

### President's Note: Strategic Planning

By: RD 108 President Fritz Durst

The Board and Management of RD 108 need your help. We need you to become spokespersons for our water district.

Such was the out come our recent strategic planning sessions led by consultant Larry Mandelberg. Your Board met twice with Larry to reconfirm the direction of our actions and to help make us as effective as possible to insure a reliable water supply at a reasonable cost. Many topics were discussed during our two three hour meetings, but what surprisingly rose to the top was "branding". We have all agreed that we need to deliver a clear and concise message to the world as to who we are and what we do.

Before we tell everyone else about us, we need to first better educate our water users and landowners as to our issues. We have noticed an increase in attendance at our special meetings and we would like to provide more opportunities to inform and discuss the many important issues facing us today. We need you to help share our message.

RD 108 has a fantastic story to tell about food production for humans and wildlife, habitat for the migrating waterfowl and excellent efficiencies with water and energy. We are the spotlight district for Northern California and we give frequent tours of our facilities. Too many folks simply assume that we operate like districts in the Central Valley, and that is a dangerous assumption for decision makers.

Our goal is to empower you all to become docents for RD 108 and Northern California water. It doesn't necessarily have to be for a congressional tour, though that would be nice, but it would be for your friends, family, trade associations, schools etc. We would like you to be comfortable speaking about the issues around water and farming and to help us to forward our goals. We sincerely hope you will be able to make it to more of our special events as well as informal lunches with Management and the Board.

### OPINIONS WANTED

RD 108 is looking for public participation and feedback and welcomes opinion articles for the Water Notes Newsletter. Articles or topics of discussion for the newsletter can be submitted to the District by email:

bbusch@rd108.org

or mail:

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c/o Newsletter Opinion  
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RECLAMATION DISTRICT NO. 108

# WATER NOTES

QUARTERLY PUBLICATION OF DISTRICT NEWS AND EVENTS

November 2013, Volume 4.3

### BOARD MEETINGS RESTRUCTURED TO BETTER ENGAGE LANDOWNERS

RD 108 recently completed a workshop focused on how to improve RD108. The result of the consensus process was to improve interaction with Landowners and Water Users. In this effort, the Board is creating an Open Forum for the first 30 minutes of each Board Meeting to encourage questions, concerns and suggestions from Landowners and Water Users. Raise anything from your turnout leading to Bay Delta Conservation Plan to what you want to see from your District.

The Open Forum will be held at **8:30 a.m. on the third Thursday of every month** at the RD 108 office.

### RD108 Welcomes New Trustee

Jon Leonard is the newest member of Reclamation District No. 108's Board of Trustees. Jon currently lives in Princeton and has farmed rice for over 20 years. Jon manages 360 acres in the District and is the son of John Leonard who owns the historic Shore Properties.



Trustee Jon Leonard

### El Dorado Bend Pumping Plant Maintenance Update

RD 108 is in the process of completely refurbishing the El Dorado Bend Pumping Plant. The pumping plant was originally constructed in 1921 to provide both drainage and irrigation service. Many of the pumping plant's major components are original and include two 600 HP pumps and two 400 HP pump.

filling the gaps with grout. The District is replacing two of the pump impellers used to divert irrigation water as the original implellers have deteriorated over the 90 years of service. The new impellers will increase the reliability and efficiency of the pumping plant.



Sleeving a 48 inch Pipe Inside Old 54 inch Pipe Through the River Levee

Part of the maintenance improvements include repairing the original 54-inch diameter 3/8-inch thick pipes through the levee, which have corroded over the last 90 years to a thickness of only 1/8-inch. The repair process includes sleeving the three 54-inch pipes with a new 48-inch diameter 1/2-inch thick pipe and

The remaining maintenance includes: replacing the riverside gates, secondary gates and actuators inside the pumping plant, waterside suction bells for the two diversion pumps, and refurbishing the pump priming system. The total project cost is approximately \$2 million.

### Rice Decomposition Curtailed

RD 108 has stopped deliveries for Rice Decomposition due to a condition of it's winter water right, Term 91, which requires us to stop diverting water from the River if there is not enough natural inflow to the valley to fulfill in-basin needs. The State Water Resources Control Board has called Term 91 and estimates the condition to last until there is significant precipitation in the Sacramento Basin.

The District is continuing to deliver water to lands located near the Sacramento River with a Riparian claim. Contact Asst. Manager Bryan Busch at (530) 437-2221 if you have any questions.

## Recognizing the Service of former Trustee Arnold Andreotti

Reclamation District 108's Board of Trustees presented the Andreotti family with Resolution NO. 13-08, recognizing ARNOLD ANDREOTTI's years of service as Trustee to the District.

ARNOLD ANDREOTTI served faithfully as Trustee of Reclamation District No. 108 since November 12, 2003, having made valuable contributions of his time and counsel to the District's continued success; and

WHEREAS, the Board of Trustees desire to memorialize the passing of Trustee ANDREOTTI on July 29, 2013, and to recognize his devoted service to the administration of this District; and

WHEREAS, Trustee ANDREOTTI'S dedication to, and love for, family, farming, this District and his many friends was so evident in his life, and this dedication and love will be a lasting memory to all who knew him;

**NOW THEREFORE BE IT RESOLVED**, that the Board of Trustees formally honors the life of ARNOLD ANDROTTI and recognizes his tenure as a Trustee, serving devotedly with wisdom and vision for the future of the District.



## CA Fish and Wildlife Trap Salmon in Colusa Drain



Salmon Barrier in Colusa Drain

During the 2012-2013 migration a large number of salmon were stranded in the Colusa Drain. It was later determined that many of the stranded salmon were endangered winter-run Chinook Salmon. To prevent the continued loss of endangered species in the 2013-2014 season, CA Fish and Wildlife in cooperation with RD 108 has installed a barrier, called an Alaskan weir, to direct fish into live pens so the fish can be returned to the Sacramento River.

CA Fish and Wildlife plans to satellite tag some of the trapped fish to learn more about salmon migration and possibly how the salmon are ending up in the Colusa Drain.

## Settlement Contract Litigation Update

The Sacramento River Settlement Contractors argued in front of an eleven-member panel of the Ninth Circuit on September 19, 2013 on its long-term water supply contracts with the US Bureau of Reclamation (Reclamation). The original settlement contracts were renewed in 2005 only to be challenged by the Natural Resource Defense Council (NRDC) who questioned the validity of the renewal.

The Sacramento River Settlement Contractors were successful at the lower courts before Judge Wanger, and so the NRDC appealed to the Ninth Circuit Court. The appeal was heard in 2011 before a panel of three judges who also issued a 2-1 ruling in favor of the Settlement Contractors on July 17, 2012. Still discontent with the courts rulings, the NRDC issued yet another appeal and the Ninth Circuit judges agreed to reopen the case in an En Banc hearing on September 19, 2013.

During the En Banc hearing NRDC argued that Reclamation violated the Endangered Species Act's requirements by not consulting with fish agencies in ways that would protect ESA listed species. Reclamation's and Settlement Contractors' attorneys argued that Reclamation lacked discretion and the section of ESA was only for discretionary actions. In a non-typical move, the court has requested the parties to meet with a judge to consider a settlement. The first of these meetings are scheduled in November.

## Johnson Grass Prevention

Johnson Grass is a continuing challenge in the District. We ask that landowners and water users help address this problem weed. The District is committed to vegetation management to help create a healthy and productive landscape for its growers. As the District works to control weeds, we understand that the success of any vegetation management program hinges on the District coordinating efforts with growers to manage invasive weeds on their property and the District's rights-of-way.

The District's vegetation policy encourages grasses along canals and roadways and targets only specific weeds with chemical application. The policy has shown to provide slope stabilization as well as creating competition for other harmful weeds and plants. The grasses also provide habitat for pheasants, birds and other wildlife enjoyed in RD108.



Invasive Johnson Grass

## RD 108 Flow Measurement Compliance Program

State law requires that all Districts over 25,000 acres measure the volume of water delivered to each field and bill customers at least "in part" on the volume of water delivered by 2016. To comply with the law the District must modify all field turnouts and pump discharges to provide measurement. After several Landowners and Water Users meetings, it was the Board's decision that: 1) The charge for each turnout or pump modification should be paid on a per-turnout basis (up to \$2,900), 2) The cost for the portable meters, data quality control, and the invoicing software should be paid on a per-acre charge (\$7.30/acre), 3) The charges shall be combined as a single fee and billed over 3 years.

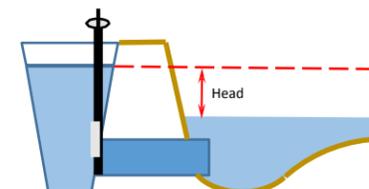
The District reached out this summer and met with nearly every landowner in the District to review each field and confirm what facilities are needed for field level measurement. The first invoice for the Flow Measurement Compliance Program was sent out in September and is due on December 1, 2013. If you have any question or believe the invoice is incorrect please contact Bryan Busch at (530) 437-2221.

The Flow Measurement Compliance Program is well underway with approximately 80% of the District's turnout measurement devices already installed. It is estimated that by the start of the 2014 irrigation season all turnout devices will be installed. The next step is to expand testing to debug the software and train District Staff. RD 108 plans to measure all turnout deliveries throughout the District in the 2015 irrigation season and will provide farmers with a summary of their water use. Billing in part by volume will begin on January 1, 2016.

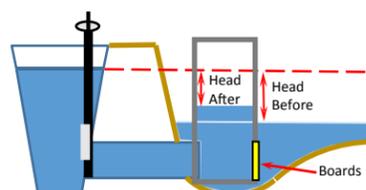
## Does the Flow Measurement Box Reduce Field Flooding Time?

The flow rate through an orifice type turnout is a function of the gate opening and amount of head across the gate. When installing the flow measurement boxes, RD 108 made sure all turnouts are submerged, meaning the water on both sides is always above the gate. This is accomplished by having the top of the turnout's culvert lower than the field level. The Figure below shows how the head is measured across the turnout for a typical District turnout.

Note the head is the difference in height between the two water levels; and the position of the orifice does not matter as long as it is submerged.



Weir boards will be installed in the flow measurement box for three reasons: 1) to ensure full pipe conditions, 2) to prevent sedimentation of the turnout, and 3) to isolate the field water from the head across the gate. Depending on the number of weir boards installed, the amount of head across the gate may be reduced. The figure below shows the impact of installing weir boards in a flow measurement box.



In most cases the gate can be opened further to allow for the same flow rate through the turnout. RD 108 has tested some turnouts to determine the effect of flow measurement boxes and found an approximate decrease in maximum flow rate of 5%. In the case where an impact is found, RD 108 will work with the water user to keep a full pipe condition for flow measurement but will minimize the number of boards to maximize the flow through the gate. This is typically only a challenge in rice fields with very low head (less than 2 feet). In these cases, boards will be removed and the first rice check will be utilized to stabilize water levels for measurement.

## Flow Measurement Program Budget

The budgeted cost for the standard turnout box was based on a pilot study of 17 turnouts. In addition, there are cases where the entire culvert and gate must be removed and reinstalled or replaced due to deterioration over time or to fit the physical constraints of the flow measurement device.

The costs for any individual turnout may be different, however, the entire cost of the flow measurement program is evenly charged to all turnouts. Therefore, the cost charged for each standard turnout is an average of the entire District and individual items listed on the budget may be more or less than compared to any single installation. The table below shows the budget estimate of a standard turnout box.

Description	Cost
Weir Box, Grout, and Rock Base	\$ 800.00
Meter Plate and Misc. Hardware	\$ 50.00
Culvert and Gate Replacement	\$ 600.00
Equipment (Excavator, Pickup, Dump Truck)	\$ 500.00
Labor	\$ 950.00
<b>Total Estimate per Turnout</b>	<b>\$ 2,900.00</b>

It is important to realize that RD 108 will only charge the actual cost of installation up to a maximum of \$2,900 per turnout. Therefore, if the District comes in under budget, which current projections show work significantly ahead of schedule and substantially under budget, the cost per turnout will be adjusted.

It is expected that the final payment of the flow measurement program **will be reduced or eliminated** to reflect the lower cost of flow measurement installations.



District Turnout Box

# PRESIDENT'S NOTE

OF THE KNIGHTS LANDING RIDGE DRAINAGE DISTRICT

November 2013

## MARCHING IN PLACE; IT'S CORPS POLICY

The following is an editorial response by James Heidrick, President of the Knights Landing Ridge Drainage District. The response is to an editorial published by the Woodland Daily Democrat on August 17, 2013 regarding the U.S. Army Corps of Engineers' finding the Knights Landing levees "unacceptable."

I am writing this in response to an article in the Woodland Daily Democrat about the US Army Corps of Engineers declaring levees in Knights Landing "unacceptable" because of maintenance "deficiencies". I currently serve as the President of the Knights Landing Ridge Drainage District (District). The District is responsible for maintaining the federal Project Levees, which define the Knights Landing Ridge Drainage Channel. We agree that the maintenance of our levees could and should always be improving. However, the reason our levees are a public safety threat, is not because of some minor maintenance items, but because an astounding twenty-seven years after the 1986 flood, the Corps still has not been able to execute the repairs they themselves say are needed. I am writing this because I want you to know how hard our District is working to make our levees better. I am writing this because the public needs to know how broken the process is to repair and improve our flood system. I am writing this



*Knights Landing Neighborhood*

because I'm so darn mad that the Corps is all too quick to point the finger, but can not figure out how to pick up a shovel and get some real work done!

First, the bad news. Today, the 1,000 residents, K-6th grade elementary school students, and all of the farmers in the Knights Landing Basin are at risk of flooding from levees that were; 1) observed as underperforming during the 1986 flood; 2) documented in a report by the Corps as underperforming in 1991; and 3) were emergency flood fought in the flood of 1997. The good news is we know what needs to be fixed



*Knights Landing Ridge Cut*

and we have the money to fix the Levee. The devastating news is that the system for getting a flood project to construction through the Corps is absolutely broken. The Corps is an organization that has lost their way, and is absolutely paralyzed by their own tangled processes and procedures. I hope and believe the public would demand change if they only knew how bad the situation has become. Although I am most familiar with levees surrounding the Knights Landing basin, I have come to understand that our frustration is not unique.

After the 1986 flood, the Corps began a planning process with the goal of fixing levees throughout the Sacramento Valley that had not performed well during the 1986 flood. Eleven years later we had the 1997 flood and still the Knights Landing levees had not been fixed. That 1997 flood brought more issues to light and the District was hopeful that some remediation work would finally happen, but it didn't. Three years ago, the District Board was so frustrated with the lack of progress, and so concerned about liability, Board members considered stepping off the Board. After much soul searching, they instead decided to take a

more aggressive approach and try to push the work forward themselves. They held several meetings with landowners and asked them to quadruple their self-imposed property tax assessment to pay for constructing levee fixes. The landowners agreed overwhelmingly, and 85% voted in favor of increasing their assessments.

The Board hired an engineering and project management team to help ready the project for construction. Several Board members travelled to Washington D.C.

to press for federal cooperation. Since federal funds for construction were no longer on the table, the District asked the State Department of Water Resources (DWR) for funding which doubled the District's cost share. DWR found the project to be in the State's interest and agreed to cost share the work. We were finally on our way to starting construction in 2014.

need more reports, different reports, reports that the local Corps offices don't have the money to write.

The Corps is now telling the District that the only way to get to construction in 2014 is by going through another, different Corps process. This time the process would require the District to obtain a 408 Permit to allow the District to repair

in the town of Knights Landing if the levees failed. The local Corps staff seem to understand. They'll even share quietly over coffee their own frustrations with the system and their lack of power to get things done. And while we appreciate their commiserations and condolences, that doesn't get levees fixed or protect lives. It's time for change at the Corps. This project in Knights Landing should have been built 20 plus years ago and the more than \$6 million spent pushing paper should have been spent on moving dirt to protect the people of Knights Landing. You would think Hurricane Katrina would have motivated the Corps to improve flood protection. Instead, it has done just the opposite. It has actually slowed down the protection of citizens and prompted the Corps to spend tax dollars on levee inspections already performed 4 times per year by the State and locals. The true purpose of these inspections is to point the finger at others. It is time for the Corps to take ownership of their true responsibility; public safety! For now, my Board realizes that the only way to get things done is to do it on our own and expect no assistance from the Corps.



*Knights Landing surrounded on Three Sides by Water; Protected by Levees*

March on right? Not so fast! The Corps told the Knights Landing District that if we wanted to build the exact same project the Corps was planning to build, we would need special language added to our original Corps cost sharing agreement. What seemed at first to be a simple bureaucratic step quickly turned into a quagmire of re-studies, reports and rigid rules that made little or no sense for our project. The Corps had to re-study the project economics even though they were not paying for the project. They had to prepare new construction cost estimates even though they have no intent to fund the repair of the levees. The Corps had to prepare a report that would confirm that the project the federal government has been planning to build since the 1990's was integral to the federal flood control system. And on and on it went until those rigid rules required that the final approvals must now come from Corps headquarters in Washington D.C. But before Corps headquarters can approve our project, guess what? They

the federal levee. This Permit application requires that we submit to the Corps their own reports, engineering designs and environmental assessments and ask them to make a finding that constructing exactly what they were intending to construct would not harm the flood system. If you're thinking it seems crazy to submit documents to the author and ask for their review and approval of an action they were already intending to do, let me tell you, it is crazy, it is ridiculous, and it is a waste of tax payer dollars. But in the meantime the Corps is issuing press releases, informing us of our increased risk due to minor maintenance items while ignoring their own failure to deliver much more important, much more critical levee repairs for our basin. Talk about missing the forest for the trees!

I have heard our District Manager tell the local Corps staff that the kids at the Knights Landing Elementary School are not as tall as the flood waters would be



*Knights Landing Ridge Cut Levee*

The residents of Knights Landing deserve flood protection! Knights Landing Ridge Drainage District along with the State have funding money to fund the critical repairs. We no longer expect assistance from the Corps, but isn't it time they at least get out of the way and give us permission to fix our own levees! It is now up to us to "march on" without the Corps.

James Heidrick  
President of KLRDD