

ENGINEER'S STATUS REPORT
HARRIS COUNTY FRESH WATER SUPPLY DISTRICT No. 61
October 14, 2020



Prepared by William G. Rosenbaum, P.E. #45894
 Lockwood, Andrews & Newnam, Inc., TBPE Firm #F-2614

A. Design – Construction Projects

1. Water, Sanitary and Lift Station Relocations: Eldridge Parkway at FM 1960 (12094) –
 TxDOT is proposing to widen all four approaches of the N. Eldridge Parkway / FM 1960 intersection. TxDOT is acquiring additional Right-of-Way (ROW) adjacent to the existing ROW. Any existing utilities under the proposed pavement sections must be relocated. The District has many existing water lines and sanitary sewer lines located either within the existing street ROWs or within easements adjacent to the ROWs. The District's water & sanitary sewer relocation plans are complete. New easements are being proposed and some won't meet the City of Houston requirements without a variance being granted.

TxDOT Schedule:

90% Complete Plans: **12/4/19**
 100% Complete Plans: **7/31/20**
 Letting (Advertising) Date: **August 2020**
 Notice to Proceed: **October 2020**
 Actual Construction Start: **February 2021**

<u>Tasks</u>	<u>Date</u>	<u>Status</u>
<u>Easements</u>		
Surveys and Metes & Bounds of 44 Easements completed and sent to Smith Murdaugh	3/1/2020	Completed
5 Easement Surveys updated	6/1/2020	Completed
Receive easement values from Appraisers	8/14/2020	Completed
Receive estimated legal fees from Smith, Murdaugh	8/26/2020	Completed
Phone meeting with TxDOT on Reimbursements	9/23/2020	Completed
Follow-up phone meeting with TxDOT		
Submit Draft Reimbursement Agreement to TxDOT		
Submit Final Reimbursement Agreement to TxDOT		
Easements granted & recorded or right of entry obtained		

Plans

After easements are obtained, submit plans for approval
 Receive City of Houston Approval of Plans
 Receive Construction Bids
 Award Construction Contract
 Start Construction
 Complete Construction

2. Sanitary Sewer Phase 7 & 9 Rehabilitation (12169) (BI 18) –The contractor is King Solution Services. The Notice to Proceed was issued on 5/25/20 and the work is underway. Pay Application No. 3 was approved at the 9/9/20 Board meeting. **Received Notice of Claim from ACT for \$37,900.80. This will need to be resolved before the next Pay App is approved.**
3. WWTP No. 2 (Hastings Green) Lift Station Rehabilitation (12176) – The Preliminary Engineering Report was presented to the Board at the 2/12/20 meeting. The rehab plans will be prepared for a Fall 2020 Bidding Schedule.
4. WWTP No. 1 (Barwood) Lift Station & Remaining District Lift Stations – The Preliminary Engineering Report was presented to the Board at the 2/19/20 meeting.

B. Construction Warranty Status

<u>Inspection</u>	<u>Expiration</u>	<u>Project</u>
5/10/20	7/10/20	Sanitary Sewer 4 & 5 Rehabilitation (12021) MH's repairs being scheduled
12/12/20	2/12/21	Sanitary Sewer 6 Television (12049)
5/8/21	7/8/21	Wortham Falls DP Improvements (12188)
5/15/21	7/15/21	WP 3 & Aerial WL Crossings Recoating (12134)

C. Permit / Plan Status

1. America's Water Infrastructure Act (AWIA) of 2018 – Risk and Resilience Assessment due **6/30/21**, Emergency Response Plan due 12/30/21
2. Barwood WWTP No. 1 – TPDES Discharge Permit 10876-001
Issued: 7/18/2017 Expires: **3/1/2022** Start permit renewal on **3/1/2021**
3. Barwood WWTP #1 - Storm Water Pollution Prevention Permit (SWPPP)
Issued: 8/14/2016 Expires: **8/14/2021** Start permit renewal on **8/14/2020**
Renewal underway
4. Hastings Green WWTP No. 2 - TPDES Permit No. 10876-002
Issued: 7/6/2017 Expires: **3/1/2022** Start permit renewal on **3/1/2021**
5. Hastings Green WWTP No. 2 - Storm Water Pollution Prevention Permit (SWPPP)
Issued: 8/14/16 Expires: **8/14/2021** Start permit renewal on **8/14/2020**
Renewal underway
6. Water Conservation Plan (WCP)
Next Plan Update due: **5/1/2024**

7. Drought Contingency Plan (DCP)
Next Plan Update due: **5/1/2024**
8. TCEQ Emergency Preparedness Plan
Approved by TCEQ: 4/26/10, submitted to the County Judge, Public Utility Commission, Texas Department of Emergency Management and the Harris County Office of Emergency Management.
9. Water Monitoring Plan
Prepared and sent to the Assistant General Manager on 9/1/20

D. Miscellaneous Projects

1. Buildout Projections & System Capacity – We have completed the Alternative Capacity Study to determine the maximum number of connections that the water system can service. We are preparing the report to submit to the TCEQ.
2. Magellan Pipeline Easement – Assigned 8/9/18.
3. NHCRWA – We will be designing the #61 Chloramination Systems at each Water Plant for the NHCRWA Transmission Line Engineers. The Authority will be funding these systems.
4. Capital Improvement Plan (CIP) – No change
5. Bond Issue 18 – No change
6. Bond Issue 19 – Supporting bond sale efforts
7. WWTP 1 (Barwood) – Sent Declaration of Emergency letter to TCEQ on 9/17/20
8. Harris County Drainage Improvement Project, Barwood & Tower Oaks Subdivisions - Harris County staff have determined that the work is complete and they have requested payment of 61's \$330,035.75. **We have obtained the Plans and Contract Documents and are reviewing the completed work.**
9. Timberlake Improvement District - Water Plant 2 – Consideration of acquisition. **See preliminary cost estimates developed by the Timberlake Improvement District Engineer. Need information on the well.**

E. Utility Commitments / Site Plan Reviews / Utility Requests

1. Tract 4C-1, 0.9642 acres, 3,530 SF Retail – Requested service to 1 ESFC on 2/5/20.
2. Tract 4N2 – 0 Glenora, 3.1077 acres proposed townhomes – On 5/29/19 requested utility

info from Eric Lien with Mission Engineering, acting as agent for the owner. Previous contact info was the Developer is Drew Patel Development, engineer was J. L. Trevino.

3. Tract 8A6 – SE Corner of Huffmeister Road and White Oak Landing – Owner is NTV Group, designer is J.L. Trevino. Requesting utility capacity for 2 shell retail buildings, 11,925 SF of retail space, 1,089 gpd Water and 838 gpd Wastewater.
4. Tract 11B – Michoacani Meat Market & Shopping Center - 13867 Cypress N Houston, just west of Cypress Junction Shopping Center. 11,000 SF Meat Market & 4,000 SF Shopping Center, 13.5 ESFC, 5,528 gpd Water and 4,253 gpd Wastewater.
5. Tract 17I - NW corner Huffmeister & Birdcall - proposed Gas Station, Retail Center and Convenience Store. Vantani Consulting Engineers, Prasad Maragani, P.E.
6. Tract 17K3 – SE corner of Birdcall & Huffmeister Road, proposed 240-unit apartment complex. Utility commitment requested by Johnathan Rosen with The Interfin Companies on 5/17/19.
7. Tract 19C4 - 3.263 ac Business Park (9 Buildings) located on east side of Huffmeister just north of Tuckerton – Proposed 40,000 SF business pa buildings, 13.4 ESFC, 5,487 gpd Water, 4,221 gpd wastewater, Refugio Trejo, P.E. design engineer, Owner is Plaza On Huffmeister, LP.
8. Tract 19E – Industrial Business Park – A 108,280 SF Office/Warehouse Building is proposed within #61 requiring 16.9 ESFC or 5,492 gpd of water service from #61. A 92,800 SF & 66,980 SF building are proposed within HCMUD #188.
9. Tract 25A-C (NW corner of FM 1960 & Jones Road) - Wingfield Partners, potential redevelopment of Bank Tract and relocation of detention pond. Tract 25A Proposed Fast Food Restaurant requesting Utility Capacity Letter, Ray Alcala w/ Jones & Carter Engineers. Reviewed plans and sent comments.
10. Tract 36F - 1.5628 acres south of Foxburo Drive & east side N. Eldridge Parkway - Plaza North Eldridge LLC is the owner and on 2/22/18 they requested 2,500 gpd capacity for a 17,032 SF Retail Center.
11. Tract _____ - 2.46 acre tract, 11003 Jones Road – Annexation Study performed 4/17/19. Proposed 2-story motel with 50 guest rooms, a 2500 SF commercial kitchen and a 2000 SF Banquet Hall. Requesting 12,807 gpd water and wastewater service. Contact Catalyst Technical Group, Inc.

F. Potential Annexations

No current activity

Timberlake Improvement District
Water Plant No. 2 Improvements
A&S Job No. 022000
July 7, 2020

PRELIMINARY COST ESTIMATE

Item	Unit	Quantity	Unit Cost	Total
Move-In, Bonds, Insurance	LS	1	\$ 13,000	\$ 13,000
Recoat Booster Pumps Piping	LS	1	5,000	5,000 (2)
Replace Existing 100,000 gallon Galvanized GST	LS	1	180,000	180,000 (3)
Recoat Well Piping	LS	1	5,000	5,000 (4)
Convert Gas Disinfection to Bleach Feed System	LS	1	45,000	45,000 (5)
Replace Exist 12-Inch Water Line Extension	LF	1340	60	81,000 (6)
Additional Cost to Bore and Jack	LF	500	150	75,000 (7)
Pavement Restoration	LS	1	15,000	15,000 (8)
Traffic Controls	LS	1	20,000	20,000 (9)

SUBTOTAL:	\$	439,000
CONTINGENCIES (10%):	\$	44,000
ENGINEERING SERVICES:	\$	60,000
ADDITIONAL SERVICES:	\$	22,000
DIRECT EXPENSES:	\$	5,000
TOTAL:	\$	570,000

NOTES :

- (1) This estimate represents my best judgment as a design professional familiar with the construction industry. A&S Engineers, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market conditions. Accordingly, we cannot and do not guarantee that bids will not vary from this cost estimate.
- (2) This cost includes the recoating of the booster pump piping.
- (3) This cost includes replacing the existing 100,000 gallon galvanized GST and foundation.
- (4) This cost includes recoating all well header piping.
- (5) This cost includes the conversion from gas disinfection to a bleach feed system.
- (6) This cost includes relocating the existing 12" water line into the ROW of Cypress North Houston Road and assumes that construction in the ROW can occur without interfering with existing dry utilities. Further investigation is needed to determine feasibility.
- (7) This cost includes additional cost to bore and jack.
- (8) This cost includes pavement restoration.
- (9) This cost includes traffic control.

Timberlake Improvement District
 #4 Water Plant No. 2 Improvements
 A&S Job No. 022131
 May 3, 2019

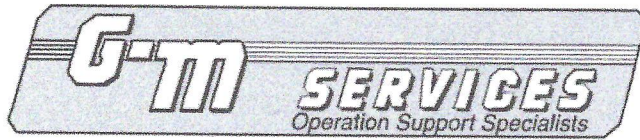
PRELIMINARY COST ESTIMATE

Item	Unit	Quantity	Unit Cost	Total
Move-In, Bonds, Insurance	LS	1	\$ 4,000	\$ 4,000
Recoat Booster Pumps Piping	LS	1	5,000	5,000 ⁽²⁾
Recoat 50,000 gallon galvanized GST interior	LS	1	40,000	40,000 ⁽³⁾
Recoat Well Piping	LS	1	5,000	5,000 ⁽⁴⁾
Convert Gas Disinfection to Bleach Feed System	LS	1	45,000	45,000 ⁽⁵⁾
Interior Patching of 50,000 gallon GST	LS	1	15,000	15,000 ⁽⁶⁾

SUBTOTAL:	\$	114,000	←
CONTINGENCIES (10%):	\$	11,000	
ENGINEERING SERVICES:	\$	20,000	
ADDITIONAL SERVICES:	\$	7,000	
DIRECT EXPENSES:	\$	5,000	
TOTAL:	\$	157,000	

NOTES :

- (1) This estimate represents my best judgment as a design professional familiar with the construction industry. A&S Engineers, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market conditions. Accordingly, we cannot and do not guarantee that bids will not vary from this cost estimate.
- (2) This cost includes the recoating of the booster pump piping.
- (3) This cost includes the recoating of the 50,000 gallon galvanized GST interior.
- (4) This cost includes recoating all well header piping.
- (5) This cost includes the conversion from gas disinfection to a bleach feed system.
- (6) This cost includes patching the interior of the 50,000 GAL GST prior to coating.



October 1, 2019

Timberlake I.D.
 C/o Regional Water Corporation
 Attn: Mr. Steve Woodring
 P.O. Box 690406
 Houston, Texas 77070

Reference: Well #2 - Performance Testing

Dear Mr. Woodring:

Collection and evaluation of field data pertaining to the operation of the well and well pumping equipment was recently completed at the above referenced facility. Included in this report please find the test results and pump curve generated by the testing. Historical performance data is presented in graphical format.

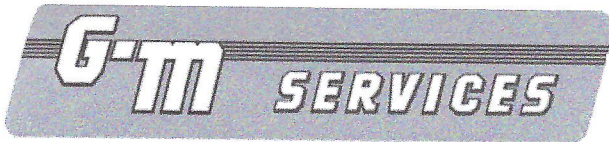
PERFORMANCE TEST REVIEW								
Hydraulic Performance of pump is 383 GPM @ 315' field head	Excellent	<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Marginal	<input type="checkbox"/>	Poor	<input type="checkbox"/>
Overall efficiency is 60 percent	Excellent	<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Satisfactory	<input type="checkbox"/>	Poor	<input type="checkbox"/>
Pump Submergence 78 feet	Excellent	<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Marginal	<input type="checkbox"/>	Poor	<input type="checkbox"/>
Vibration Analysis (N/A)	Excellent	<input type="checkbox"/>	Good	<input type="checkbox"/>	Marginal	<input type="checkbox"/>	Poor	<input type="checkbox"/>
Suspended Solids Testing	Excellent	<input checked="" type="checkbox"/>	Good	<input type="checkbox"/>	Marginal	<input type="checkbox"/>	Poor	<input type="checkbox"/>
Brass Observed in SST	None	<input checked="" type="checkbox"/>	Trace	<input type="checkbox"/>	Substantial	<input type="checkbox"/>	Excessive	<input type="checkbox"/>
Flowmeter Accuracy is 0.0 percent Flowmeter not registering								

The test indicated the pump appears to be operating in satisfactory condition.

We appreciate this opportunity to be of service. If you have any questions or comments, please call.

Sincerely,

Gary McMurrey
 G-M Services



Performance Test Report

SPECIALIZED INSPECTION SERVICES FOR THE WATER INDUSTRY

website: www.g-mservices.com

phone: 281-894-8971

Facility Timberlake I.D. - well#2	Test Date 09/27/2019
U.S.G.S. # TT-65-04-415	Subsidence Well ID#: 3383

PUMP DATA

Manufacturer :	Goulds
Bowl Type :	7" CLC
Stages :	4
Setting :	375
Column Size :	5"
Design Point :	375 GPM @ 354' TDH

MOTOR DATA

Manufacturer :	Franklin
Size (HP) :	50
Amps/Volts :	67.5/460
Serial # :	030023
Frame :	
Speed (RPM) :	3450

PERFORMANCE TEST DATA

Static Lvl (ft) -271		
Discharge Pressure	8	30
Capacity (GPM)	383	317
Pumping Lvl (ft)	-297	-292
Drawdown (ft)	26	21
Specific Capacity	14.73	15.10
Field Head (ft)	315.48	361.3
Water Horsepower	30.51	28.95
Overall Efficiency	60%	59%
Horsepower Input	51.05	49.18
Kilowatt Input	38.1	36.7
Amp Draw	64-59-59	63-58-58
Voltage	496-490	496-490
Sand (PPM)	1	1
Time (min)	45	15

Meter Data

Manufacturer:	WaterSpec	Size:	6
Serial #:	991382		
Meter Read:	826214.000		
Meter accuracy is	0.0% % at	GPM	

Additional Data

Start-up Sand (PPM)	1
Brass Detect:	No
Pump Submergence (ft)	78
ETM Read:	6084

Remarks
Flowmeter not working.
Water levels measured utilizing airline.

TECHNICIAN P. White

Test Date: 03/27/11

Curve: E6207CFPC0
 No. E6207CFPC0
 Model: 7CLC
 RPM: 3450

EFFICIENCY CONNECTION	
STGS. 1	-3.0
STGS. 2	-1.0
STGS. 3	-0

PERF BASED ON
 STD. MTL'S

Impeller = CLOSED

$N_s = 2183$

$K = 3.50 \text{ LBS/FT}$
 $K = 5.2 \text{ KG/M}$

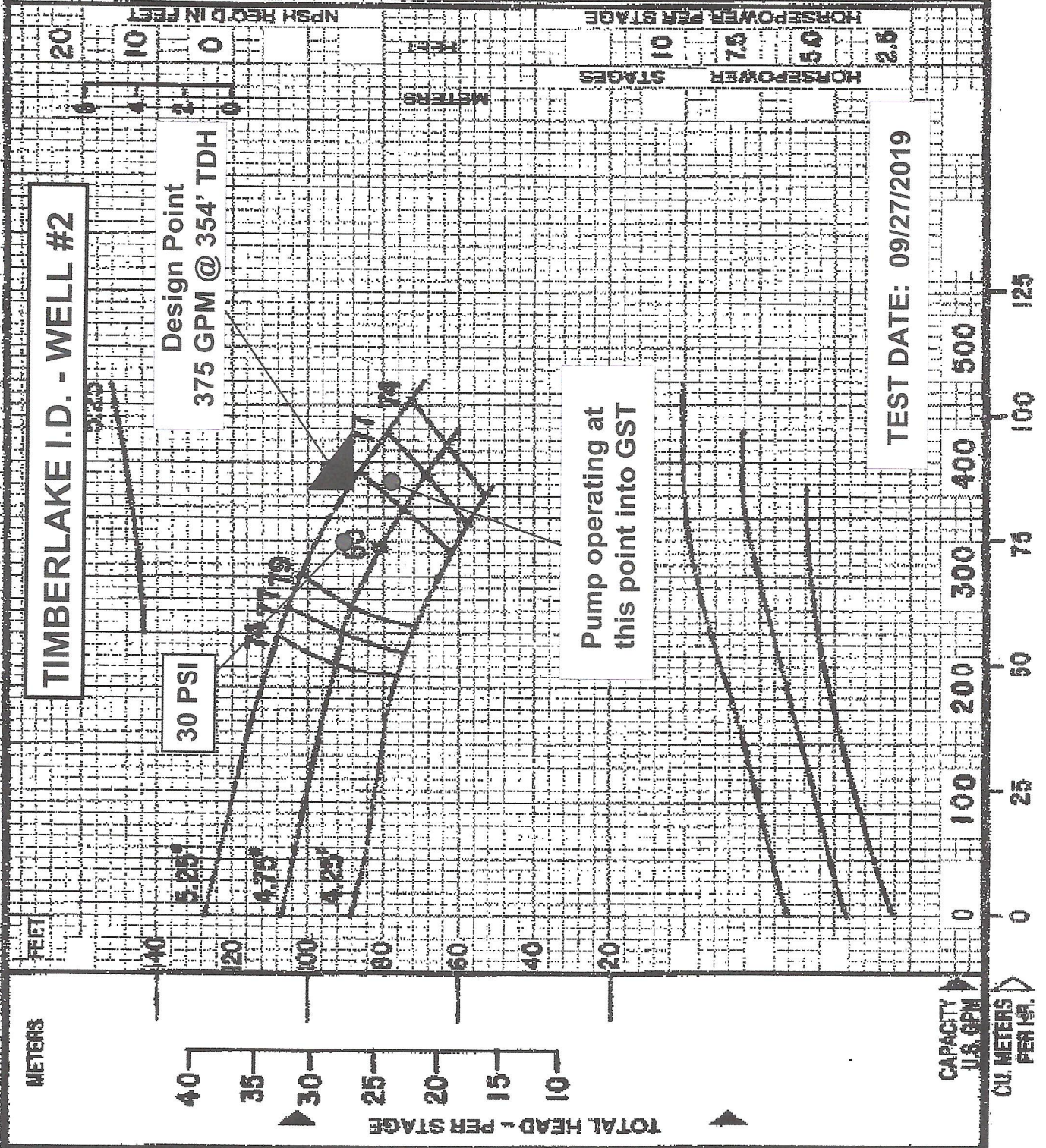
$K (\text{Gal}) =$



WATERS DIVISION
 LUBBOCK, TEXAS

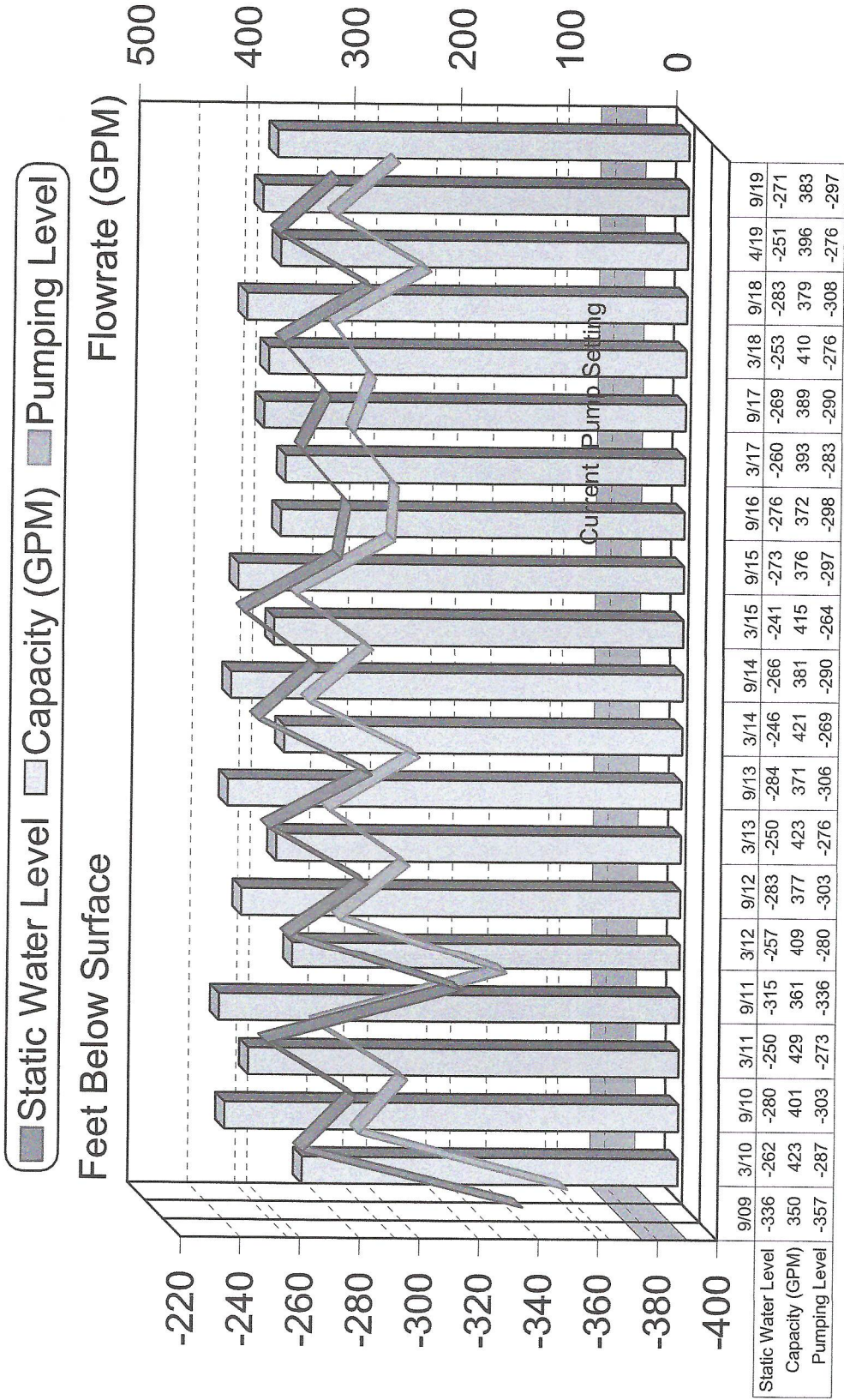
Characteristics based upon pumping clear, non-aerated water. Rating point only is guaranteed. Column losses not included.

MOD 7
 CATI
 ALG
 SUP
 Apr



Timberlake I.D.

Well #2



Prepared by G-M Services