

Long-Term Facilities Plan for Tahoe Keys Water System

October 28, 2021

Why Action is Needed Now

| Well # | PCE, ppb** | Uranium, ppb |
|--------|------------|--------------|
| MCL* | 5 | 30 |
| 1 | 2.4 | 17 |
| 2 | 31 | 41 |
| 3 | 0 | 36 |

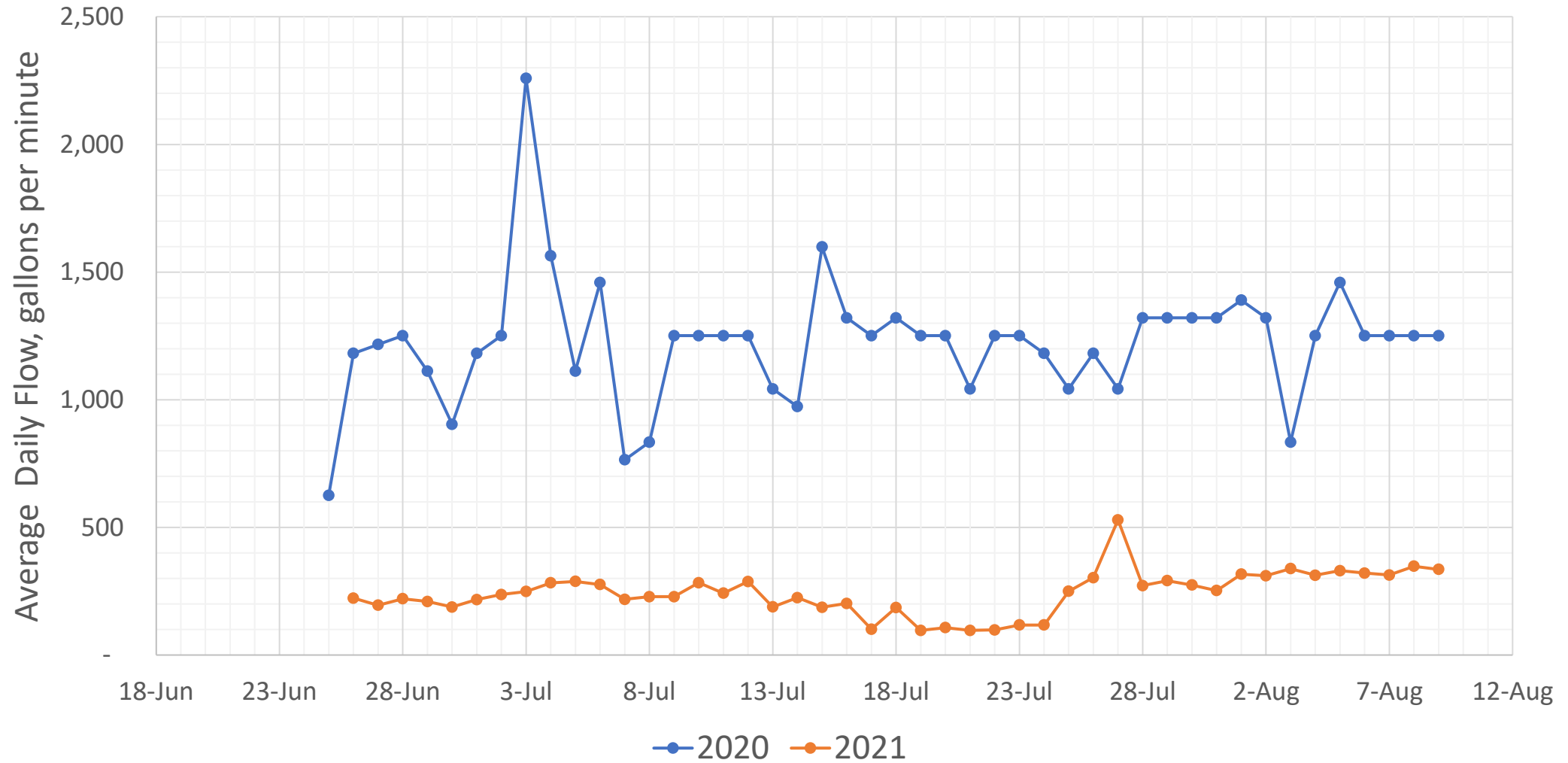
* Maximum (safe) Contaminant Level set by EPA ** Parts per billion or micrograms per liter

Why Action is Needed Now (cont'd)

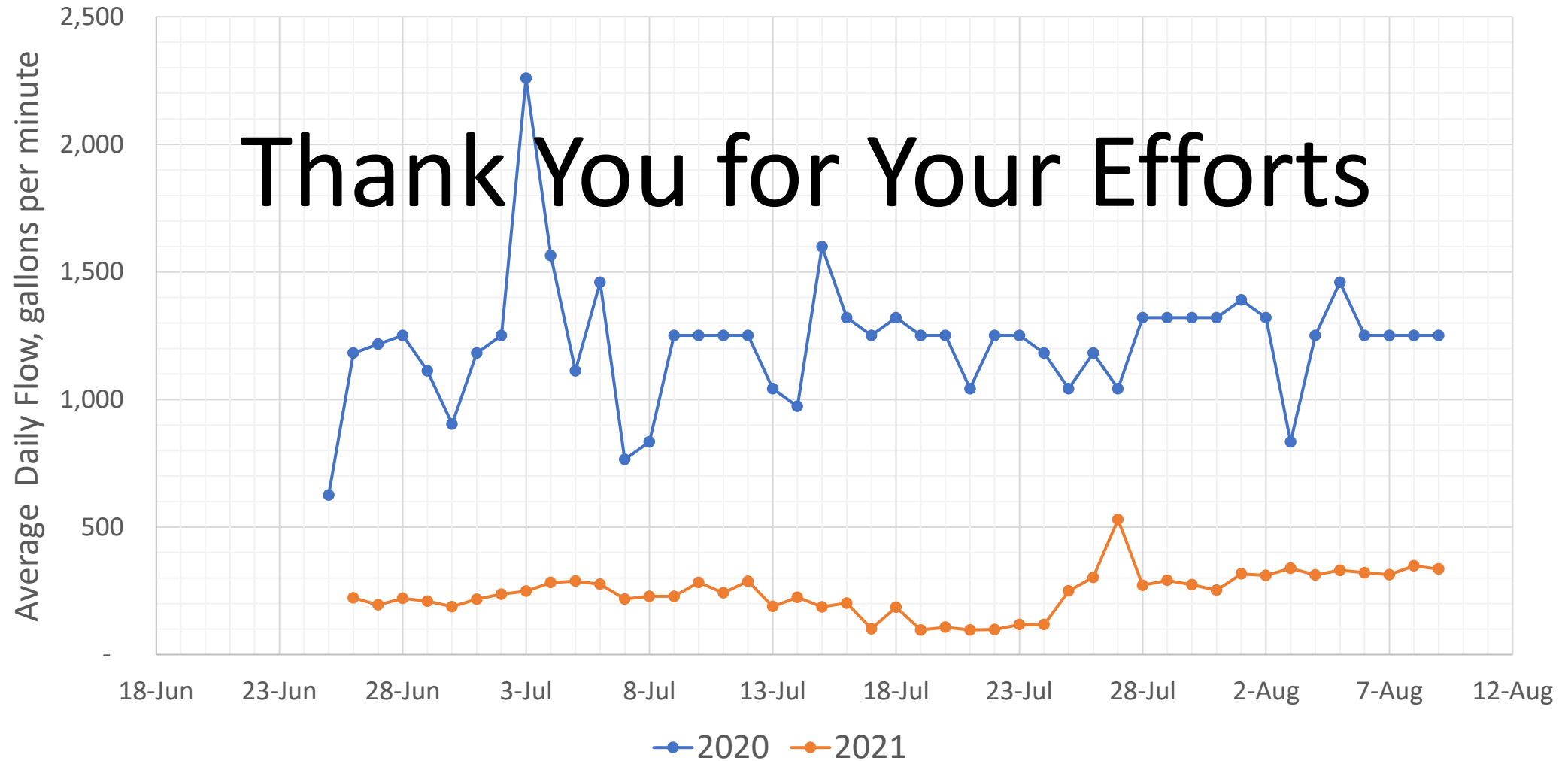
| Source | Water Production Capacity, gpm* | Demand with Unlimited Irrigation, gpm | Demand with Irrigation Limits, gpm | Emergency Demand, gpm |
|-----------------|---------------------------------|---------------------------------------|------------------------------------|-----------------------|
| Well 1 | 1,000 | | | |
| Well 2 | 400 | | | |
| Well 3 | 800 | | | |
| LBWC | 500 | | | |
| STPUD | 0 | | | |
| Total | 2,700 | 3,300 | 2,700 | 4,300 |
| Reliable | 1,700 | | | |

* Gallons per minute

Impact of Limiting Irrigation



Impact of Limiting Irrigation



Tahoe Keys Water System Status

- Well 1 in reliable condition
- Well 2 & 3 have temporary treatment for uranium removal
- LBWC connection is in operation*
- Water system monitored and controlled via SCADA
- STPUD connection will be available in event of emergency
- Water meters in place to monitor common area water use

* Tahoe Keys is low priority (e.g. connection was shut down during the Caldor Fire).

Temporary Treatment Facilities Completed

Well 2

Well 3

SCADA Completed

Well 3 Control Schematic

SCADA provides flow and pressure data every 2 minutes, detailed equipment run times, alarms, control automation, and remote operation.

LTWSFP Status

- Final report is complete
 - 12 total alternatives evaluated
 - 3 project scenarios recommended for further evaluation
 - Recommend plan implementation in 3 phases
- Timeline
 - October Communicate Report to Members and Seek Input
 - November Present Report and Member Input to Board
 - December Board Deliberation and Approval
 - January Member Approval
 - 2022-23 Implement Phase 1 and 2 Activities
 - 2023-25 Implement Phase 3 Activities

Estimates Used for Evaluation of Alternatives

- Limited information currently available
- Engineering studies are underway to provide needed information
- Flows and costs are based, in part, on best estimates and may change based on current and future studies
- Future scenarios have risks:
 - Changing water demand data
 - Deteriorating groundwater quality
 - Changing drinking water standards
 - California push to consolidate small water systems

Scenario 1

Centralized Treatment and Storage

- Water source: TKWC wells supplemented by adjacent water suppliers
- Water system operation: TKWC
- On-site Facilities located at Water Treatment Plant site
 - Central treatment
 - Storage tank with booster pump station
- Estimated Cost
 - 2026 Tahoe Keys Average cost/year/property \$1,600

Scenario 2

Wholesale Water Purchase

- Water source: Adjacent water suppliers
- Water system operation: TKWC
- On-site Facilities located at Water Treatment Plant site
 - Storage tank with booster pump station
- Off-site Facilities
 - Water supplier system improvements
- Estimated Cost
 - 2026 Tahoe Keys Average cost/year/property \$1,700

Scenario 3A

Contract Operation

- Water source: TKWC wells supplemented by adjacent water supplier(s)
- Contract with Private Water Company for services:
 - Management
 - Regulatory reporting
 - Administration
 - Customer service
 - Water system operation and maintenance
- Estimated Cost
 - Late breaking opportunity; Cost still under investigation

Scenario 3B

STPUD or Private Water Company Takeover

- TKPOA gets out of the water business entirely
- Relinquish ownership of all water rights and all water system assets
- TKPOA members:
 - Become customers of the water supplier
 - Billed directly for water use
- Estimated Cost
 - 2026 Tahoe Keys Average cost/year/property \$2,500 to \$3,000*

* Based on estimated costs for STPUD

Summary of Estimated Project Scenario Costs

| Scenario # | Project Scenario Description | 20 year NPV, million \$ | 2026 Annual Cost per Tahoe Keys Dwelling Unit | Increase Over Projected 2026 Assessment |
|------------|---|-------------------------|---|---|
| 1 | Centralized Storage and Treatment | 35 | \$1,600 | 70% |
| 2 | Wholesale Water Purchase | 40* | \$1,700* | 70% |
| 3A | Contract Operation | Not available yet | Not available yet | |
| 3B | STPUD or Private Water Company Takeover | 40 to 50* | \$2,500 to \$3,000* | 160% to 200% |

* Costs shown are based on preliminary estimates of STPUD costs. LBWC costs are still being developed.

Note: 2026 projected annual cost with no changes, shown for comparison purposes only, would be \$950.

Recommended LTWSFP Implementation

- Phase 1 (2022 to 2023), \$11 million
 - Install Residential water meters
 - Construct Storage
 - Develop and implement Backflow program
- Phase 2 (2022 to 2023), \$1.2 million
 - Investigate long-term financing options including loans, grants, and cost sharing
 - Analyze and optimize water demand
 - Negotiations with the LBWC, STPUD, other private water companies
 - Investigate ways to eliminate contaminant entry into wells
 - Explore new well options including site selection and test boring
 - Distribution system modeling for peak flows
 - Alternative TKWC organizational structures
- Phase 3 (2023 to 2025)
 - Implement best approach

Current Activities

- Engineering evaluation of STPUD options underway
- Starting negotiations with LBWC regarding possible future roles
- Seeking interest from private water companies to purchase and operate Tahoe Keys water system
- Requesting proposals for LTWSFP program/project management
- Gathering detailed water use data using SCADA

Next Steps

- Hire contract Program Manager
 - Phase 1 projects
 - Phase 2 studies and negotiations
- Continue exploration of late breaking options
- Complete studies to provide missing information
- Build water storage tank
- Install residential water meters
- Develop and implement a backflow prevention program

Questions?