



# Pond Biosolids Removal and Reuse Project (CIP 13745)

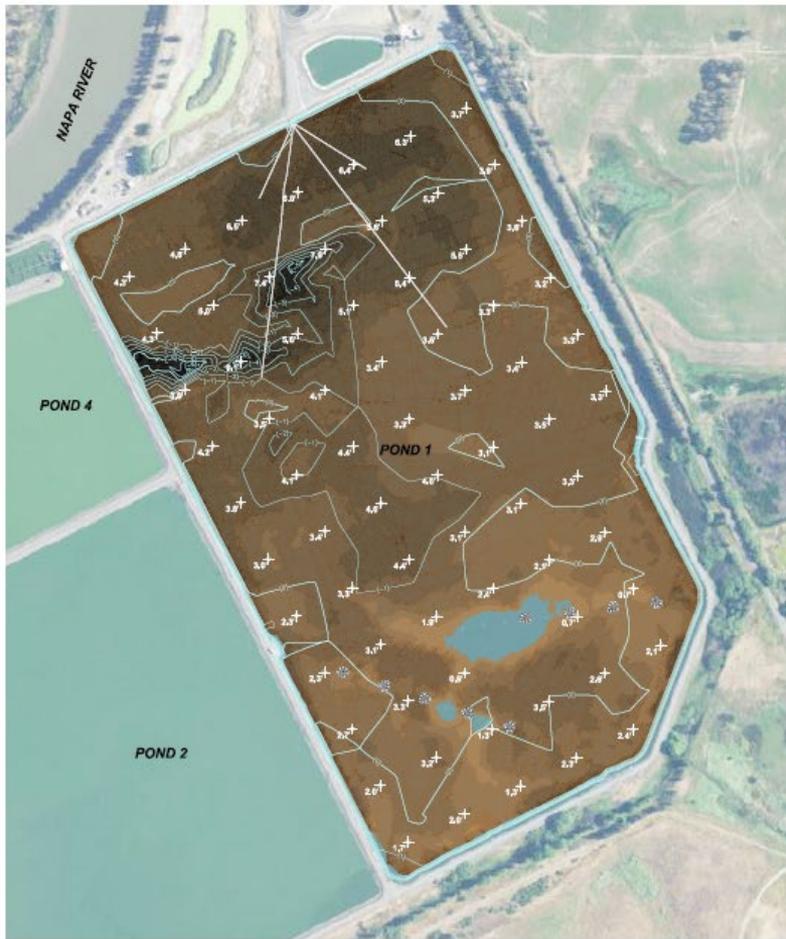


NapaSan Board of Directors Meeting  
November 4, 2020

# Background

- Recent biosolids removal projects were completed using various methods between 1999 and 2008





**NOTES**

HORIZONTAL DATUM: NAD83 STATE PLANE CALIFORNIA ZONE 2 (US FEET)  
 VERTICAL DATUM: PER ULTRASONIC LEVEL GAGE AT NORTHWEST CORNER OF POND 1

**DATA SOURCES:**

SEA-TECH POND BOTTOM SURVEY, SEPTEMBER 20, 1988  
 (DEPTH MEASUREMENTS CONVERTED TO SURVEY DATUM ASSUMING 11.1' DEPTH  
 COORESPONDS TO LEVEL GAGE READING OF 0.0')

SLUDGE BATHYMETRY DATA RECORDED BY NAPASAN OPERATIONS STAFF USING  
 LOWRANGE LCK-25C

POND LEVEL WAS CONSTANT AT 93 INCHES (7.75 FEET) DURING SLUDGE BATHYMETRY SURVEY

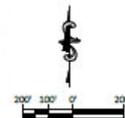
**ESTIMATED TOTAL SLUDGE VOLUME = 650,000 CY (403 ACRE FEET)**

**LEGEND**

- 1.2'± SLUDGE THICKNESS SPOT MEASUREMENTS
- CONTOURS OF POND BOTTOM SURFACE ELEVATION
- AERATOR LOCATIONS AS OF 5/20/17

**SLUDGE THICKNESS BANDING KEY**

0.0' - 1.0'
1.0' - 2.0'
2.0' - 3.0'
3.0' - 4.0'
4.0' - 5.0'
5.0' - 6.0'
7.0' - 8.0'
8.0' - 9.0'
9.0' - 10.0'
10.0' - 11.0'
11.0' - 12.0'



POND SLUDGE DREDGE  
 (CIP 13745)  
**POND 1 BATHYMETRY SURVEY  
 CALCULATED SLUDGE THICKNESS**  
 DECEMBER, 2017



# Biosolids Removal

- Remove biosolids to elevation 1.0 ft.
- Priority 1:
  - Northern 1/3 of pond
- Priority 2:
  - Middle 1/3 of pond





# Project Costs

**Total Budget**      **\$2,337,150**

Item	Cost
Design	\$39,275
Construction Contract	\$2,000,000
Construction Management, Inspection, ESDC	\$205,135
Estimated Staff Time and Lab Analyses	\$50,000
<b>Total:</b>	<b>\$2,294,410</b>



# Project Accomplishments

- Removal of high priority biosolids from Pond 1
- Learned better ways to implement the project next time
- Team effort resulted in a successful project

# Napa Sanitation District harvests Napa's sewage sludge for fertilizer

Barry Eberling Aug 14, 2020 Updated Sep 19, 2020











# Recommendation

- Adopt Resolution accepting completion and authorizing General Manager to file the Notice of Completion at the Office of the Recorder, Napa County, California for the Pond Biosolids Removal and Reuse Project (CIP 13745).