

# GEOSPATIAL SECTION OVERVIEW

LEVERAGING TECHNOLOGY AND RESOURCES FOR  
QUALITY RESULTS

Earnest M. McCarty, Jr. (Mack)

Professional Land Surveyor / Certified Federal Surveyor

29 August 2017



US Army Corps  
of Engineers®



# LRH GEOSPATIAL TEAM

**Earnest M. McCarty, Jr. (Mack)**

***Professional Land Surveyor / Certified Federal Surveyor***

## **Staff Resources**

6 Licensed Geospatial Professionals (PE, PS, GIS-P, CFEDS)

3 Certified FAA-107 UAS Pilots

We can field 5 three man survey crews or 8 two-man crews all with experienced staff if needed.

Additional Information can be found at:

<https://gis.lrh.usace.army.mil/>



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# LRH GEOSPATIAL TEAM SERVICES AND DELIVERABLES

- **SERVICES:**

- BOUNDARY
- TOPOGRAPHIC
- DEFORMATION
- LIDAR SCANNING  
*(Mobile and Terrestrial)*
- AERIAL IMAGERY
- AERIAL MAPPING
- CONTROL SURVEYS
- DISPLACEMENT  
MONITORING

- **DELIVERABLES:**

- BOUNDARY MAPS
- CONTOUR MAPPING
- DEFORMATION  
REPORTS
- AERIAL VIDEO  
*(INCLUDING LIVE FEED)*
- ORTHOPHOTO
- VOLUME  
CALCULATION
- AERIAL CROSSING  
ELEVATIONS



# LRH COVERAGE



# LRH GEOSPATIAL TEAM

## WORK FOR OTHERS PROGRAM ( WFO / ISS )

Long Standing History of Support Others

- LRD
  - Routinely work with sister districts to complete Geospatial Projects
- SWF
  - Grapevine Lake Deformation Survey
- SPA
  - Completed Instrumentation & Deformation at five projects recently.
- SPK
  - Boundary Surveys at Various Projects
  - Dam Safety Survey at Isabella Lake



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# LRH GEOSPATIAL TEAM

## WORK FOR OTHERS PROGRAM ( WFO / ISS )

Long Standing History of Support Others

- Department of Energy
  - LRH preformed projects across the nation for DOE
- US Forest Service
  - Wayne National Forest
  - Mongahela National Forest
- Dam Safety Production Center - Mandatory Center of Expertise – Huntington, WV
  - Working directly with National Dam Safety teams on process and procedures for surveying and geospatial project.



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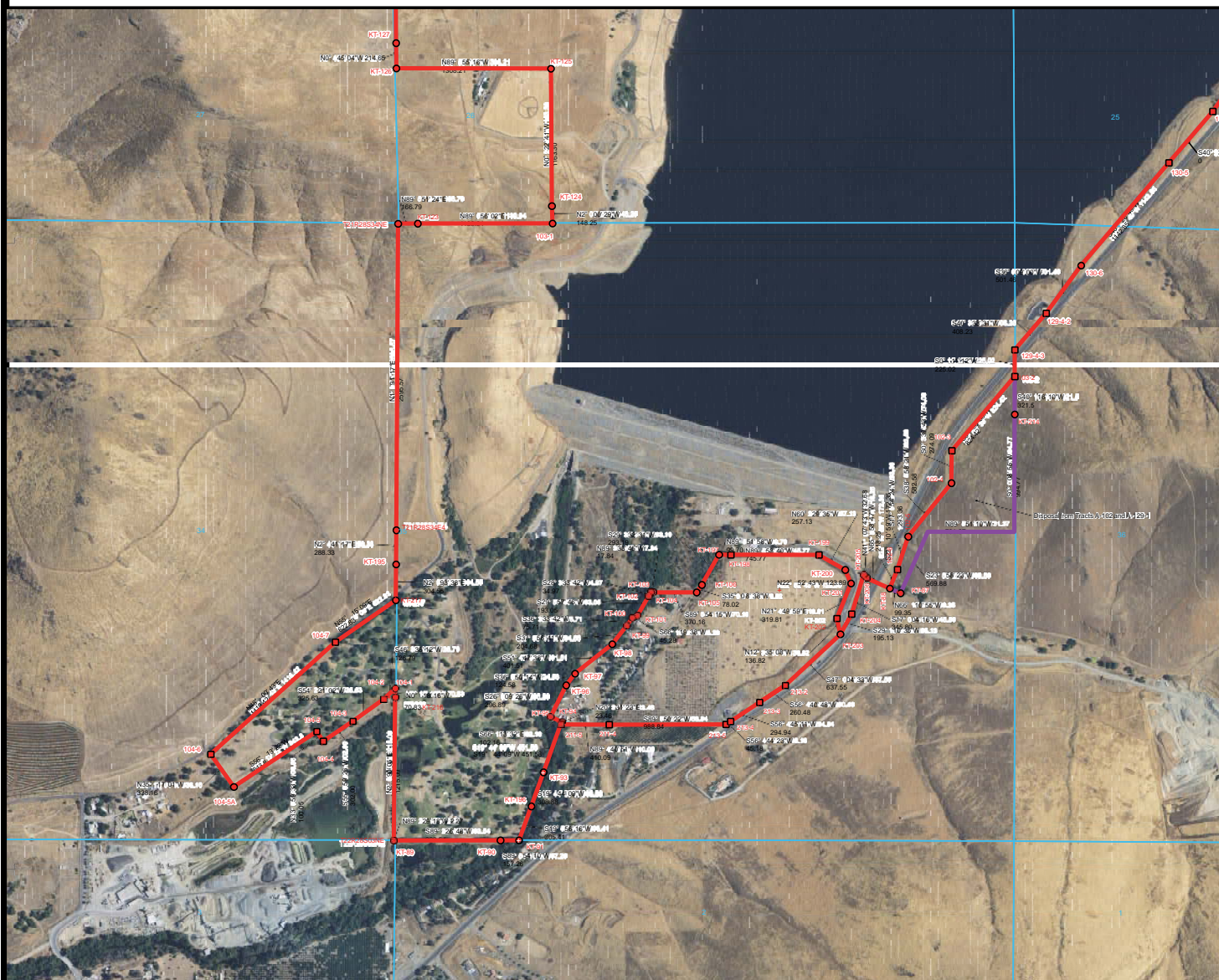
# ADVANTAGES TO UTILIZING USACE STAFF FOR PROJECTS RATHER THAN CONTRACTING.

7

- Project Turnaround
  - In immediate situations projects can be turned around in the typical time a task order or contract can be issued.
- Project Flexibility
  - Ability to modify and adapt project scopes on the fly in the field without the use of COR or additional fees.
- Project Budget
  - Project funds required for Contracting, Contract Management and COR functions can be redirected.
  - Mobilization of fully functional crew to anywhere in the nation can be completed for \$10K or less.







Vicinity Map



State Map

DRAFT - TEMPLATE  
As Applicable

## PROJECT MAP

DEPARTMENT OF THE ARMY  
USING SERVICE U.S. ARMY

## LOCATION OF PROJECT

STATE CALIFORNIA  
COUNTY YULARE  
DIVISION SOUTH PACIFIC DIVISION (SPD)  
DISTRICT SACRAMENTO (SPK)  
ARMY AREA 6TH ARMY  
30 Miles S.W. OF COLINGA  
32 Miles N.E. OF MORRO BAY

## LEGEND

EXCEPT FOR SPECIAL SYMBOLS SHOWN BELOW,  
MAP SYMBOLS ARE STANDARD U.S. ARMY  
FIELD MANUAL FM 21-31, TOPOGRAPHIC SYMBOLS,  
DATED DECEMBER 1946

## Corner

- Found
- Not Set
- Set

## Lines

- Disposal
- Easement
- Fee

## Encroachment Lines

- Dike Boundary
- Tree Line
- Dirt Road
- Gravel Road
- CL of Drain

## METADATA

Township/Ranges:  
21S, 28E  
of the Mount Diablo Baseline & Meridian.

## Special notes:

- 1) This information is based on a field survey performed in May of 2017.
- 2) Parcel boundary data is only a representation of ground features projected on to the Earth's surface by computer programs from raw data obtained from local government agencies and is not necessarily in whole, or in part, based upon any physical survey, study, or recording, professional or otherwise, of the covered jurisdiction.
- 3) PLUS lines are for reference only and differ from actual surveyed lines.

Coordinate System:  
NAD 1983 NAD83  
StatePlane California IV FIPS 5004 F1 US  
Projection: Lambert Conformal Conic  
Datum: NAD 1983 NAD83  
Units: Feet US

## PROJECT BOUNDARY SURVEY



DEPARTMENT OF THE ARMY  
OFFICE OF THE SACRAMENTO DISTRICT ENGINEER  
SOUTH PACIFIC DIVISION



FIELD SURVEYOR: JAC	TULARE COUNTY: CALIFORNIA
ADJUTANT: JAC	ENGINEERING & CONSTRUCTION DIVISION
CHECKER: JAC	COST & TECHNICAL SUPPORT BRANCH
SUBMITTED BY: DAVID A. CHESTNUT	GEOSPATIAL SECTION
RECOMMENDED BY: DAVID A. CHESTNUT	
APPROVED BY: Aaron L. Ansell	DATE: _____
RECEIVED: _____	APPROVED BY: Samuel M. McCarthy, P.S. C.F.D.S. CHIEF GEOSPATIAL SECTION
REVISIONS: _____	DATE: 8/23/2017 4:27:21 PM
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