesis Mark Twain Lake, Missouri, Volume 1& 2

Note -- Areas disturbed during initial development of the Clarence Cannon Dam (Material borrow site)



US Army Corps
of Engineers

Clarence Cannon Dam and Mark Twain Lake
Frank Russell Recreation Area

Master Plan Supplement No. 5, Design Memorandum No. 9
Frank Russell Recreation/Northeast Environmental Education Demonstration
Area - Restroom Facility

ENVIRONMENTAL CHECKLIST
For
ST. LOUIS DISTRICT CORPS PROJECTS

GENERAL INSTRUCTIONS: This checklist will be used to document environmental compliance under NEPA and Section 404/401 of the CWA on all new construction projects or real estate actions conducted at St. Louis District Corps Projects. The checklist also contains questions relating CERCLA and RCRA issues that will be used to evaluate the need for various local, state and federal permits. Please fill out pages 1-3 and forward to OIT.

DATE: September 21, 2011

NAME OF PROJECT: Master Plan Supplement No. 5, Design Memorandum No. 9, Frank Russell Recreation Area Equine Camping Facility

LOCATION: Frank Russell Recreation Area

LEGAL DESCRIPTION: T. 55N. R. 7W. S. 23 CO. 1N. E. 1, Ralls County, Missouri

BRIEF DESCRIPTION OF PROJECT (include photographs, maps and/or drawings):

This action includes the development of three hardened surface campsites in the Frank Russell Recreation Area in proximity to the Joanna Trail Corral. Development includes hardened trailer pads, gravel impact areas, picnic tables, ground grills, lantern hangers, and 50 amp electric service. The sites will provide a favorable recreation environment for equine recreational users, by providing a camping facility that permits maintenance of equipment and stock at the same location. This activity will occur outside the developed campground maintaining a defined separation of recreational uses. Development will be accomplished in partnership with the FOREST Council. (Reference attached map.)

ANTICIPATED EFFECTS ON THE ENVIRONMENT AS A RESULT OF PROCEEDING WITH THIS PROJECT:

IS THIS ACTIVITY INCLUDED IN THE MASTER PLAN? YES ☐ NO ☒ Initial *TKG*

IS THIS ACTIVITY INCLUDED IN THE OMP? YES ☐ NO ☒ Initial *TKG*

IS THIS ACTIVITY INCLUDED IN A WORKPLAN? YES ☐ NO ☒ Initial *TKG*

IS THIS ACTIVITY INCLUDED IN THE PMP? YES ☐ NO ☒ Initial *TKG*

Project Manager Initiating Environmental review *[Signature]* DATE: *9/23/11*

Operation Manager's review *[Signature]* DATE: *9/23/11*

Technical Operations review (OD-T) *Lynn D. Nelson* DATE: *9/23/11*

Recommended Action:

NEPA Biological review required	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> <i>9a</i>	Initials <i>TKG</i>	DATE <i>9/23/2011</i>
NEPA Cultural review required	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> <i>9a</i>	Initials <i>TKG</i>	DATE <i>9/23/11</i>
NEPA Review required	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> <i>9a</i>	Initials <i>TKG</i>	DATE <i>9/23/11</i>
NEPA Mitigation action required	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> <i>9a</i>	Initials <i>R</i>	DATE <i>9/23/11</i>

CERCLA/RCRA REVIEW

Will the activity involve the storage of hazardous substances or materials (flammable/combustible, compressed gases, pesticides or acids)?

YES ☐ NO ☒

If yes, list substances/materials: _____

If so will the site be covered in the spill plan?

YES ☐ NO ☐

Will the activity result in a change of the hazardous waste generator status?

YES ☐ NO ☒

Will the site store, accumulate or transfer hazardous waste?

YES ☐ NO ☒

Will the activity result in a real property transaction?

YES ☐ NO ☒

If yes, has a Environmental Baseline Survey been conducted? YES ☐ NO ☐

Is there a change in land use or the site Development Plan requiring a state permit or license?

YES ☐ NO ☒

Will fuels be dispensed (temporarily or permanently) at the site?

YES ☐ NO ☒

Does the activity involve the installation, removal or upgrade of storage tanks containing petroleum products, hazardous substances or wastes?

YES ☐ NO ☒

Are there any pipelines located on the site?

YES ☐ NO ☒

Will solid waste be generated at the site?

YES ☐ NO ☒

Will construction, demolition or remodeling of facilities result in disturbance of asbestos, PCB's or Lead-Based Paint?

YES ☐ NO ☒

Are there wastewater discharges associated with the activity regulated by outside agencies creating any of the following:

Stormwater runoff

Dredge fill

Wastewater treatment

Septic systems

Vehicle washing

Industrial waste systems

Lines which bypass treatment structures

requiring a National Pollution Discharge Elimination System (NPDES) permit?

YES ☐ NO ☒

Does the activity result in the operation of a public drinking water system, wellhead, swimming pool or beach regulated by state EPA or Public Health agencies or federal agencies enforcing the Clean Water Act?

YES ☐ NO ☒

Will the activity involve construction, painting, venting or open burning that will require an Air Emissions Permit?

YES ☐ NO ☒

NATURAL/CULTURAL RESOURCES REVIEW

Does the activity result in the removal of trees?

YES ☐

NO ☒

If YES, list the species name and number to be removed. _____

Are state and/or federal threatened/endangered/candidate species located in the project area?

YES ☒

NO ☐

If YES, list the species. Indiana Bat, Gray Bat

Will the project result in the modification or destruction of wetlands or the discharge of dredge material into the waters of the United States?

YES ☐

NO ☒

If YES, estimate the acreage to be altered. _____

Will the project result in the modification or destruction of Farmland? YES ☐

NO ☒

If YES, estimate the acreage to be altered. _____

Does the proposed project area contain known cultural properties? YES ☐

NO ☒

If YES, describe and list site numbers. _____

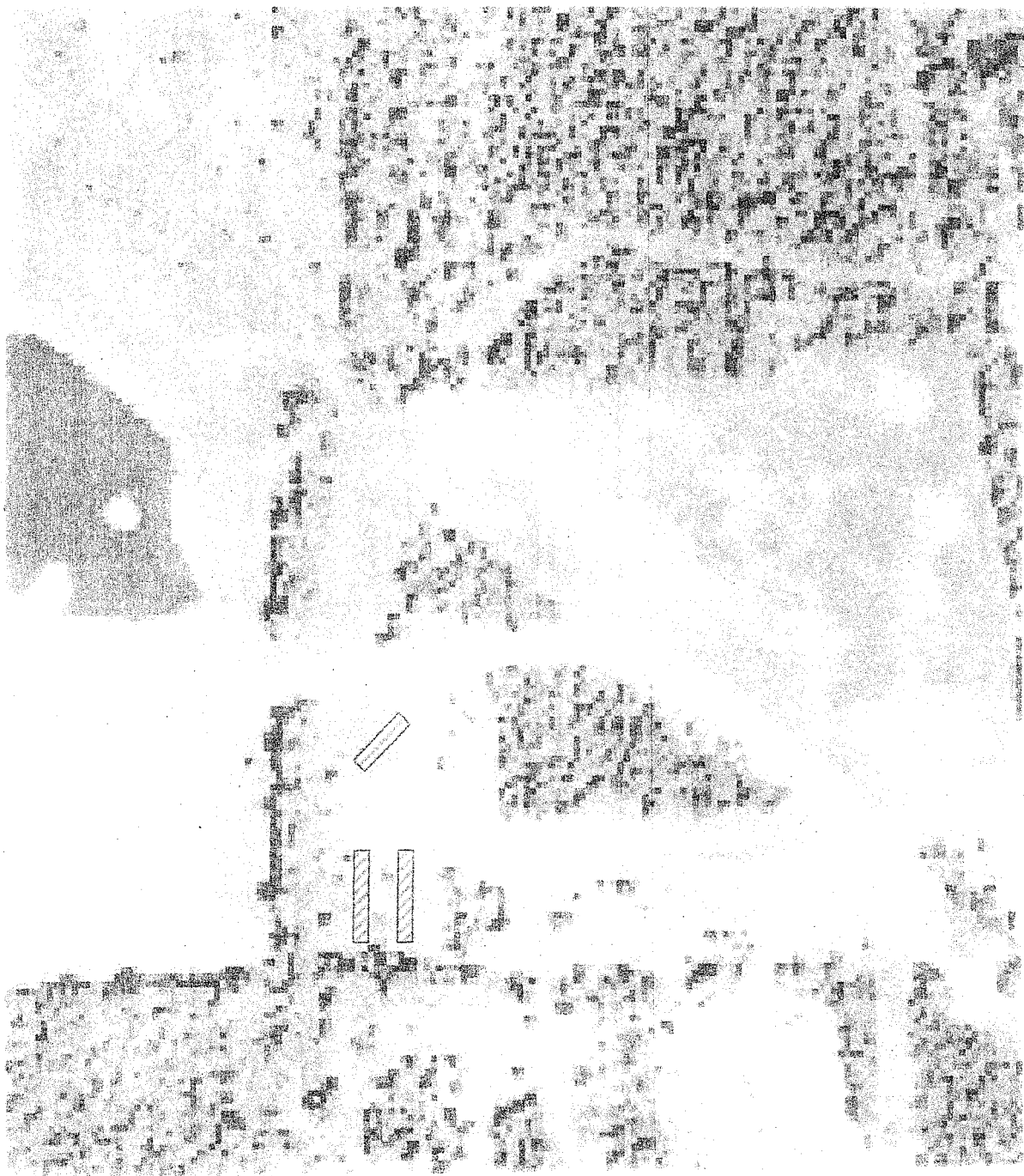
Has all or a portion of the proposed project area previously been professionally surveyed for cultural resources?

YES ☒

NO ☐

If YES, list dates. Reference the St. Louis District Historic Properties Management Report No. 47, Historic Properties Data Synthesis Mark Twain Lake, Missouri, Volume 1 & 2

Note - Areas disturbed during initial development of the Clarence Cannon Dam (Material borrow site), and the development of the Frank Russell Recreation Area.



US Army Corps
of Engineers

Clarence Cannon Dam and Mark Twain Lake
Frank Russell Recreation Area, Equine Camping Facility

Master Plan Supplement No. 5, Design Memorandum No. 9

③

DATE September 21, 2011

LOCATION Frank Russell Recreation Area

BRIEF DESCRIPTION OF PROJECT (include photographs, maps and/or drawings if

ANTICIPATED EFFECTS ON THE ENVIRONMENT AS A RESULT OF PROCEEDING WITH THIS PROJECT.

IS THIS ACTIVITY INCLUDED IN THE PMP? YES ☐ NO ☒ Initial CE

Technical Operations review (OD-T) Day Mela DATE: 9-23-11

Recommended Action

PHSA: Biological review required	YES	<input type="checkbox"/>	9a	ADHS	N/A	<input checked="" type="checkbox"/>	Initials	KG	DATE	2/23/11
PHSA: Clinical review required	YES	<input type="checkbox"/>	9b	ADHS	N/A	<input checked="" type="checkbox"/>	Initials	KG	DATE	2/23/11
PHSA: Review required	YES	<input type="checkbox"/>			N/A	<input checked="" type="checkbox"/>	Initials	KG	DATE	2/23/11
PHSA: Further action required	YES	<input type="checkbox"/>	Action		N/A	<input checked="" type="checkbox"/>	Initials	KG	DATE	2/23/11

CERCLA/RCRA REVIEW

Will the activity involve the storage of hazardous substances or materials (flammable/combustible, compressed gases, pesticides or acids)?

YES ☐ NO ☒

If yes, list substances/materials: _____

If so will the site be covered in the spill plan?

YES ☐ NO ☐

Will the activity result in a change of the hazardous waste generator status?

YES ☐ NO ☒

Will the site store, accumulate or transfer hazardous waste?

YES ☐ NO ☒

Will the activity result in a real property transaction?

YES ☐ NO ☒

If yes, has a Environmental Baseline Survey been conducted?

YES ☐ NO ☐

Is there a change in land use or the site Development Plan requiring a state permit or license?

YES ☐ NO ☒

Will fuels be dispensed (temporarily or permanently) at the site?

YES ☐ NO ☒

Does the activity involve the installation, removal or upgrade of storage tanks containing petroleum products, hazardous substances or wastes?

YES ☐ NO ☒

Are there any pipelines located on the site?

YES ☐ NO ☒

Will solid waste be generated at the site?

YES ☐ NO ☒

Will construction, demolition or remodeling of facilities result in disturbance of asbestos, PCB's or Lead-Based Paint?

YES ☐ NO ☒

Are there wastewater discharges associated with the activity regulated by outside agencies creating any of the following:

Stormwater runoff

Dredge fill

Wastewater treatment

Septic systems

Vehicle washing

Industrial waste systems

Lines which bypass treatment structures

requiring a National Pollution Discharge Elimination System (NPDES) permit?

YES ☐ NO ☒

Does the activity result in the operation of a public drinking water system, wellhead, swimming pool or beach regulated by state EPA or Public Health agencies or federal agencies enforcing the Clean Water Act?

YES ☐ NO ☒

Will the activity involve construction, painting, venting or open burning that will require an Air Emissions Permit?

YES ☐ NO ☒

NATURAL/CULTURAL RESOURCES REVIEW

Does the activity result in the removal of trees?

YES ☐

NO ☒

If YES, list the species name and number to be removed. _____

Are state and/or federal threatened/endangered/candidate species located in the project area?

YES ☒

NO ☐

If YES, list the species. Indiana Bat, Gray Bat

Will the project result in the modification or destruction of wetlands or the discharge of dredge material into the waters of the United States?

YES ☐

NO ☒

If YES, estimate the acreage to be altered. _____

Will the project result in the modification or destruction of Farmland? YES ☐ NO ☒

If YES, estimate the acreage to be altered. _____

Does the proposed project area contain known cultural properties?

YES ☐

NO ☒

If YES, describe and list site numbers. _____

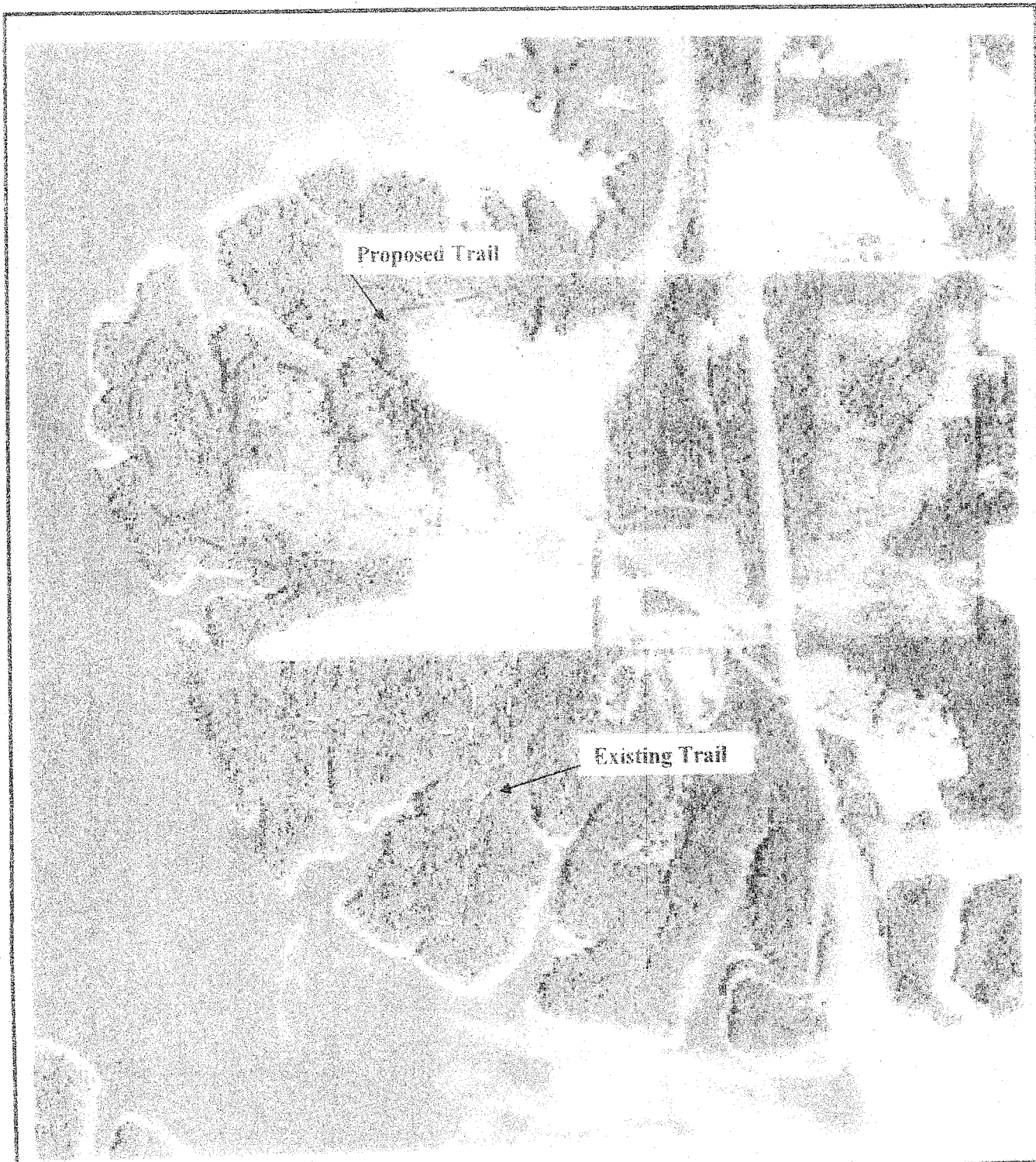
Has all or a portion of the proposed project area previously been professionally surveyed for cultural resources?

YES ☒

NO ☐

If YES, list dates. Reference the St. Louis District Historic Properties Management Report No. 47.

Historic Properties Data Synthesis Mark Twain Lake, Missouri, Volume 1 & 2



US Army Corps
of Engineers

Clarence Cannon Dam and Mark Twain Lake
Frank Russell Recreation Area

Master Plan Supplement No. 5, Design Memorandum No. 9
Frank Russell Pond - NEMOESDA Environmental Adventure Trail

4

ENVIRONMENTAL CHECKLIST

For
ST. LOUIS DISTRICT CORPS PROJECTS

GENERAL INSTRUCTIONS: This checklist will be used to document environmental compliance under NEPA and Section 101-401 of the CWA on all new construction projects or real estate actions conducted in St. Louis District COB Projects. The checklist also contains questions relating CERCCLA and RCRA issues that will be used to evaluate the need for various local, state and federal permits. Please fill out pages 1-3 and forward to COB.

DATE: September 21, 2011

NAME OF PROJECT: Master Plan Supplement No. 5, Design Memorandum No. 9, Joanna Multi-Purpose Trailhead/John F. Spalding Recreation Area Restroom Facility

LOCATION: John F. Spalding Recreation Area

LEGAL DESCRIPTION: T 55N R 7W S 15 COUNTY: Ralls County

BRIEF DESCRIPTION OF PROJECT (include photographs, maps and/or drawings):

The scope of the project is the development of a restroom facility in the John F. Spalding Recreation Area to provide services for Joanna Multi-Use Trail, Mark Twain Lake, in partnership with the Show-Me Missouri Back Country Horsemen NEMO River Valley Chapter, was the successful recipient a \$75,000.00 Recreational Trails Program grant. The grant will fund the acquisition of a pre-fabricated concrete, single compartment, ADA compliant, waterborne restroom facility. The project also includes installation of underground electric service, waterline installation, sidewalks, and on-site septic system installation. (Reference attached map.)

ANTICIPATED EFFECTS ON THE ENVIRONMENT AS A RESULT OF PROCEEDING WITH THIS PROJECT

IS THIS ACTIVITY INCLUDED IN THE MASTER PLAN? YES ☐ NO ☒ Initial: [initials]

IS THIS ACTIVITY INCLUDED IN THE OMP? YES ☐ NO ☒ Initial: [initials]

IS THIS ACTIVITY INCLUDED IN A WORKPLAN? YES ☐ NO ☒ Initial: [initials]

IS THIS ACTIVITY INCLUDED IN THE PMPT? YES ☐ NO ☒ Initial: [initials]

Project Manager initiating Environmental review: [signature] DATE: [blank]

Operation Manager's review: [signature] DATE: [blank]

Technical Operations review (OD-T): [signature] DATE: 9/23/11

Recommended Action

NEPA Biological review required	YES <input checked="" type="checkbox"/> (CN 9a)	NO <input type="checkbox"/>	Initials: [initials]	DATE: 9/23/2011
NEPA Cultural review required	YES <input type="checkbox"/> (CN 9b)	NO <input checked="" type="checkbox"/>	Initials: [initials]	DATE: 9/23/11
NEPA Review required	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	Initials: [initials]	DATE: 9/23/11
NEPA Historic action required	YES <input type="checkbox"/> Action	NO <input checked="" type="checkbox"/>	Initials: [initials]	DATE: 9/23/11

Biological assessment required; EA not needed.

(4)

CERCLA/RCRA REVIEW

Will the activity involve the storage of hazardous substances or materials (flammable/combustible, compressed gases, pesticides or acids)? YES ☐ NO ☒

If yes, list substances/materials: _____

If so will the site be covered in the spill plan? YES ☐ NO ☐

Will the activity result in a change of the hazardous waste generator status? YES ☐ NO ☒

Will the site store, accumulate or transfer hazardous waste? YES ☐ NO ☒

Will the activity result in a real property transaction? YES ☐ NO ☒

If yes, has a Environmental Baseline Survey been conducted? YES ☐ NO ☐

Is there a change in land use or the site Development Plan requiring a state permit or license? YES ☒ NO ☐

Will fuels be dispensed (temporarily or permanently) at the site? YES ☐ NO ☒

Does the activity involve the installation, removal or upgrade of storage tanks containing petroleum products, hazardous substances or wastes? YES ☒ NO ☒ *h*

Are there any pipelines located on the site? YES ☐ NO ☒

Will solid waste be generated at the site? YES ☐ NO ☒

Will construction, demolition or remodeling of facilities result in disturbance of asbestos, PCB's or Lead-Based Paint? YES ☐ NO ☒

Are there wastewater discharges associated with the activity regulated by outside agencies creating any of the following:

Stormwater runoff

Dredge fill

Wastewater treatment

Septic systems

Vehicle washing

Industrial waste systems

Lines which bypass treatment structures

requiring a National Pollution Discharge Elimination System (NPDES) permit?

YES ☒ NO ☐

Does the activity result in the operation of a public drinking water system, wellhead, swimming pool or beach regulated by state EPA or Public Health agencies or federal agencies enforcing the Clean Water Act? YES ☒ NO ☐

Will the activity involve construction, painting, venting or open burning that will require an Air Emissions Permit? YES ☐ NO ☒

NATURAL/CULTURAL RESOURCES REVIEW

Does the activity result in the removal of trees?

YES ☒ NO ☐

If YES, list the species name and number to be removed. Oak and hickory 40 trees varying in size largest is DBH 16

Are state and/or federal threatened/endangered/candidate species located in the project area?

YES ☒ NO ☐

If YES, list the species: Indiana Bat, Gray Bat

Trees will be removed after November 1

Will the project result in the modification or destruction of wetlands or the discharge of dredge material into the waters of the United States?

YES ☐ NO ☒

If YES, estimate the acreage to be altered: _____

Will the project result in the modification or destruction of Farmland? YES ☐ NO ☒

If YES, estimate the acreage to be altered: _____

Does the proposed project area contain known cultural properties?

YES ☐ NO ☒

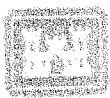
If YES, describe and list site numbers: _____

Has all or a portion of the proposed project area previously been professionally surveyed for cultural resources?

YES ☒ NO ☐

If YES, list dates. Reference the St. Louis District Historic Properties Management Report No. 47, Historic Properties Data Synthesis Mark Twain Lake, Missouri, Volume 1 & 2

Note – Areas disturbed during initial development of the road system to the Spalding Boat Ramp and the Joanna Multi-Use Recreation Trail Parking Lot

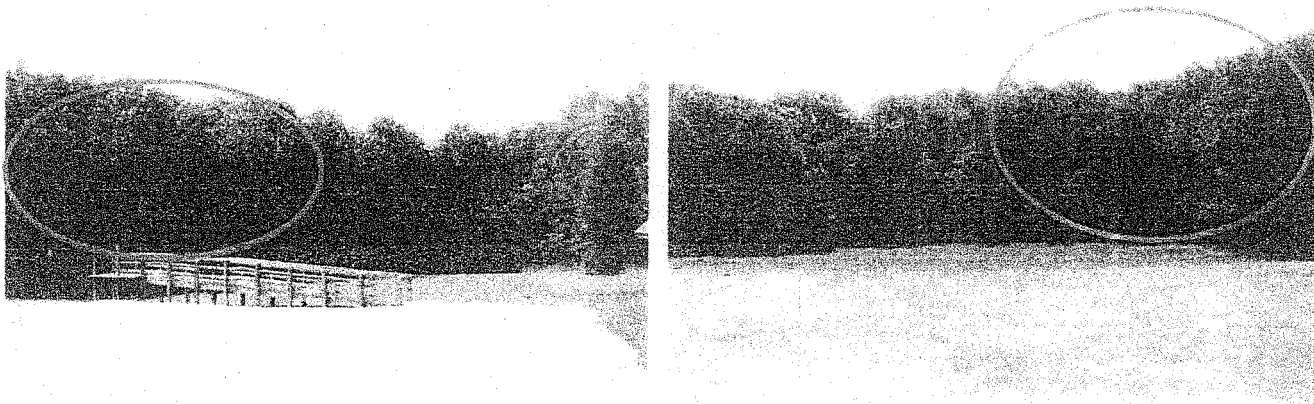


US Army Corps
of Engineers

Clarence Cannon Dam and Mark Twain Lake
John F. Spalding Recreation Area

Master Plan Supplement No. 5, Design Memorandum No. 9

Joanna Multi-Use Trail/John F Spalding Recreation Area Restroom
Facility



Area of Clearing



Type of Clearing



US Army Corps
of Engineers

Clarence Cannon Dam and Mark Twain Lake
John F. Spalding Recreation Area

Master Plan Supplement No. 3, Design Memorandum No. 9
John F. Spalding Recreation Area – Joanna Multi-Use Trail
Restroom Clearing

CEMVS-DE


9 NOV 2011

MEMORANDUM FOR CEMVS-PM-E

SUBJECT: Supplement No. 5, Mark Twain Lake Master Plan, Design Memorandum No. 9

Supplement No. 5 to the Mark Twain Lake Master Plan, September 2011 is:

Approved CSH Disapproved _____


CHRISTOPHER G. HALL
COL. EN
Commanding