

# the irrigator

Modesto Irrigation District Water Operations Newsletter

## 2017 Groundwater Replenishment Program

During the May 9 and May 23 Board meetings, the MID Board of Directors discussed and approved the 2017 Groundwater Replenishment Program (GRP). The GRP is a voluntary program that allows eligible landowners to receive MID surface water for irrigation purposes on applicable land outside of MID's irrigation boundary for the benefit of groundwater replenishment within the Modesto Sub-basin. This program is only for the 2017 irrigation season. More information at [www.mid.org](http://www.mid.org).

**Water Operations Division**  
 Monday - Friday  
 7 a.m. - 4 p.m.  
 209.526.7639

If you have any feedback or suggestions regarding MID's water operations, please contact us at 526-7562.



The 2017 irrigation season officially kicked off on Sunday, March 19 and it's no secret that this year has been an abundant water year. With Don Pedro Reservoir at its highest levels in the last few years, the MID Board of Directors approved a base 42 inch allocation with replenishment water available above that. We haven't seen a full allocation like this since 2011. With the available water supply, the Farmer to Farmer Delivery Program has been suspended. This season you can only transfer water to parcels you own, rent or lease.

At the March 14 Board meeting, the Board agreed to not make any changes to the 2017 water rates. Following is the current rate structure.

Category	Cost
Fixed Charge	\$44.00/acre
Volumetric - Tier 1 (up to 24")	\$2.00/acre-foot
Volumetric - Tier 2 (24" up to 36")	\$5.00/acre-foot
Volumetric - Tier 3 (36" up to 42")	\$11.25/acre-foot
Volumetric - Tier 4 (42" and up)	\$40.00/acre-foot
Facilities Maintenance Charge*	\$22.00/acre

*\*A landowner only pays a facilities maintenance charge when they aren't taking any surface water.*

During the winter season, Water Operations staffs' focus was on water level control, reliability and modernization. All the winter work that took place was designed and constructed by Water Operations staff and all work was within Board approved budgets.

## MID Water Operations in the Community

Water Operations staff participated in Modesto Junior College's job fair. They were able to speak to several students about job opportunities within MID's Water Division.



## A look back and a look forward

*By John Davids, Assistant General Manager of Water Operations*

### Looking back

With the start of the 2017 irrigation season underway, I think it's important for us to look forward, but also to look back and recap our accomplishments, what has worked and what hasn't worked.

### Operational Spills

In 2016, Water Operations staff operated a "tight" system for another irrigation season. Operational spills totaled approximately 23,000 acre-feet – about a 30% reduction with nearly a full allocation. Our infrastructure improvements are working and Water Operations staff remains diligent in their management of our most precious resource.

### Aquatic Vegetation Management

Depending on your location within MID's irrigation service area, you may have noticed a significant change in our aquatic vegetation management. For a number of years, Water Operations staff has been researching comparable alternatives to Magnicide H. Magnicide H has been applied by MID for years and has done a great job, however, its use comes at a significant cost with a high safety risk for our applicators and the larger community as a whole. After significant research, Water Operations staff decided to try Endothal (specifically Cascade and Teton) as a long term replacement for Magnicide H. With one season under our belts, we are pleased with the results. From my perspective, the benefits are three fold; (1) we saved approximately \$100,000 in product costs thus far, (2) the safety risks for our applicators have been significantly reduced and (3) the volume of water associated with application is significantly reduced given a decrease in the frequency of application.

### Groundwater

With the Sustainable Groundwater Management Act passing in 2014, the landscape with respect to groundwater management statewide has changed. At MID, we continue to play an active role in groundwater management within the Modesto Sub-basin and 2016 resulted in significant local cooperation amongst the Stanislaus and Tuolumne Rivers Groundwater Basin Association (STRGBA). This past year we embarked on a historic effort – all member agencies elected to become a Groundwater Sustainability Agency (GSA) for our collective service areas within the Modesto Sub-basin. On May 30, 2017, the STRGBA GSA was deemed the exclusive GSA for that portion of the Modesto Sub-basin lying within Stanislaus County. This was a big lift and the member agencies should be applauded.

### Stormwater

In 2016, Water Operations staff worked extremely hard on a collaborative master stormwater agreement with the City of Modesto. We look forward to consideration of our final product by both the Modesto City Council and the MID Board of Directors in late June 2017. While we look to be fair to our neighbors, we also look to seek accurate compensation for the use of our irrigation conveyance infrastructure during the winter months.

### Outreach

Outreach – what more can I say? 2016 marked our third straight year in which we focused on outreach to you – our growers. Whether it was through newsletters such as this, reports at the Board meetings, additional letters or through direct contact with MID Water Operations staff, we are committed to complete transparency through honest and deliberate outreach.

## Looking forward

Our 2017 water supply is better than it has been in years, which means that our agricultural and urban customers alike will enjoy all of the surface water necessary to meet their beneficial uses. This temporarily takes one item off of a plate that remains full with large, complicated and vitally important water issues. As we move through 2017 and as outlined in the 2017 landowner meetings, Water Operations staff will continue to focus our efforts on; (1) business focus, (2) Comprehensive Water Resources Management Plan, (3) Groundwater, (4) Safety and (5) Outreach.

### **Business Focus**

Within the Water Operations Division, we strive to deliver the highest level of service at the most affordable cost. I like to think that the highest level of service comes easy, but the most affordable cost is always a challenge. For that reason alone, Water Operations staff is constantly engaged in continuing education and research related to new products, new work methods, project management and leadership. That's what I call our "business focus" and from my perspective it will pay dividends in the years to come.

### **Comprehensive Water Resources Management Plan**

Over the last several years, Water Operations staff has spent countless hours on the development of our Comprehensive Water Resources Management Plan (CWRMP). The details of our past actions are highlighted in a special section within this issue and completing the necessary environmental documentation for the CWRMP will be one of our big focuses for 2017.

### **Groundwater**

With GSA formation behind us, we are now shifting gears to the speculated Operating Agreement and in the next five years we as a group, along with your collective input, will chart the path forward to continued sustainability through development and completion of our Groundwater Sustainability Plan.

### **Safety**

For MID management, the safety of our work force is one of our highest priorities. In the Water Operations Division we take safety seriously and I want to ensure that each night, my staff returns home safely to their families. In 2017, we are excited to see our Safety Department expand to include additional staff – a change that we hope will bring focus and dedication to the water side of the house and the jobs that we do on a daily basis.

### **Outreach**

Our commitment to outreach is here to stay. As I communicated during this year's landowner meetings, I believe in an educated and well-versed staff and constituency. Knowledge is power and to the extent we can continue to share our positions, solicit input and engage in constructive dialogue with those we serve, we all win.

As we embark on the busy summer ahead, I want to take this opportunity to thank mother nature for the bountiful winter season and wish each of you prosperity and well-being this growing season. Should you have any questions or concerns, please feel free to call me at (209) 526-7562.

## Weather forecasting, water supply and what's to come

*By Gordon Enas, Senior Civil Engineer*

In Fall 2015, weather forecasters were predicting that a “Godzilla” El Nino would unleash buckets of water on California in 2016. While California did receive more rain than the previous three years, the “godzilla” storms never materialized. Fast forward to Fall 2016 – while the weather forecasters debated which weather pattern, El Nino or La Nina, would show up in 2017, the region was blasted unexpectedly with one of the wettest October’s in recorded history. At the same time, the term “atmospheric rivers” became the buzzword in the forecasting world.

Looking back, October 2016 was only a precursor of more atmospheric rivers to come. We now have over 71 inches of rainfall in our watershed. Couple this with another 61 inches of snow water equivalent that is snow in the mountains at the peak of the season, our region has been catapulted out of a lengthy drought.

So what does this mean for the Tuolumne River Watershed and the 2017 water supply? Most of the snow will eventually melt and either run off into the streams and rivers that feed Don Pedro Reservoir or percolate into the groundwater basins. Since the end of the 2016 irrigation season, over 700,000 acre-feet of water flowed into Don Pedro Reservoir filling it to the rim. This forced Turlock Irrigation District - the dam operators - to open one of the three spillway gates at Don Pedro Reservoir for about a week. The last time Don Pedro was this full was in 2011. Since then, almost 2 million acre-feet has been released into the Tuolumne River. The groundwater table has also been recharged - rebounding by an average of 3.5 feet within MID’s boundaries.

Coming off four years of crippling drought, we have a lot to be thankful for and a lot we can learn. First, atmospheric rivers, El Nino/La Nina weather patterns and long-range weather trends are very difficult to predict, but prudent conjunctive water management reduces risk and brings greater certainty to water supply planning. Having a balanced portfolio of surface water and groundwater can help mitigate these wet-dry cycles. Replenishing the groundwater table during wet years can provide great benefits during drought years - hence the 2017 Groundwater Replenishment Program. Second, protecting and beneficially using our surface and groundwater supply should be synonymous in our collective thinking about the value of water and water rights. MID has a great treasure which must be appreciated and protected from attempts by outside entities to take it from the region and use it to solve their problems.



# Comprehensive Water Resource Management Plan - What is it?

By Chad Tienken, Civil Engineering Manager

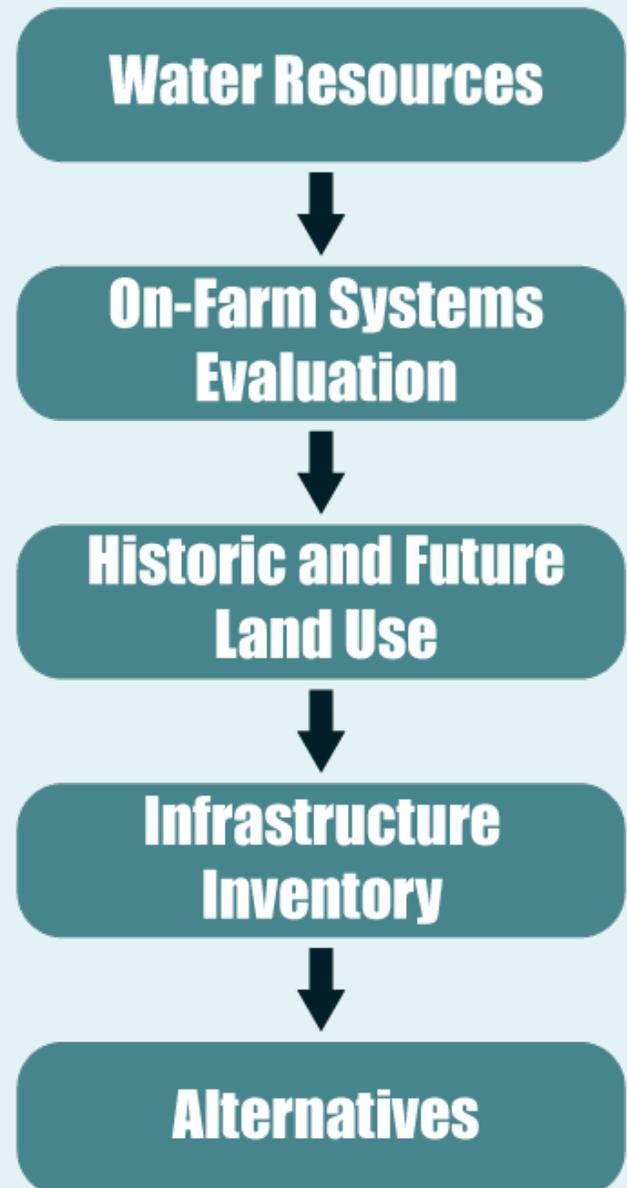
As many of you know, Water Operations staff has been working on the development of a long-range water resources plan for several years. We are happy to announce that 2017 will show the culmination of these efforts. I'd like to provide you with some information on the content of the plan.

*"It is the intent of Modesto Irrigation District to preserve and protect their water rights and resources and embark on a significant infrastructure modernization program while at the same time providing for the long-term financial viability of the organization."*

In order to deliver irrigation water to the 66,000 irrigated acres within MID's service area, Water Operations staff must operate a complex distribution system consisting of miles of canals, pipelines, pumping plants and control structures. The system was constructed over the past 130 years and regardless of sound maintenance practices, many facilities are beginning to show signs of age. The necessity to replace aging infrastructure coupled with available technological advances, changing water needs and land use created a clear recipe for development of a Comprehensive Water Resource Management Plan (CWRMP).

The CWRMP analyzes five subject areas that affect MID's water supply and demand. By taking a close look at MID's current and future water supplies, on-farm irrigation practices, land use and cropping patterns, we were able to forecast what MID's water landscape will look like decades into the future. As you can imagine our water needs will change as cities grow, as crops change from things like irrigated pasture to orchards and as irrigation methods change from flood to drip/micro or sprinklers.

Based on these facts and findings we considered infrastructure alternatives that would meet the predicted range of conditions. We know there will be increased pressures on water management in the future and this plan will provide MID with a road map that allows staff to balance those pressures with changing customer needs. *(continued on page 6)*





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## ***Comprehensive Water Resource Management Plan (continued)***

### **Goals**

As we design projects and move forward with implementation, it's important that projects align with one or more of the following goals:

1. Provide a high level of customer service and meet customers' evolving water delivery needs - MID wants to ensure that we maintain focus on adapting to our customers changing farming practices.
2. Ensure compliance with SBx7-7 - This goal was included to ensure that future infrastructure projects are designed with water conservation and compliance in mind.
3. Implement irrigation infrastructure improvements for stewardship of MID's water resources and increased operational reliability - We want to focus on projects that provide improvement in management of surface water and groundwater supplies, while enhancing reliability within the system.

### **Current Status**

- Initial assessment and data collection is complete.
- Forecasts of the future MID landscape are done.
- Infrastructure inventory is complete.

### **Next Steps**

As we move forward this year, we will finalize the program and plan to present it to the MID Board. Following Board approval, we will go through an environmental review process for California Environmental Quality Act (CEQA) compliance and with any luck, you will see significant execution of the CWRMP in the years to come.