



# Valley Water

Clean Water • Healthy Environment • Flood Protection

UAV Program Update  
Land Surveying and CADD Services Unit  
April 2020



# Review of 6-month Pilot UAV Program

Presented by: Mr. Kris Puthoff, Unit Manager

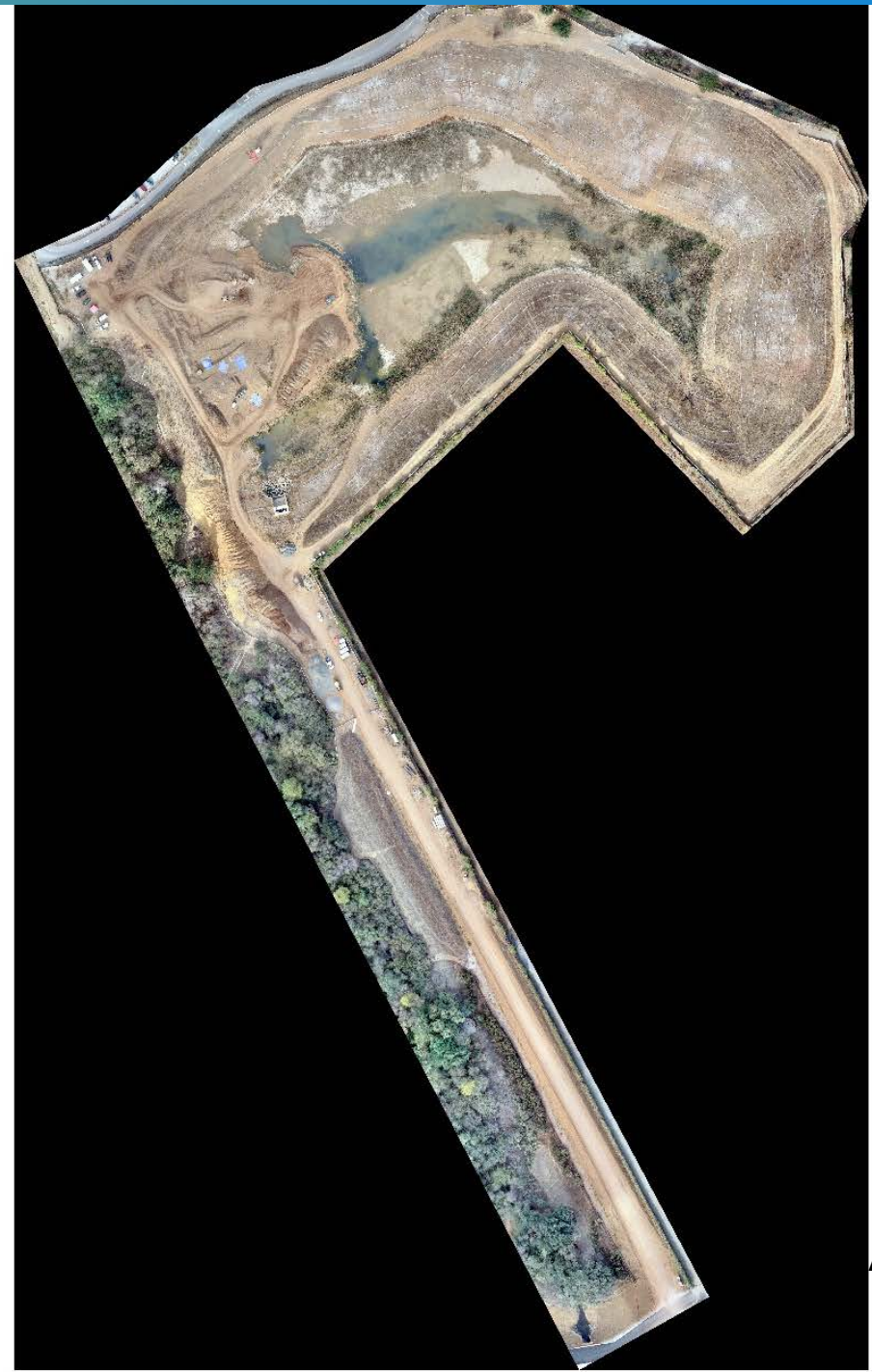
# Successful implementation of UAV (Unmanned Aerial Vehicle) Technology

- **Primary Use Cases**

- Budget
- Secondary Use Cases
- Next Steps

# Topographic Mapping

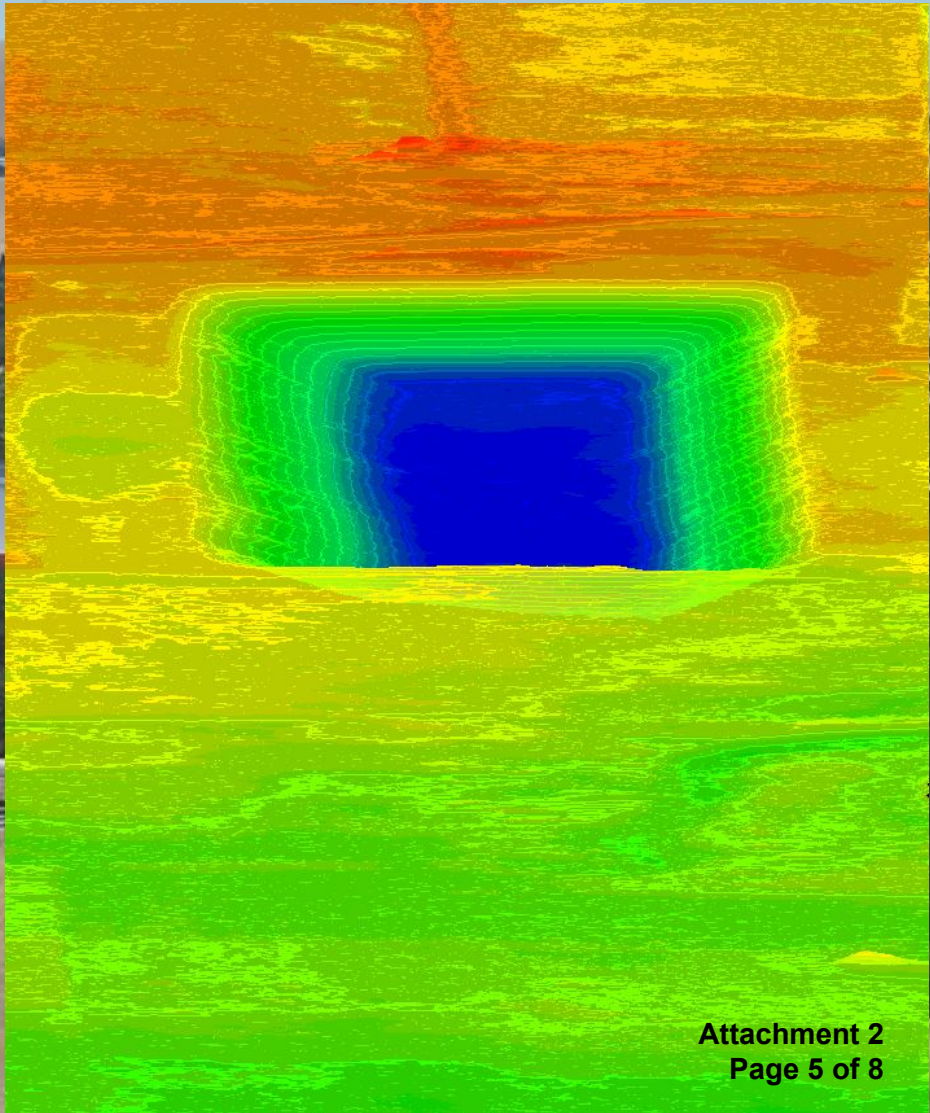
- Site: Rancho San Antonio
- Task: Determine the volume of 5 dirt stockpiles
- 30 minutes total flight time
- Conventional survey methods would have been a full day of fieldwork





# Pre-Construction Documentation

## Upper Llagas Flood Protection Project





# Construction Progress Imagery

Lake Silveira Vegetation Removal, Upper Llagas Flood Protection Project

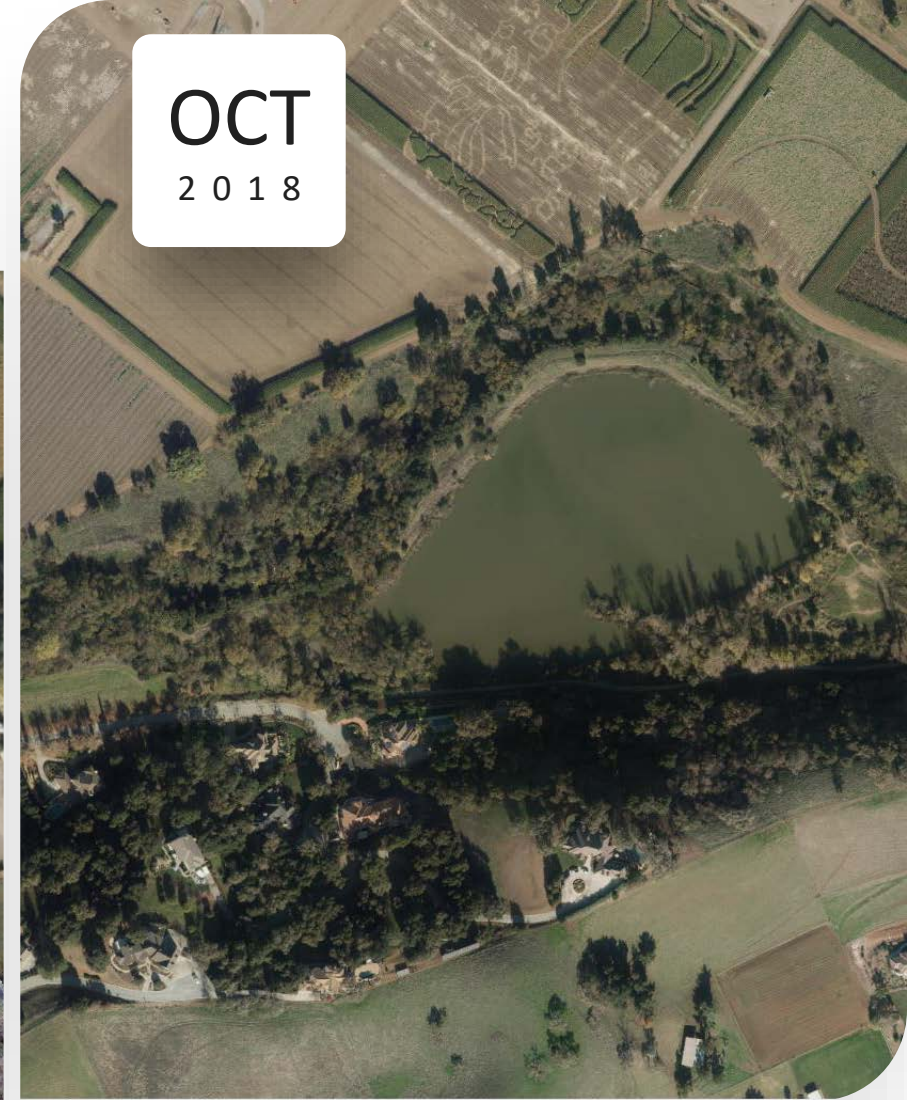
NOV

2019



OCT

2018





# Successful implementation of UAV (Unmanned Aerial Vehicle) Technology

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- Primary Use Cases
- **Budget**
- Secondary Use Cases
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# Budget

## Projected vs. Actual

- Projected 6-month program budget of \$32,360 for:
  - Purchase of 2 UAVs
  - Staff Training
  - Program Oversight
  - Insurance
- Actual 6-month program costs of \$44,290 for:
  - Purchase of 3 UAVs
  - Accessory Hardware (GPS systems, iPads, Radios)
  - Additional software
  - Staff Training
  - Program Oversight
  - Insurance



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# Safe, Clean Water Program Outreach

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# X-Band Radar



Videos & Photos provided for documentation of the new technology and for facilities management of the Penitencia Water Treatment Plant



# McKelvey Park

Ahead of the ribbon-cutting ceremony, videos & photos were provided for media announcements

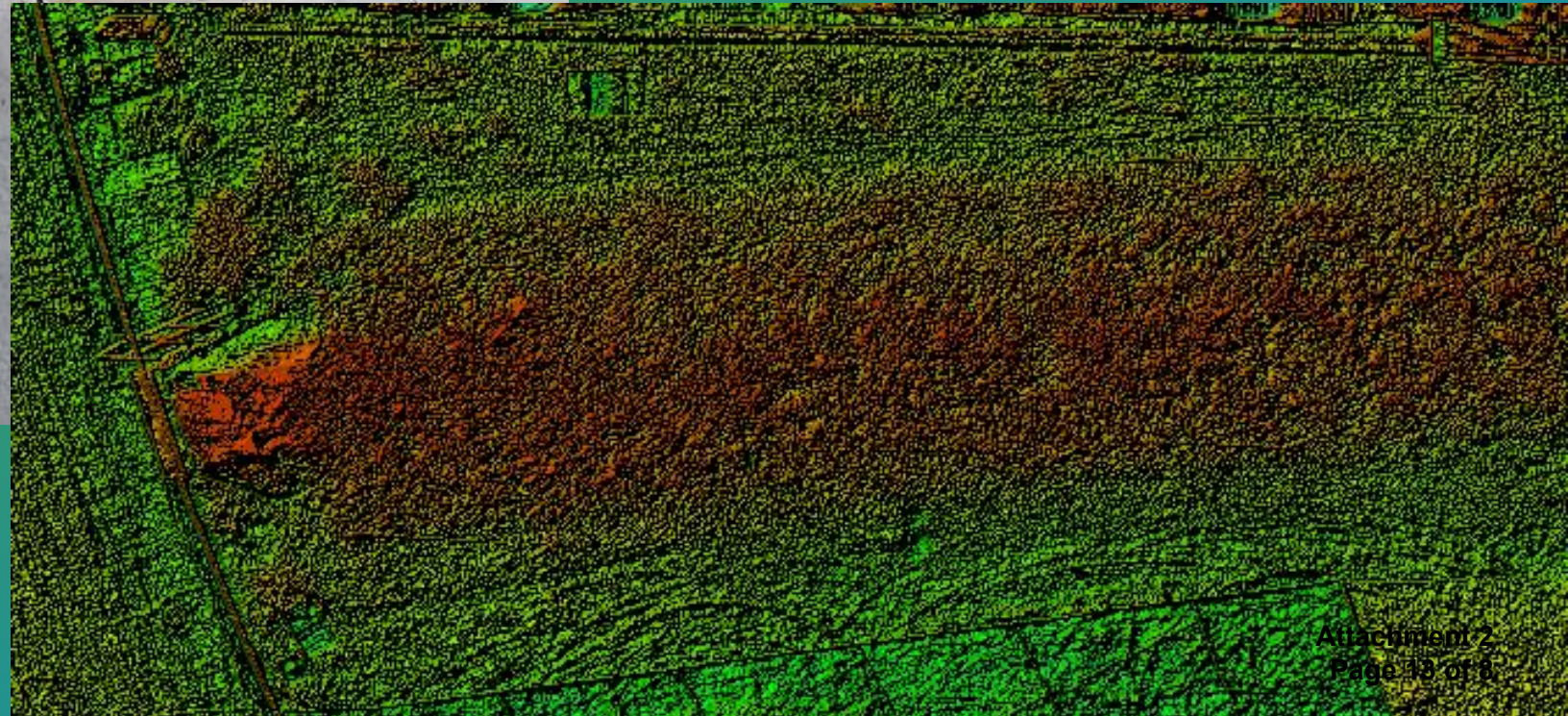






# Invasive Vegetation Mapping

Princevalle Drain, Gilroy

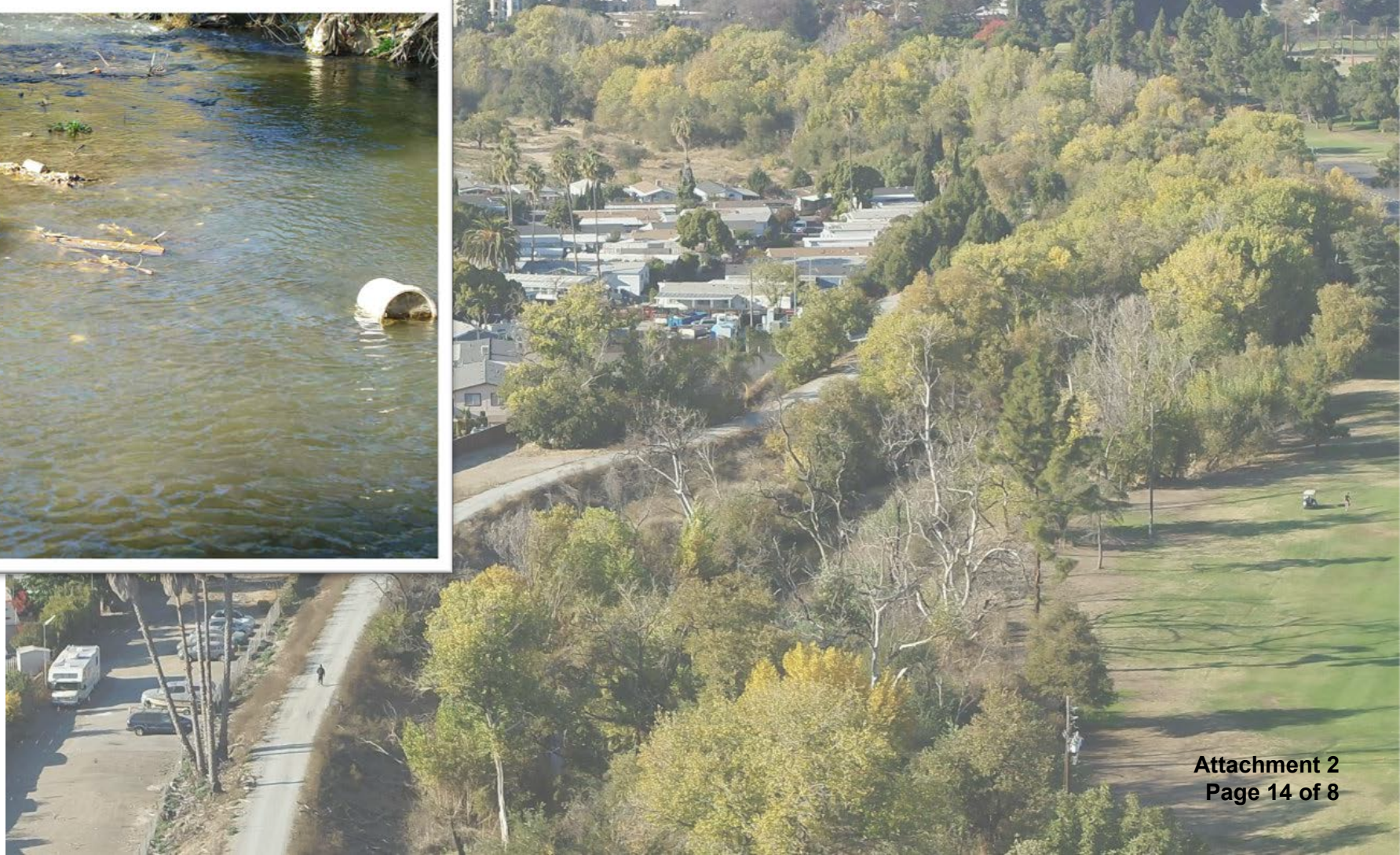




# Cleanup Outreach



For promotion of a Coyote Creek Community Cleanup effort with Director Santos





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# Next Steps

## Expanded Opportunities and Developing Technologies

- Dam Monitoring & Safety
  - Visual inspection Photos
  - Change Detection
  - Deformation Mapping
- Emergency Response
  - Live Video Streaming
- Security
  - Heat Mapping

# QUESTIONS







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