



PID NEWS

2022 PID NEWSLETTER

As the Patterson Irrigation District (PID or District) rolls into the New Year, it's time for the annual newsletter and District update. Provided in this newsletter are features about PID staff, updates from what happened in 2020, major project updates, action that the Board took in 2020, a recap of operations for 2020 and a projection for 2021.

Staff Anniversaries

Jim Boschi – DSO – 28 years
Steve Trinta – Operations Supervisor – 18 years
Toni Russell – Secretary/Treasurer – 16 years
Joe Silva – Mechanic – 16 years
Allan Hooper – Mechanic – 11 years
Ethan Dias – DSO – 9 years
Joseph Martin – Maintenance – 7 years
Vince Sottile – Maintenance – 6 years
Vince Lucchesi – GM – 5 years
David Gragg - Maintenance – 3 years
Darrel Worthy - Maintenance – 2 years
Greg Reichmuth – 1 year
Juan Ramirez - Maintenance – 1 year

Featured Employee – Joe Silva



The 2022 newsletter is featuring Joe Silva. Joe came to PID in November of 2006 with going on 16 years of dedicated service. Joe likes working at PID because he enjoys the people he works with, likes to build different things for the district, and gets to troubleshoot various issues with the equipment and machines that PID operates.

Joe grew up in Patterson, with most of his family still living in the area. Like most of his family in the area, Joe is a farmer, more specifically walnuts. Prior to PID, Joe worked at J&M Equipment, owned a hay baling business, worked at Silva Machine, and even worked at John Azevedo's dairy.

Joes hobbies include spending time with this family, working on his '55 Chevy Bel Air, going to car shows, working on

and riding motorcycles, tinkering in his shop, SCUBA diving, free diving for abalone, fishing, camping and traveling.

Joes' breadth of experiences and knowledge has been a huge asset to the district and has helped solve some problems that ensured that growers continued to get their water. The District would like to extend a Thank You to Joe Silva and all he has accomplished in his years employed with PID.

Aquatic Herbicides

In 2021, the District continued the aquatic herbicide program with the goal to 1) eliminate or reduce the need to chain the canals, which will reduce the impact to the integrity of District facilities; and 2) reduce the amount of vegetation that grows along the bottom of PID's canals that plug up flow meters and reduce the capacity of conveyance facilities. The herbicide program included the application of Teton herbicide into PID's conveyance facilities. Neighboring irrigation districts use the same chemicals to address aquatic weeds and feel that it is a better approach than to chaining canals.

For 2021, the Aquatic Herbicide program was more successfully implemented than in 2020. Staff made modifications with the application rate, treating the moss buildup on road crossings, in addition to dipping the road crossings where the moss and algae build up. Due to the high heat and the low San Joaquin River, water quality wasn't the greatest and provided plenty of nutrients and temperature to allow the moss and algae grow in the canals. Staff worked expeditiously to keep the canals clean and to allow for the ease of conveyance of water.

Drought

With 2020 being dry and 2021 being the lowest precipitation year on record, California is in a drought. Reservoirs being depleted and little snowpack led to 2021 being a difficult year to navigate. The San Joaquin River was at its lowest levels in years and temperature and water quality became an issue due to the limited water in the River. In addition, in August, the State Water Resources Control Board adopted emergency regulations that allowed them to curtail water rights in the Sacramento-San Joaquin Delta Watersheds. These emergency regulations granted the State Water Resources Control Board the authority to curtail for up to an entire year based upon their water unavailability tool that they developed internally and diversion reports made in 2018.

To navigate 2021, staff worked on having water in storage to mitigate diminished pumping off the San Joaquin River in addition to reliance on our wells. Due to the delay in the State Water Resources Control Board in implementing the emergency regulations, PID was able to navigate the highest water demand months without being curtailed by making use of our wells and stored water. However, PID was curtailed in September.

Looking into 2022, with the emergency regulations in place until August 2022, the State Water Resources Control



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Board may impose curtailments at any point in the water year. It is difficult to predict when or how they will implement the curtailments, especially considering if precipitation and snow pack hold up. Therefore, we will have water in storage in the hopes that curtailments will be limited for 2022. As of the beginning of January 2022, PID has approximately 10,000 AF of water in storage available to bring down. Depending on how hydrology plays out for the remainder of the wet season PID will do its best to try to setup the District for success on water supply in 2022.

Capital Improvements Marshall Pump Station Relocation

The Capital Improvement Plan Adopted at the November 20, 2019 Board meeting set the stage for how the District will prioritize major capital improvements for the District barring any major facility failure. Project #1 from the capital improvement plan was to relocate the pump station at 3 South and Marshall into the Marshall Reservoir. This pump station relocation had the highest benefit to investment under the capital improvement plan. The project was completed in early 2021 and was operational throughout the irrigation season. Staff immediately were able to see the benefits of the project immediately.

2N Canal from Magnolia to Loquat

As many of the water users within PID know, the canals have over time seen quite a bit of degrading from their age. Typically in the winter months staff will go out and perform routine maintenance and canal lining repairs. However, there are some canals in the District that lining repair is no longer an option. In addition, those canals tend to experience seeps and become a hotbed for aquatics to grow. Of those canals in PID, 2N from Magnolia to Loquat is in the worst condition, considering leaks, lining issues, aquatics and sometimes stagnation.

In late 2020, PID set out with the plan to rebuild the canal with new lining. As the project proceeded, it was found that maybe PID would better benefit from piping the canal rather than lining it. The major benefit would be the reduction of pond grass and algae growth in the canal by not having the water exposed to the sun and heat, meaning deliveries wouldn't be hindered by a plugged up canal with aquatics. The engineers for the project put the increase in cost at less than 10% from the original estimate.

The project is currently in construction with an anticipation operational start date of March 1, 2022.

M Lateral from Poppy to Sperry Avenues

When the 2N project was bid, the price for the project was lower than what PID had originally anticipated. In addition, the price for the project was lower than what PID has seen on other proposals for piping other sections of canals in previous years. With that, staff requested the low bidder on 2N to provide an estimate on what the cost would be to do the same effort on

M lateral between Poppy and Sperry Avenues. This project is listed as priority number 7 in the Capital Improvement Plan to pipe laterals within the City of Patterson.

The project is currently in construction with an anticipation operational start date of March 1, 2022.

Sustainable Groundwater Management Act

In 2014, the California State Legislature passed comprehensive groundwater legislation creating the Sustainable Groundwater Management Act (SGMA). In adopting that act, the Legislature intended to provide local groundwater agencies with the authority and technical and financial assistance necessary to sustainably manage groundwater. The act anticipates that each affected groundwater basin or sub-basin will be regulated separately by one or more groundwater sustainability agencies. Groundwater sustainability under the act is to be achieved through groundwater sustainability plans (GSPs), which can be a single plan developed by one or more groundwater sustainability agencies, or multiple coordinated plans within a basin or sub-basin. The District is within the Delta-Mendota groundwater sub-basin, which is bounded by the coast range to the west, the San Joaquin River to the east, and extends from Tranquility north to Tracy.

From 2020 through 2025, PID will be working on collecting data and evaluating:

- groundwater in the upper unconfined aquifer,
- the relationship between the San Joaquin River and groundwater in PID,
- groundwater in the lower confined aquifer also known as sub-Corcoran, and
- extraction information for all irrigation wells within PID.

The data collected and evaluated in the coming years will help paint a better picture of what is happening beneath our feet. With the evaluations and data collected, projects and programs may be developed with the intention to prevent or reduce the need to restrict pumping within PID's boundaries. However; due to the limited data within our area the data collection effort will be substantial. In the event that an issue becomes apparent in the next 5 years, PID will work on determining means for action to work towards sustainability without causing significant impacts to water users.

Landowners within PID have been notified that the PID GSA is requiring all irrigation wells to have a flow meter installed to aid in the monitoring in extractions of groundwater within the PID GSA. A few landowners have responded, however, well owners are to be reminded of the new policy and the requirement to register their wells with PID to allow PID staff to check extractions of their respective wells.



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End of Year Evaluation

For 2021, the District Budgeted Operating Costs (District expenses not including capital improvements and costs for transfer water) at \$4.4 million (\$348.53/acre for 12,660 District acres). With a 1 acre-foot per acre allocation, the District generated roughly \$1.46 million (\$116/acre) from PID growers and landowners. At the end of the year, the unaudited expenses put the District at operating costs of approximately \$4.6 million (\$364/acre); which translates to a \$3.1 million subsidy to PID growers, or a subsidy of approximately \$248 per acre.

For 2021, the District allocated 1 acre-foot per acre with the expectation of some outside sales and no wheeling. It was projected that the District would lose or subsidize growers water rates by \$2.9 million. As the year progressed, the District's staff worked to constrain costs and to transfer and wheel what the District could, however as the drought progressed, pumping costs, water purchases, and storage and conveyance costs with the Delta-Mendota Canal required budget adjustments to ensure growers were getting water.

The information below is an unaudited summary of District operations for 2021:

2021 WATER DELIVERIES (AF)	
Allocated Water	11,203
Excess Water	20,256
District Wheeling	176
Out of District	1,176
Wheeling to DMC	1,516

2021 BUDGETED FINANCIAL	
Budgeted Operating Expenses	\$4,412,368
Budgeted Non-Operating Expenses	\$300,852
Budgeted Capital Expenses	\$2,920,911
Budgeted Internal Revenues	\$1,459,955
Budgeted External Revenue	\$3,729,317
Total	(2,444,859)

2021 FINANCIAL ¹	
Operating Expenses	\$4,604,133
Non-Operating Expenses	\$450,818
Capital Expenses	\$2,298,439
Internal Revenues	\$1,462,900
External Revenue	\$6,715,937
Total	\$825,447

Note: 2021 Financials are estimates and draft until the audit is complete

2022 Outlook

WATER SUPPLY: As we move into the 2022-23 water year, it's early to estimate exactly how much rain and snow will arrive this winter and spring, considering that the rainy season for the area runs from November through April. Water supply forecasts are putting our region in a possible critical situation.

2021 was critical on the San Joaquin River and PID experienced water availability, water quality, temperature and pond grass and algae problems. In addition, PID was curtailed due to these critical conditions. Please note, if critical conditions continue into 2022, water in the River will be warm and thus more moss and algae can be anticipated than previous years. In addition, water quality in the River will also be poorer which can create a hotbed in District canals for pond weed, moss, and algae.

Current 2022 projections estimate CVP contractors will receive an allocation in the range of 0-10% depending on San Joaquin River hydrology through spring. These translate into revenue projections for the District. A lower allocation provides more opportunities to wheel water and generate revenue from water transfers; inversely, a higher allocation lowers revenue-generating opportunities.

OPERATIONS: For 2022, special operations outside of delivering water and general maintenance efforts include:

- Staff will continue with a more aggressive Teton schedule with attempting different approaches to help alleviate the moss and algae growth,
- The District will continue work on Project #2 of the Capital Improvement Plan, a northside recharge and recirculation project, and
- The District will begin work on:
 - Replacement of Poplar Well
 - Design of bottleneck relief for Lateral 3S at Pear and Armstrong Avenues (Capital Improvement Project priority number 10)
 - Design of piping of Lateral 4N between Las Palmas and 1st Street (Capital Improvement priority number 7)