

**Thunderbird Water & Sanitation District  
Board of Directors Monthly Meeting Minutes  
October 14, 2021**

**Call to Order:**

7:01 P.M.

**TWSD Board Members Present:**

Larry Morris, Barry Gager, Bruce Boydston, Duff Comstock and Gary Cammarata

**Other TWSD Present:**

Edd Berchem (TWSD accounting services)

**TWSD Residents Present:**

Landon Dees-Lot #106, Eric Daudt-Lot #28, Dan Soo-Lot #153,  
Lyle Breshears-Lot #59, Jim & Loretta Gilbert-Lot #24, Steven Nelson-  
Lot #20,

**TWSD Residents Discussion:**

The home owners were in attendance to discuss, question and get answers concerning:

1. Thunderbird Water and Sanitation District's (TWSD) Ballot Proposal for funding of a needed increase in water supply capacity from Water Rights on Lambert Ranch.
2. TWSD's more immediate consideration for putting in a new well near the low producing well #1R.

The above two projects are discussed by Larry Morris in Summary Of Written Comments For the Proposal and Barry Gager in Election For Approval of \$3,000,000 New Debt (see the end of this Minutes Document). These papers were previously sent to Indian Creek Residents via County Ballot information and email.

Question about drilling replacement well for well #1R. The Board Reported that this would be completely independent from the Lambert ballot proposal and is not an option but rather a primary objective. The new well will be going deeper than the old well.

Discussion about the District's purchase of Water rights under Lambert Ranch and is now in the process of obtaining easements. for wells and pipelines.

Financially - In 2019 the District paid off one loan and in 2022 the District will pay off another. This will help our loan balance when new loans are acquired.

What is the value of the Lambert Ranch Water Rights? The Water Rights give Thunderbird the right to drill for water in three different aquifers. Thunderbird will be drilling in the Arapahoe Aquifer.

What is the water level? Is the Arapahoe level dropping? Yes, it is but don't know exactly how much. Thunderbird has records that will show historical levels.

What about leaks. Thunderbird knows there are leaks but doesn't know where. Thunderbird has tested meters and hydrants with an electronic device but tests were inclusive.

Winter water is available, summer is where Thunderbird has problems.

Why don't we use the Denver Aquifer – because it's not as Productive.

Dominion Water was discussed. It's a very high-cost option.

The Rural Water Authority was discussed.

Pipeline options were questioned. Depletion of the well water. What about leaks. What are the distances for proposed pipelines?

Resident, who is in the business of constructing gas pipeline systems, thinks the projected pipeline costs for Lambert Wells and Dominion connection sound very high.

Who manages this Lambert project? Courtney Hemingway

**Minutes:**

The DRAFT of Board minutes, for the 9-9-2021 monthly TWSD Board of Directors meeting, as corrected (tank 3 changed to tank 1 in Violations) was unanimously approved by the Board (5-0)

**Financial:**

**Accounts payable** was reviewed by the Board. Independent Bank checks dated 10-14-2021 were issued, signed and reconciled to checks issued 9-9-2021. The check sequence was #9356, #9369 – #9380. Due to system error, check # 9356 had been skipped 9-9-2021.

All Independent Bank check payments were unanimously (5 - 0) approved for issue by the Board.

**Independent Bank Register - Cash Reserve Report – Reconciliation**  
The beginning cash balance / (10-14-2021 Report) does reconcile to the ending cash balance / (9-9-2021 Report).

**Chase Bank Register - Cash Reserve Report – Reconciliation.** The 10-14-2021 Report cash balances reconciled to the 9-9-2021 Report cash balances.

The last two checks issued on Chase Bank were #1088 4-10-2020 and #1089 9-22-2020.

**UBS Register - Cash Reserve Report – Reconciliation**  
The 10-14-2021 Report cash balances reconciled to the 9-9-2021 (Corrected 9-9-2021).

**TWSD Financial Statements for September 30, 2021** - The Financial Statements were reviewed. The Board accepted the Financial Statements (5-0).

**Billing Register**– The Billing Register for 9-30-2021 was examined by the Board. No action was required.

**Exchange Flash Drive** – Accounting system flash drives were exchanged between the Treasurer and Accounting Services (10-14-2021).

**Ballot Proposal** – The Board discussed the ballot proposal for property tax funding for new wells and infrastructure. Barry Gager will outline the reasons for the proposal and the Board will distribute the information to Indian Creek residents.

**Budget**–Drafts of proposed 2022 budget documents were submitted by Edd Berchem and Barry Gager. The Board discussed future expenditures. Barry will combine and expand on the budget documents for the 11-11-2021 Board meeting.

**Billing System** – Edd Berchem is having trouble with the Billing System. Edd talked to Trent (billing system rep). Edd thinks that maybe it is fixed.

**High Meter Readings** – Larry Morris and Bruce Boydston will examine several of the high meter readings.

**Old Business:**

**System Operation** – System is functioning normally.

**Meter Reader** – Sensus meter reader is still not available because of production and transportation problems.

**Flushing Fire Hydrants** – Hydrants will be flushed October 23&24.

**Adjourn:**

10:16 PM

**Submitted by:**

Gary D. Cammarata

TWSD Board Secretary

### **Summary of Written Comments for the Proposal:**

Currently Indian Creek Ranch is being supplied by two wells, each approximately 21 years old. Well #1R is producing approximately 18 gallons per minute (gpm) from a lower portion of the Denver aquifer and the uppermost Arapahoe aquifer. Well #3, our main supply at the current time is producing 80 gpm from the Arapahoe aquifer. During the winter months it is possible to supply the water demands of Indian Creek with little concern, however during the summer months both wells are running virtually nonstop to supply all the homes and to be prepared for any fire issues. There is no backup supply and if Well #3 were to go down for any reason it would be impossible to meet the summer water demands of Indian Creek.

Thunderbird Water is proposing to soon drill a Well #4 adjacent to Well #1R but about 200 feet deeper, into the lowermost, best portion of the Arapahoe aquifer. This would be expedient since all the infrastructure already exists and would then take some of the demand off Well #3.

Water rights have been purchased under Lambert Ranch. These water rights will enable the drilling of a 3rd active well (Well #5) on Lambert Ranch to supplement our current wells and be a backup or a main supply if and when needed. Well #5 will take more time and cost to implement since currently there are no approved easements or infrastructure to bring the water into Indian Creek. The distance from Indian Creek and the installation of infrastructure results in the requested debt limit authorization.

I believe we need these new wells, pipeline and facilities to assure both a current and future supply of water for Indian Creek. We live in a great area, but what is your home worth without water.

### **Re: Election for Approval of \$3,000,000 New Debt**

To: INDIAN CREEK RANCH (ICR) HOMEOWNERS:

Thunderbird currently has two active wells, each about 20 years old, which are used to supply all water to ICR. This summer the monthly average production of those wells was up to 62 gal/minute(gpm). The #3 well produces about 60gpm and the #1R well produces maybe 10-15gpm. That doesn't leave much cushion, and obviously if either well, and especially if the #3 well, goes down, we are in a world of hurt. Our big tank holds 500,000gals (5-6 days supply), but once below about 350,000gals we risk not having enough water to fight a fire. Presently the neighborhood has a pretty good "fire rating", which helps keep your homeowners insurance costs down. We don't want that to change negatively.

Well production rates naturally decline with time, as the volume of water near the wellbore is reduced, and scale and "fines" (like silt and clay)

build up on and adjacent to the casing pipe. We occasionally (about every 5 years) try to “clean up” those casing issues, but with diminishing returns.

### WE NEED TO INCREASE OUR WATER-SUPPLY CAPACITY!

There’s essentially two ways to do this: drill a well, or connect to another reliable water supplier. We have investigated the latter with Dominion Water and Sanitation District (DWSD), which serves Sterling Ranch.

We don’t have solid numbers, but from Louviers’ discussions with DWSD, it’s probably safe to say that the “tap fee” to connect to their system would be about \$40-60k per household. The connection infrastructure (pipes, valves, controls, etc) would cost about \$19-26k (2019 dollars) per household. Dominion would not share what might be the actual cost of water, but Sterling Ranch currently charges \$64/mo plus \$8 - \$26 per kgal (1000 gals) (see <https://sterlingranchcab.com/DocumentCenter/View/405/Sterling-Ranch-CAB-Fees-Sheet-2021-01-PDF>). Thunderbird currently charges \$33/mo which includes 3333gal/mo, and charges \$1 - \$30 per kgal above that minimum. Please note that historically only about 6% of TWSD invoices include an incremental charge above \$22/kgal; 80% of TWSD bills charge no more than \$6/kgal (see [https://drive.google.com/file/d/1EiCWdMYx\\_czUboXapF6qz\\_XTv1Ga\\_ARQ/view](https://drive.google.com/file/d/1EiCWdMYx_czUboXapF6qz_XTv1Ga_ARQ/view) ).

TWSD has been anticipating this general situation for quite some time. In 2011 we bought from the developer substantial water rights under the southern portion of Lambert Ranch (LR). Securing easements from LR via negotiation has been troublesome. We now have access to our proposed easements, while waiting for the court to determine proper compensation. These easements in part provide two drilling locations on the eastern edge of LR, one just south of Rio Grande Ave and the other ¾-mile to the south and relatively close to ICR. Developing wet water from LR will be more costly than past wells due in large part to the cost to connect to our existing infrastructure about 0.4 miles away.

But, back up, why LR you may ask. It’s a little complicated. The Arapahoe is the best-producing aquifer. It is exposed as Wildcat Mountain, and dips steeply to the east under ICR. That dip becomes more gentle maybe by about Winnebago Drive, but it continues to dip to the east until about Castle Rock. Water runs downhill, or more properly here, downdip. It also moves from high to low pressure. Every municipality drills Arapahoe wells, so when say Castle Pines produces a gallon of water from one of their wells (dropping the pressure), for both reasons a little bit of that gallon moves away from ICR. That’s why our #3 well is on the eastern edge of ICR. There’s not much space in ICR to drill another easterly well, and to get away from other wells we chose to buy those LR water-rights when they were available. We also felt that if we didn’t buy them, someone else (Dominion? Sedalia?) surely would, and we’d be sorry.

We recently solicited cost-estimates to both drill an Arapahoe well and to connect a southern-LR well to our existing pipe near the upper Cherokee Dr – Rainbow Creek Rd intersection. In round numbers that's about \$1million per well and about \$1million for additional infrastructure; or about \$3 million total.

Good news is we don't have to do this all at once. The most expeditious thing to do is to drill proposed Well #4, a deep all-Arapahoe offset to our 10gpm #1R well in the eastern portion of ICR, which was only drilled into the uppermost portion of the Arapahoe, leaving the most prolific portion of the aquifer behind. We blame the consulting hydrologist, but one of us should have caught this. We hope that this Well #4 will provide us with a 50-100gpm well by next summer, so that if one good well goes down, the other will cover demand.

Eventually, within maybe 2-5 years, we drill our first LR Well #5 on the southern LR site along with about 3000ft of pipeline, and a new treatment and control facility/shed near the SW corner of the DougCo open space, and connect it up to our existing pipe. We would then keep the northern LR drill site in our back pocket for use maybe 20 years from now.

In the above scenario we would borrow roughly \$1million early next year, and \$2million in 2-5 years. Please note that the resulting increase in property taxes has been, and will be, partially mitigated by the payoff of our debt to drill our current wells in 2019 and 2022, each of which has/will reduce our mill levy and your property taxes. Another bit of relatively good news is that interest rates from our likely lender (the CO Power & Water Dev't Authority, a state entity that is largely supported by federal funds) are only about 2.5% for 20-year debt as we write this, versus about 4-5% 20 years ago.

Please note that TWSD will be holding our regular monthly meeting on Thursday Oct 14th, 7pm at the ICRIA clubhouse. As always, you're welcome to attend.

On an obliquely-related note we'd like to remind you that Thunderbird Directors are elected officials, although there hasn't been a contested election in 20-25 years. More importantly we are all above some certain age, yet do most of the physical and mental labor, excluding accounting and heavy-equipment-needed repairs. We really need some younger folks to step up and learn to serve. The work isn't all that difficult, but it's diverse and sometimes interesting. You even get paid, a little. Feel free to contact one of us with any questions; come to a few meetings to get a feel for what's going on. Help keep our rates some of the lowest around. If we have to hand operations over to hired professionals, we estimate an annual increased cost of about \$100/month/lot.

For Thunderbird Water & Sanitation District  
Barry Gager, Treasurer