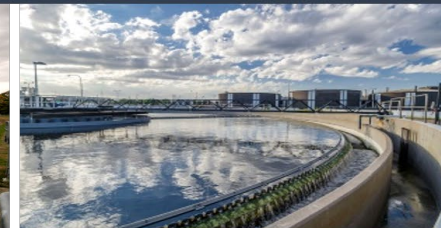
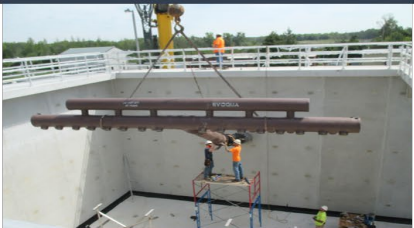


# Thank you to our Patrons



We will begin our presentation in a few minutes...





# Implementing Updated Controls at National Parks

**Aaron Szalaj, PE PMP**

AAEES Webinar Series

March 5, 2025

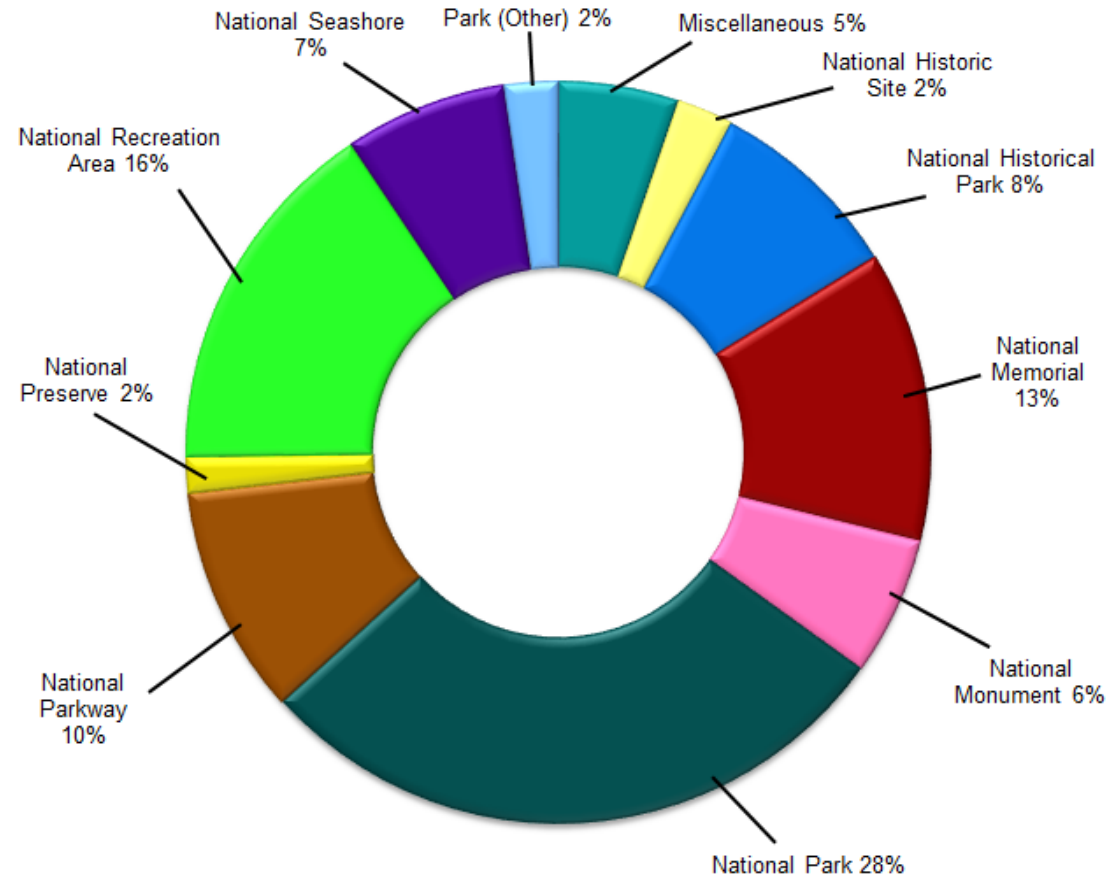


# Agenda

- National Park Service – Big Picture
- Program Approach (IDIQ with Dowl)
- Everglades
- Canyonlands
- Bryce Canyon
- Glacier
- Curecanti (National Recreational Area)
- Questions

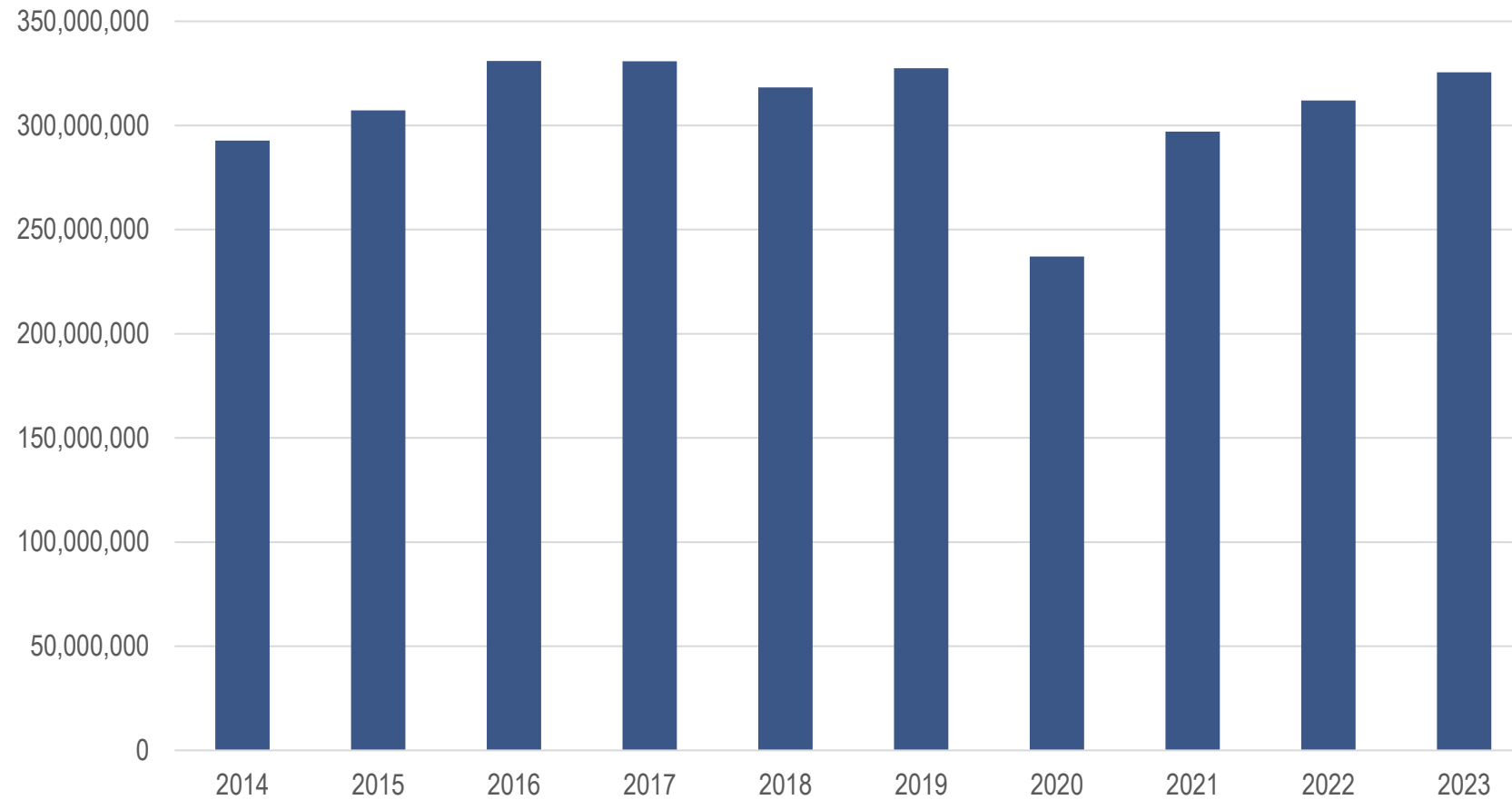


# 2023 Visitation At-A-Glance

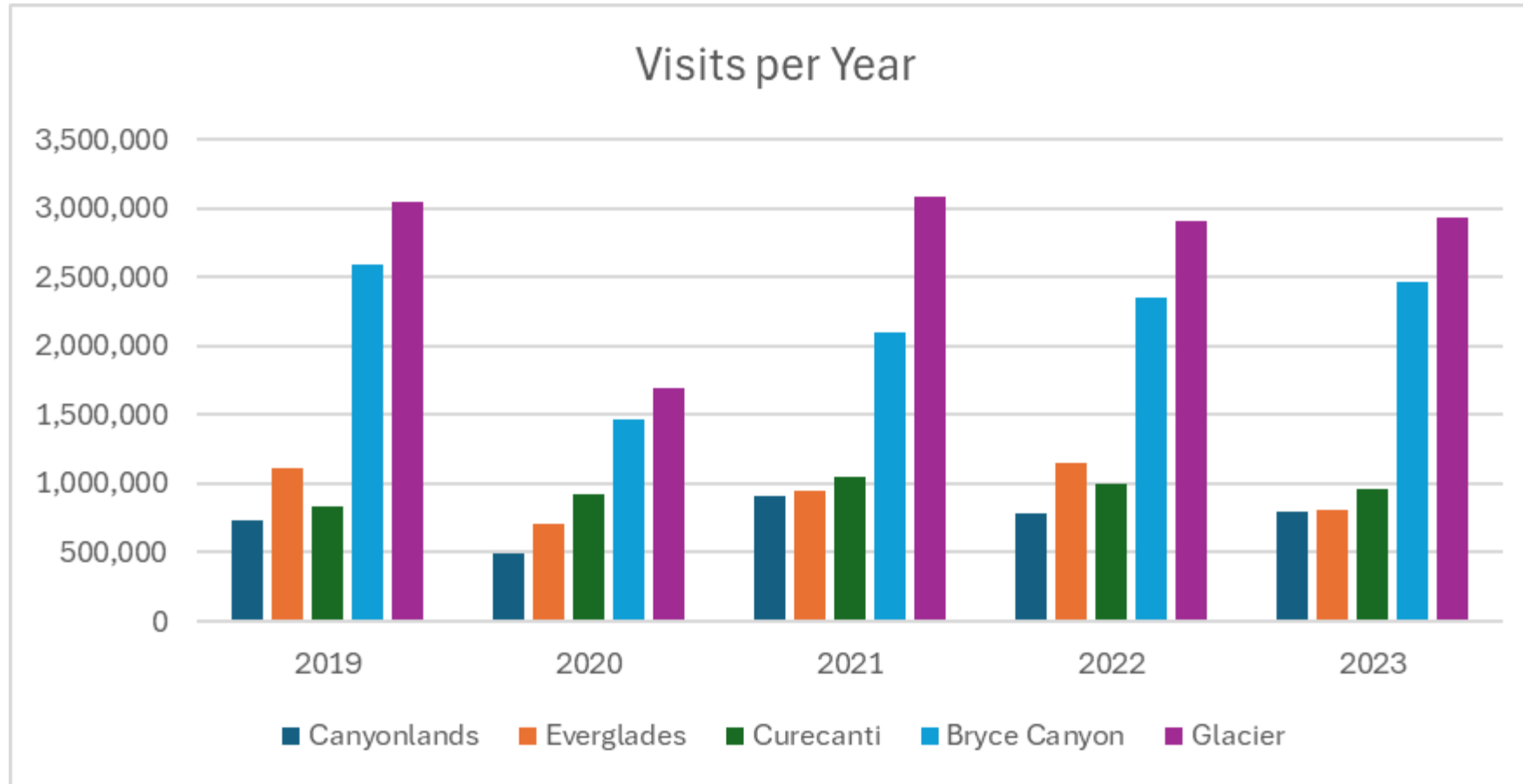


# National Parks Visitation

## Recreation Visits by Year



# National Park & Rec Area Visitation



# Program Structure & Approach

- Joint venture partner DOWL
- 5 different locations for National Parks Service
- Navigating unique landscapes
- Physical water infrastructure rehabilitation and upgrades
- Instrumentation & controls upgrades
  - Water / wastewater utilities
  - Communication infrastructure





# Everglades National Park



# Everglades National Park

- Southern Florida, 1.5 million acres
- Annual Visitation: 1 million
- The largest subtropical wilderness in the US
- Rare and endangered species (Manatee)
- Dry season (December – April)
- Wet season (May – November)



# Project Opportunities

- Upgrade and refurbish water and wastewater systems
  - Wells
  - Water Treatment Facilities
- Flamingo water and wastewater plants
- Increased traffic – impacting facilities
- Increasing water table
- Raised mount drainage fields to manage ground water
- Satellite (larger facilities)
- Cellular connection (smaller facilities/pump stations)





# Canyonlands National Park

# Canyonlands National Park

- Utah's largest national park, 337,598 acres
- 2023 Visitation: 800,322
- Remote area with few services
- Three districts: Island in the Sky, The Needles, The Maze
  - No roads that cross Green or Colorado rivers
  - 2-6 hours between each

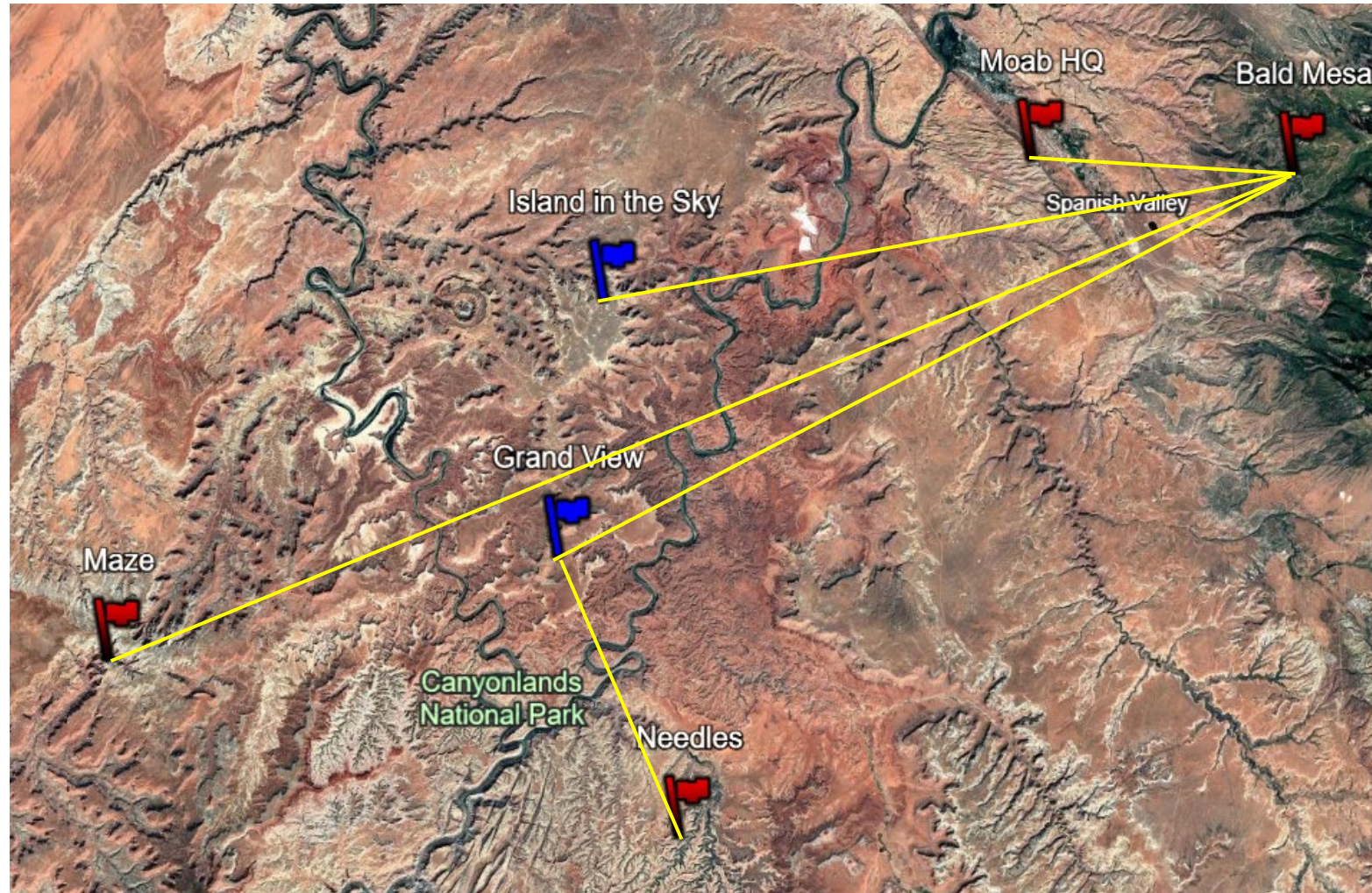


# Project Opportunities

- Parkwide communications systems
- Controls system for water treatment and pumping
- Satellite linked SCADA system
  - Monitor and control district water systems remotely
  - HQ in Moab
- Cybersecurity was paramount in the satellite system
- Electric improvements to support increased loads
- Schematic design completed in Spring 2025
- Replaced water infrastructure at all three districts



# Parkwide Communications System – Microwave Alternative





# Bryce Canyon National Park

# Bryce Canyon National Park

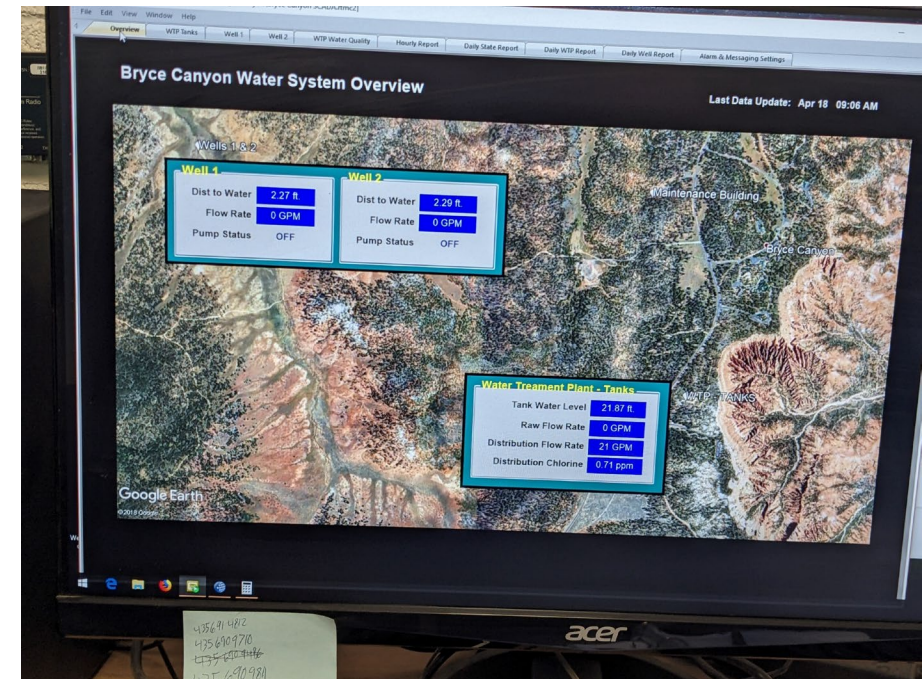
- Southern Utah, 35,835 acres
- Annual Visitation: 2.6 million
- High elevation
  - Situated along a high plateau at the top of the Grand Staircase
- Smallest park in Utah
  - 18-mile road running through park





# Project Opportunities

- Replacing piping and distribution materials
- Design for local control stations at wellhouses
  - Overlooked in original controls installation
- Two existing wells delivering raw water to treatment facility
- Distribution by gravity to park facilities
- Instrumentation and controls for:
  - Rehabilitation of raw water
  - Distribution systems





# Glacier National Park

ONE WAY  
←

Picnic Area  
No Camping

# Glacier National Park

- Northern Montana, 1,013,322 acres
- 2024 Visitation: 3 million
- Majority of the park closed during Winter
  - Full park open ~4 months a year
- Remote location
  - Local installer
- 25 active glaciers



# Project Opportunities

- Modernized control building
  - Water wells
  - Septic systems
  - Existing freshwater tank
- Automatic dialer
  - Calls different person based off issue detected
- Hybrid approach to communications
- Built for future expansions





# Curecanti National Recreational Area

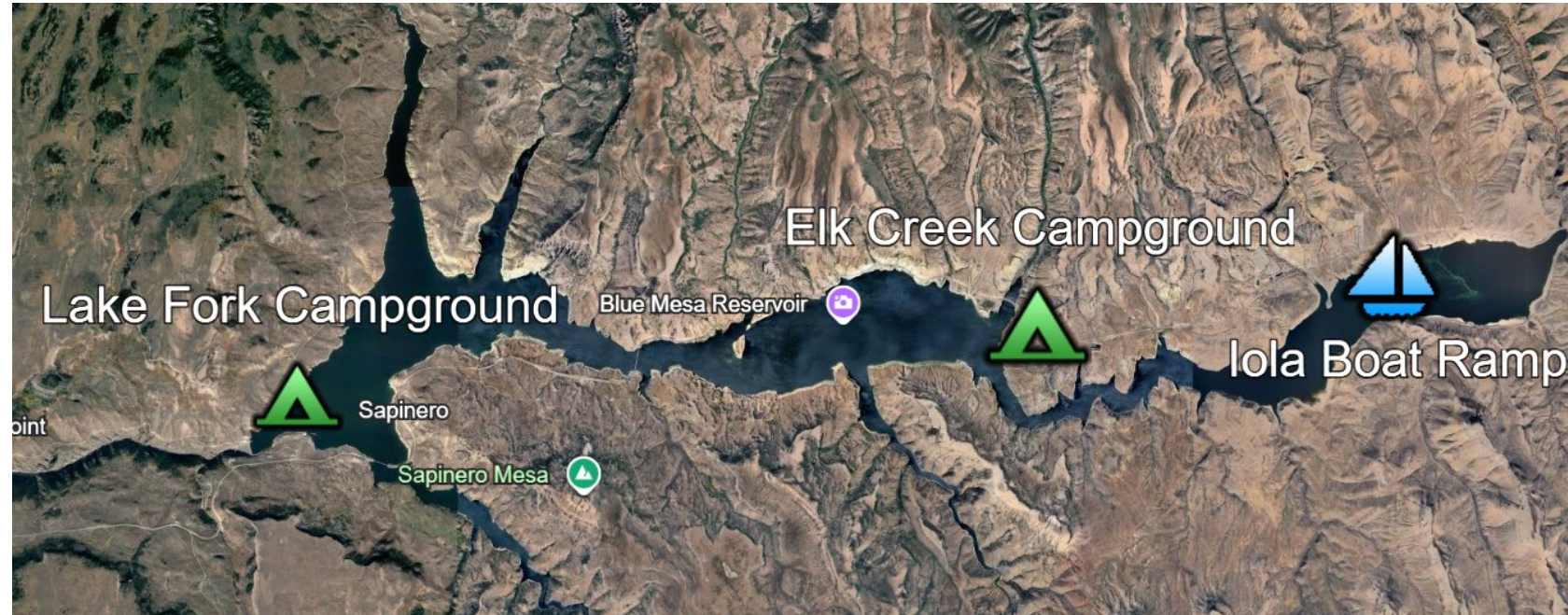
# Curecanti National Recreational Area

- Western slope of Colorado, 43,095 acres
- Average visitation: 900,000
- Three reservoirs – Blue Mesa, Morrow Point, Crystal
- Varied habitats – mostly high desert country
  - Steep canyons
  - Sage brush hillsides
  - Pine forests



# 11 Sites Spread Around the Blue Mesa Reservoir

- Elk Creek
  - Main SCADA Site
  - 2 Well Sites
  - Chlorination Bldg
  - Water Storage Site
  - 2 Lift Stations
- Lake Fork
  - 1 Well / Chlorination / Tank Site
  - 1 Lift Station
- Iola
  - Well & Chlorination Site
  - Tank Site (Solar)



# Project Opportunities

- Replace aging SCADA system for water and wastewater
  - 11 remote sites
- Treatment and pumping systems spread out
- Enhanced monitoring and controls features from old system
  - Expansion pump and chemical dosing controls
  - Physical security monitoring
  - Radio communications diagnostics
- Replacing two lift stations
- Remote control capability





# In Conclusion

- Enhancing visitor experience as it grows
- Considering unique attributes of each park
- Evaluating existing systems in person
- Modernizing for the future
- Providing tools for efficient park management
- Projects that ignite passion



**Stanley Consultants**

**Thank You!**

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**Digital Water Practice Lead**

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# Comments/Questions?

# Thank you for attending our event today.

## Would you like to attend our next event?

We have several webinars happening in the near future. Go to <https://www.aaees.org/events> to reserve your spot.

## Would you like to watch this event again?

A recording of today's event will be available on our website in a few weeks.

## Need a PDH Certificate?

Board Certified Individuals will be emailed a PDH Certificate for attending this event within the next week.

## Questions?

Email Marisa Waterman at [mwaterman@aaees.org](mailto:mwaterman@aaees.org) with any questions you may have.

