

# ACWA JPIA 2023-2024 Risk Control Grant Program Recipients



Members agree to update the ACWA JPIA to review project progress and results, share lessons learned and observations about the implementation and outcomes. Upon completion of the project, members will provide a report to the Risk Management Committee and Executive Committee, summarizing the project goals and results achieved.

## Reclamation District No. 1004 – Well Security Fencing

Reclamation District No. 1004 has three well sites without access barriers and has experienced vandalism and theft. To improve safety and security while reducing loss, the District plans to construct a robust security fence with security cameras around all three well sites to prevent unauthorized entry or exit, as well as future theft and vandalism. The installation of a security fence is an **engineering control** and a C2E *Infrastructure Theft/Vandalism* loss reduction best practice.

## Elsinore Valley Municipal Water District – IBC Tilt Stand Upgrade

The District uses tilt stands with bottle jacks to assist with the draining process of containers and have better access to valve connections. Existing tilt stands lack manufacturer labels on the bottle jacks and the District cannot locate any record of its “installation” or shelf life of these devices. The District evaluated a tilt upgrade of replacing manual jacks with an IBC Tilt Stand. When the tilt stand’s liquid decreases its spring mechanism acts as a counterbalance, raises the container, allowing for additional discharge of liquid. The counterbalance feature allows for less physical activity from operators while maintaining its spill protection integrity. This **substitution control** may reduce employees' exposures to repetitive motion injuries, strains, or caught-in-between injuries and is a C2E *Ergonomics* best practice.

## Alta Irrigation District – Corporation Yard Security

The District’s Corp Yard is located in a very remote area and surrounded by permanent fruit tree crops making it secluded from view. Recently, the District experienced two separate catalytic converter thefts in which security cages were mounted around them. After two more theft attempts, the District consulted with their local law enforcement on theft mitigation methods. The local Sheriff conducted a physical security assessment and recommended the installation of a camera system and exterior lighting upgrades. The installation of a security camera system and improved exterior lighting is an **engineering control** and a C2E *Infrastructure Theft/Vandalism* loss reduction best practice.

## Rio Alto Water District – Hydro Vacuum

Currently, field crews hand dig 80 percent of water and sewer service lines because they are located within five feet of potential power and cable lines. The District is aware that a best practice is the use of a hydro vacuum versus manual excavation. Using a hydro vacuum reduces the risk of damaging pre-existing underground utilities and infrastructure, reduces the risks associated with hitting live power lines when using a backhoe or manual digging, and eliminates the physical demands from hand digging. Four field Operators will directly benefit through the increase in efficiency of operations and an increase in their safety. The use of a hydro vacuum is a **substitution control** and a C2E *Construction USA Line Locating; Infrastructure Waterline/Sewer Backup Prevention; and Ergonomics Fall Prevention* best practices.

## Three Valleys Municipal Water District – Drone Program

Three Valleys Municipal Water District owns and maintains assets that are located within areas that are adjacent to natural landscapes and potential for wildfire exposure. Currently, the District manually inspects electrical equipment on an annual basis with Operators implementing Lockout/Tagout procedures and then opening electrical cabinets. Using thermal sensors located on the drone can indicate active electrical hazards that may cause wildfires or present electrical hazards without exposing Operators to potential electrical hazards. Additional benefits of a thermography drone is the risk

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reduction of a potential wildfire impairing or damaging the critical operations of the treatment plant since it is located adjacent to large vegetative areas. Reducing the risk of electrical hazards also reduces overall District liabilities, minimizing active exposures and greater flexibility to inspect assets during emergencies, and reduces the potential of slips, trips, and falls to staff. The use of a drone for quick and detailed inspections of assets that are either inaccessible or unsafe for on-the-ground inspection is a **substitution control** and a C2E *Infrastructure Equipment Failure Prevention and Ergonomics Fall Prevention* best practice.

### Sweetwater Authority – Pump Control Davit Arm

A two-employee lift is required to raise or lower lift pump control valves from waist height to the ground which may create an ergonomic strain. The Authority has identified the mechanical method of a davit arm in place of a two-person lift for lowering valves. The davit arm will also improve operational workflow for five employees while reducing their risk of strain. A davit arm is a **substitution control** and a C2E *Ergonomics* best practice.

### Mammoth Community Water District – Unmarked Line Prevention

Mammoth Community Water District must identify electrical lines before performing excavation work and follow the Underground Service Alert (USA) requirements for USA/Line Location. When locating lines, the District expressed encountering unmarked electrical and cable lines 90 percent of the time. To improve line locates and reduce mismarking lines, the District wanted to implement locating equipment that will provide an additional level of caution when performing excavation work. The use of locating equipment minimizes the risk of hitting unmarked active lines that could result in damage, injury, or a claim. In addition to locating equipment, the District will create and maintain a formal Standard Operating Procedure (SOP) that will be included in staff training. The implementation of an SOP is an **administrative control**, and the locating equipment is an **engineering control** and a C2E *Construction USA Line Locating; Infrastructure Asset Identification; and Ergonomics Fall Prevention* best practices.

### Walnut Valley Water District – Hydrant Guard FH Valves

A significant hazard when a fire hydrant is struck by a vehicle is water coming into contact with overhead power lines. Walnut Valley Water District's Material Committee evaluated its risk exposure and launched an in-depth testing procedure on hydrant guard valves. Testing procedures included a fire-flow test and a performance test in an actual live and safe environment built in-house by staff. Based on its evaluation, the Committee determined that Hydrant Guard valves best meet its needs. The District's Materials Committee identified a device that lessens or eliminates risks associated with sheared fire hydrants and water, which may create a higher threat of arcing energized power lines. Hydrant Guard valves are an **engineering control** and a C2E *Infrastructure* loss reduction focus best practice.

### Centerville Community Services District – Walk-Behind Concrete Saw

Centerville Community Services District Operators currently use a concrete saw, similar to a standard circular saw, which requires the Operator to be on their hands and knees close to the equipment while in use cutting pavement or sidewalks. Based on recommendations by Operators and concurred by the District's Resource and Planning Committee, The District seeks to replace its concrete saw with a walk-behind concrete saw. The new walk-behind saw will change the process of cutting asphalt or concrete surfaces by permitting the Operator to stand upright and be further aware of the cutting surface point of contact. Utilizing a walk-behind saw is a **substitution control** and a C2E *Ergonomics* loss reduction focus.

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### Sacramento Suburban Water District – Confined Space Equipment Trailer

Sacramento Suburban Water District has 65 identified confined spaces that may require entry at any time; based on water system equipment performance, maintenance, operation, and emergencies. Currently, the District's confined space equipment is stored at its Corporation Yard warehouse and when a confined space event occurs, especially after hours, the equipment must be gathered and hauled to the worksite. The District proposes to purchase an enclosed utility trailer to organize and store all of its confined space entry and rescue equipment in one portable location. All 35 Operations employees potentially entering confined spaces would benefit from quick access to organized confined space gear necessary to perform safe entries and rescues. By storing the confined space equipment in one, secure location, response time to entry requirements (planned or emergency) would be improved while ensuring employee safety when performing these entries. Additionally, complying with the twice-annual inspection requirements of the fall protection equipment would be improved with all equipment located in one place. Implementing a confined space equipment trailer is a **substitution control** and a C2E *Construction* best practice.

### Orchard Dale Water District – Custom Truck Valve Exerciser

As a water utility, many operational duties take place on public roads and sidewalks, which may place staff at higher risk of being stuck by vehicles, motorcycles, or bicyclists during the day and nighttime hours. Having this in mind, Orchard Dale Water District instituted a strategic process into the planning, construction, and fabrication of a custom-built, one-of-a-kind, service truck. A significant function of this vehicle is the ability to exercise isolation valves throughout the water distribution system. Located at the front of this service truck, the valve exercising equipment lessens the need for staff to manually open or close isolation valves which if done manually can lead to strains, sprains, and slip, trip, and fall hazards. In addition to the valve exerciser, the placement of components such as shovel racks, ergonomically located safety cone racks, or compartments for tools was also given consideration. The service truck is also equipped with numerous work lights, traffic directional light bars, LED light bars, and code three lights. The goals of this service truck are to assist with curtailing or preventing the probability of injuries or incidents and advance operational workflow by allowing staff to perform tasks quicker and more efficiently. Compartment for tools and shovels are **engineering controls** while the use of a valve exerciser is a **substitution control**. The one-of-a-kind service truck is a best practice in our C2E *Construction, Infrastructure, and Ergonomic* loss reduction focus categories.

### Cottonwood Water District – Corporate Yard Security Gate

The entrance to Cottonwood Water District's Corporation Yard is equipped with a manual double swing gate, with a master lock connecting two chains that are bolted to the gates. Theft and vandalism are current risk exposures and unauthorized access to the corporation yard can be gained utilizing either bolt cutters, or a wrench that can be used to unbolt the chain from the gate. The District currently does not have security cameras at this facility. The District's desired solution is to install an automatic gate with security code access to improve security at the Corporation Yard, its associated pumping infrastructure and stored equipment. The installation of a security gate with access code entry is an **engineering control** and a C2E *Infrastructure Theft/Vandalism* loss reduction best practice.