



Save Medina Lake

committee update with

LAMCOS membership

January 8, 2018

WHO IS SAVE MEDINA LAKE?

5 years ago, a group of concerned citizens formed the Save Medina Lake committee (SML) as part of Lake Medina Conservation Society.

The fundamental question of the committee was:

Why was Medina Lake drained from 2007 to 2013, while all comparable lakes in Central Texas were not?

Today the SML committee has almost 15,000 followers on Facebook and receives over 100,000 views on many of our posts.

We have gathered over 10,500 signatures on a petition supporting our efforts.

SML has gained approval as a 501(c)(3) organization.



GUIDING PRINCIPLES

1. Save Medina Lake is a data and fact driven organization. Research and data analysis drives all of our work.
2. Save Medina Lake **does not** challenge the water rights granted to the BMA to divert water for **“real”** irrigation and municipal purposes. HOWEVER we seek to influence the permit to include :
 - Water Conservation & Environmental Policies
 - Consideration of all stakeholders in and around the lake.
3. Surface water in Texas is owned by the state and held in trust for the citizens of the state. **It is our democratic right to seek influence over how the water in Medina Lake is managed.**



PROBLEM STATEMENTS

1. Data analysis proves that the reason Medina Lake was drained in 2013, and not just low as other lakes in the region, is **because the valve(s) at Medina Lake were not managed and were left open.** The lake was drained from 100% in 2007 to 25% in 2009 to 6% in April 2013.
2. The management of Medina lake dam has essentially **not changed since the lake was built 104 years ago.** Despite significant population growth, and thousands of people depending on the lake, there is very little insight or transparency. Even worse, minimal data exist from BMA or is made available to the public. Much of the data available to the public is provided by SML.





Where are we on our
goals?



SML's Short Term Goal:
BMA responsibly manages
the Medina Lake dam

The contract was NOT renewed last spring for BMA's business manager, Ed Berger **and he is no longer an employee for BMA.**

SML believes Ed Berger's management of the lake dam was one of the key drivers for why it was drained dry between 2009 and 2013.



AFTER INTENSE PRESSURE FROM SML, BMA NOW PUBLISHES

Canal Gates are Currently Closed

Medina Lake valve and Diversion Lake canal gate statuses



Welcome to BMA



Conservation Projects

Medina Reservoir was constructed from 1911-1912 as an irrigation reservoir. An extensive canal system delivers water by gravity flow to 33,000 acres of irrigated



Water Issues

BMA is well aware of problems facing the Reservoir system and will be posting educational information on our website. Water quality is a very important issue as it relates to the state



Our History

Deeply Rooted in the Golden Valley of Medina
BMA's history is fascinating. From the Medina Dam project, to the countless miles of irrigation canals, our story is embedded into

Search our site

Area Water Index

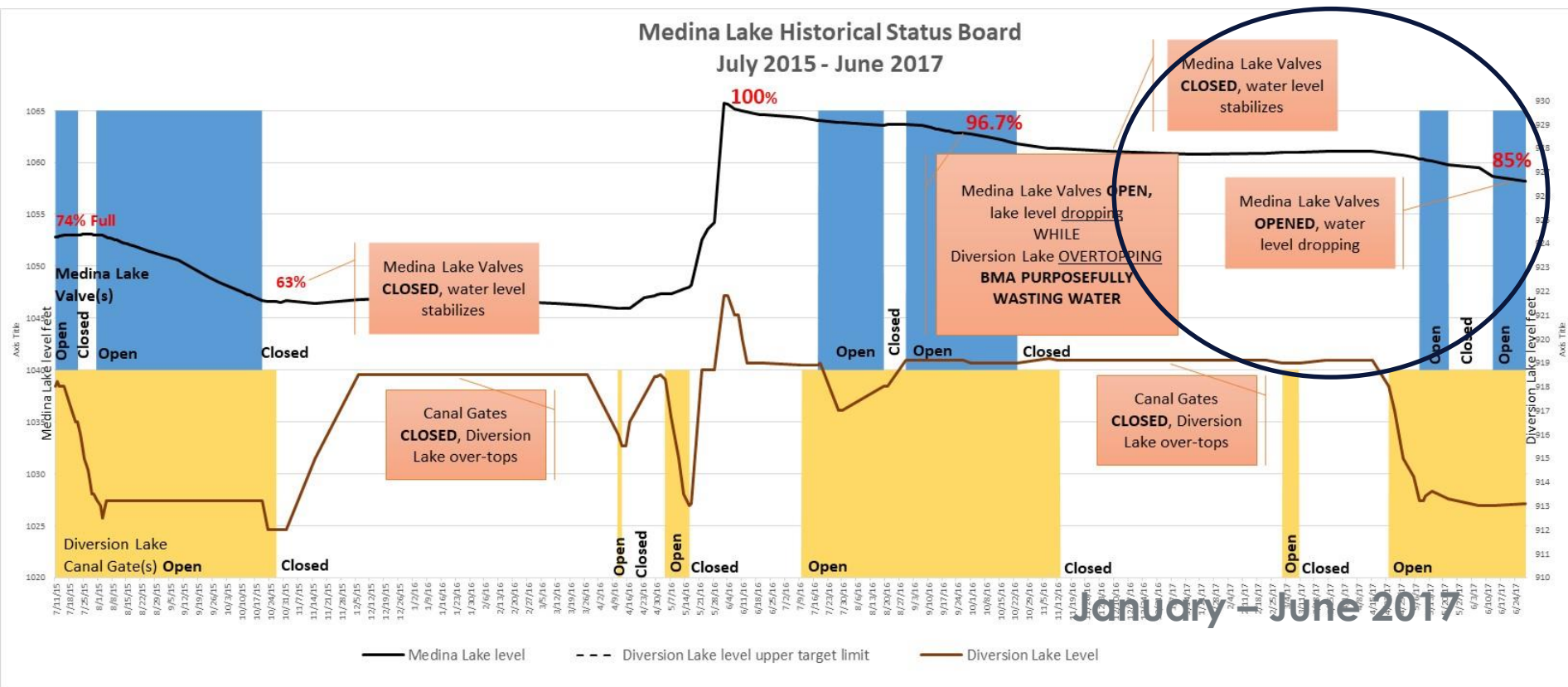
Area Index	Today's Reading
Medina Reservoir Elevation	1,049.21
Medina Reservoir Storage Acre Feet	173,000
Diversion Reservoir Elevation	916.4

- Home
- About Us
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www.bmawater.org



MEDINA LAKE DAM VALVE STATUS, JANUARY – JUNE 2017

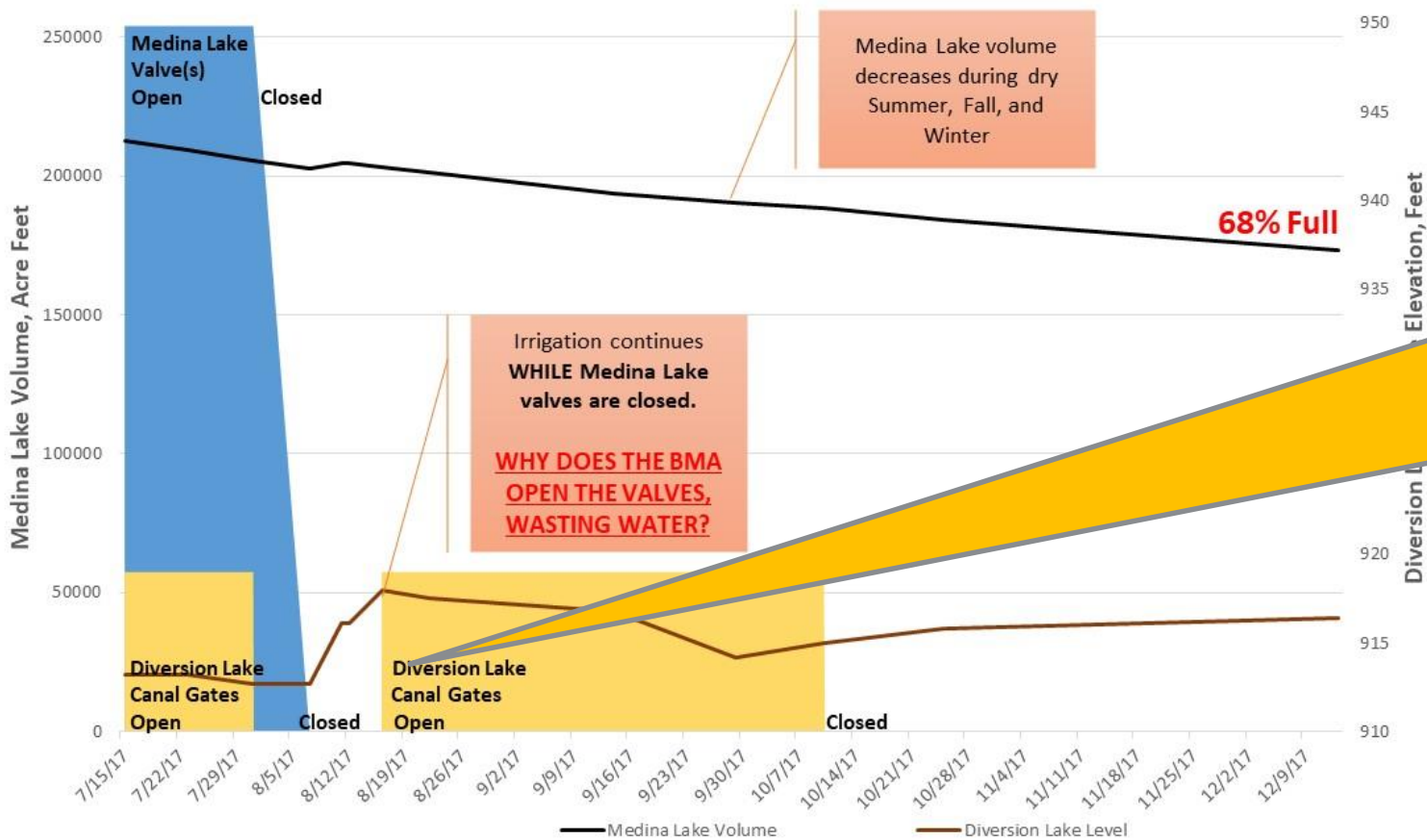


In general, the Medina Lake valves were closed during winter and opened during the growing season



MEDINA LAKE DAM VALVE STATUS, JULY - DECEMBER 2017

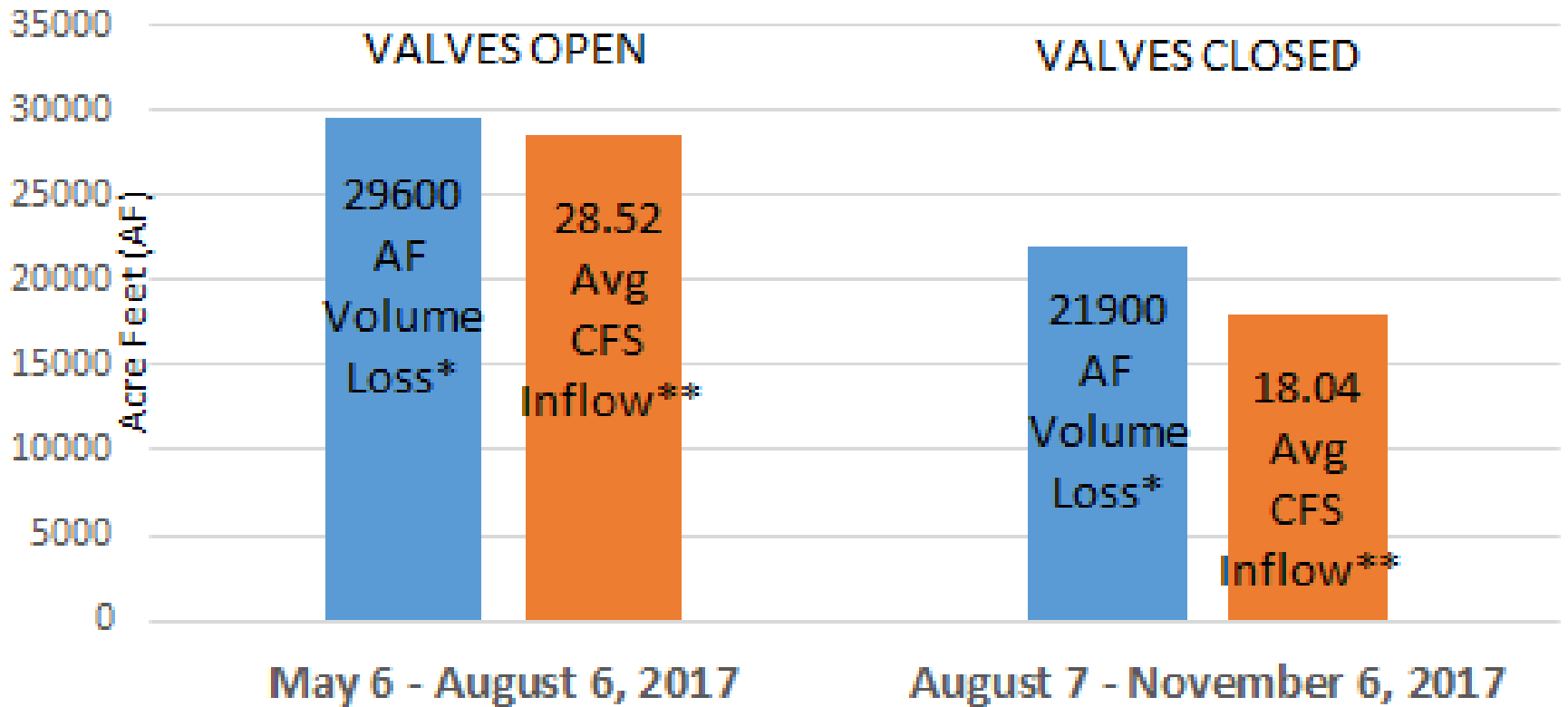
Medina Lake Historical Status
July 2017 - December 2017



Irrigation continued for 6 weeks after the Medina Lake Valves were closed on August 7th.



MEDINA LAKE LOST LESS VOLUME AFTER VALVES WERE CLOSED DESPITE LESS INFLOW



* USGS 08179500 Medina Lk nr San Antonio, TX

**USGS 08178880 Medina Rv at Bandera, TX





SML's Mid Term Goal:
Contractually, BMA
responsibly manages the dam

SML CONTINUES TO ROUTINELY MEETS WITH SAWS AND USGS AND HAS FORMED POSITIVE RELATIONSHIPS WITH BOTH.

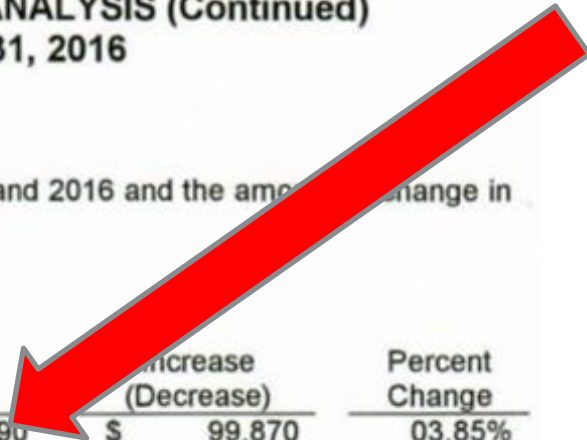
BEXAR-MEDINA-ATASCOSA COUNTIES WATER CONTROL AND IMPROVEMENT DISTRICT NO. 1
MANAGEMENT'S DISCUSSION AND ANALYSIS (Continued)
Year ended December 31, 2016

THE DISTRICT'S FUNDS

Table 1 below presents a summary of revenues for 2015 and 2016 and the amount and percent change in relation to the prior year.

Table 1 - Revenues

	2015	2016	Increase (Decrease)	Percent Change
Municipal water sales	\$ 2,596,620	\$ 2,696,490	\$ 99,870	03.85%
Fixed water assessments	358,383	352,098	(6,285)	(01.75)%
Irrigation water sales	107,155	117,484	10,329	09.64%
Investment earnings	56,162	46,474	(9,688)	(17.25)%
Other	95,686	116,551	20,865	21.81%
	<u>\$ 3,214,006</u>	<u>\$ 3,329,097</u>	<u>\$ 115,091</u>	<u>03.58%</u>



Although SAWS provides BMA with over 80% of their budget, they have not received significant amount of water since 2012.

They do not plan to receive water from the canal system in the foreseeable future.

NOTE: SAWS is entitled to 20K AF of the total 66K AF TCEQ permit.



SML'S RELATIONSHIP WITH SAWS AND USGS

SML raised the awareness with San Antonio Water Systems (SAWS) and USGS :

- That prior studies of Medina Lake did not consider the fact that Medina Lake's valves were opened during the studies.
- The advantages of taking permitted water through the aquifer rather than from the irrigation canal system and the Medina river.

SAWS has now commissioned USGS to perform a new study to re-evaluate Medina Lake's importance in recharging the Edwards Aquifer.

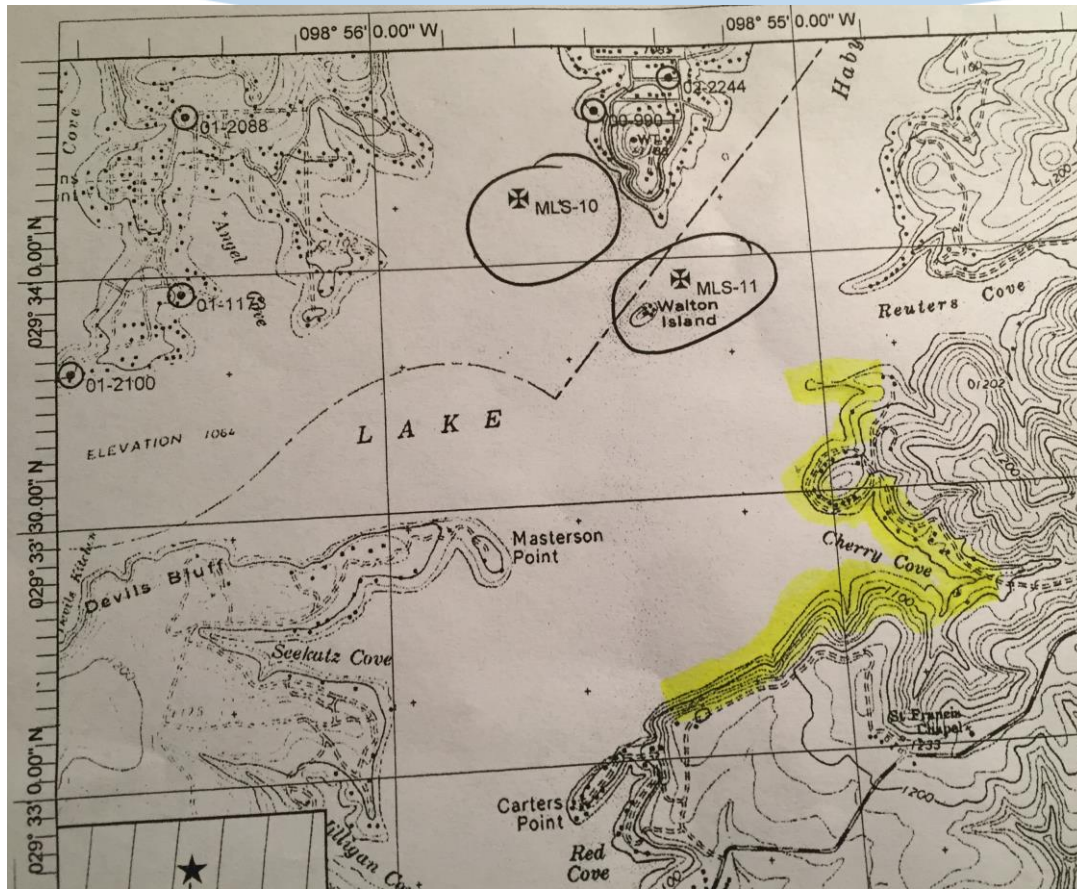
We view this as the most promising avenue to contractually force BMA to operate responsibly.



1 WEATHER STATION HAS BEEN INSTALLED TO MEASURE SOUTH WINDS AND EVAPORATION RATES FOR THE USGS STUDY.



USGS CONTINUES TO SEARCH FOR A ANOTHER LOCATION



Along the eastern shoreline from Reuters Cove south to one mile past Cherry Cove near private roads 274 & 275 or private roads 2621 & 2622 to install a 2nd weather station to measure the north winds.

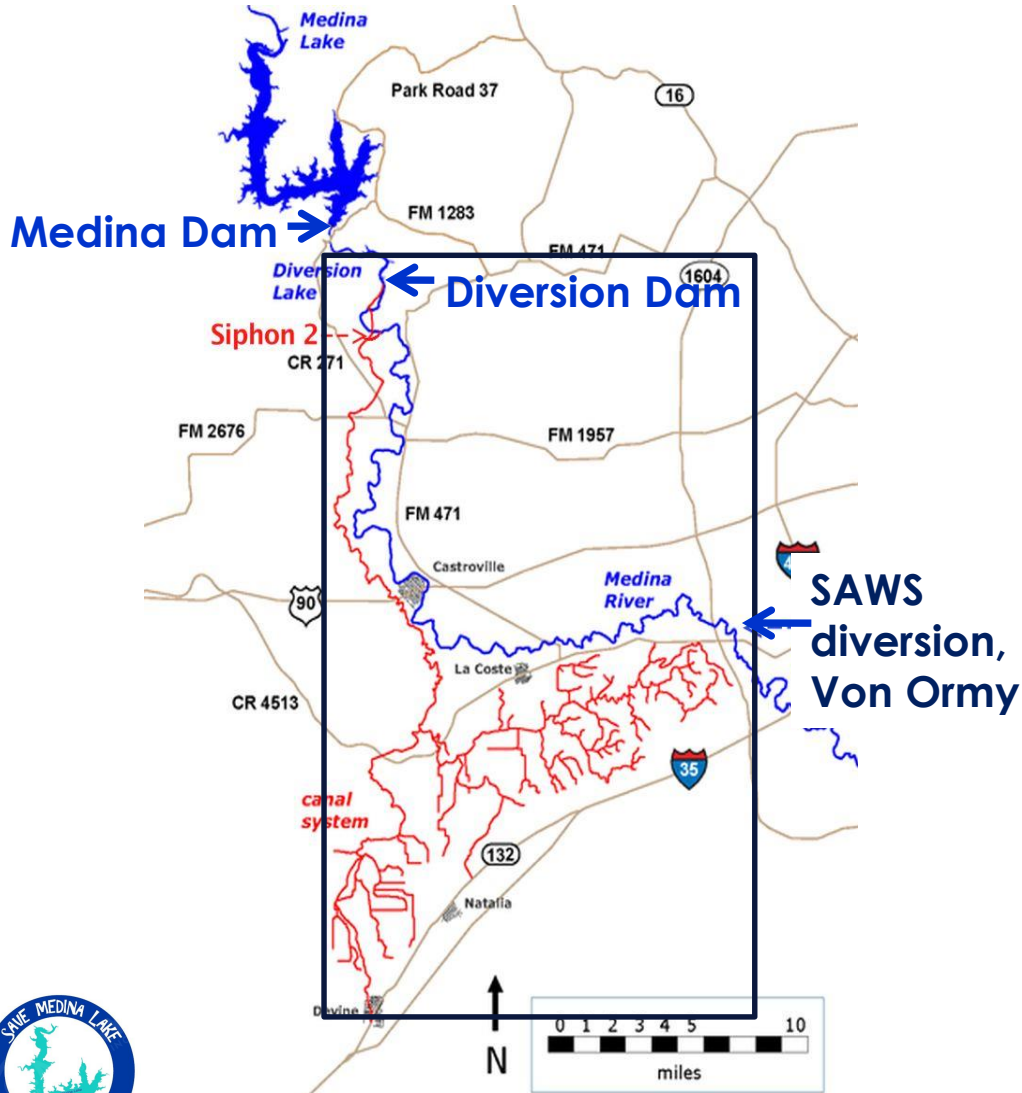
If you know of a location that may be available please send an email to water@SaveMedinaLake.com.





SML's Long Term Goal:
All Stakeholders are involved
in responsibly managing the
lake's dam.

THE BMA BOARD



Although most of the water comes from Bandera County, **NO ONE in Bandera County** has a “say” (join BMA’s board) in how Medina Lake’s dam is managed. Not even Lake Front property owners

Only property owners in BMA’s district (land owners on red canal system in black box) can serve on the board and vote for board members.



AND HOW IS THE WATER USED THAT ONLY THE BMA BOARD CONTROLS?

Save Medina Lake's ANALYSIS OF
BMA's IRRIGATION WATER SALES



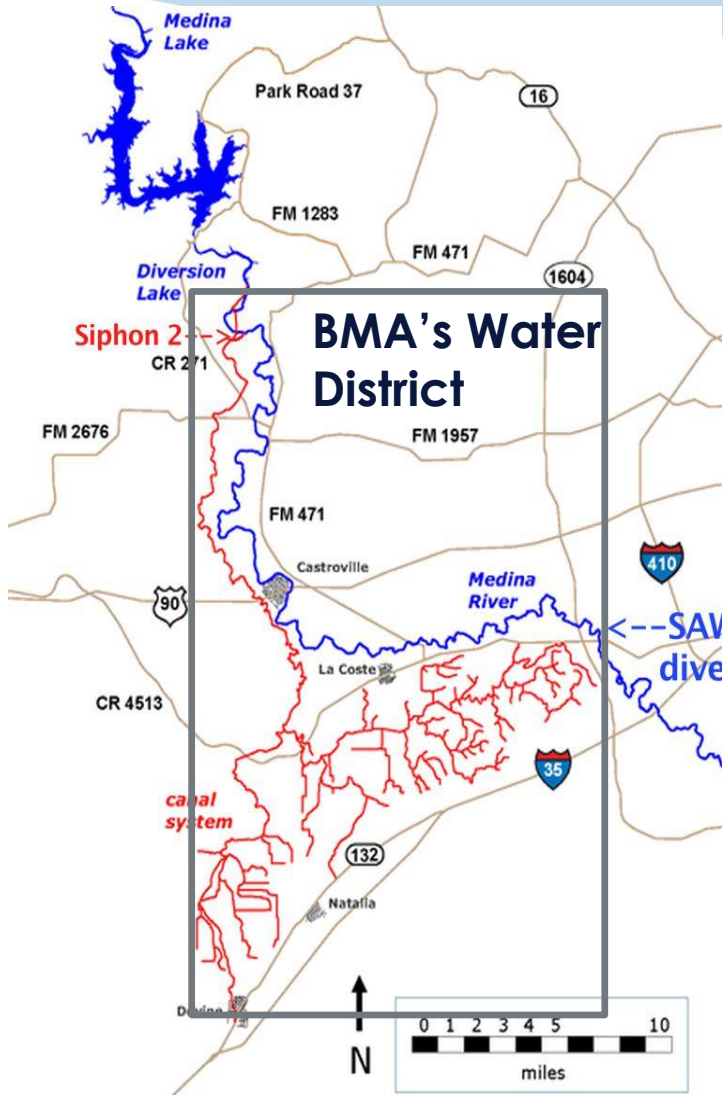
THE GOAL OF OUR ANALYSIS

Save Medina Lake (SML) believes that BMA's water district (property owners on **red** canal system in **black** box) HAS DRAMATICALLY CHANGED OVER THE PAST 100 YEARS

Yet, the permit and BMA's management of the water has essentially not changed in the last 100 years.

Therefore we analyzed BMA's water sales invoices to determine how many property owners there are, how many acres are farmed, what type of crops, etc...

THE GOAL OF OUR ANALYSIS was to understand the changes in BMA's water district.



METHODOLOGY

SML created a database containing BMA's water sales information for 1 year.

2009 was selected because it was the start of the drought.

- 2010 – 2014 were extreme drought years
- 2012 – mid 2015 the lake was essentially dry (3% - 10% full)
- 2015 – lake filled to 74% during the summer, partial irrigation year
- 2016 – extremely wet year
- 2017 – **We plan to analyze 2017 Water Sales once the growing season closes**

The database contains each individual water sales invoices from 2009.

Disclaimer – Since we had to create a database containing BMA's sales invoices, there may be up to 10% error in the data due to technical issues associated with scanning and converting the invoices into an electronic database.



CHALLENGES

Through public open records request, SML requested an electronic extract of BMA's system containing all 2009 water sales. **BMA said this was not possible.**

Instead, we received 2240 paper copies of each BMA's water sales invoices in 2009.

To create the database, SML -

- Paid a company to scan each paper invoice and to convert each scanned invoice into an electronic invoice text file.
- Wrote a program to move key data elements from each electronic text invoice file into the database.
- Save Medina Lake spent over \$1000 of donated funds to cover expenses. We also volunteered over 100 hours of our time to create the database.

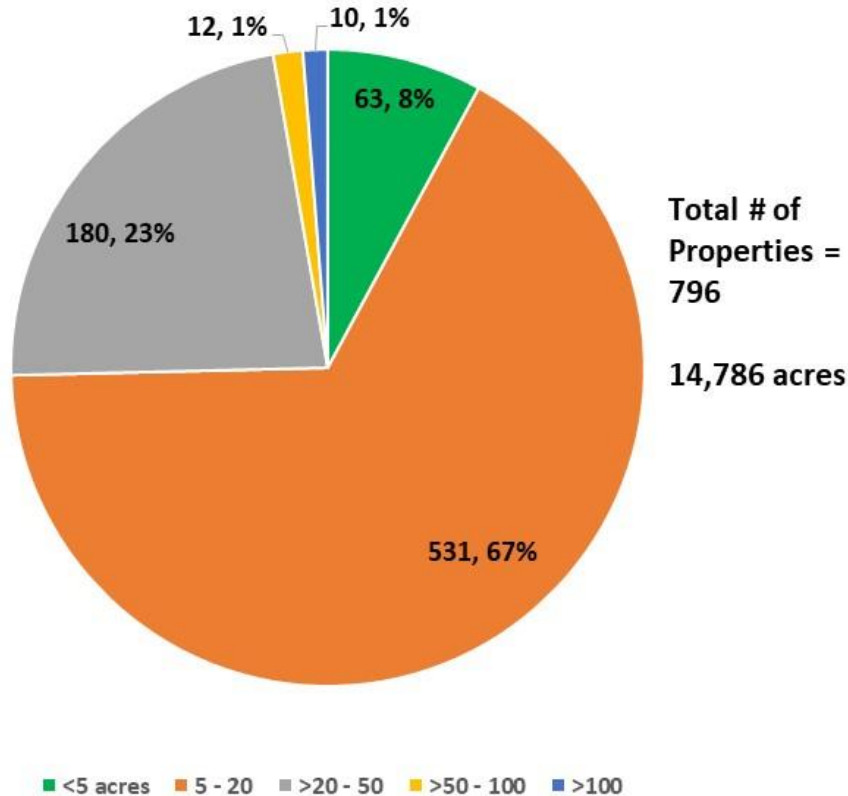


ANALYSIS RESULTS



HOW MANY PROPERTY OWNERS PURCHASED WATER FROM BMA?

Distribution of Property by Size (acres)



There are 796 properties (14,786 acres) with 700 owners that purchased irrigation water in 2009.

75% of the properties are 20 acres or less

219 properties are <10 acres and do not qualify for agriculture exemption

63 properties are < 5 acres

Only 22 properties are 50 acres or greater

HOW MUCH WATER DID PROPERTY OWNERS PURCHASE?

According to TCEQ, *35,090 acre feet (AF) was released into the irrigation canal system in 2009

Of the 35,090 acre feet released, only 15,900 AF was purchased

Medina Lake's volume dropped by 80,000 AF (~1/3 of the lake's volume) in 2009.

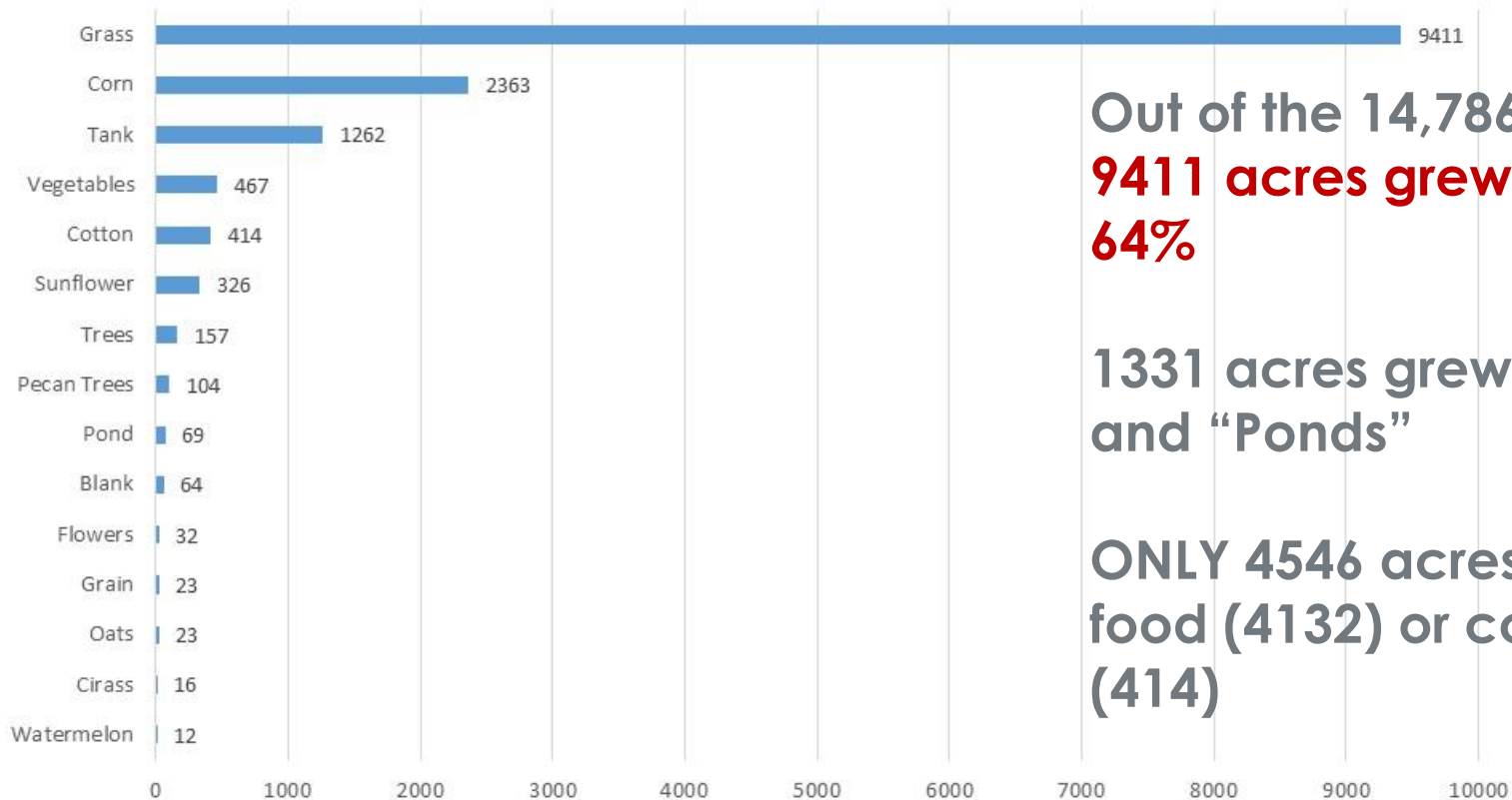
80,000 AF drop in lake volume → 35,090 AF released into canal system → 15,900 AF purchased

* Does not include water released for SAWS



WHAT DO THE PROPERTY OWNERS GROW?

Type of Crop (acres)



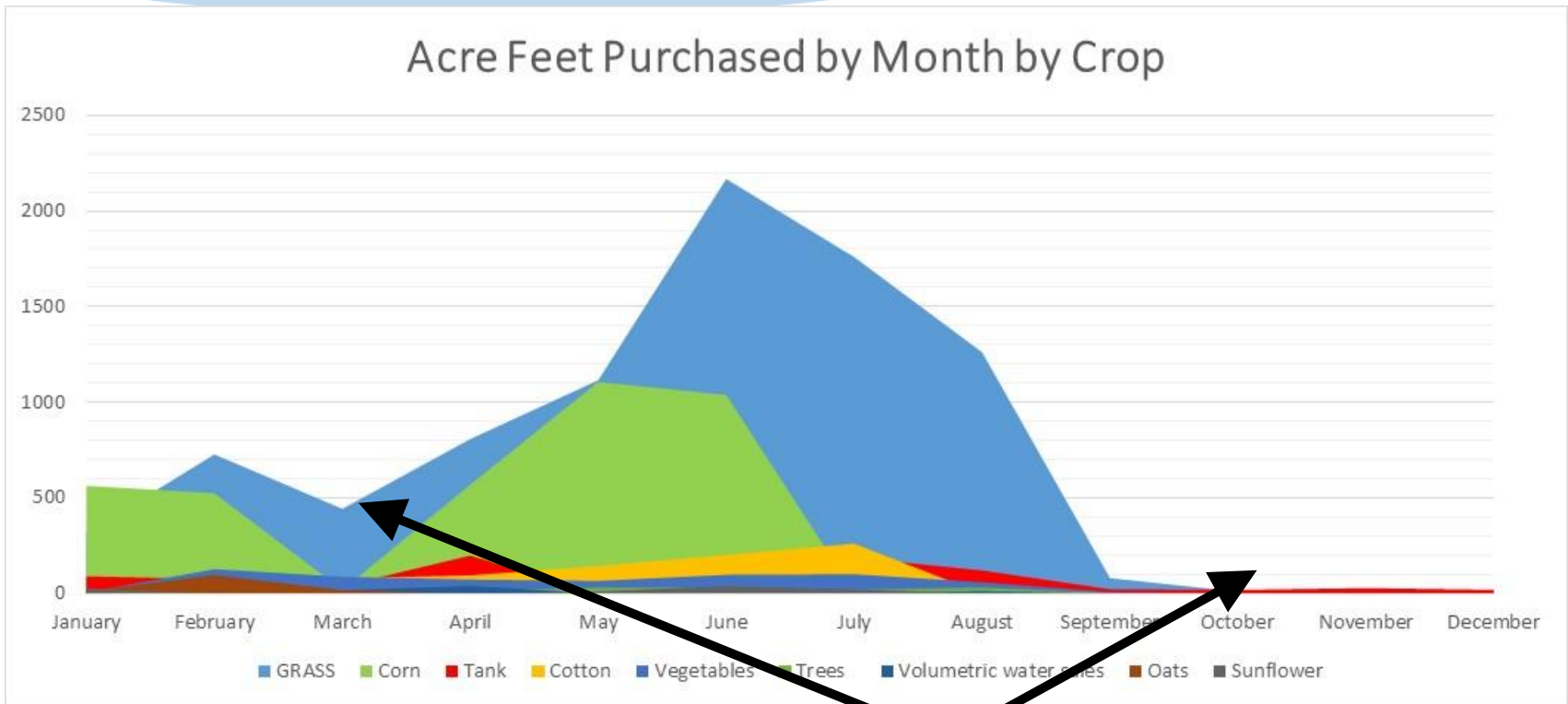
Out of the 14,786 acres,
9411 acres grew GRASS - 64%

1331 acres grew “TANKs”
and “Ponds”

**ONLY 4546 acres grew
food (4132) or cotton
(414)**



AND WHEN?

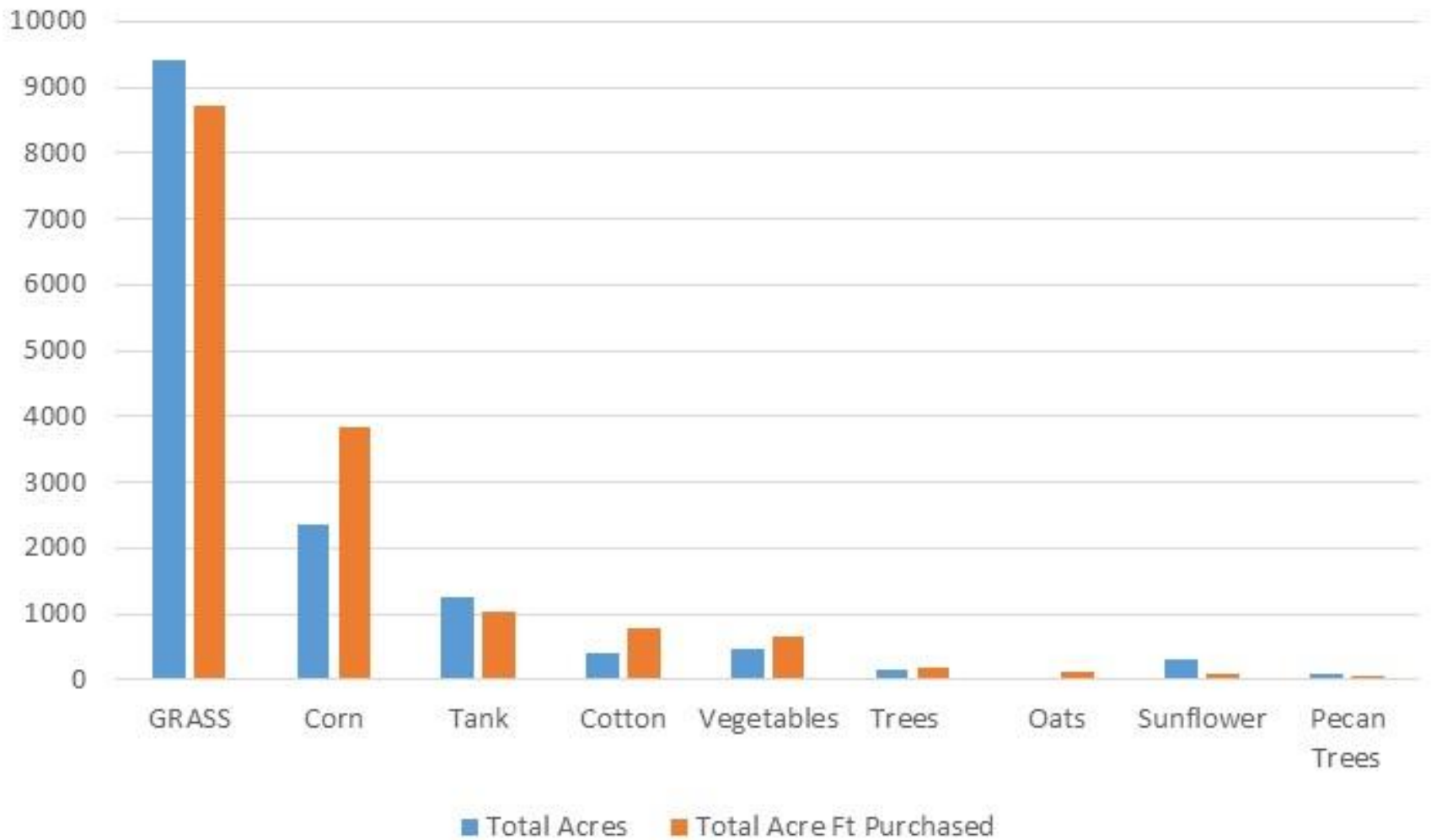


LITTLE OR NO WATER WAS PURCHASED DURING THESE MONTHS, **YET THE MEDINA LAKE VALVES REMAINED OPENED WASTING WATER** and **NEEDLESSLY DRAINING THE LAKE!**

Assumption is invoice date is the near the time that the water is released.



Total Acre Feet Purchased by Total Acres for each Crop



SOME PROPERTY OWNERS PURCHASED AN EXORBITANT AMOUNT OF WATER

It **does NOT** take 12 AF to grow grass on .29 acres.

OR

181 AF to grow corn on 23 acres.

Other property owners growing corn purchased <2AF of water for each acre of corn grown.

Area	Property	Acres	Total Acre Feet Purchased in 2009	Crop
D2-1	03-571	0.29	11.92	Grass
D3B-4	01-158	0.3	4	Tank
D3B-5	01-436A	0.986	6.63	Grass
D3A-5	03-317	1.21	8	Tank
D3B-4	01-250A	1.254	6.68	Grass
D1-3	03-326A	2	18	Tank
D1-3	03-270A	2.17	9.88	Grass
D3B-4	01-119A	2.271	9.28	Grass
D3B-7	01-631	2.297	10.84	Grass
D3B-4	01-128A	2.967	17.47	Grass
D1-7	03-598	12.5	103.63	Grass
D3B-5	43 13 4	23.33	181.32	Corn
D1-6	03-719	10.05	73.08	Trees

What was this water used for?



Other property owners have private lakes
and “vanity ponds” along BMA’s canal
system





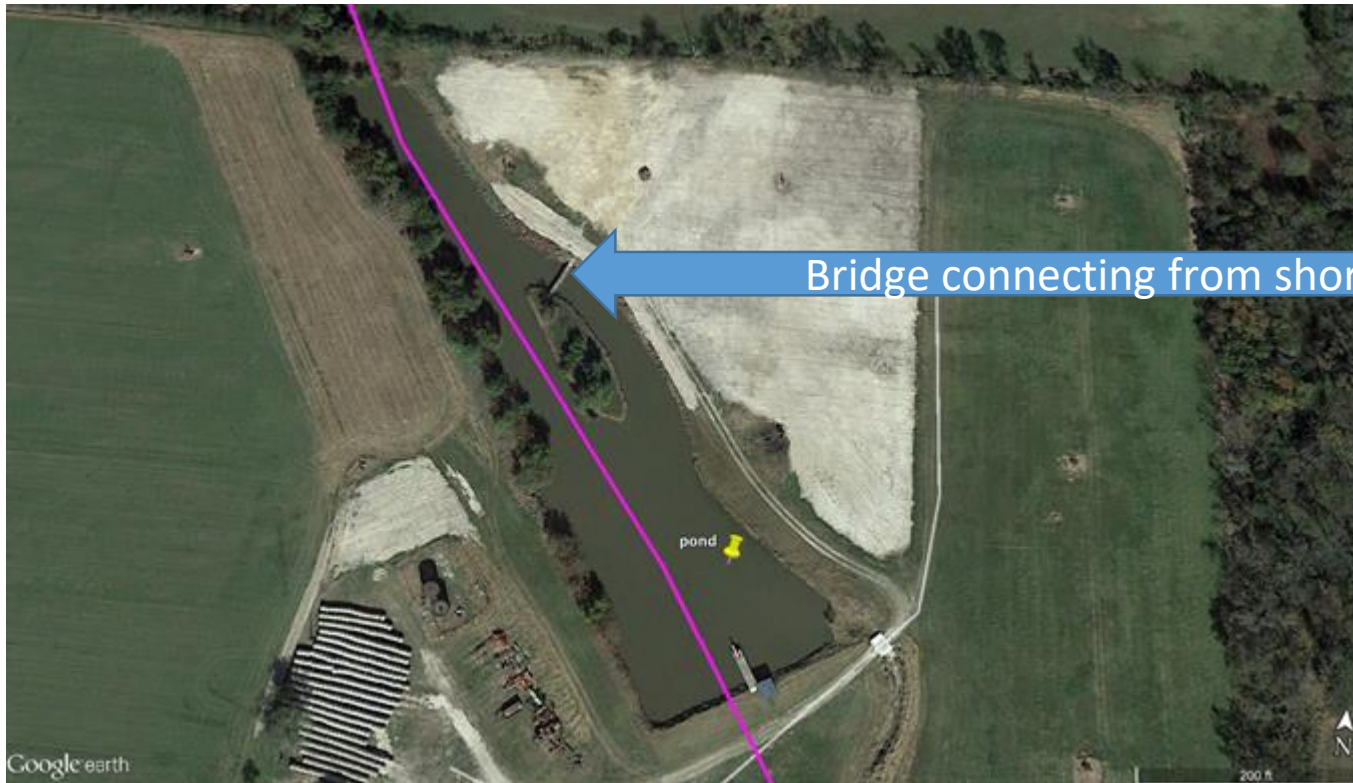
Property on canal system (purple line) outlined in red with home on private lake with dock.

Does not appear farming is occurring, yet property purchased water from BMA.

Zoom in on private lake with pier that has lights.



Private Lake that has irrigation canal going through it. Lake has island in the middle.



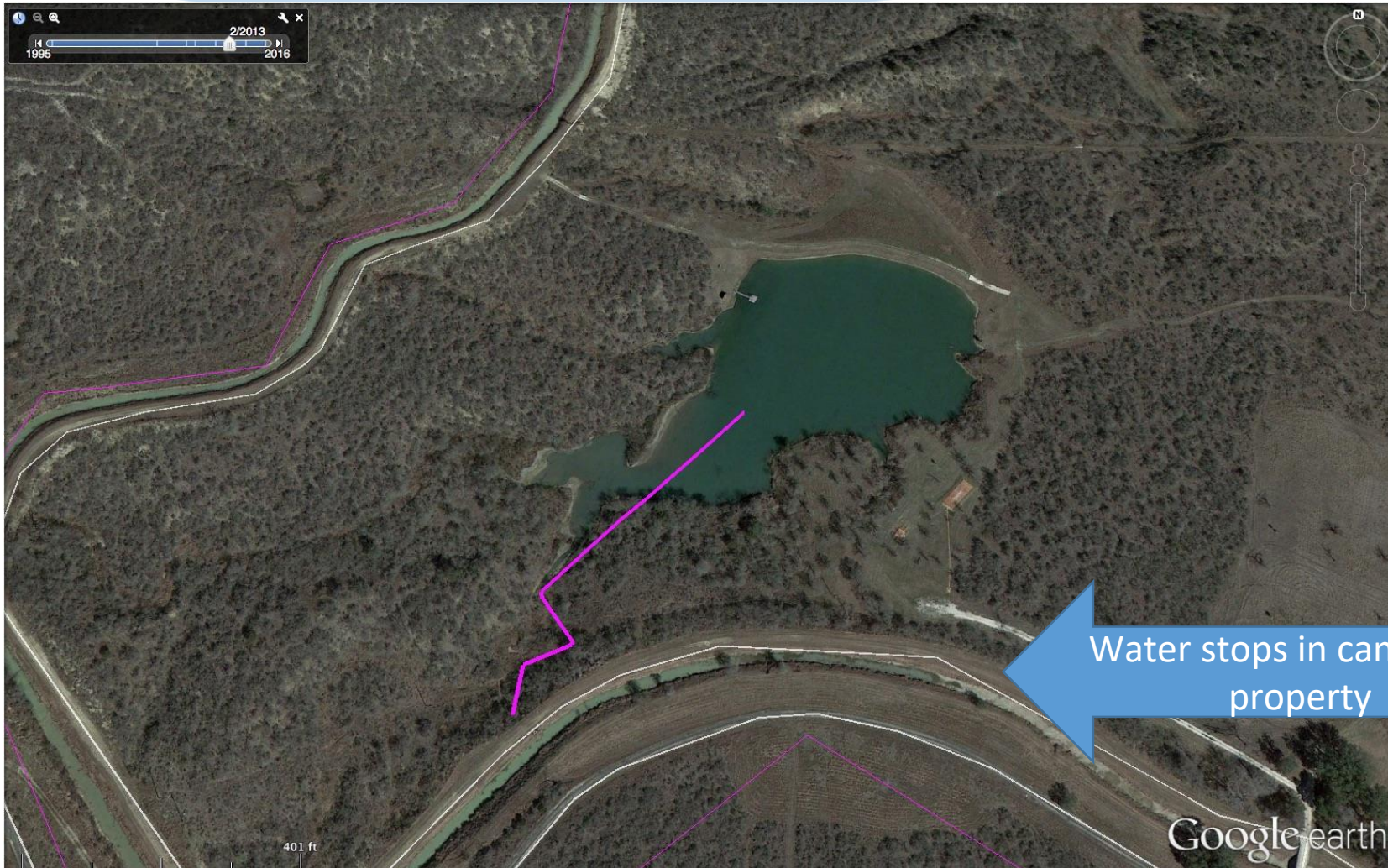


Private “Vanity
Pond” with
dock
and cabana.

Paddle boat moored on dock.

Property on canal system (in purple) with private lake surrounded by forest.

Google Earth picture taken February 2013, 5 months after the farmers were cut-off from receiving water from BMA.



Water stops in canal after property



**There are many examples such as
these**



What does this analysis tell us?

- The BMA drained the lake dry between 2007 – 2013 to predominately grow GRASS
- It appears water is being used for other purposes than crop irrigation. For example :
 - .29 acre farm purchasing 12 AF of water with a crop of grass.
 - Private ponds/lakes with docks, cabanas and paddle boats
- ~4 out of 5 businesses around the lake shut down during this time
- Because of lack of maintenance and neglect, ~2/3 of the water sent down the canal system was lost
- There is NOT 33,000 acres being farmed as stated on BMA's website and TCEQ permit. ONLY ~14,786 acres purchased water in 2009.
- AND of the 14,786 acres, there are only a few **“real”** farmers... the majority are what the BMA itself terms as “hobby” farmers
- Yet, the BMA drained the lake dry... AND continues to this day to operate in a closed, non-transparent, non-scientific way.



2018 INTERIM AND 2019 LEGISLATIVE SESSIONS

SML has also formed positive relationships with our state leaders Representative Andrew Murr and Senator Dawn Buckingham.

SML believes it is unconstitutional that property owners on lake have no rights.

From the water sales analysis, BMA is not meeting its original purpose of providing water to “real” farmers.

BMA continues to have serious transparency issues.

We believe that any long term solution will need to be done legislatively.

SML will be active during the 2018 Interim Session in Austin. This is required for bills to be considered during the 2019 Legislative session.





How can you help?

- ✓ Share this information with your friends and family.
- ✓ If you have not already , join our Facebook page – Save Medina Lake
- ✓ Respond to Call to Actions made on SML's Facebook page such as attend BMA meetings, contact the BMA office, contact local and state leaders, etc.
- ✓ During the past 12 months contributions have totaled **\$9127** and the expenses have been **\$5440** for drone/aircraft operations, open records requests, printing materials, etc.

We are expecting additional legal expenses in the upcoming months.

Your donations are needed and appreciated to help continue our efforts. Contributions are tax deductible.

SML has no paid employees.





Thank you!