



## **BOARD MEETING AGENDA SUBMITTAL**

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**TO:** GCSB Board of Directors

**FROM:** Pete Kampa, General Manager

**DATE:** April 13, 2021

**SUBJECT:** Agenda Item 7C. Approval of a 2020/21 Budget Amendment for the Completion of the Wastewater Treatment Plant Reservoir #2 Inundation Study and Emergency Action Plan as Required by Mandate of the State Department of Water Resources

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### **RECOMMENDED ACTION:**

Staff recommends the following action:

*I move to approve the 2020/21 Budget Amendment not to exceed \$53,000 for the Completion of the Wastewater Treatment Plant Reservoir #2 Inundation Study and Emergency Action Plan as Required by Mandate of the State Department of Water Resources.*

### **BACKGROUND:**

The California Division of Safety of Dams is requiring all dam owners to provide an inundation study and an emergency action plan that evaluates the potential flooding caused by a dam failure. GCSB owns and operates Reservoir #2, a 170 ac-ft reservoir created by an earthen dam. The hazard potential classification for the Reservoir #2 dam is Significant. The Reservoir #2 Dam is located west of Pine Mountain Lake, upgradient from residential homes around Pine Mountain Lake. A failure of the Reservoir #2 dam would potentially cause flooding on some of the homes closer to the lake. AMCE will prepare an emergency action plan that complies with the requirements of listed in Government Code Section 8589.5 and follows the template provided by CalOES. AMCE will submit a draft copy of the EAP and inundation study to GCSB staff for review. After GCSB's review, AMCE will finalize the EAP and inundation study and submit copies to the State.

### **ATTACHMENTS:**

- AMCE Inundation Study Scope of Work

### **FINANCIAL IMPACT:**

AMCE will complete the tasks set forth herein for a not to exceed fee of \$53,000. AMCE will invoice the District monthly for the work performed during the prior month based on the staff hours spent on this project. If approved, this project and amount will be added to the 2020/21 fiscal year wastewater budget.



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March 24, 2021

Peter Kampa  
General Manager  
Groveland Community Services District  
P.O. Box 350  
Groveland, CA 95321

**Re: Emergency Action Plan and Inundation Study**

Dear Peter:

We are pleased to submit this letter summarizing the scope and fee for engineering services with regards to the preparation of an Emergency Action Plan and Inundation Study for Reservoir #2. The EAP and IS are being required by the California Division of Safety of Dams in accordance with the Title 23, Division 2, Chapter 1, Article 6 of the California Code of Regulations.

GCSD owns and operates Reservoir #2, a 170 ac-ft reservoir created by an earthen dam. The hazard potential classification for the Reservoir #2 dam is Significant. The Reservoir #2 Dam is located west of Pine Mountain Lake, upgradient from residential homes around Pine Mountain Lake. A failure of the Reservoir #2 dam would potentially cause flooding on some of the homes closer to the lake. The California Division of Safety of Dams is requesting all dam owners to provide an inundation study and an emergency action plan that evaluates the potential flooding caused by a dam failure.

**SCOPE OF WORK**

Based on our understanding of this project we have prepared the following scope of work:

**Task 1 – Topographic Survey**

AMCE's subconsultant will complete a UAV LiDAR Topographic Survey utilizing a high precision UAV equipment with Riegl LiDAR and RGB Sensors. The topographic survey will include at a minimum:

1. Field and office work to prepare a UAV LiDAR Topographic survey.
2. Identification of existing property benchmarks or establish at least two site survey benchmarks.
3. Setting aerial targets throughout the project site as determined with Sub that aerial LiDAR and imagery will be leveled to.
4. Ortho rectified image will be provided with a 1-inch image resolution.
5. Linework for all features will be provided such as roads, fences, structures, utilities, etc.

Elevations shall be referenced to the local state vertical datum. Each project horizontal datum shall be relative to the standard horizontal datum for the state. The survey will follow State and County jurisdiction standards for coordinate system and datum where applicable.

### **Task 2 – Inundation Study**

AMCE's will utilize the topographic survey and ground terrain models generated in Task 1 to create a computer model that will simulate the inundation of areas downstream from Reservoir #2 Dam because of a dam failure. The computer model will be done using HEC-RAS, an industry standard computer model that simulates flooding.

### **Task 3 – Emergency Action Plan**

AMCE will prepare an emergency action plan that complies with the requirements of listed in Government Code Section 8589.5 and follows the template provided by CalOES. AMCE will submit a draft copy of the EAP and inundation study to GCSD staff for review. After GCSD's review, AMCE will finalize the EAP and inundation study and submit copies to the State.

### **FEE**

AMCE will complete the tasks set forth herein for a not to exceed fee of \$53,000. AMCE will invoice the District monthly for the work performed during the prior month based on the staff hours spent on this project. A detailed budget (per task) used in the determination of this fee and is included in the following table:

<b>Task</b>	<b>Fee (\$)</b>
Task 1 – Topographic Survey	\$28,000
Task 2 – Inundation Study	\$15,000
Task 3 – Emergency Action Plan	\$10,000
Total Fee	\$53,000

### **SCHEDULE**

The EAP and IS are overdue. AMCE, on behalf of GCSD has requested an extension to DWR. The extension requested would require the submittal of the EAP and IS by August 1, 2021. We are committed to meet that schedule. For purposes of this proposal we anticipate completing each of the tasks according to the following schedule:

<b>Task</b>	<b>Completion Date</b>
Task 1 – Topographic Survey	May 1, 2021
Task 2 – Inundation Study	June 15, 2021
Task 3 – Emergency Action Plan	June 30, 2021

We have already arranged the topographic survey and the field work will be completed in the next couple of weeks. Thank you once more for considering us for this project. If you have any questions or require any additional information, please call me at (559) 288-9172.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Alfonso Manrique', with a long horizontal flourish extending to the right.

Alfonso Manrique, PE  
Principal