

MENDOCINO CITY COMMUNITY SERVICES DISTRICT BOARD OF DIRECTORS 11-7-2022 MEETING AGENDA

MENDOCINO CITY COMMUNITY SERVICES DISTRICT  
P. O. BOX 1029  
MENDOCINO, CA 95460  
Business Phone (707) 937-5790 Treatment Plant (707) 937-5751 Fax (707) 937-3837

AGENDA

REGULAR MEETING

Monday, November 7, 2022

5:00 PM

Wastewater Treatment Plant, 10500 Kelly Street, Mendocino

Per California Governor Gavin Newsom's Executive Orders N-25-20 and N-29-20, and AB 361 the meeting will be held via teleconference. MCCSD meetings are open to the public, and the District encourages public participation either in the office or on Zoom. To participate by ZOOM call 1 (669)-900-6833, Meeting ID: 931 3833 6051, Passcode: 750084 or log in online URL:

<https://us06web.zoom.us/j/93138336051?pwd=ZDVkRndkZmc0ZWsyYTJTTFFacmxtQT09>

Meeting ID: 931 3833 6051

Passcode: 4BezsR

1. CALL TO ORDER
2. APPROVAL OF AGENDA
3. PUBLIC COMMENT: non agenda items
4. COMMUNICATIONS
5. FINANCIAL REPORT
  - a. Discussion and Possible Action to Approve District Disbursements/Expenditures.
6. CONSENT AGENDA

All matters on the Consent Agenda are to be approved by one action without discussion unless a Board Member requests separate action on a specific item.

  - a. APPROVAL OF MINUTES
    - a-1. 9-7-22 Closed Session Meeting Minutes
    - a-2. 9-26-22 Meeting Minutes
    - a-3. 10-3-22 Meeting Minutes
  - b. APPROVAL OF RES 2022-305: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO CONTINUE THE AUTHORITY TO HOLD VIRTUAL MEETINGS PURSUANT TO AB 361
7. DISCUSSION AND POSSIBLE ACTION REGARDING ANY CONSENT AGENDA ITEM NEEDING SEPARATE ACTION
8. GROUNDWATER MANAGEMENT
  - a. Monthly Groundwater Management Report
9. NEW BUSINESS
  - a. Discussion and Possible Action to accept the updated hydrological study for 10970 Ford St.
  - b. Discussion and Possible Action to GWEP for Change In Use with increased water demand for 45020 Ukiah St.
10. OLD BUSINESS
  - a. Discussion and Possible Action related to process of reviewing and updating the Governance Guidelines
  - b. Discussion and Possible Action to approve spending of remaining PSPS Grant money

MENDOCINO CITY COMMUNITY SERVICES DISTRICT BOARD OF DIRECTORS 11-7-2022 MEETING AGENDA

- c. Discussion and Possible Action regarding engaging SAFER and community outreach to begin exploring interest in a possible Community Water System
  
- 11. DISTRICT SUPERINTENDENT'S REPORT
  - a. Monthly Report.
  
- 12. SECRETARY'S REPORT
  - a. Monthly Report
  
- 13. COMMITTEE UPDATES
  
- 14. MATTERS FROM BOARD MEMBERS
  
- 15. ADJOURNMENT

STANDING COMMITTEES: For 2022

- Finance:----- Dennak Murphy and Maggie O'Rourke
- Personnel:----- Dennak Murphy and Maggie O'Rourke
- Plant Operations:----- Dennak Murphy and Jim Sullivan
- Safety:----- Harold Hauck
- Street Lighting:----- Harold Hauck
- Groundwater Management:----- Jim Sullivan and Donna Feiner

*Pursuant to Americans with Disability Act (ADA Title II), MCCSD will make reasonable arrangements to ensure accessibility to the meeting. If you need special assistance to participate in this meeting, please contact the business office at 707- 937-5790.*

Cash Disbursements (Checking)  
**For the Period End August 2022**

	9/30/2022
<b>Balance Forward</b>	\$ 96,844
Monthly Fees (Current and Past Due) Collected	40438
Interest Income	30
Service to Read Water Meters	600
Hills Ranch Service	250
Parts Sales (inventory)	790
Golden State Risk Mgmt Authority	0
General Property Taxes	0
<b>Revenue</b>	<u>42,108</u>
<b>Total Inflows</b>	<u>\$ 138,952</u>
Disbursements (Check Register)	\$ (93,982)
Balance Checking	<u>\$ 44,970</u>
General Ledger Operating Checking Difference	\$ 44,969 0

**APPROVAL OF THE BOARD OF DIRECTORS**

The undersigned Directors of the Mendocino City Community Service District, do hereby certify total disbursements, including checks, online CalPers, State and Federal Tax Deposits.

Print and Sign	Date
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____



# Mendocino City Community Services District

## Distribution Report by Bank Account

September 2022

DATE	NUM	NAME	AMOUNT
Cash and Equivalents			
Cash in Checking #2837			
09.06.2022	20560	REDWOOD WASTE SOLUTIONS	-143.06
09.06.2022	20561	Pace Supply Corp.	-113.01
09.06.2022	20562	Harvest Market	-67.60
09.06.2022	20563	Alpha Analytical Laboratories	-245.00
09.07.2022	20564	Waste Management	-250.25
09.07.2022	20565	IDEXX Distribution, Inc	-203.33
09.07.2022	20566	REDWOOD COAST FUELS	-3,638.28
09.07.2022	20567	North Coast Tire	-155.39
09.12.2022	20568	Pace Supply Corp.	-62.24
09.12.2022	20569	A T & T Services, Inc.	-1,649.91
09.12.2022	20570	Deep Valley Security	-32.95
09.12.2022	20571	Jackson Law Offices	-2,984.50
09.15.2022	20574	R.F Macdonald Co.	-3,791.00
09.15.2022	20575	Pace Supply Corp.	-262.43
09.15.2022	20576	STOKES, HAMER, KIRK & EADS, LLP	-30,762.54
09.15.2022	20577	A T & T Mobility	-169.22
09.15.2022	20578	Mountain Fresh Spring Water Co	-16.00
09.15.2022	20579	Liebert Cassidy Whitmore	-2,093.50
09.15.2022	20580	PG&E	-9,201.01
09.15.2022	20581	Alpha Analytical Laboratories	-390.00
09.15.2022	20582	Robert Ryan Rhoades	-105.00
09.15.2022	20583	Community Center of Mendocino	-120.00
09.19.2022	20585	Pace Supply Corp.	-510.94
09.19.2022	20586	Golden State Risk Managment Authority	-8,123.00
09.19.2022	20587	Alpha Analytical Laboratories	-275.00
09.02.2022	DD	Robert Ryan Rhoades	-2,324.28
09.02.2022	DD	Dylan M. Cooper	-979.94
09.02.2022	DD	Keith D. Linden	-1,547.50
09.02.2022	DD	Katharine L. Bates	-1,322.63
09.16.2022	DD	Dylan M. Cooper	-907.65
09.16.2022	DD	Keith D. Linden	-1,527.83
09.16.2022	DD	Robert Ryan Rhoades	-2,324.27
09.16.2022	DD	Katharine L. Bates	-1,701.72
09.30.2022	DD	Dylan M. Cooper	-1,008.84
09.30.2022	DD	Katharine L. Bates	-1,624.09
09.30.2022	DD	Robert Ryan Rhoades	-2,740.98
09.30.2022	DD	Keith D. Linden	-1,596.64
09.01.2022		K. Mckee & Company, Inc.	-75.00
09.01.2022		QuickBooks Payments	-9.62
09.02.2022		K. Mckee & Company, Inc.	-300.00





# Mendocino City Community Services District

## Distribution Report by Bank Account

September 2022

DATE	NUM	NAME	AMOUNT
09.06.2022		CAL PERS	-910.79
09.06.2022		CAL PERS	-325.59
09.08.2022		IRS	-2,007.09
09.08.2022		CA EDD	-378.63
09.09.2022		K. Mckee & Company, Inc.	-1,039.62
09.12.2022		QuickBooks Payments	-0.58
09.12.2022			-137.50
09.13.2022		QuickBooks Payments	-57.37
09.19.2022		CAL PERS	-295.98
09.19.2022		CAL PERS	-971.63
09.21.2022		IRS	-2,113.02
09.21.2022		CA EDD	-388.00
<b>Total for Cash in Checking #2837</b>			<b>\$ -93,981.95</b>
Petty Cash			
09.08.2022		Robert Ryan Rhoades	-12.50
09.12.2022			137.50
<b>Total for Petty Cash</b>			<b>\$125.00</b>
<b>Total for Cash and Equivalent</b>			<b>\$ -93,856.95</b>

**MENDOCINO CITY COMMUNITY SERVICES DISTRICT**

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mccsd@mcn.org

Per California Governor Gavin Newsom's Executive Orders N-25-20 and N-29-20, the meeting is being held via teleconference.

**MENDOCINO CITY COMMUNITY SERVICES DISTRICT SPECIAL BOARD MEETING**

**ACTION MINUTES – September 26, 2022**

**BEFORE THE BOARD OF DIRECTORS  
FAIR STATEMENT OF PROCEEDINGS  
(PURSUANT TO CALIFORNIA COMMUNITY SERVICES DISTRICT LAW  
Government Code §61000)**

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**AGENDA ITEM NO. 1 – CALL TO ORDER – OPEN SESSION 4:01 p.m.**

**Present:** Directors Donna Feiner, Harold Hauck, Maggie O'Rourke, Vice President Jim Sullivan and presiding was President Dennak Murphy

**Staff Present:** Mr. Ryan Rhoades, District Superintendent, Katie Bates, Board Secretary.

**Legal Counsel Present:** Chris Hamer

**Public Present:** None

**AGENDA ITEM NO. 2. – APPROVAL OF AGENDA**

**Staff Comment:** Superintendent Rhoades

Director Hauck moves to approve the agenda and withhold item 14a for a future meeting. Director Feiner 2<sup>nd</sup>.

**AYES:** 4

**AGENDA ITEM NO. 4 –ADJOURNMENT TO CLOSED SESSION**

**Presenter:** Dennak Murphy

**AGENDA ITEM NO. 5–RETURN FROM RECESS 5:00 p.m. Continue Regular Board Meeting**

a. Call to Order

**Present:** Directors Donna Feiner, Harold Hauck, Maggie O'Rourke, Vice President Jim Sullivan, and presiding was President Dennak Murphy.

**Staff Present:** Mr. Ryan Rhoades, District Superintendent, Katie Bates, Board Secretary.

**Legal Counsel Present:** None

**Public Present:** MacKenzie Skye, Michelle Blackwell, Matthew Miksak, Tina Aranguren

**AGENDA ITEM NO. 6 –REPORT OUT FROM CLOSED SESSION**

Board of Directors met with legal counsel regarding current lawsuit, case No. 21CV00177

**AGENDA ITEM NO. 7 – PUBLIC COMMENT**

None

**AGENDA ITEM NO. 8 – COMMUNICATIONS**

None

**AGENDA ITEM NO. 9: FINANCIAL REPORT**

**9a) Discussion and Possible Action to Approve District Disbursements/ Expenditures**

Presenter: Katie Bates

**Board Comment: Director Hauck**

**Board Action:** Upon motion by Director O'Rourke seconded by VP Sullivan. IT IS ORDERED to approve the disbursements and expenditures. The Motion carried by the following vote:

AYE: 5

NO: 0

**AGENDA ITEM NO. 10: CONSENT AGENDA**

**a. APPROVAL OF MINUTES**

a1) 7-25-22 Meeting Minutes

a2) 8-8-22 Meeting Minutes

a3) 8-18-22 Meeting Minutes

**b) APPROVAL OF RES 2022-294: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO CONTINUE THE AUTHORITY TO HOLD VIRTUAL MEETINGS PURSUANT TO AB 361**

**Board Action:** Upon motion by Director Hauck, seconded by Director O'Rourke. IT IS ORDERED to approve the consent agenda. The Motion carried by the following vote:

AYE: 5

NO: 0

**Board Action:** Upon motion by Director Hauck, seconded by Director Feiner. IT IS ORDERED to approve a-3 with correction to strike "confidential minutes on pages 2 and 3". The Motion carried by the following vote:

AYE: 5

NO: 0

**AGENDA ITEM NO. 11: DISCUSSION AND POSSIBLE ACTION REGARDING ANY CONSENT AGENDA ITEM NEEDING SEPARATE ACTION**

**AGENDA ITEM NO. 12- GROUNDWATER MANAGEMENT**

**a) Monthly Groundwater Management Report**

**Presenter: Ryan Rhoades**

**AGENDA ITEM NO. 13 – NEW BUSINESS**

**President Murphy welcomes Matthew Miksak as a new Board member as of 12-1-2022**

**13a) Discussion and Possible Adoption of RESOLUTION 2022-301: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO DECLARE A STAGE 2 WATER SHORTAGE CONDITION AND RESCIND RESOLUTIONS 2022-288 AND 2022-289**

**Staff Comment: Superintendent Rhoades**

**Board Comment: Directors Hauck, Feiner, and VP Sullivan**

**Public Comment: Michelle Blackwell, MacKenzie Skye**

**Board Action:** Upon motion by Director O'Rourke, seconded by Director Feiner. IT IS ORDERED to approve RESOLUTION 2022-301: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO DECLARE A STAGE 2 WATER SHORTAGE CONDITION AND RESCIND RESOLUTIONS 2022-288 AND 2022-289

The Motion carried by the following vote:

AYE: 5

NO: 0

**13b) Discussion and Possible adoption of RESOLUTION 2022-298: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO APPROVE INITIATION OF PROP 218 PROCEDURES FOR PROPOSED MONTHLY SEWER CHARGE INCREASES**

**Presenter: Superintendent Rhoades**

**Board Comment: Director Hauck, and President Murphy**

**Public Comment: Michelle Blackwell, Matthew Miksak**

**Board Action:** Upon motion by Director O'Rourke, seconded by Director Hauck. IT IS ORDERED to adopt RESOLUTION 2022-298: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO APPROVE INITIATION OF PROP 218 PROCEDURES FOR PROPOSED MONTHLY SEWER CHARGE INCREASES

The Motion carried by the following vote:

AYE: 5

NO: 0

**13c) Discussion and Possible action to adopt RESOLUTION 2022-299: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO APPROVE INITIATION OF PROP 218 PROCEDURES FOR PROPOSED MONTHLY GROUNDWATER MANAGEMENT CHARGE INCREASES**

**Presenter: Superintendent Rhoades**

**Board Comment: Directors Hauck, O'Rourke, President Murphy**

**Public Comment: Michelle Blackwell**

**Board Action:** Upon motion by Director Hauck, seconded by VP Sullivan. IT IS ORDERED to adopt **RESOLUTION 2022-299: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO APPROVE INITIATION OF PROP 218 PROCEDURES FOR PROPOSED MONTHLY GROUNDWATER MANAGEMENT CHARGE INCREASES.** The Motion carried by the following vote:

AYE: 4

NO: 0

ABSTAIN: 1 (Director O'Rourke)

13d) Discussion and Possible Adoption of **RESOLUTION 2022-300: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT AUTHORIZING THE GRANT APPLICATION, ACCEPTANCE, AND EXECUTION FOR THE WASTERWATER TREATMENT PLANT TERTIARY EFFLUENT IMPROVEMENT AND RECYCLED WATER SYSTEM EXPANSION PROJECT**

**Staff Comment:** Superintendent Rhoades

**Board Comment:** VP Sullivan

**Public Comment:** Michelle Blackwell

**Board Action:** Upon motion by Director Feiner, seconded by VP Sullivan. IT IS ORDERED to adopt **RESOLUTION 2022-300: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT AUTHORIZING THE GRANT APPLICATION, ACCEPTANCE, AND EXECUTION FOR THE WASTERWATER TREATMENT PLANT TERTIARY EFFLUENT IMPROVEMENT AND RECYCLED WATER SYSTEM EXPANSION PROJECT**

The Motion carried by the following vote:

AYE: 5

NO: 0

#### **AGENDA ITEM NO. 14- OLD BUSINESS**

14a) Discussion and Possible Action to approve spending of remaining PSPS Grant money

Tabled for a future meeting

#### **AGENDA ITEM No. 15 – SUPERINENDENT'S REPORT**

a) Monthly Superintendent's Report

Presenter: Ryan Rhoades

Public Comment: Michelle Blackwell

Board Comment: VP Sullivan

#### **AGENDA ITEM NO. 16- SECRETARY'S REPORT**

a. Monthly Secretary's Report

Presenter: Katie Bates

#### **AGENDA ITEM NO. 17: COMMITTEE UPDATES**

#### **AGENDA ITEM NO. 16: MATTER FROM BOARD MEMBERS**

Director Feiner, VP Sullivan, and Superintendent Rhoades briefly discuss the tank project at MUSD

**AGENDA ITEM NO. 17: ADJOURNMENT**

IT IS ORDERED to approve adjourning the meeting at 7:16 p.m.

**NOTICE: PUBLISHED MINUTES OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT MEETINGS**

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- *Minutes are considered draft until adopted/approved by the Board of Directors*
- *Please reference the District's website to obtain additional resource information for the Board of Directors: [www.mccsd.com](http://www.mccsd.com).*

*Thank you for your interest in the proceedings of the Mendocino City Community Services District*

*Board of Directors*

STANDING COMMITTEES:

Finance:----- Dennak Murphy and Maggie O'Rourke

Personnel:----- Dennak Murphy and Maggie O'Rourke

Plant Operations:----- Dennak Murphy and Jim Sullivan

Safety: ----- Harold Hauck

Street Lighting:----- Harold Hauck

Water Management:----- Donna Feiner and Jim Sullivan

Respectfully submitted,

Ryan Rhoades and Katie Bates

**MENDOCINO CITY COMMUNITY SERVICES DISTRICT**

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mccsd@mcn.org

Per California Governor Gavin Newsom's Executive Orders N-25-20 and N-29-20, the meeting is being held via teleconference.

**MENDOCINO CITY COMMUNITY SERVICES DISTRICT SPECIAL BOARD MEETING**

**ACTION MINUTES – October 3, 2022**

**BEFORE THE BOARD OF DIRECTORS  
FAIR STATEMENT OF PROCEEDINGS**

**(PURSUANT TO CALIFORNIA COMMUNITY SERVICES DISTRICT LAW  
Government Code §61000)**

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**AGENDA ITEM NO. 1 – CALL TO ORDER – OPEN SESSION 5:01 p.m.**

**Present:** Directors Donna Feiner, Harold Hauck, Maggie O'Rourke, Vice President Jim Sullivan and presiding was President Dennak Murphy

**Staff Present:** Mr. Ryan Rhoades, District Superintendent

**Legal Counsel Present:** None

**Public Present:** Michelle Blackwell representing KZYX, Tina Aranguren, Denise Luis, McKinzy Skye, Anthony Elowsky RDN Financial consulting , Ed Obrien joined a few minutes later.

**AGENDA ITEM NO. 2. – APPROVAL OF AGENDA**

Director O'Rourke moves to approve the agenda. Director Hauck 2<sup>nd</sup>.

**AYES: 5 NOES: 0**

**AGENDA ITEM NO. 3 – PUBLIC COMMENT: non agenda items**

**Public Comment:** Tina Aranguren, and Denise De Luice

**Board Comment:** President Murphy, Director Hauck,

**Staff Comment:** None

**AGENDA ITEM NO. 4 – COMMUNICATIONS**

**Staff Comment:** Superintendent Rhoades

**Board Comment:** President Murphy

**AGENDA ITEM NO. 5: OLD BUSINESS**

a) **Discussion and Possible Action to reapprove the final MOU with MUSD related to the water tank project**

**Presenter:** Superintendent Rhoades and President Murphy

**Staff Comment:** Superintendent Rhoades

**Board Comment:** Director Hauck, President Murphy, Director Sullivan

**Public Comment:** Tina Aranguren

**Board Action:** Upon motion by VP Sullivan, seconded by Director Hauck. IT IS ORDERED to rescind the MOU between MCCSD and MUSD as previously adopted by the MCCSD Board 8/29/22. The Motion carried by the following vote:

AYE: 5

NO: 0

a) **Discussion and Possible Action to reapprove the final MOU with MUSD related to the water tank project**

**Presenter:** Superintendent Rhoades and President Murphy

**Staff Comment:** Superintendent Rhoades

**Board Comment:** President Murphy, Director Sullivan

**Public Comment:** Tina Aranguren

**Board Action:** Upon motion by Director Hauck, seconded by President Murphy. IT IS ORDERED to approve the MOU between MCCSD and MUSD as previously adopted by the MCCSD Board 8/29/22. The Motion carried by the following vote:

AYE: 5

NO: 0

b) **MCCSD rate study and Proposition 218 process**

**B1) Discussion and Possible Action to adopt RESOLUTION 2022-302: RESOLUTION TO RESCIND RESOLUTION 2022-298 and 2022-299**

**Presenter:** President Murphy

**Staff Comment:** Superintendent Rhoades

**Board Comment:** President Murphy suggests edits

**Public Comment:** None

**Board Action:** Upon motion by Director Hauck, seconded by Director O'Rourke. IT IS ORDERED to approve Resolution 2022-302, as edited by President Murphy, Rescinding Resolutions 2022-298 and 2022-299 . The Motion carried by the following vote:

AYE: 4

NO: 0

Abstain: 1

**B2) Discussion and Possible Adoption of RESOLUTION 2022-303: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO APPROVE INITIATION OF PROP 218 PROCEDURES FOR PROPOSED MONTHLY GROUNDWATER MANAGEMENT CHARGE INCREASES**



**Presenter:** President Murphy

**Staff Comment:** Superintendent Rhoades

**Board Comment:** President Murphy, suggests edits

**Public Comment:** None

**Board Action:** Upon motion by Feiner, seconded by VP Sullivan. IT IS ORDERED to approve Resolution 2022-303, **RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO APPROVE INITIATION OF PROP 218 PROCEDURES FOR PROPOSED MONTHLY GROUNDWATER MANAGEMENT CHARGE INCREASES** as edited by President Murphy, The Motion carried by the following vote:

AYE: 5

NO: 0

**B4) Discussion and Possible Adoption of RESOLUTION 2022-304: RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO APPROVE INITIATION OF PROP 218 PROCEDURES FOR PROPOSED MONTHLY SEWER CHARGE INCREASES**  
**Staff recommends approval**

**Presenter:** President Murphy

**Staff Comment:** Superintendent Rhoades

**Board Comment:** President Murphy, suggests edits, Directors Hauck and Sullivan

**Public Comment:** Ed Obrien

**Board Action:** Upon motion by Hauck, seconded by VP Sullivan. IT IS ORDERED to approve Resolution 2022-304, **RESOLUTION OF THE MENDOCINO CITY COMMUNITY SERVICES DISTRICT TO APPROVE INITIATION OF PROP 218 PROCEDURES FOR PROPOSED MONTHLY SEWER CHARGE INCREASES** as edited by President Murphy, The Motion carried by the following vote:

AYE: 5

NO: 0

**B5) Discussion and Possible Action to adopt the Rate Study and proposed rate option**

**Presenter:** Superintendent Rhoades and Anthony Elowsky

**Staff Comment:** Superintendent Rhoades

**Board Comment:** President Murphy, Director O'Rourke, VP Sullivan

**Public Comment:** Ed Obrien, McKinzie Skye, Michelle Blackwell

**Board Action:** Upon motion by Director O'Rourke, seconded by VP Sullivan. IT IS ORDERED to adopt the 2022 MCCSD Financial Planning, Revenue Requirements and Rate Setting Analysis "Rate Study" as provided by California Rural Water Association in collaboration with Robert D. Hiehaus, Inc. and specifically to adopt Plan #3 in the 2022 MCCSD Financial Planning, Revenue Requirements and Rate Setting Analysis as the proposed recommendations by RDN as the basis of moving ahead in the proposition 218 process for proposed rate increases for both monthly sewer service and monthly groundwater management charges. The Motion carried by the following vote:

AYE: 5

NO: 0

**AGENDA ITEM NO. 5 6: NEW BUSINESS**

None

**AGENDA ITEM NO. 6 7: MATTER FROM BOARD MEMBERS**

None

**AGENDA ITEM NO. 7 8: ADJOURNMENT**

IT IS ORDERED to approve adjourning the meeting at 6:22 p.m.

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*Thank you for your interest in the proceedings of the Mendocino City Community Services District*

*Board of Directors*

**STANDING COMMITTEES:**

- Finance:----- Dennak Murphy and Maggie O'Rourke
- Personnel:----- Dennak Murphy and Maggie O'Rourke
- Plant Operations:----- Dennak Murphy and Jim Sullivan
- Safety: ----- Harold Hauck
- Street Lighting:----- Harold Hauck
- Water Management:----- Donna Feiner and Jim Sullivan

Respectfully submitted,

Ryan Rhoades and Dennak Murphy



# Memo

**To:** MCCSD Board of Directors  
**From:** District Superintendent  
**cc:** Jim Jackson  
**Date:** November 3, 2022  
**Re:** Groundwater Management Report

## The 2022-23 Rain Year

October 1, 2022 was the beginning of the 2022-23 rain year. Average annual precipitation in Mendocino is 39.72 inches, and average rainfall in October is 2.29" inches, 0.45" inches of rainfall has been measured in the District for the month as of October 31, 2022 (Figure 1, Table 1).

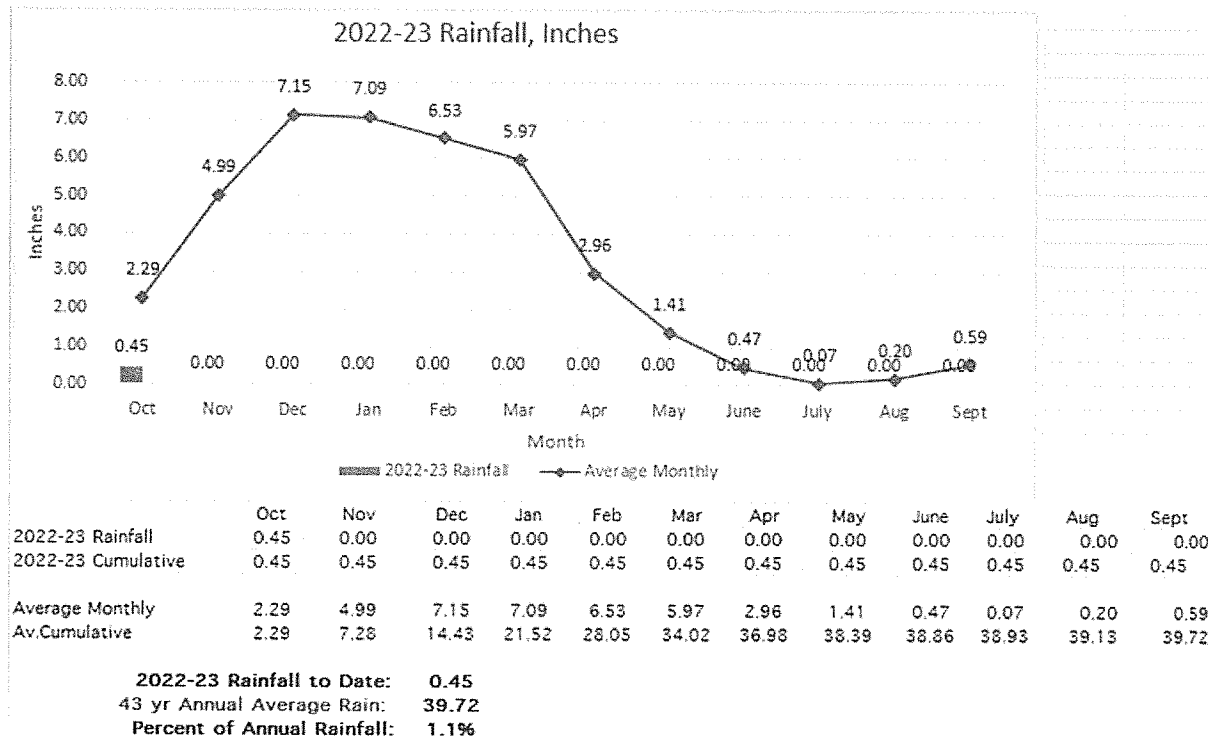


Figure 1, Table 1

Table 1 2022-23 Rainfall Record

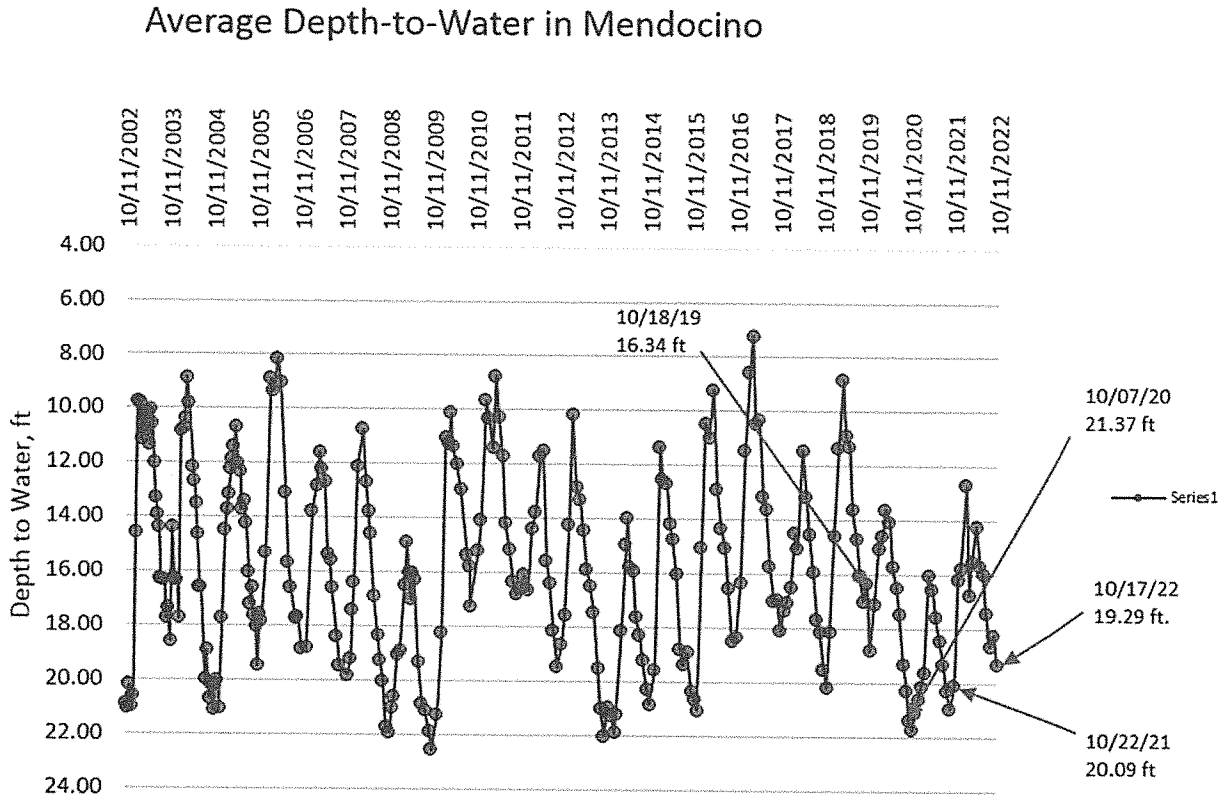
Total Rainfall for Rain Year 2021-22 was 33.82" inches. Mendocino received just 85% of normal annual rainfall during the last water year. By October 18, 2022, total rainfall since October 31, 2021 was 0.45" inches, 1.1% of average annual rainfall.

2022-23												<i>Elevation 32 Feet</i>	
Data From: Community Service District												<i>Latitude 29.306°</i>	
10AM												<i>Longitude -123.600°</i>	
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
1													
2													
3													
4	0.02												
5	0.01												
6	0.01												
7													
8													
9													
10	0.03												
11	0.02												
12	0.02												
13	0.02												
14													
15													
16	0.01												
17	0.01												
18	0.02												
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
Sum	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Count	10	0	0	0	0	0	0	0	0	0	0	0	
Max	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rainy Days	10							Water year Total Rainfall					0.17
Maximum Daily Rainfall				0.03									

October 2022 Depth-to-Water (DTW)

The average DTW measurements District-wide in the 24 monitoring wells on October 17, 2022 was 19.29 ft.; about 1 ft. lower than September, about .8 ft. better than October of 2021, and about 2.1 ft. better than October of 2020. Compared to a good rain year like 2019, which received 45.64" inches, the average depth to water is currently about 3 ft. below normal for the month.

Figure 2 October 2022, Depth-To-Water Chart



The average depth-to-water reported from the five drought monitoring wells on October 17, 2022 was 22.49 ft. about 0.40 ft. lower than September 20, 2022 where it was recorded at 22.08 ft.

The MCCSD Board declared a Stage 2 Water Shortage Crisis exists within its boundaries on September 26, 2022, based the Water Shortage Contingency Plan and average depth to water recorded in the five drought monitoring wells as of August 31, 2022. November 30, represents the next Water Shortage evaluation date. At that time both rainfall and depth to water measurements will be used to conduct another evaluation. The Superintendent recommends maintaining the Stage 2 Water Shortage at this time.

## Memo

**To:** MCCSD Board  
**From:** District Superintendent  
**cc:** Jim Jackson  
**Date:** October 11, 2022  
**Re:** Supplemental Report Review for 2004-05 Hydrological Study 10970 Ford St. APN 119-170-13 Formerly 119-170-07

---

The property owner of 10970 Ford St. in Mendocino APN 119-170-13, formerly part of 10950 Ford St. APN 119-170-07 is requesting review and approval of a supplemental report showing the conclusions of the 2004/2005 Questa Engineering Hydrological Study results for their property remain valid.

Section 10, page 12 of MCCSD GWEP Ordinance 2020-01 states a Groundwater Extraction Permit Approval that was based on the findings of a Hydrological Study shall not be issued for more than ten (10) years from the date of the original Hydrological Study Approval without the applicant providing, at the applicant's expense, a supplemental report showing the conclusions of the Hydrological Study are still valid. The report shall be prepared by a qualified hydrologist.

MCCSD received a supplemental report by a qualified hydrologist at Lawrence and Associates Engineers and Geologists on June 16, 2022. This report reviewed the original hydrological study conducted by Questa Engineering in 2004 and completed in January of 2005.

For this evaluation, L&A conducted the following tasks:

- Measured the depth to water in the two wells present on the subject parcel.
- Reviewed the 2005 hydrology report – Questa Engineering Corp., January 2005, *Hydrological Study for Minor Subdivision of Parcel #119-170-007 at 10950 Ford Street, Mendocino, California.*
- Reviewed a hydrology report prepared since 2005 for parcels in the vicinity of 10970 Ford Street - Lawrence & Associates, January 2020, *Hydrological Study, 10940 Lansing Street, Mendocino Seaside Cottage, Mendocino, California, APN-119-070-19.*
- Reviewed precipitation trends historically and since 2005.
- Reviewed MCCSD groundwater-level monitoring data.
- Reviewed development trends in the vicinity.
- Reviewed memo to MCCSD Board of Directors from District Superintendent, May 25, 2022, re Groundwater Management Report (on MCCSD web page).
- Reviewed administrative draft of the *Mendocino 2020 Groundwater Management Update*, Todd Groundwater, June 2021 (on MCCSD web page).

## SUMMARY

The conclusions and recommendations of the 2005 report remain valid. Evaluation of the existing conditions for groundwater levels, climate, and land use support the assumptions made in the 2005 report. This conclusion is based on the following findings:

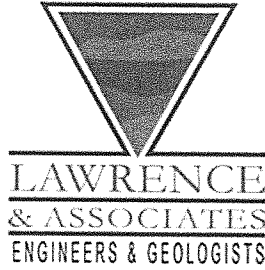
1. Groundwater levels in the site wells, while lower by approximately 2.5 to 3 feet, are not so low as to preclude pumping groundwater for a single-family residence. The water column in the production well remains at more than 100 feet (106 feet in 2004 vs. 104 feet in 2022).
2. The change in groundwater level between September 2004 and 2022 in the site wells is similar to that in MCCSD monitoring well #32A (the closest monitoring well to the site). In September 2004, the depth to water in #32A was 30.5 feet and in late May 2022, the depth to water was 28.22 feet.
3. There have been no significant changes in land use in the vicinity of the Project property. Since 2005, one additional hydrologic test (for an increased allotment, not a new well) has been conducted in the vicinity (for Mendocino Seaside Cottage). It was approved.
4. Interference from the Project well from pumping at the allotment rate (0.18 gpm or 260 gallons per day) for 180 days would not cause interference beyond approximately 175 feet. There are no wells within this radius.
5. Evaluation of cumulative impacts (interference) from the Project well plus the additional allotment approved since 2005 show no adverse cumulative effects. Per the Ordinance, adverse cumulative effects occur if the sum of incremental drawdowns from a project well and test wells from previously approved hydrologic studies amounts to more than 10 percent of the available static water column in a hydrologically contiguous well.

In 2004/2005, a Hydrological Study was performed on APN 119-170-07 to prove adequate groundwater for a subdivision of the parcel, and for future development of the new parcel. The MCCSD Board approved the hydrological study for 10950 on February 28, 2005 to allow for a minor subdivision of the parcel. The County approved the final subdivision. The new parcel, now 10970 was approved for an allotment for future development not to exceed 276 gal/day. The property owner paid to renew the results of this study every two year up through 2017. Ordinance 2020-01 requires a supplements report to show the results of the original study remain valid. The supplemental report received June 16, 2022 concluded that the "conclusions and recommendations of the original report remain valid."

The property owner is not applying for a GWEP to develop the parcel at this time. He is just hoping to have a current, supplemental hydrological report on file that has been accepted by the MCCSD Board, which show the results of the 2004-2005 hydrological study remain valid for possible future development of that parcel. A water allotment would be issued based on the proposed GWEP application and proposed development at that time but would not exceed 276 gal/day.

After reviewing the supplemental report by Lawrence and Associates MCCSD staff recommend a vote to accept the June 16, 2022 report which concludes the results and recommendations of the original study remain valid.





June 16, 2022

022039.00

Mr. Charlie Baughn  
P.O. Box 112  
Albion, CA 95410

Dear Mr. Baughn:

**SUBJECT: RELEVANCE OF PREVIOUS HYDROLOGY REPORT FOR 10970 FORD STREET, APN 119-170-007, MENDOCINO, CALIFORNIA**

### INTRODUCTION

As you requested, Lawrence & Associates (L&A) has prepared this evaluation of the relevance of a 2005 hydrology report for your parcel on Ford Street (APN 119-170-007), Mendocino, California. (**Figure 1**). The 2005 hydrology report was prepared as part of permitting for a parcel split of this property, then identified as 10950 Ford Street, for two single-family residences. It was approved by the Mendocino City Community Services District (MCCSD). Once the hydrology report was approved, the parcel was split and the new parcel was given an address of 10970 Ford Street and a parcel number of 119-170-007. **Attachment A** contains the 2005 report for ease of reference.

Per our telephone conversation, MCCSD is requiring a review of the 2005 report because you are planning to proceed with development of the property and the report is more than 10 years old.

The work described herein was conducted under the supervision of Bonnie Lampley (California Certified Hydrogeologist No. 626), with support from other L&A staff.

For this evaluation, L&A conducted the following tasks:

- Measured the depth to water in the two wells present on the subject parcel.
- Reviewed the 2005 hydrology report – Questa Engineering Corp., January 2005, *Hydrological Study for Minor Subdivision of Parcel #119-170-007 at 10950 Ford Street, Mendocino, California*.
- Reviewed a hydrology report prepared since 2005 for parcels in the vicinity of 10970 Ford Street - Lawrence & Associates, January 2020, *Hydrological Study, 10940 Lansing Street, Mendocino Seaside Cottage, Mendocino, California, APN-119-070-19*.
- Reviewed precipitation trends historically and since 2005.
- Reviewed MCCSD groundwater-level monitoring data.
- Reviewed development trends in the vicinity.
- Reviewed memo to MCCSD Board of Directors from District Superintendent, May 25, 2022, re Groundwater Management Report (on MCCSD web page).
- Reviewed administrative draft of the *Mendocino 2020 Groundwater Management Update*, Todd Groundwater, June 2021 (on MCCSD web page).

## SUMMARY

The conclusions and recommendations of the 2005 report remain valid. Evaluation of the existing conditions for groundwater levels, climate, and land use support the assumptions made in the 2005 report. This conclusion is based on the following findings:

1. Groundwater levels in the site wells, while lower by approximately 2.5 to 3 feet, are not so low as to preclude pumping groundwater for a single-family residence. The water column in the production well remains at more than 100 feet (106 feet in 2004 vs. 104 feet in 2022).
2. The change in groundwater level between September 2004 and 2022 in the site wells is similar to that in MCCSD monitoring well #32A (the closest monitoring well to the site). In September 2004, the depth to water in #32A was 30.5 feet and in late May 2022, the depth to water was 28.22 feet.
3. There have been no significant changes in land use in the vicinity of the Project property. Since 2005, one additional hydrologic test (for an increased allotment, not a new well) has been conducted in the vicinity (for Mendocino Seaside Cottage). It was approved.
4. Interference from the Project well from pumping at the allotment rate (0.18 gpm or 260 gallons per day) for 180 days would not cause interference beyond approximately 175 feet. There are no wells within this radius.
5. Evaluation of cumulative impacts (interference) from the Project well plus the additional allotment approved since 2005 show no adverse cumulative effects. Per the Ordinance, adverse cumulative effects occur if the sum of incremental drawdowns from a project well and test wells from previously approved hydrologic studies amounts to more than 10 percent of the available static water column in a hydrologically contiguous well.

## GROUNDWATER LEVELS

L&A contracted with Superior Pump, Fort Bragg, to measure the depth to water in the two property wells. **Figure 2** shows the location of the wells (MCCSD numbers 22B and 22C) and the 2004 vs. 2022 water levels. **Table 1** summarizes the water levels:

**Table 1. Depth to Water, 2004 & 2022**

Well	Depth to Water (feet RP)		Difference
	09/07/2004	06/08/2022	
22B	42.00	39.48	-2.52
22C	41.08	38.30	-2.78

Groundwater levels in the site wells, while lower by approximately 2.5 to 3 feet, are not so low as to preclude pumping groundwater for a single-family residence. The water column in the production well remains at more than 100 feet (106 feet in 2004 vs. 104 feet in 2022).

To evaluate potential seasonal changes in groundwater levels, we obtained depth-to-water monitoring data from the MCCSD. MCCSD has monitored depth to water in approximately 25

wells in the town of Mendocino since 2002. MCCSD Wells #32A is the closest well to the Project site. Number 32A, at 128 feet deep, is completed to a generally similar depth as the Project well, which is approximately 143 feet deep. Additionally, groundwater in both the 10970 Ford Street wells and well 32A occurs in sandstone bedrock.

**Figure 3** shows graphs of the depth to water in Well #32A, the average depth to water in all MCCSD monitoring wells, and the annual precipitation as recorded by MCCSD. Well #32A has shown approximately 20 to 25 feet of seasonal variation in the past; in 2020 and 2021, the seasonal variation was less than 10 feet, reflecting the lower wintertime rainfall.

As **Figure 3** shows, the groundwater levels roughly mimic annual precipitation. In years with higher precipitation, groundwater levels are higher, and in years with low precipitation, groundwater levels are lower. This is the expected pattern in an area where there is not overdraft (over pumping) of groundwater. In areas of overdraft, groundwater levels may not rise with increasing precipitation, and instead, may continue to decline or remain flat. This is not the case in the Project area.

#### PRECIPITATION

**Figure 4** shows a graph of the annual precipitation and cumulative deviation from annual precipitation at Station Fort Bragg 5N. The cumulative deviation graph illustrates drought (if the line is trending downward) vs. wet periods (if the line is trending upwards).

Based on the period of record from water years 1904 through 2021, the average precipitation of this area is 38.40 inches. The average precipitation for the period water-year 1904 through 2005 was 38.36 inches; that for the period water-year 2005 to 2021 is 38.66 inches. Thus, there has not been a decline in total precipitation in the Mendocino coast area in the recent period. The precipitation pattern appears to be different, however, with more variability between years (*e.g.*, higher totals in wet years, lower totals in dry years).

#### LAND USE & CUMULATIVE IMPACTS

Land use in the vicinity has not changed since 2005, with the vicinity parcels consisting of single-family residences and one vacation cottage (Mendocino Seaside Cottage). Wells at homes located on neighboring parcels were considered in the 2004 test. One updated water allotment in the general vicinity has been approved since 2005, at the Mendocino Seaside Cottage. **Figure 2** shows the parcels in the vicinity that have been subject to hydrologic testing since 2005 per the Ordinance. For this update, we evaluated the cumulative impacts of these allotments plus the Project allotment.

Per the Ordinance, an adverse cumulative effect on the aquifer shall be considered to have occurred if the sum of incremental drawdown(s) from the current test well and test wells from previously approved hydrologic studies amounts to more than 10 percent of the available static water column in a hydrologically contiguous well (assumed to be within the radius of influence of the current test well).

**Table 1** summarizes the calculations for adverse cumulative effects; **Attachment B** contains the calculation sheets for the previously tested wells. To evaluate adverse cumulative effects, the Theis equation was used to calculate the drawdown at each test well that potentially could be caused by pumping each of the other test wells. For each set of comparisons, one well was “pumped” at a rate equivalent to that parcel’s allotment. The calculations used the aquifer coefficients previously calculated for each well. The calculation sheets in **Attachment B** show the equations, pumping rates, and aquifer coefficients used.

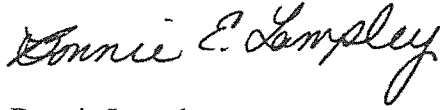
**Table 1. Summary of Cumulative Impacts (Drawdown) Analysis**

Pumping Well ↓	Drawdown (feet)		
	22B	Seaside	61A
10970 Ford (22B)	14.75	0.00	0.00
Seaside Cottage	0.00	1.24	0.00
61A	0.00	0.00	0.19
Total Drawdown From All Wells Pumping	14.75	1.24	0.19
Drawdown Attributable to Other Wells	0.00	0.00	0.00
Available Water Column	102	6.25	2.47
Drawdown Attributable to Other Wells as % of Available Water Column	0.0%	0.0%	0.0%

None of the wells show interference effects from the other tested wells. Therefore, there are no adverse cumulative effects per the Ordinance from pumping the Project well.

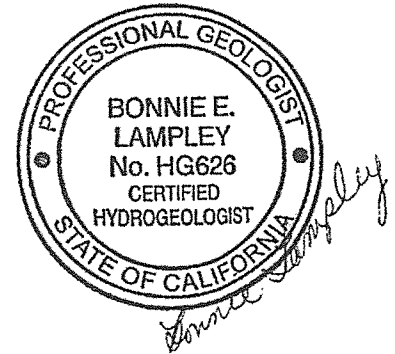
Please feel free to contact us if you have any questions regarding this report.

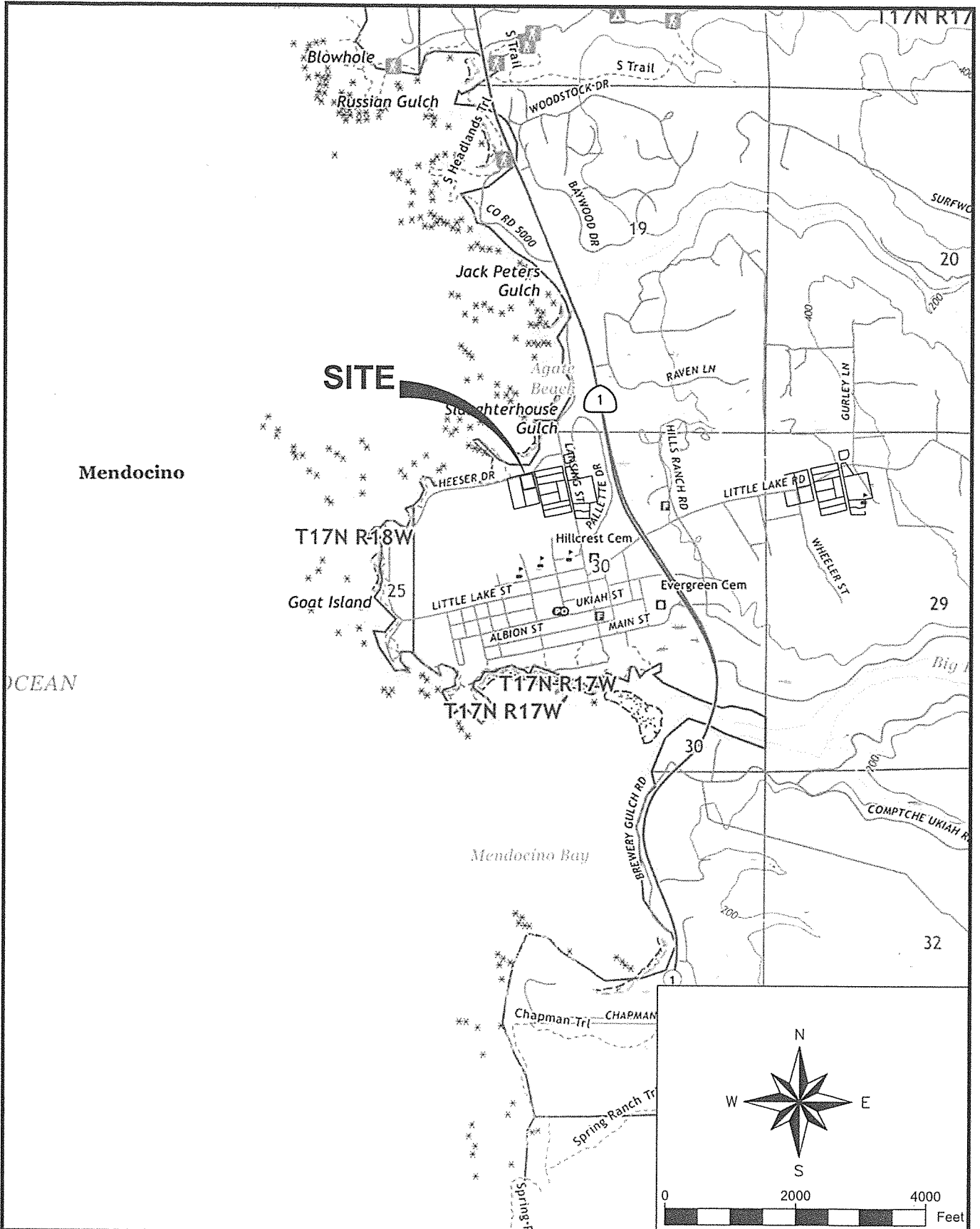
Sincerely,



Bonnie Lampley  
Principal Hydrogeologist, CHG 626

- enc.: **Figure 1.** Location Map  
**Figure 2.** Site Map  
**Figure 3.** Annual Precipitation at Mendocino & Depth to Groundwater  
in MCCSD Well #32A  
**Figure 4.** Precipitation – Station Fort Bragg 5N  
**Attachment A.** 2005 Hydrology Report  
**Attachment B.** Cumulative Impact Calculations

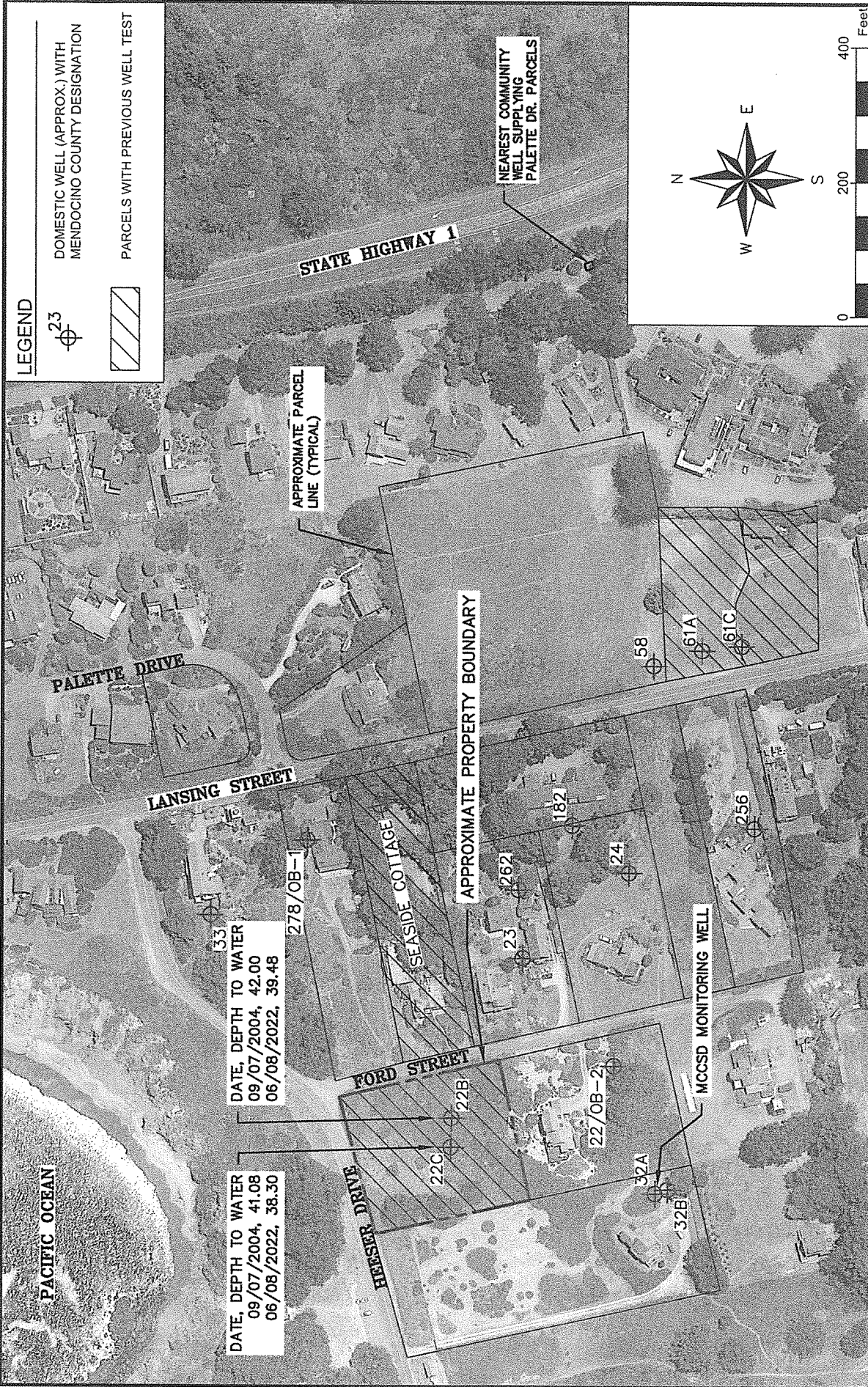




### SITE LOCATION MAP

MAP ADAPTED FROM U.S.G.S.  
7.5-MINUTE TOPOGRAPHIC QUAD  
MENDOCINO, CA.

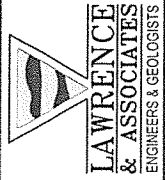
PROJECT NAME: HYDRO. UPDATE	PROJECT NO: 022039.00	DATE: 06/09/2022
CLIENT: C. BAUGHN	DRAWN BY: J. BEERS	<b>FIGURE 1</b>
SCALE: 1" = 2,000	CHECKED BY: B. LAMPLEY	

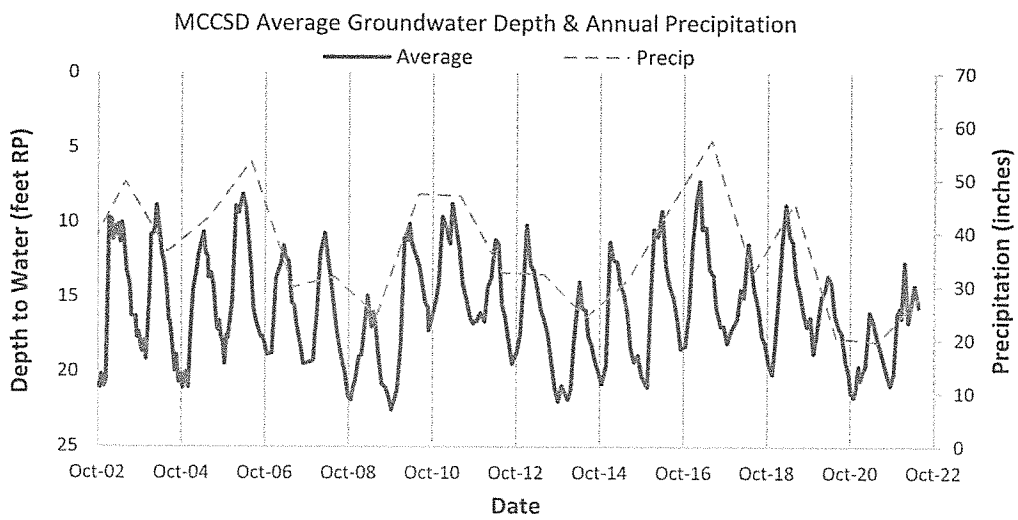
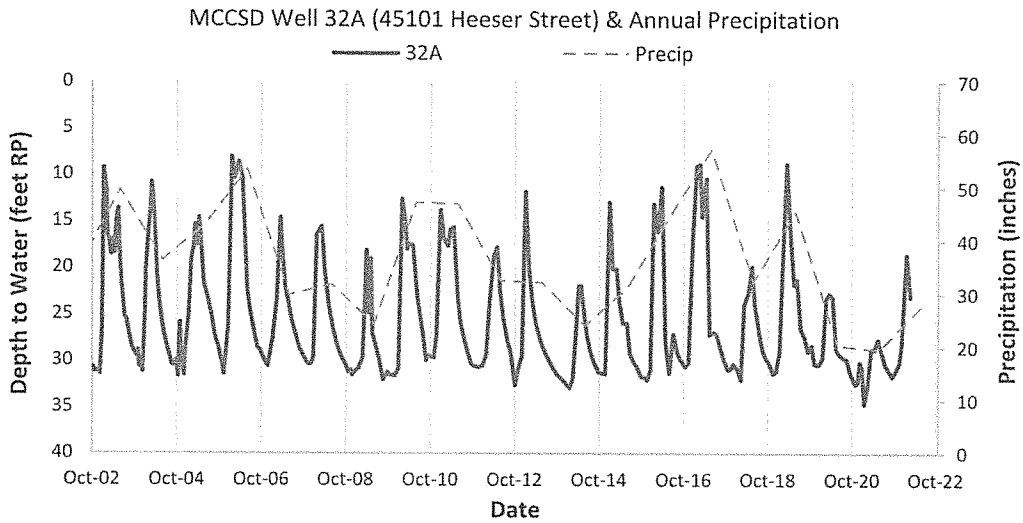


**HYDROLOGIC STUDY**

**APN: 119-170-007**  
**10970 FORD STREET**  
**MENDOCINO, CA.**

**SITE MAP**







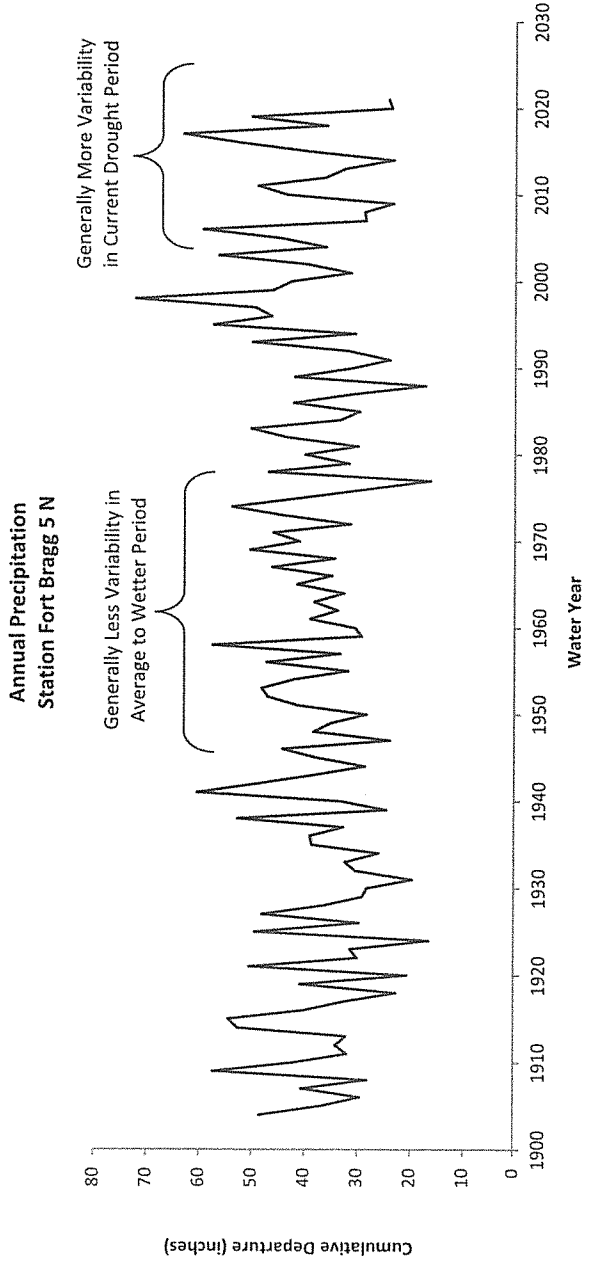
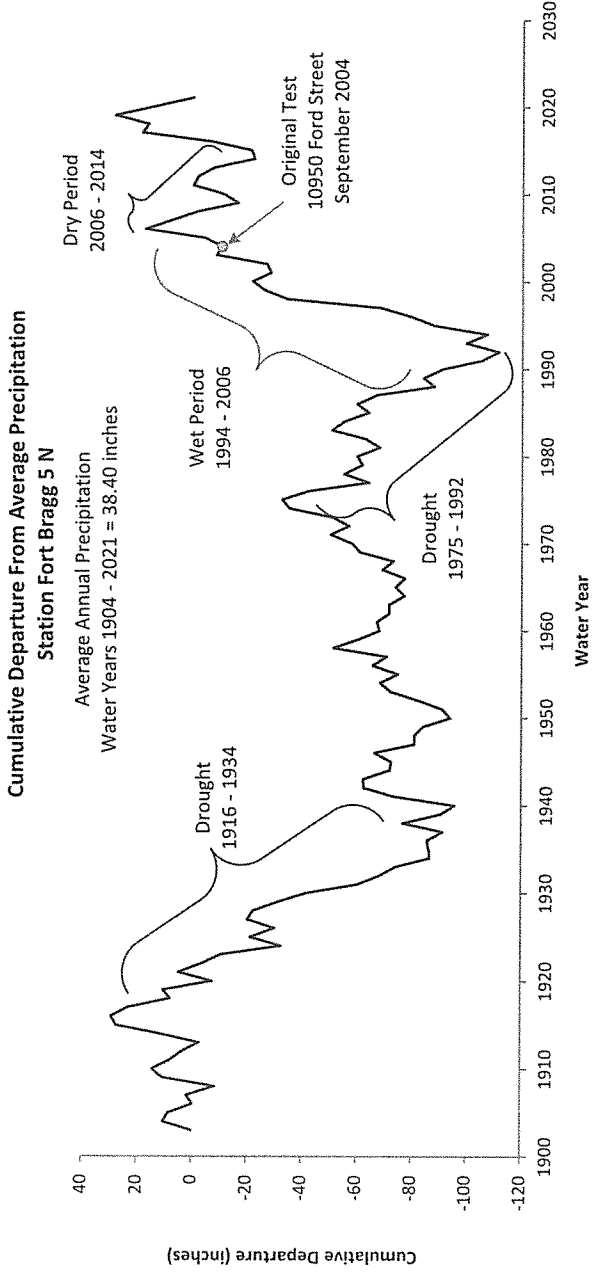


FIGURE 4

**ATTACHMENT A**  
**2005 HYDROLOGY REPORT**

HYDROLOGICAL STUDY  
FOR  
MINOR SUBDIVISION OF  
PARCEL #119-170-007  
AT  
10950 FORD STREET  
MENDOCINO, CALIFORNIA  
MENDOCINO COUNTY

---

Prepared for

**Diane & Gerard Michael Pasterick**  
P. O. Box 2038  
Healdsburg, CA 95448

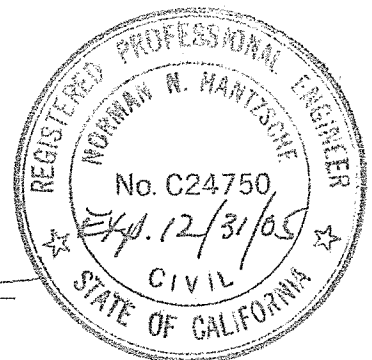
Project #240254

Prepared By

**Questa Engineering Corporation**  
1220 Brickyard Cove Road, Suite 206  
Point Richmond, California 94807  
(510) 236-6114

January 7, 2005

  
Norman N. Hantzsche, P.E.



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PROJECT SITE .....	1
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### TABLES

Table 1 – Onsite Well Construction Details

Table 2 – Pumping Test Data

Table 3 – Neighboring Well Monitoring Summary

Table 4 – 90 and 180-Day Drawdown Effects at Various Distances From Well A

### FIGURES

Figure 1 – Site Location Map

Figure 2 – Monitoring Wells Location Map

Figure 3 – Time Drawdown Plot, WELL A

Figure 4 – Recovery Plot, Pumping WELL A

Figure 5 – Time Drawdown Plot, WELL B

### APPENDICES

Appendix A – Well Driller Reports

Appendix B – Pumping Test Monitoring Data

Appendix C – Transmissivity and Storativity Calculations

Appendix D – Well Drawdown Calculations

Appendix E – Water Quality Data

## INTRODUCTION

This report presents the results of a pumping test and a hydrological study conducted for property located at 10950 Ford Street in the Town of Mendocino (APN 119-170-007). The parcel is approximately 2.0 acres and currently has a single family residence located on the southern portion of the lot. The parcel is proposed to be divided into two lots, of roughly 1.0 acres each. The existing residence, which has its own existing water supply well, will occupy the "Remainder" parcel. The study presented here covers the testing and verification of a new water supply well for the proposed new parcel. For the purposes of this study, it is assumed that the water supply must be capable of serving a single-family residence (with three bedrooms) to be created as part of this proposed minor subdivision.

The purpose of the pumping test and hydrological study for the property, in accordance with requirements of the Mendocino Local Coastal Plan and Mendocino City Community Services District (MCCSD) ordinances, is to demonstrate that an adequate supply of water exists for the future development (i.e., "Proof of Water") and also to determine whether or not the proposed withdrawal of groundwater will have a significant adverse effect on water supplies serving neighboring properties.

## PROJECT SITE

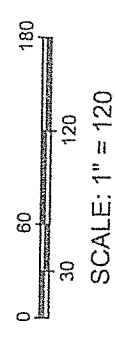
The project site is located on a marine terrace on the northern end of the Mendocino Headlands at the intersection of Hesser Drive and Ford Street (see **Figure 1**). The property lies at an elevation of approximately 120 feet above mean sea level (AMSL) and slopes moderately (5 to 10%) to the west. The site contains grassland vegetation. The soils in the area have been identified as a Heeser sandy loam. Surface runoff is slow to medium.

Two wells, one supply well and one monitoring well, were installed in August 2004, and were used for a pumping test in September 2004. A map of the project site showing the location of the two onsite wells and the relationship of the property to other neighboring wells is provided in **Figure 2**.





## HYDROGEOLOGIC SETTING

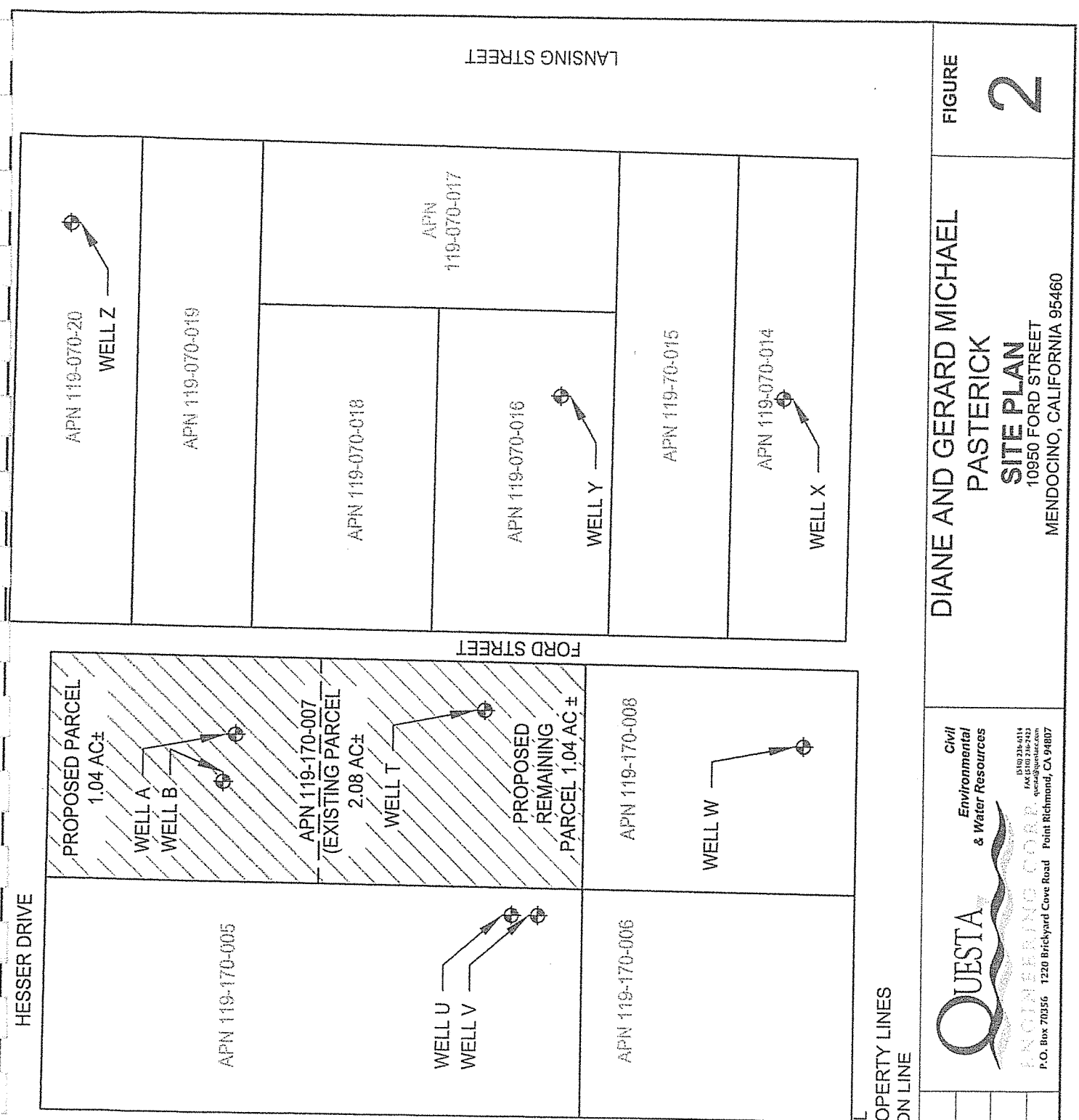
According to the DWR Mendocino County Coastal Groundwater Study, the project site lies within the Fort Bragg Groundwater Subunit, Terrace VIII, Russian Gulch to Big River, in an area designated as having "Marginal Water Resources (MWR)." Coastal Belt Franciscan rocks—generally considered non-water bearing—mantled with marine terrace deposits underlie the project site. The Franciscan rocks are consolidated and of low permeability and porosity. Groundwater contained in these rocks exists only in the soil, weathered rock, or in secondary openings formed by fractures, joints, and shear zones.

In the Fort Bragg Subunit, data from most bedrock well logs yield between 1 and 9 gallons per minute (gpm), whereas data from terrace deposit well logs show most wells yielding between 8 and 29 gpm. Bedrock wells have drawdowns that range from 5 to 129 feet and a mean specific capacity



**LEGEND:**

-  PROJECT SITE
-  MONITORING WELL
-  APPROXIMATE PROPERTY LINES
-  PROPERTY DIVISION LINE



Date: 12/21/2004  
 Drawn: K.S.W.  
 Apprd: N.H.  
 Dwg. No: 240254\_SitePlan.dwg

**QUESTA**  
 Engineering Corp.  
 P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807  
 Civil Environmental & Water Resources  
 (916) 236-0114  
 FAX (916) 236-7133  
 questajournal@questacorp.com

DIANE AND GERARD MICHAEL  
 PASTERICK  
**SITE PLAN**  
 10950 FORD STREET  
 MENDOCINO, CALIFORNIA 95460

FIGURE  
**2**

## PUMPING TEST PROCEDURES

Carl Rittiman and Associates conducted a continuous 74-hour pumping test for Well A during the period of September 7-11, 2004; Well B and several neighboring wells were monitored for water level changes during the pumping test. The pumping test was conducted in order to determine the sustained yield and drawdown characteristics of Well A, according to the following testing procedures.

- **Pumping Equipment.** A pump was installed in Well A, approximately 5 feet from the bottom of the well. A valve was installed on the discharge line to adjust the flow rate from the well. The flow from the well was discharged approximately 120 feet downslope of Well A into a swale, outside the immediate well recharge area.
- **Flow Metering.** Flow metering was done manually at periodic intervals throughout the pumping test. Measurements were made every five minutes during the first 20 minutes of pumping, then every 10 minutes for 120 minutes, then every 20 minutes for 60 minutes, then at least every 100 minutes until the end of the 74-hour test.
- **Drawdown Measurements.** Drawdown measurements were taken throughout the duration of the test at the same time intervals as the flow metering. While Well A was being pumped, the water levels in Well B were monitored. Drawdown measurements were also taken at the wells on seven neighboring properties during the pumping test. Four other neighboring property owners were also contacted to have their wells monitored; but they declined.
- **Pumping Rate.** At the beginning of the pump test, the pumping rate was varied for the first 30 minutes of the test to observe the water level response. Then, the pump rate was held at approximately 1.72 gpm until 100 minutes after the start of the test, and gradually decreased to 0.48 gpm at 130 minutes. The rate was then maintained at approximately 0.48 gpm for the remaining 72 hours of the 74-hour test (97% of the total time). The average rate over the full duration of the test was 0.52 gpm.
- **Recovery.** At the conclusion of pumping, periodic readings of water level recovery. Well A recovered 100% of the entire drawdown depth experienced during pumping in 48 hours.

## PUMPING TEST ANALYSIS

### *Pumping Data*

The data from the pumping tests are provided in **Appendix B**. The pertinent data from the test are shown in **Table 2**.

Figure 3  
Time Drawdown Plot  
WELL A

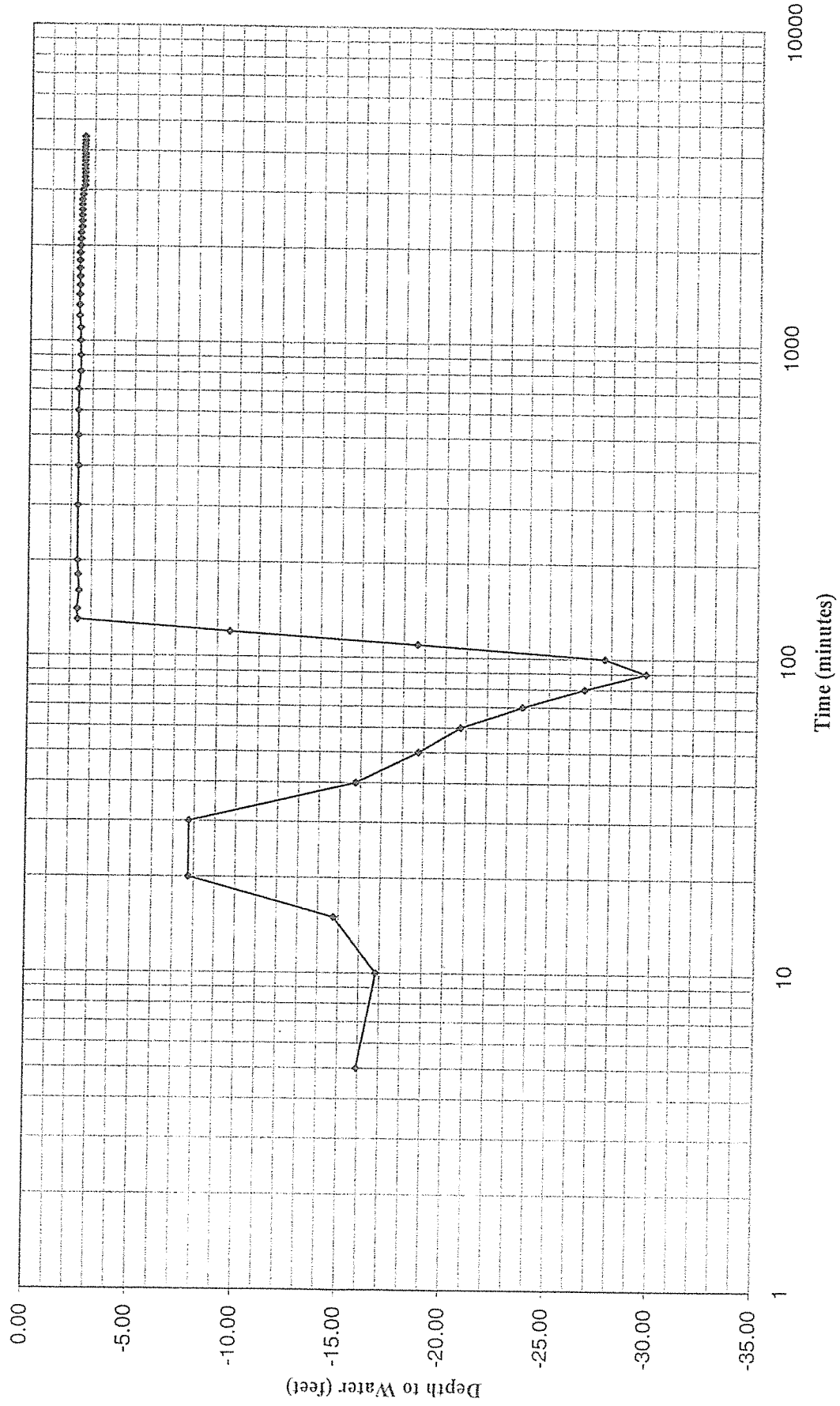
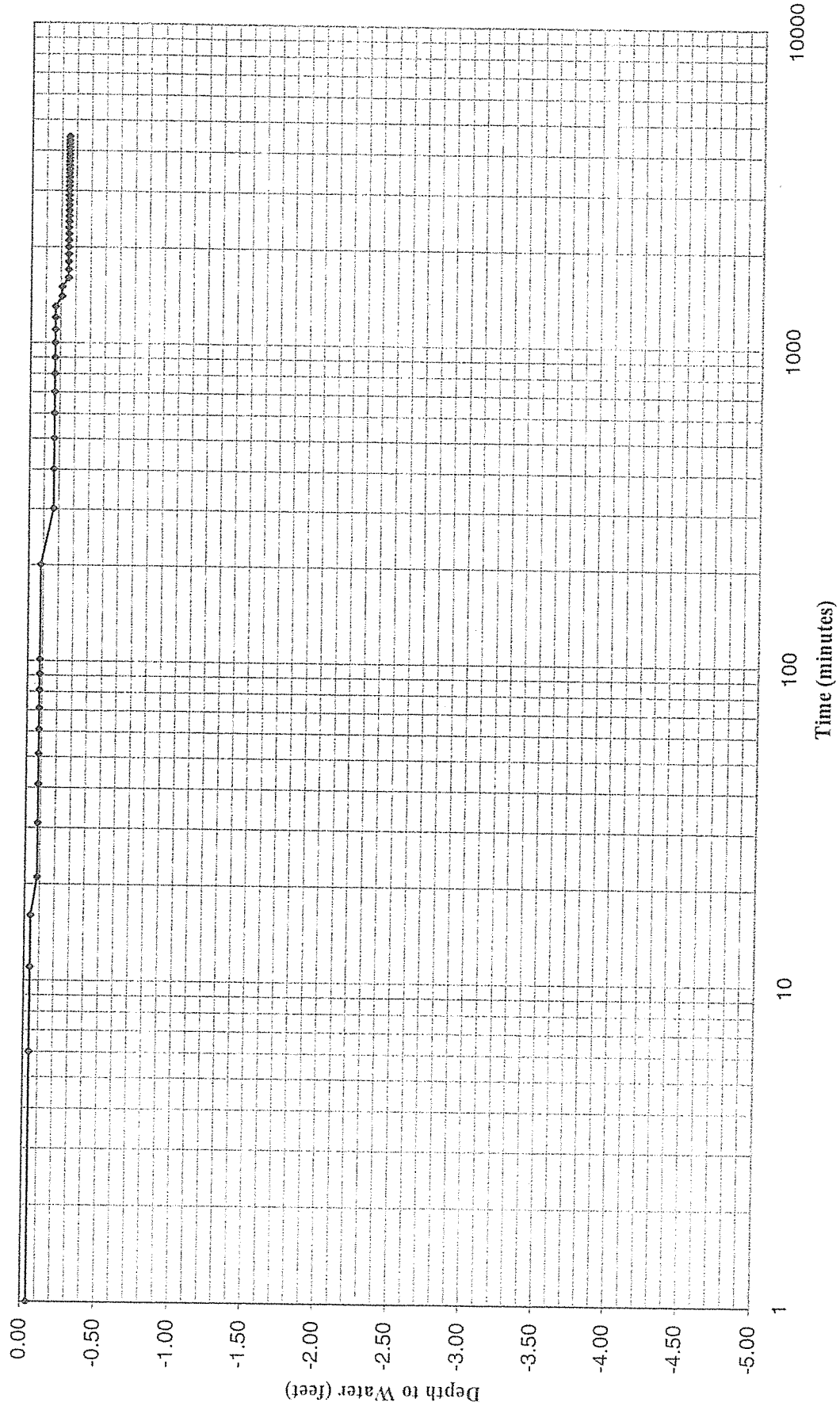




Figure 5  
Time Drawdown Plot  
WELL B



For site-specific validation, the Theis non-equilibrium equation was used to estimate the storativity from the observed drawdown of Well B during the 74-hour pumping test. By trial-and-error, we determined that a storativity of 2.0% (0.02) yields the best match between the predicted drawdown and observed drawdown in the monitoring well at the end of the 74 hours of pumping. Calculations are provided in **Appendix C**.

The total volume (V) of water in aquifer storage within the limits of the property is estimated conservatively using the storativity value of 2.0% determined from the Theis non-equilibrium equation. Using this approach, and a static water depth of 39 feet below ground surface at Well A at the time of pumping, and the total well depth of 140 feet, the aquifer storage within the limits of the proposed new parcel is estimated to be:

$$\begin{aligned} V &= (1.04 \text{ ac})[(140 \text{ ft} - 39 \text{ ft})(0.02)](325,851 \text{ gal/ac-ft}) \\ V &= (2.10 \text{ ac-ft})(325,851 \text{ gal/ac-ft}) \\ V &= 684,548 \text{ gallons} \end{aligned}$$

This is approximately 7 times the expected annual water demand for the residence, calculated later in this report to be about 94,900 gallons (see page 8).

- **Sustained Yield.** Equilibrium conditions were achieved for Well A during the 74-hour pumping test and, thus, the sustained long-term yield of the well is approximated by the final, stabilized pumping rate of 0.48 gpm. This pumping rate equates to a continuous flow of about 690 gallons per day, which meets the water supply needs of the parcel as specified in the MCCSD Proof-of-Water requirements for the proposed three-bedroom residence (see discussion of well yield below).
- **Specific Capacity.** The specific capacity (Q/d), the discharge per unit of water table drawdown, is calculated from the stabilized pumping rate or discharge (Q) and the total drawdown (d) for the pumping well at the end of the test as follows:

$$\begin{aligned} Q/d &= 0.48 \text{ gpm}/2.54 \text{ ft} \\ Q/d &= 0.19 \text{ gpm}/\text{ft} \end{aligned}$$

## DISCUSSION AND CONCLUSIONS

### *Well Yield*

The pumping test demonstrated a minimum stabilized yield of 0.48 gpm for Well A during a 98-hour sustained pumping period. The test was run for the 72-hour duration required by MCCSD Ordinance No.01-1. This pumping rate corresponds to a daily pumping volume of about 690 gallons. The well is planned to supply an individual residence. According to the Mendocino City Community Services District's Groundwater Extraction Permit Ordinance, the daily water use standard for a three-bedroom residence is 260 gpd (200 gpd for the first two bedrooms, plus 60 gpd for the third bedroom). For purposes of this analysis and report, the peak daily use is considered to be 2.5 times the daily water use standard; for a 3-bedroom residence this is equal to 650 gpd (2.5 x 260 gpd = 650

**Table 3**  
**Neighboring Well Monitoring Summary**

Well Designation	Location (APN)	Owner's Name	Distance From Test Well (ft)	Well Construction		Monitoring Results			
				Casing Diameter (inches)	Total Depth	Initial Depth to Water (ft)	Available Water Column (ft)	Observed Drawdown at end of Pumping Test (ft)	Percent Drawdown (%)**
T	119-170-07	Pasterick	225	8.0	120'	28.83	91.17	-0.17	<0.2
U	119-170-05	Thomas and Denali	287	4.0	107'-4"	30.67	76.66	-0.15	<0.2
V	119-170-05	Thomas and Denali	306	6.0	186'-2"	32.54	153.63	-0.27	<0.2
W	119-170-08	Petillo and Dreaper	454	8.0	117'-7"	106.96	10.62	+78.17	Rise
X*	119-070-14	Nelson	563	8.0	60'	30.33	29.67	-0.17	0.6
Y	119-070-16	Mulvaney	414	8.0	37'-4"	29.46	7.87	+0.13	Rise
Z	119-070-20	Brater	447	42	30'-10"	26.63	4.20	+0.42	Rise

\* Owner operated well during pumping test.

\*\* Calculated as drawdown divided by available water column

$$(1.04 \text{ acres})(43,560 \text{ ft}^2/\text{acre})(1.17 \text{ ft/yr recharge})(7.48 \text{ gal/ft}^3) = 396,468 \text{ gallons}$$

This calculation assumes an available recharge area of 1.04 acres (i.e., the limits of the proposed parcel) and an annual onsite deep vertical percolation of 1.17 feet, based on the recently completed Groundwater Modeling Study (ETIC and Questa Engineering, 2004). The annual standard water use and pumpage for the subject property (94,900 gal/yr) constitutes 24% of the annual onsite groundwater recharge (396,468 gal/yr).

### *Water Quality*

During the pumping test, a water sample was taken from the well and delivered to Alpha Analytical Laboratories, Inc. (Ukiah) for standard mineral analysis. The laboratory results showed the water to be of excellent quality and safely within drinking water standards for all parameters. The laboratory report and a summary of the test results (prepared by Carl Rittiman and Associates) are provided in Appendix E.

### REFERENCES

- Driscoll, Fletcher, G. *Groundwater and Wells*. Johnson: 1986.
- ETIC Engineering, Inc. and Questa Engineering Corporation. *Groundwater Modeling Study of the Mendocino Headlands, Mendocino, California*. May 2004.
- Questa Engineering Corporation. *Mendocino County Coastal Groundwater Development Guidelines*. 1988.
- State of California, Department of Water Resources. *Mendocino Coastal Ground Water Study*. June 1982.
- Town of Mendocino, Mendocino City Community Services District. "Ordinance No. 01-1, Groundwater Extraction Permit." 2001.
- United States. Natural Resources Conservation Service, Department of Agriculture. "Soil Survey of Mendocino County, California. Western Part – Fort Bragg Quadrangle." CD-ROM.

APPENDIX A

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# WELL DRILLER REPORTS

TEST WELL "A"

MAY-03-1900 05:30

P. 01

OWNER'S WELL No. 5285

STATE OF CALIFORNIA  
WELL COMPLETION REPORT

Date Work Began 8/12/04 Ended 8/12/04

No. 0965422

Local Permit Agency Mendocino

Permit No. 20063

Permit Date 8/2/2004

DWR USE ONLY - DO NOT FILL IN

STATE WELL NO. STATION NO.

LATITUDE LONGITUDE

APN / TRS OTHER

GEOLOGIC LOG

ORIENTATION Vertical Degree of Angle \_\_\_\_\_ Diane & Gerry Pasterick

DEPTH FROM SURFACE DEPTH TO FIRST WATER .....(ft.) BELOW SURFACE PO BOX 2038

FL. FL. DESCRIPTION Healdsburg WELL LOCATION CA 95448

0 2 top soil Address 10050 Ford Street

2 20 brown sandy clay City Mendocino County Mendocino

20 35 weathered sandstone Apt. Book 119 Page 170 Parcel 07

35 140 sandstone w/ shale Township \_\_\_\_\_ Range \_\_\_\_\_ Section 14 1/4

Latitude \_\_\_\_\_ NORTH Longitude \_\_\_\_\_ WEST

Deg. Min. Sec. LOCATION SKETCH Deg. Min. Sec.

ACTIVITY NEW WELL PLANNED USE(S) Domestic Water

DRILLING METHOD ROTARY AIR FLUID Bentonite

DEPTH OF STATIC WATER LEVEL 30 (FL) & DATE MEASURED Aug 12 2004

ESTIMATED YIELD \* 3 (G.P.M.) & TEST TYPE AIR

TEST LENGTH 2 (Hrs) TOTAL DRAWDOWN 135 (FT.)

\*May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 140 (Feet)

TOTAL DEPTH OF COMPLETED WELL 140 (Feet)

DEPTH FROM SURFACE ft. To Ft.	BORE-HOLE DIA.	TYPE	CASING			DEPTH FROM SURFACE ft. To Ft.	ANNULAR MATERIAL	
			Material / Grade	Dia.	Gauge Slot size		Seal Material	Filter Pack (Type / Size)
0 - 20	1.75	Blank	F480 PVC	5	160	0 - 20	Bentonite	
20 - 50	2.5	Blank	F480 PVC	5	160	20 - 140		
50 - 140	2.5	Perforated	F480 PVC	5	200 Factory			Per Gravel

- Attachments
- Geologic Log
  - Well Construction Diagram
  - Geophysical Logs
  - Soil Water Chemical Analyses
  - Other

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Fisch Bros. Drilling, Inc.  
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

5001 Gravenstein Hwy. No. \_\_\_\_\_

Signed Date This 8/12/04

WELL DRILLER / AUTHORIZED REPRESENTATIVE DATE SIGNED 8/12/04

C-57 LICENSE NUMBER 389226

TEST WELL

# MONITORING WELL<sup>1</sup>B

MAY-03-1900 05:31

P.02

OWNER'S WELL No. 5285

## STATE OF CALIFORNIA WELL COMPLETION REPORT

No. **0965420**

Date Work Began 8/12/04 Ended 8/12/04

Local Permit Agency Mendocino

Permit No. WW20089 Permit Date 8-17-2004

DWR USE ONLY -- DO NOT FILL IN	
STATE WELL NO. STATION NO.	
LATITUDE	LONGITUDE
APN / TRS / OTHER	

**GEOLOGIC LOG** **WELL OWNER**

ORIENTATION	Vertical	Degree of Angle	Diane & Gerry Pasterick	P.O. Box 2038	WELL LOCATION
DEPTH FROM SURFACE	DEPTH TO FIRST WATER	(ft.) BELOW SURFACE	Healdsburg	CA	
0	2		Address 10950 Ford Street		
2	15		City Mendocino	County Mendocino	
15	30		Apn Book 112	Page 170	Parcel 92
30	60		Township	Range	Section 1/4 1/4
			Latitude	NORTH	Longitude WEST
			Deg. Min. Sec.		Deg. Min. Sec.

DESCRIPTION	topsoil	brown sandy clay	weathered sandstone	sandstone	LOCATION SKETCH
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ACTIVITY	NEW WELL	PLANNED USE(S)	Monitoring
DRILLING METHOD	ROTARY AIR	FLUID	Bentonite
DEPTH OF STATIC WATER LEVEL	40 (ft.)	DATE MEASURED	Aug 12, 2004
ESTIMATED YIELD	1 (G.P.M.)	TEST TYPE	Artif.
TEST LENGTH	1 (hrs.)	TOTAL DRAWDOWN	60 (ft.)

TOTAL DEPTH OF BORING 60 (Feet)

TOTAL DEPTH OF COMPLETED WELL 60 (Feet)

\*May not be representative of a well's long-term yield.

DEPTH FROM SURFACE	BORE-HOLE DIA.	TYPE	CASING			DEPTH FROM SURFACE		ANNULAR MATERIAL		
			Material / Grade	Dia.	Gauge	Slot size	Fi.	To	Soil Material	Filter Pack (Type / Size)
0	2	10.5/8	Black	F480 PVC	5	160	0	20	Bentonite	
20	4.0	7.5	Black	F480 PVC	5	160	20	60	Fea Gravel	
40	6.0	7.5	Peris	F480 PVC	5	200				

Attachments <input type="checkbox"/> Geologic Log <input type="checkbox"/> Well Construction Diagram <input type="checkbox"/> Geophysical Logs <input type="checkbox"/> Soil Water Chemical Analyses <input type="checkbox"/> Other	<p style="text-align: center;"><b>CERTIFICATION STATEMENT</b></p> <p>I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.</p> <p>NAME <b>Flash Bros. Drilling, Inc.</b>          (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)          6001 Gravenstein Hwy No. Sebastopol CA 95472</p> <p>Signed Date <b>Thelms</b> <i>Thelms</i> 08/20/04 399228</p> <p style="text-align: center;">WELL DRILLER / AUTHORIZED REPRESENTATIVE DATE SIGNED C. 57 LICENSE NUMBER</p>
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MONITORING  
WELL



APPENDIX B

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PUMP TEST MONITORING DATA



### PUMP TEST

Well Designation: A  
Project Name: PASTERICK HYDRO

Test Date: 9/7/2004  
Project Number: 240254

Top of Well Casing [feet]: 3.33  
Measured Static Depth [feet]: 42.00  
Actual Static Depth [feet]: 38.67

Clock Time	Elapsed Minutes	Change in Minutes	Depth to Water	Drawdown	Gallons per Minute	Gallons Pumped per Time Step	Total Gallons Pumped
[HH:MM:SS]	[Minutes]	[Minutes]	[feet]	[feet]	[GPM]	[Gallons]	[Gallons]
11:45:00 AM	0	0	38.67	0.00	0.00	0.00	0.00
11:50:00 AM	5	5	54.60	-15.94	5.29	26.46	26.46
11:55:00 AM	10	5	55.48	-16.81	1.66	8.32	34.78
12:00:00 PM	15	5	53.42	-14.75	1.51	7.55	42.33
12:05:00 PM	20	5	46.42	-7.75	1.54	7.71	50.03
12:15:00 PM	30	10	46.42	-7.75	1.87	18.69	68.72
12:25:00 PM	40	10	54.42	-15.75	2.20	22.03	90.75
12:35:00 PM	50	10	57.42	-18.75	2.15	21.53	112.28
12:45:00 PM	60	10	59.40	-20.73	0.26	2.61	114.89
12:55:00 PM	70	10	62.38	-23.71	2.04	20.43	135.32
1:05:00 PM	80	10	65.38	-26.71	2.06	20.55	155.88
1:15:00 PM	90	10	68.35	-29.69	1.92	19.24	175.12
1:25:00 PM	100	10	66.33	-27.67	1.42	14.18	189.30
1:35:00 PM	110	10	57.31	-18.65	0.05	0.54	189.83
1:45:00 PM	120	10	48.27	-9.60	0.50	4.98	194.82
1:55:00 PM	130	10	41.04	-2.38	0.49	4.92	199.74
2:05:00 PM	140	10	41.00	-2.33	0.50	4.95	204.69
2:25:00 PM	160	20	41.08	-2.42	0.50	9.96	214.66
2:45:00 PM	180	20	41.04	-2.38	0.49	9.86	224.52
3:05:00 PM	200	20	41.00	-2.33	0.49	9.75	234.27
4:45:00 PM	300	100	41.00	-2.33	0.49	48.61	282.88
6:25:00 PM	400	100	41.02	-2.35	0.49	48.89	331.76
8:05:00 PM	500	100	41.00	-2.33	0.49	48.73	380.49
9:45:00 PM	600	100	41.00	-2.33	0.48	48.47	428.96
11:25:00 PM	700	100	41.00	-2.33	0.49	48.58	477.54
1:05:00 AM	800	100	41.08	-2.42	0.49	48.76	526.30
2:45:00 AM	900	100	41.08	-2.42	0.48	48.34	574.64
4:25:00 AM	1000	100	41.06	-2.40	0.48	48.28	622.92
6:05:00 AM	1100	100	41.06	-2.40	0.48	48.36	671.29
7:45:00 AM	1200	100	41.00	-2.33	0.48	48.09	719.38
9:25:00 AM	1300	100	41.00	-2.33	0.48	48.19	767.57
11:05:00 AM	1400	100	41.00	-2.33	0.48	48.15	815.72
12:45:00 PM	1500	100	41.02	-2.35	0.48	48.31	864.03
2:25:00 PM	1600	100	41.02	-2.35	0.48	48.29	912.33
4:05:00 PM	1700	100	41.00	-2.33	0.48	48.13	960.45
5:45:00 PM	1800	100	41.00	-2.33	0.48	48.12	1008.57
7:25:00 PM	1900	100	41.00	-2.33	0.48	48.19	1056.76

9:05:00 PM	2000	100	41.04	-2.38	0.49	48.52	1105.27
10:45:00 PM	2100	100	41.04	-2.38	0.48	48.47	1153.74
12:25:00 AM	2200	100	41.04	-2.38	0.48	48.45	1202.20
2:05:00 AM	2300	100	41.08	-2.42	0.49	48.61	1250.80
3:45:00 AM	2400	100	41.08	-2.42	0.49	48.50	1299.31
5:25:00 AM	2500	100	41.08	-2.42	0.48	48.34	1347.65
7:05:00 AM	2600	100	41.08	-2.42	0.48	48.38	1396.03
8:45:00 AM	2700	100	41.08	-2.42	0.48	48.40	1444.43
10:25:00 AM	2800	100	41.08	-2.42	0.48	48.47	1492.90
12:05:00 PM	2900	100	41.13	-2.46	0.49	48.68	1541.58
1:45:00 PM	3000	100	41.13	-2.46	0.48	48.44	1590.02
3:25:00 PM	3100	100	41.21	-2.54	0.49	48.86	1638.88
5:05:00 PM	3200	100	41.21	-2.54	0.49	48.54	1687.42
6:45:00 PM	3300	100	41.21	-2.54	0.48	48.48	1735.90
8:25:00 PM	3400	100	41.21	-2.54	0.49	48.50	1784.40
10:05:00 PM	3500	100	41.21	-2.54	0.48	48.33	1832.73
11:45:00 PM	3600	100	41.21	-2.54	0.48	48.38	1881.11
1:25:00 AM	3700	100	41.21	-2.54	0.48	48.42	1929.53
3:05:00 AM	3800	100	41.21	-2.54	0.48	48.43	1977.96
4:45:00 AM	3900	100	41.21	-2.54	0.48	48.34	2026.31
6:25:00 AM	4000	100	41.19	-2.52	0.48	48.24	2074.55
8:05:00 AM	4100	100	41.21	-2.54	0.48	48.36	2122.91
9:45:00 AM	4200	100	41.21	-2.54	0.48	48.41	2171.32
11:25:00 AM	4300	100	41.21	-2.54	0.48	48.47	2219.79
1:25:00 PM	4420	120	41.21	-2.54	0.48	58.11	2277.89
<b>Total Gallons Pumped</b>							<b>2277.89</b>
<b>Total Test Duration (hours):</b>							<b>73.67</b>
<b>Total Average Pumping Rate (gpm):</b>							<b>0.52</b>
<b>Stabilized Pumping Rate (gpm):</b>							<b>0.48</b>

**PUMP TEST**

Well Designation: B  
 Project Name: PASTERICK HYDRO

Test Date: 9/7/04  
 Project Number: 240254

Top of Casing [feet]: 4.08  
 Measured Static Depth [feet]: 41.08  
 Actual Static Depth [feet]: 37.00

Clock Time	Elapsed Minutes	Change in Minutes	Depth to Water	Drawdown
[HH:MM:SS]	[Minutes]	[Minutes]	[feet]	[feet]
11:45:00 AM	0	0	37.00	0.00
11:46:00 AM	1	1	37.04	-0.04
11:51:00 AM	6	5	37.04	-0.04
11:56:00 AM	11	5	37.04	-0.04
12:01:00 PM	16	5	37.04	-0.04
12:06:00 PM	21	5	37.08	-0.08
12:16:00 PM	31	10	37.08	-0.08
12:26:00 PM	41	10	37.08	-0.08
12:36:00 PM	51	10	37.08	-0.08
12:46:00 PM	61	10	37.08	-0.08
12:56:00 PM	71	10	37.08	-0.08
1:06:00 PM	81	10	37.08	-0.08
1:16:00 PM	91	10	37.08	-0.08
1:26:00 PM	101	10	37.08	-0.08
3:06:00 PM	201	100	37.08	-0.08
4:46:00 PM	301	100	37.17	-0.17
6:26:00 PM	401	100	37.17	-0.17
8:06:00 PM	501	100	37.17	-0.17
9:46:00 PM	601	100	37.17	-0.17
11:26:00 PM	701	100	37.17	-0.17
1:06:00 AM	801	100	37.17	-0.17
2:46:00 AM	901	100	37.17	-0.17
4:26:00 AM	1001	100	37.17	-0.17
6:06:00 AM	1101	100	37.17	-0.17
7:46:00 AM	1201	100	37.17	-0.17
9:26:00 AM	1301	100	37.17	-0.17
11:06:00 AM	1401	100	37.21	-0.21
12:46:00 PM	1501	100	37.21	-0.21
2:26:00 PM	1601	100	37.25	-0.25
4:06:00 PM	1701	100	37.25	-0.25
5:46:00 PM	1801	100	37.25	-0.25
7:26:00 PM	1901	100	37.25	-0.25
9:06:00 PM	2001	100	37.25	-0.25
10:46:00 PM	2101	100	37.25	-0.25
12:26:00 AM	2201	100	37.25	-0.25
2:06:00 AM	2301	100	37.25	-0.25
3:46:00 AM	2401	100	37.25	-0.25
5:26:00 AM	2501	100	37.25	-0.25

7:06:00 AM	2601	100	37.25	-0.25
8:46:00 AM	2701	100	37.25	-0.25
10:26:00 AM	2801	100	37.25	-0.25
12:06:00 PM	2901	100	37.25	-0.25
1:46:00 PM	3001	100	37.25	-0.25
3:26:00 PM	3101	100	37.25	-0.25
5:06:00 PM	3201	100	37.25	-0.25
6:46:00 PM	3301	100	37.25	-0.25
8:26:00 PM	3401	100	37.25	-0.25
10:06:00 PM	3501	100	37.25	-0.25
11:46:00 PM	3601	100	37.25	-0.25
1:26:00 AM	3701	100	37.25	-0.25
3:06:00 AM	3801	100	37.25	-0.25
4:46:00 AM	3901	100	37.25	-0.25
6:26:00 AM	4001	100	37.25	-0.25
8:06:00 AM	4101	100	37.25	-0.25
9:46:00 AM	4201	100	37.25	-0.25
11:26:00 AM	4301	100	37.25	-0.25
1:26:00 PM	4421	120	37.25	-0.25

### PUMP TEST

Well Designation: T  
Project Name: PASTERICK HYDRO

Test Date: 9/7/04  
Project Number: 240254

Top of Casing [feet]: 0.00  
Measured Static Depth [feet]: 28.83  
Actual Static Depth [feet]: 28.83

Clock Time	Elapsed Minutes	Change in Minutes	Depth to Water	Drawdown
[HH:MM:SS]	[Minutes]	[Minutes]	[feet]	[feet]
11:45:00 AM	0	0	28.83	0.00
1:05:00 PM	80	80	28.75	-0.08
2:45:00 PM	180	100	28.67	-0.17
5:15:00 PM	330	150	28.63	-0.21
7:55:00 PM	490	160	28.67	-0.17
10:55:00 PM	670	180	28.79	-0.04
3:55:00 AM	970	300	28.75	-0.08
8:55:00 AM	1270	300	28.67	-0.17
1:55:00 PM	1570	300	28.67	-0.17
4:55:00 PM	1750	180	28.67	-0.17
7:55:00 PM	1930	180	28.67	-0.17
10:55:00 PM	2110	180	28.67	-0.17
12:55:00 PM	2950	840	28.69	-0.15
4:55:00 AM	3910	960	28.69	-0.15
8:55:00 AM	4150	240	28.69	-0.15
1:05:00 PM	4400	250	28.60	-0.23
4:55:00 PM	4630	230	28.63	-0.21
8:55:00 PM	4870	240	28.63	-0.21
1:15:00 AM	5130	260	28.65	-0.19
8:55:00 AM	5590	460	28.67	-0.17

Final Drawdown =

0.17 feet

### PUMP TEST

Well Designation: U

Test Date: 9/7/2004

Project Name: PASTERICK HYDRO

Project Number: 240254

Top of Casing [feet]: 0.00  
 Measured Static Depth [feet]: 30.67  
 Actual Static Depth [feet]: 30.67

Clock Time	Elapsed Minutes	Change in Minutes	Depth to Water	Drawdown
[HH:MM:SS]	[Minutes]	[Minutes]	[feet]	[feet]
11:45:00 AM	0	0	30.67	0.00
1:00:00 PM	75	75	30.67	0.00
2:40:00 PM	175	100	30.67	0.00
5:10:00 PM	325	150	30.63	0.04
7:50:00 PM	485	160	30.63	0.04
10:50:00 PM	665	180	30.73	-0.06
3:50:00 AM	965	300	30.83	-0.17
8:50:00 AM	1265	300	30.79	-0.13
1:50:00 PM	1565	300	30.79	-0.13
4:50:00 PM	1745	180	30.79	-0.13
7:50:00 PM	1925	180	30.81	-0.15
10:50:00 PM	2105	180	30.81	-0.15
12:50:00 AM	2225	120	30.81	-0.15
4:50:00 AM	2465	240	30.81	-0.15
8:50:00 AM	2705	240	30.81	-0.15
12:50:00 PM	2945	240	30.81	-0.15
4:50:00 PM	3185	240	30.81	-0.15
8:50:00 PM	3425	240	30.81	-0.15
1:10:00 AM	3685	260	30.81	-0.15

Final Drawdown =

0.15 feet

### PUMP TEST

Well Designation: V  
 Project Name: PASTERICK HYDRO

Test Date: 9/7/04  
 Project Number: 240254

Top of Casing [feet]: 0.00  
 Measured Static Depth [feet]: 32.54  
 Actual Static Depth [feet]: 32.54

Clock Time	Elapsed Minutes	Change in Minutes	Depth to Water	Drawdown
[HH:MM:SS]	[Minutes]	[Minutes]	[feet]	[feet]
11:45:00 AM	0	0	32.54	0.00
1:00:00 PM	75	75	32.50	0.04
2:40:00 PM	175	100	32.50	0.04
5:10:00 PM	325	150	32.46	0.08
7:50:00 PM	485	160	32.48	0.06
10:50:00 PM	665	180	32.63	-0.08
3:50:00 AM	965	300	32.67	-0.13
8:50:00 AM	1265	300	32.67	-0.13
1:50:00 PM	1565	300	32.67	-0.13
4:50:00 PM	1745	180	32.67	-0.13
7:50:00 PM	1925	180	32.67	-0.13
10:50:00 PM	2105	180	32.71	-0.17
12:50:00 AM	2225	120	32.67	-0.13
4:50:00 AM	2465	240	32.67	-0.13
8:50:00 AM	2705	240	32.67	-0.13
12:50:00 PM	2945	240	32.71	-0.17
4:50:00 PM	3185	240	32.71	-0.17
8:50:00 PM	3425	240	32.71	-0.17
1:10:00 AM	3685	260	32.81	-0.27

Final Drawdown =

0.27 feet

### PUMP TEST

Well Designation: W  
Project Name: PASTERICK HYDRO

Test Date: 9/7/2004  
Project Number: 240254

Top of Casing [feet]: 0.00  
Measured Static Depth [feet]: 106.96  
Actual Static Depth [feet]: 106.96

Clock Time	Elapsed Minutes	Change in Minutes	Depth to Water	Drawdown
[HH:MM:SS]	[Minutes]	[Minutes]	[feet]	[feet]
11:45:00 AM	0	0	106.96	0.00
12:55:00 PM	70	70	102.00	4.96
2:35:00 PM	170	100	97.96	9.00
5:05:00 PM	320	150	95.71	11.25
7:45:00 PM	480	160	84.04	22.92
10:45:00 PM	660	180	77.46	29.50
3:45:00 AM	960	300	67.48	39.48
8:45:00 AM	1260	300	58.20	48.76
1:45:00 PM	1560	300	52.38	54.58
4:45:00 PM	1740	180	48.08	58.88
7:45:00 PM	1920	180	43.54	63.42
10:45:00 PM	2100	180	40.10	66.85
12:45:00 AM	2220	120	37.50	69.46
4:45:00 AM	2460	240	34.79	72.17
8:45:00 AM	2700	240	32.21	74.75
12:45:00 PM	2940	240	31.54	75.42
4:45:00 PM	3180	240	30.15	76.81
8:45:00 PM	3420	240	29.50	77.46
1:05:00 AM	3680	260	29.15	77.81
8:45:00 AM	4140	460	28.79	78.17

Final Drawdown =

0.00 feet



### PUMP TEST

Well Designation: X

Test Date: 9/7/2004

Project Name: PASTERICK HYDRO

Project Number: 240254

Top of Casing [feet]: 0.00  
 Measured Static Depth [feet]: 30.33  
 Actual Static Depth [feet]: 30.33

Clock Time	Elapsed Minutes	Change in Minutes	Depth to Water	Drawdown
[HH:MM:SS]	[Minutes]	[Minutes]	[feet]	[feet]
11:45:00 AM	0	0	30.33	0.00
12:50:00 PM	65	65	30.33	0.00
2:30:00 PM	165	100	30.29	0.04
5:00:00 PM	315	150	30.29	0.04
7:40:00 PM	475	160	30.27	0.06
8:40:00 PM	535	60	30.29	0.04
3:40:00 AM	955	420	30.38	-0.04
8:40:00 AM	1255	300	30.46	-0.13
1:40:00 PM	1555	300	30.48	-0.15
4:40:00 PM	1735	180	30.42	-0.08
7:40:00 PM	1915	180	30.92	-0.58
10:40:00 PM	2095	180	30.48	-0.15
12:40:00 AM	2215	120	30.50	-0.17
4:40:00 AM	2455	240	30.40	-0.06
8:40:00 AM	2695	240	30.71	-0.38
12:40:00 PM	2935	240	30.63	-0.29
4:40:00 PM	3175	240	30.77	-0.44
8:40:00 PM	3415	240	30.56	-0.23
1:00:00 AM	3675	260	30.58	-0.25
8:40:00 AM	4135	460	30.50	-0.17

Final Drawdown =

0.17 feet

### PUMP TEST

Well Designation: Y  
Project Name: PASTERICK HYDRO

Test Date: 9/7/2004  
Project Number: 240254

Top of Casing [feet]: 0.00  
Measured Static Depth [feet]: 29.46  
Actual Static Depth [feet]: 29.46

Clock Time	Elapsed Minutes	Change in Minutes	Depth to Water	Drawdown
[HH:MM:SS]	[Minutes]	[Minutes]	[feet]	[feet]
11:45:00 AM	0	0	29.46	0.00
12:45:00 PM	60	60	29.38	0.08
2:25:00 PM	160	100	29.38	0.08
4:55:00 PM	310	150	29.33	0.13
7:35:00 PM	470	160	29.33	0.13
10:35:00 PM	650	180	29.46	0.00
3:35:00 AM	950	300	29.46	0.00
8:35:00 AM	1250	300	29.42	0.04
1:35:00 PM	1550	300	29.33	0.13
4:35:00 PM	1730	180	29.33	0.13
7:35:00 PM	1910	180	29.33	0.13
10:35:00 PM	2090	180	29.38	0.08
12:35:00 AM	2210	120	29.38	0.08
4:35:00 AM	2450	240	29.38	0.08
8:35:00 AM	2690	240	29.38	0.08
12:35:00 PM	2930	240	29.38	0.08
4:35:00 PM	3170	240	29.33	0.13
8:35:00 PM	3410	240	29.33	0.13
12:55:00 PM	4390	980	29.33	0.13
8:35:00 AM	5570	1180	29.33	0.13

Final Drawdown =

0.00 feet

### PUMP TEST

Well Designation: Z  
Project Name: PASTERICK HYDRO

Test Date: 9/7/04  
Project Number: 240254

Top of Casing [feet]: 0.00  
Measured Static Depth [feet]: 26.63  
Actual Static Depth [feet]: 26.63

Clock Time	Elapsed Minutes	Change in Minutes	Depth to Water	Drawdown
[HH:MM:SS]	[Minutes]	[Minutes]	[feet]	[feet]
11:45:00 AM	0	0	26.63	0.00
12:45:00 PM	60	60	26.21	0.42
2:25:00 PM	160	100	26.17	0.46
4:55:00 PM	310	150	26.08	0.54
7:35:00 PM	470	160	26.04	0.58
10:35:00 PM	650	180	26.75	-0.13
3:35:00 AM	950	300	26.42	0.21
8:35:00 AM	1250	300	26.44	0.19
1:35:00 PM	1550	300	26.21	0.42
4:35:00 PM	1730	180	26.42	0.21
7:35:00 PM	1910	180	26.27	0.35
10:35:00 PM	2090	180	26.63	0.00
12:35:00 AM	2210	120	26.90	-0.27
4:35:00 AM	2450	240	26.35	0.27
8:35:00 AM	2690	240	26.29	0.33
12:35:00 PM	2930	240	26.21	0.42

Final Drawdown =

0.00 feet

APPENDIX C

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TRANSMISSIVITY AND  
STORATIVITY CALCULATIONS

Figure C1  
Time Drawdown Plot  
WELL A

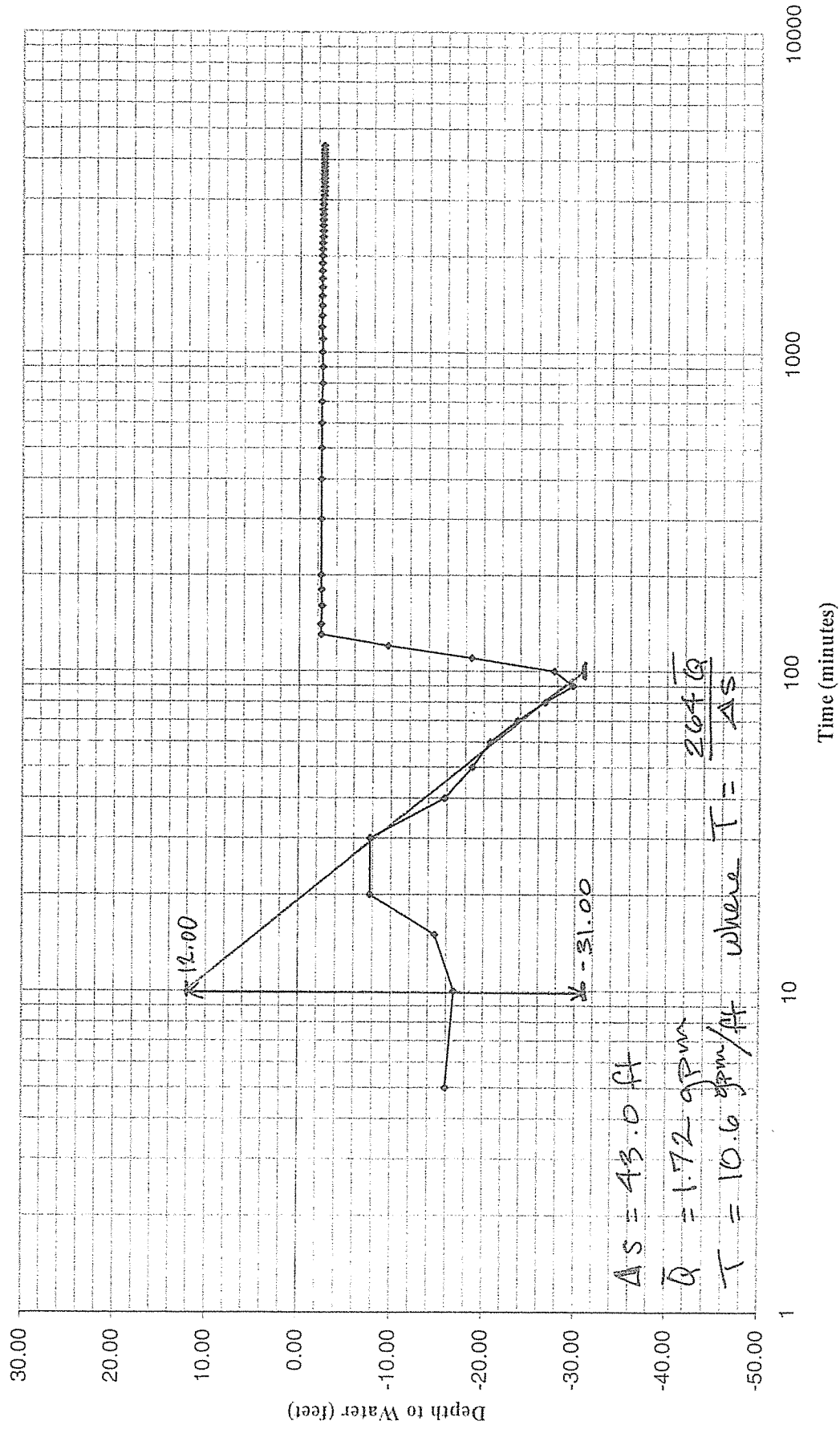
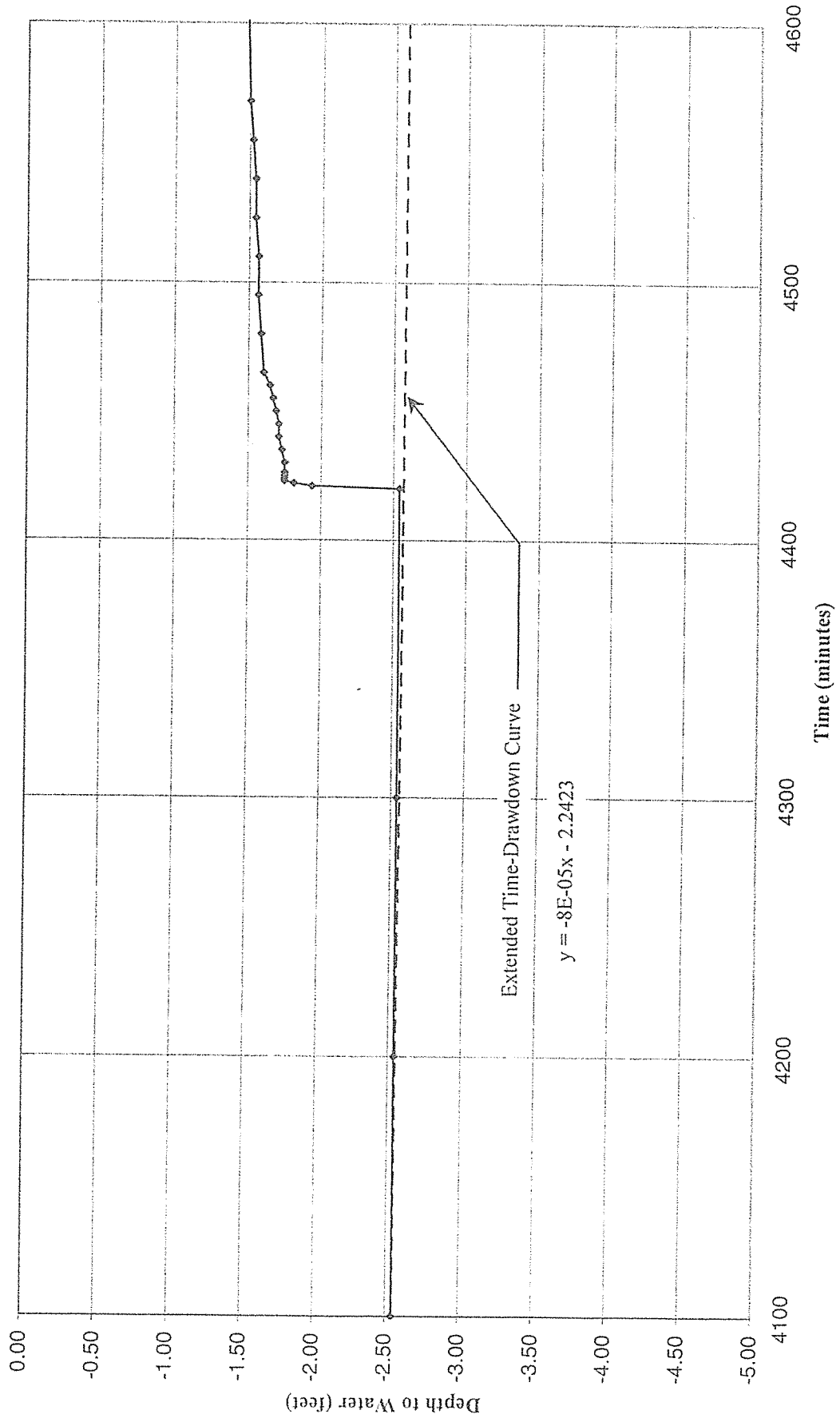


Figure C2  
Time Drawdown with Recovery Plot  
Well A



### WATER-LEVEL RECOVERY

Well Designation: A

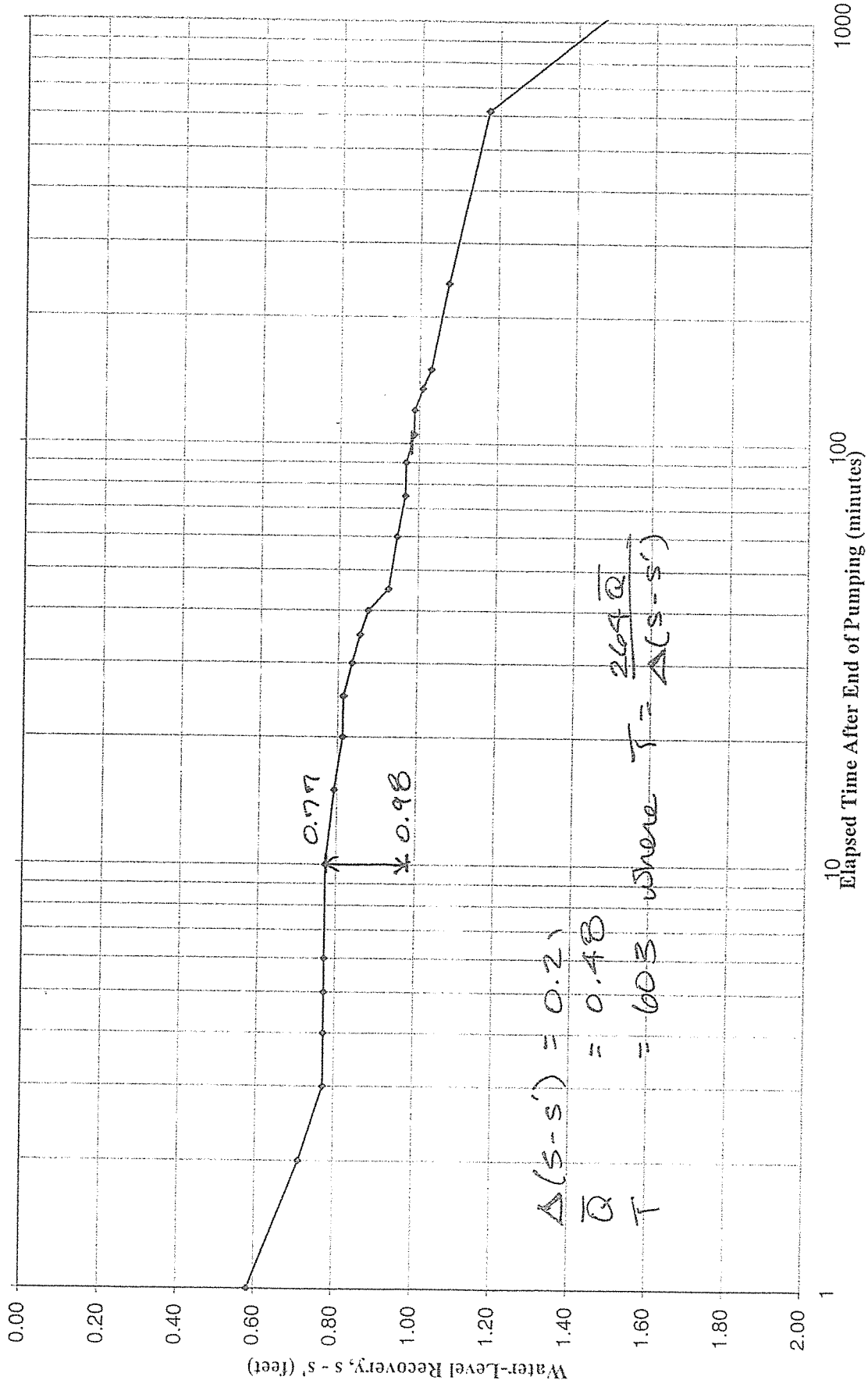
Test Date: 9/7/2004

Project Name: PASTERICK HYDRO

Project Number: 240254

Elapsed Time After Beginning of Test	Elapsed Time After End of Pumping	Extended Time Drawdown Curve (s)	Observed Recovery Curve (s')	Water-Level Recovery, (s - s')
[Minutes]	[Minutes]	[feet]	[feet]	[feet]
4420	0	-2.5223	-2.54	-0.02
4421	1	-2.52235	-1.94	0.58
4422	2	-2.5224	-1.81	0.71
4423	3	-2.52245	-1.75	0.77
4424	4	-2.5225	-1.75	0.77
4425	5	-2.52255	-1.75	0.77
4426	6	-2.5226	-1.75	0.77
4430	10	-2.5228	-1.75	0.77
4435	15	-2.52305	-1.73	0.79
4440	20	-2.5233	-1.71	0.81
4445	25	-2.52355	-1.71	0.81
4450	30	-2.5238	-1.69	0.83
4455	35	-2.52405	-1.67	0.85
4460	40	-2.5243	-1.65	0.87
4465	45	-2.52455	-1.60	0.92
4480	60	-2.5253	-1.58	0.95
4495	75	-2.52605	-1.56	0.97
4510	90	-2.5268	-1.56	0.97
4525	105	-2.52755	-1.54	0.99
4540	120	-2.5283	-1.54	0.99
4555	135	-2.52905	-1.52	1.01
4570	150	-2.5298	-1.50	1.03
4660	240	-2.5343	-1.46	1.07
5035	615	-2.55305	-1.38	1.17
5860	1440	-2.5943	-0.92	1.67

Figure C3  
Water Level Recovery Plot  
Well A





# CALIBRATION OF STORATIVITY VALUES

Check Against Observed Drawdown

Actual Pumping Data: WELL B		
T	=	10.6
Q	=	0.5
t	=	3
r	=	40.00
s	=	0.25
S	=	0.02

Applying This non-equilibrium equation:

$$u = \frac{(1.87)(r^2)(S)}{(T)(t)} = 1.88E+00$$

$$W_{(u)} = 0.0562 \quad \text{per Table A}$$

**Specific Capacity:**

$$Q/s = \frac{T}{(114.6)(W_{(u)})} = 1.65$$

Solve for drawdown at average pumping rate of 0.52 gpm

$$s = 0.52 / Q/s = 0.3$$

s = 0.3 vs 0.25  
(observed maximum drawdown at the end of the test)

APPENDIX D

---

WELL DRAWDOWN  
CALCULATIONS

# PASTERICK HYDROLOGICAL STUDY

## Individual Well Projected Drawdown Effects

Well Comparison from	Distance (r)	Storativity (S)	Transmissivity (T)	Time (t)	Int Value (u)	Pumping Rate (Q)	Well Function W(u)	Drawdown at Distance r (s)
Well A	Well B	40	0.02					
Well A	prop line	60	0.02	90	6.27E-02	1	2.2494	24.32
Well A	100 ft	100	0.02	90	1.41E-01	1	1.5241	16.48
Well A	200 ft	200	0.02	90	3.92E-01	1	0.7194	7.78
Well A	Well T	225	0.02	90	1.57E+00	1	0.0863	0.93
Well A	Well U	287	0.02	90	1.98E+00	1	0.0489	0.53
Well A	Well V	306	0.02	90	3.23E+00	1	0.0101	0.11
Well A	Well W	494	0.02	90	3.67E+00	1	0.0054	0.06
Well A	Well X	563	0.02	90	9.57E+00	1	0.0000	0.00
Well A	Well Y	414	0.02	90	1.24E+01	1	0.0000	0.00
Well A	Well Z	447	0.02	90	6.72E+00	1	0.0002	0.00
Well A	Well B	40	0.02					
Well A	prop line	60	0.02	90	6.27E-02	0.5	2.2494	12.16
Well A	100 ft	100	0.02	90	1.41E-01	0.5	1.5241	8.24
Well A	200 ft	200	0.02	90	3.92E-01	0.5	0.7194	3.89
Well A	Well T	225	0.02	90	1.57E+00	0.5	0.0863	0.47
Well A	Well U	287	0.02	90	1.98E+00	0.5	0.0489	0.26
Well A	Well V	306	0.02	90	3.23E+00	0.5	0.0101	0.05
Well A	Well W	494	0.02	90	3.67E+00	0.5	0.0054	0.03
Well A	Well X	563	0.02	90	9.57E+00	0.5	0.0000	0.00
Well A	Well Y	414	0.02	90	1.24E+01	0.5	0.0000	0.00
Well A	Well Z	447	0.02	90	6.72E+00	0.5	0.0002	0.00
Well A	Well B	40	0.02					
Well A	prop line	60	0.02	180	3.14E-02	1	2.9119	31.48
Well A	100 ft	100	0.02	180	7.06E-02	1	2.1442	23.18
Well A	200 ft	200	0.02	180	1.96E-01	1	1.2438	13.45
Well A	Well T	225	0.02	180	7.84E-01	1	0.3192	3.45
Well A	Well U	287	0.02	180	9.92E-01	1	0.2231	2.41
Well A	Well V	306	0.02	180	1.61E+00	1	0.0863	0.93
Well A	Well V	306	0.02	180	1.84E+00	1	0.0605	0.65

# PASTERICK HYDROLOGICAL STUDY

## Individual Well Projected Drawdown Effects

Well Comparison from to	Distance (r)	Storativity (S)	Transmissivity (T)	Time (t)	Int Value (u)	Pumping Rate (Q)	Well Function W(u)	Drawdown at Distance r (s)
Well A Well W	494	0.02	11	180	4.78E+00	1	0.0011	0.01
Well A Well X	563	0.02	11	180	6.21E+00	1	0.0003	0.00
Well A Well Y	414	0.02	11	180	3.36E+00	1	0.0084	0.09
Well A Well Z	447	0.02	11	180	3.92E+00	1	0.0043	0.05
Well A Well B	40	0.02	11	180	3.14E-02	0.5	2.9119	15.74
Well A prop line	60	0.02	11	180	7.06E-02	0.5	2.1442	11.59
Well A 100 ft	100	0.02	11	180	1.96E-01	0.5	1.2438	6.72
Well A 200 ft	200	0.02	11	180	7.84E-01	0.5	0.3192	1.73
Well A Well T	225	0.02	11	180	9.92E-01	0.5	0.2231	1.21
Well A Well U	287	0.02	11	180	1.61E+00	0.5	0.0863	0.47
Well A Well V	306	0.02	11	180	1.84E+00	0.5	0.0605	0.33
Well A Well W	494	0.02	11	180	4.78E+00	0.5	0.0011	0.01
Well A Well X	563	0.02	11	180	6.21E+00	0.5	0.0003	0.00
Well A Well Y	414	0.02	11	180	3.36E+00	0.5	0.0084	0.05
Well A Well Z	447	0.02	11	180	3.92E+00	0.5	0.0043	0.02



APPENDIX E

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WATER QUALITY  
DATA

## Standard Mineral Analyses Results

The values in 'Column I' are recommended maximum levels of the various compounds tested for in a standard mineral analysis. These levels have been provided to me by the Mendocino County Division of Environmental Health. The values in 'Column II' are from your water sample.

	I	II
Calcium (Ca)	160 mg/l	11 mg/l
Iron (Fe) total	0.3 mg/l	ND
Magnesium (Mg)	372 mg/l	5.4 mg/l
Manganese (Mn) total	0.05 mg/l	ND
Potassium (K)	no standard	1.3 mg/l
Sodium (Na)	250 mg/l	32 mg/l
Bicarbonate (HCO <sub>3</sub> )		61 mg/l
Carbonate (CO <sub>3</sub> )		ND
pH	5.0 - 9.0 pH acceptable range	7.2 pH
Alkalinity, total (CaCO <sub>3</sub> )	25 - 400 mg/l	50 mg/l
Total dissolved solids	500 mg/l	170 mg/l
Turbidity	5 NTU	0.98 NTU
Chloride (Cl)	250 mg/l	55 mg/l
Fluoride (F)	1.4 - 2.0 mg/l	0.10 mg/l
Nitrate (NO <sub>3</sub> -N)	45 mg/l	2.0 mg/l
Sulfate (SO <sub>4</sub> )	250 mg/l	15 mg/l
Calcium Hardness	25 - 400 mg/l	27 mg/l
Magnesium Hardness	25 - 400 mg/l	22 mg/l
Total Hardness	200 mg/l	50 mg/l



Alpha Analytical Laboratories Inc.

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**CHEMICAL EXAMINATION REPORT**

Page 2 of 4

Carl Rittiman  
 P.O. Box 1700  
 Mendocino, CA 95460  
 Attn: Carl Rittiman

Report Date: 09/27/04 12:39  
 Project No: -  
 Project ID: Pasterick / 10950 Ford St.

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
09302	09/13/2004 15:05	RITCAR	

**Alpha Analytical Laboratories, Inc.**

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
<b>Well 'A' (A409302-01)</b>							
<b>Metals by EPA 200 Series Methods</b>				<b>Sample Type: Water</b>		<b>Sampled: 09/13/04 09:00</b>	
Calcium	EPA 200.7	AI41507	09/16/04	09/22/04	1	11 mg/l	1.0
Iron	"	"	"	"	"	ND "	0.10
Magnesium	"	"	"	"	"	5.4 "	1.0
Manganese	"	"	"	"	"	ND "	0.020
Potassium	"	"	"	"	"	1.3 "	1.0
Sodium	"	"	"	"	"	32 "	1.0
<b>Inventive Chemistry Parameters by APHA/EPA Methods</b>							
Bicarbonate	SM2320B	AI41513	09/13/04	09/13/04	1	61 mg/l	5.0
Carbonate	"	"	"	"	"	ND "	5.0
Total Anions	SM1030F	AI41710	09/17/04	09/17/04	"	2.99 meq/l	1.00
Total Cations	"	AI41507	09/16/04	09/22/04	"	2.42 "	1.00
pH	EPA 150.1	AI41513	09/13/04	09/13/04	"	7.2 pH Units	1.0
Specific Conductance (EC)	EPA 120.1	"	"	"	"	280 umhos/cm	20
Total Alkalinity as CaCO3	SM2320B	"	"	"	"	50 mg/l	5.0
Total Dissolved Solids	EPA 160.1	AI42020	09/20/04	09/24/04	"	170 "	10
Turbidity	EPA 180.1	AI41513	09/13/04	09/13/04	"	0.98 NTU	0.10
Carbonate Alkalinity as CaCO3	SM2320B	"	"	"	"	ND mg/l	5.0
Bicarbonate Alkalinity as CaCO3	"	"	"	"	"	50 "	5.0
Hydroxide Alkalinity as CaCO3	"	"	"	"	"	ND "	5.0
<b>Anions by EPA Method 300.0</b>							
Chloride	EPA 300.0	AI41407	09/14/04	09/14/04	5	55 mg/l	2.5
Fluoride	"	"	"	09/14/04	1	0.10 "	0.10
Nitrate as N	"	"	"	"	"	2.0 "	0.20
Sulfate as SO4	"	"	"	"	"	15 "	0.50

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Nena M. Burgess For Sheri L. Speaks  
 Project Manager

9/27/04



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**CHEMICAL EXAMINATION REPORT**

Page 3 of 4

Carl Rittiman  
P.O. Box 1700  
Mendocino, CA 95460  
Attn: Carl Rittiman

Report Date: 09/27/04 12:39  
Project No: -  
Project ID: Pasterick / 10950 Ford St.

<u>Order Number</u>	<u>Receipt Date/Time</u>	<u>Client Code</u>	<u>Client PO/Reference</u>
09302	09/13/2004 15:05	RITCAR	

**Alpha Analytical Laboratories, Inc.**

	<u>METHOD</u>	<u>BATCH</u>	<u>PREPARED</u>	<u>ANALYZED</u>	<u>DILUTION</u>	<u>RESULT</u>	<u>PQL</u>	<u>NOTE</u>
Well 'A' (A409302-01)			Sample Type: Water			Sampled: 09/13/04 09:00		
Physical Parameters by APHA/ASTM/EPA Methods								
Hardness, Calcium	SM2340B	A141507	09/16/04	09/22/04	1	27 mg/l		2
Hardness, Magnesium	"	"	"	"	"	22 "		3
Hardness, Total	"	"	"	"	"	50 "		5

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Nena M. Burgess For Sheri L. Speaks  
Project Manager

9/27/04



**ATTACHMENT B**  
**CUMULATIVE IMPACTS CALCULATIONS**

# 10970 FORD STREET - DISTANCE DRAWDOWN EVALUATION

Evaluation of Test Data & Drawdown at Various Distances From Test Pumping at 10970 Ford Street

		10970 Ford - 09/2004 Test				
		Discharge				
		50	75	100	115	
Transmissivity, in gpd/ft., T	285.00	598	598	598	598	
Storage coefficient, unitless, S	2.0E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	
Discharge, in gpm, Q	1.72	1.47	1.47	1.47	1.47	
Length of pumping period, days	0.07	3	3	3	3	

Parameter	Units	10970 Ford - 09/2004 Test Discharge	At 50 feet	At 75 feet	At 100 feet	At 115 feet
Distance from center of well	r, ft	0.21	50	75	100	115
Storage coefficient	S, di'less	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02
Transmissivity	T, gpd/ft	10.6	10.6	10.6	10.6	10.6
Pumping time	t, minutes	100	100	100	100	100
	t, days	0	3	3	3	3
Discharge	Q, gpm	1.72	1.72	1.72	1.72	1.72
$u = [1.87 \sqrt{2S/Tt}]$	u	2.21E-03	2.94E+00	6.62E+00	1.18E+01	1.56E+01
Well function of u	W(u)	5.54	ERROR	ERROR	ERROR	ERROR
Drawdown, theoretical = $[s1=114.6QW(u)/T]$	s1, ft	103.06	0.00	0.00	0.00	0.00
Well efficiency	eff., percent	1.00	1.0	1.0	1.0	1.0
Calculated drawdown from pumping well	s2, ft	103.06	0.00	0.00	0.00	0.00

Note: ERROR indicates that the calculation is out of range; that is, the calculation indicates that there would be no effect at that distance.

# 10970 FORD STREET - DISTANCE DRAWDOWN EVALUATION

Drawdown at Various Distances From Allotment Pumping at 10970 Ford Street - 180 Day Period

	10970 Ford - Allotment Discharge	100	125	175
Transmissivity, in gpd/ft., T	10.6	11	11	11
Storage coefficient, unitless, S	2.0E-02	2.00E-02	2.00E-02	2.00E-02
Discharge, in gpm, Q	0.18	0.18	0.18	0.18
Length of pumping period, days	180	180	180	180

Parameter	Units	10970 Ford - Allotment Discharge	At 100 feet	At 125 feet	At 175 feet
Distance from center of well	r, ft	48	100	125	175
Storage coefficient	S, di'less	2.00E-02	2.00E-02	2.00E-02	2.00E-02
Transmissivity	T, gpd/ft	10.6	10.6	10.6	10.6
Pumping time	t, minutes	259200	259200	259200	259200
	t, days	180	180	180	180
Discharge	Q, gpm	0.18	0.18	0.18	0.18
$u = [1.87r^2S/Tt]$	u	4.52E-02	1.96E-01	3.06E-01	6.00E-01
Well function of u	W(u)	2.56	1.22	0.89	ERROR
Drawdown, theoretical = $[s1=114.6QW(u)/T]$	s1, ft	4.99	2.38	1.73	0.00
Well efficiency	eff., percent	0.21	1.0	1.0	1.0
Calculated drawdown from pumping well	s2, ft	23.76	2.38	1.73	0.00

Note: ERROR indicates that the calculation is out of range; that is, the calculation indicates that there would be no effect at that distance.

# LOCKEY PROPERTY - CUMULATIVE IMPACTS EVALUATION

## Drawdown at Previously Tested Wells From Allotment Pumping of 22B

	Seaside	22B	61C
Transmissivity, in gpd/ft., T	598	11	1,400
Storage coefficient, unitless, S	0.030	0.020	0.018
Allotment discharge, in gpm, Q	0.58	0.18	0.14
Length of pumping period, days	3	3	3

Parameter	Units	Seaside	Pumping At 22B	At 61C
Distance from center of well	r, ft	470	0.5	790.0
Storage coefficient	S, di'less	0.020	0.020	0.020
Transmissivity	T, gpd/ft	11	11	11
Pumping time	t, minutes	4320	4320	4320
	t, days	3	3	3
Discharge	Q, gpm	0.14	0.18	0.14
$u = [1.87r^2S/Tt]$	u	2.60E+02	2.94E-04	7.34E+02
Well function of u	W(u)	ERROR	7.55	ERROR
Drawdown, theoretical = $[s1=114.6QW(u)/T]$	s1, ft	0.00	14.75	0.00
Well efficiency	eff., percent	1.0	1.0	1.0
Calculated drawdown from pumping well	s2, ft	0.00	14.75	0.00

Note: ERROR indicates that the calculation is out of range; that is, the calculation indicates that there would be no effect at that distance.

# 10970 FORD STREET - CUMULATIVE IMPACTS EVALUATION

## Drawdown at Previously Tested Wells From Allotment Pumping of Seaside

	Seaside	22B	61C
Transmissivity, in gpd/ft., T	598	603	1,400
Storage coefficient, unitless, S	0.030	0.020	0.018
Allotment discharge, in gpm, Q	0.58	0.18	0.14
Length of pumping period, days	3	3	3

Parameter	Units	Pumping at Seaside	At 22B	At 61C
Distance from center of well	r, ft	0.5	470	520
Storage coefficient	S, di'less	3.00E-02	3.00E-02	3.00E-02
Transmissivity	T, gpd/ft	598.0	598.0	598.0
Pumping time	t, minutes	4320	4320	4320
	t, days	3	3	3
Discharge	Q, gpm	0.58	0.58	0.58
$u = [1.87r^2S/Tt]$	u	7.82E-06	5.91E+00	8.46E+00
Well function of u	W(u)	11.18	ERROR	ERROR
Drawdown, theoretical = $[s1=114.6QW(u)/T]$	s1, ft	1.24	0.00	0.00
Well efficiency	eff., percent	1.0	1.0	1.0
Calculated drawdown from pumping well	s2, ft	1.24	0.00	0.00

Note: ERROR indicates that the calculation is out of range; that is, the calculation indicates that there would be no effect at that distance.

# LOCKEY PROPERTY - CUMULATIVE IMPACTS EVALUATION

## Drawdown at Previously Tested Wells From Allotment Pumping of Well 61A

	Seaside	22B	61A
Transmissivity, in gpd/ft., T	598	10.6	1,400
Storage coefficient, unitless, S	0.030	0.020	0.018
Allotment discharge, in gpm, Q	0.58	0.18	0.14
Length of pumping period, days	3	3	3

Parameter	Units	Seaside	At 22B	Pumping at 61A
Distance from center of well	r, ft	520	790	0.5
Storage coefficient	S, di'less	0.030	0.020	0.018
Transmissivity	T, gpd/ft	1,019	1,019	1,019
Pumping time	t, minutes	4320	1320	4320
	t, days	3	3	3
Discharge	Q, gpm	0.14	0.14	0.14
$u = [1.87r^2S/Tt]$	u	2.94E+00	7.61E+00	2.72E-06
Well function of u	W(u)	ERROR	ERROR	12.24
Drawdown, theoretical = $[s1=114.6QW(u)/T]$	s1, ft	0.00	0.00	0.19
Well efficiency	eff., percent	1.0	1.0	1.0
Calculated drawdown from pumping well	s2, ft	0.00	0.00	0.19

Note: ERROR indicates that the calculation is out of range; that is, the calculation indicates that there would be no effect at that distance.

## Memo

**To:** MCCSD Board  
**From:** District Superintendent  
**cc:** Jim Jackson  
**Date:** October 11, 2022  
**Re:** GWEP Application for

---

The property owners of 45041 Calpella St. Mendocino, also known as 45025 Calpella St., 45018 Ukiah St., and most commonly 45020 Ukiah St. APN 119-234-11 have submitted a groundwater extraction permit application for a change in use, with a proposed 257 gal/day increase in water demand .

Current approved uses on APN 119-234-11

699 Sq ft. office down stairs in the Red House	105 gal/day
One-bedroom single family residence down stairs in the Red House	200/ gal/day
Two-bedroom single family residence north side of Red House	200 gal/day
Two-bedroom single family residence upstairs in Red House	200 gal day
256 sq ft. of commercial/retail "shoe repair" space. D daily water allotment of	38 gal/day.
<b>Total water allotment for this parcel:</b>	<b>743 gal/day</b>

The property owners report having already "converted 225 sq of this office/retail "shoe repair" space to an ADU"

They would like to come into compliance with MCCSD and permit this ADU.

The second request is to convert the 699 sq. office/retail space into an ADU.

Proposed new use on APN: APN 119-234-11

Convert the 225 or 256 Sq ft commercial/retail space into an ADU or single family residence with theoretical water demand of 200 gal/day. A theoretical increase in water demand of 162 gal/day

**Proposed new total allotment and Water Demand:** **1,000 gal/day**

### 1986 Hydrological Study

In October 1986, a 98.7 hour aquifer pump test with a weighted average discharge rate of 5.73 gal/min was conducted for a hydrological study of an undeveloped parcel located at 45020 Ukiah Street. Consulting Engineering Services conducted the aquifer test and prepared the Hydrological Study for a previous owner. The purpose of a hydrological study is to: 1) prove that a test well produces adequate groundwater for future development, 2) prove that there is no adverse effect on hydrologically contiguous wells during groundwater extraction from a test well during the three day aquifer test, and 3) determine the effect that the proposed groundwater extraction has on the local aquifer.

Existing Development Based on 1986 Hydrological Study

The original parcel was subsequently divided into four parcels (APN 119-234-08, 09, 11, & 12). Currently four parcels share access to this well. The following four allotments have been approved by the District:

APN	Address	Allotment
1. 119-234-08	45091 Calpella St.	335 gal/day
2. 119-234-09	45081 Calpella St.	305 gal/day
3. 119-234-11	45020 Ukiah St.	743 gal/day
4. 119-234-12	45010 Ukiah St.	<u>936 gal/day</u>
Total allotments:		2,319 gal/day

The 1986 Hydrological Study proved 2,880 gal/day could be extracted from the test well (Well 127A) for future development without adversely effecting nearby wells or the aquifer. In 2017, Lawrence and Associates prepared a review of the findings of the original 1986 Hydrological Study for the owner of 45020 Ukiah Street. L&A determined that the conclusions of the 1986 Study were still valid, and in 2017 the MCCSD Board approved an increase in the allotment for 45020 Ukiah Street (APN 119-234-11) from 350 gal/day to 743 gal/day. **561 gal/day of the original 2,880 gal/day that was proved available by the 1986 Hydrological Study has not been allotted.** The property owners of 45020 Ukiah Street (APN 119-234-11) are now requesting a 35% increase in theoretical water demand and an increased water allotment of 257 additional gal/day. If granted 304 gal of the original 2,880 gal/day that proved by the 1986 hydrological study would still be un allotted and potentially available for future development.

Findings and Recommendation:

In 2017, both a qualified hydrologist and the MCCSD Board determined that the conclusions of the 1986 Hydrological Study that proved water for this parcel were still valid. Although not all of the groundwater that was proved in 1986 has been allotted, the property owner is only requesting a 257 gal/day increase in daily water allotment.

**Staff recommends approval of the Groundwater Extraction Permit application for the requested Change-of-Use to 45020 Ukiah Street (APN 119-234-11) with an increase in the daily water allotment of 257 gal/day for a total day water allotment not to exceed 1,000 gal/day. Based on the hydrological study findings as approved by the MCCSD Board.**

There will be a onetime Right-of-Use charge for the increased sewer demand on the parcel of \$3,686.82.

Right-of-Use charge = \$2,858/ESD or Equivalent Single Dwelling

1 ESD = 200gal/day

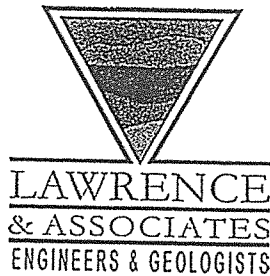
Proposed increase = 257 gal/day

Increase in parcel sewer demand =  $257/200=1.29$  ESD

$(1.29 \text{ ESD})(\$2,858/\text{ESD}) = \$3,686.82$

Monthly Sewer charges will increase by approximately \$65.27 due to the additional parcel development/change in use  $[(1.29 \text{ ESD})(\$50.60/ \text{ESD}) = \$65.27$





016092.00

October 27, 2016; rev. June 15, 2017

Mr. Robert Schmitt  
2318 Ashwood Place  
Paso Robles, CA 93446

Dear Mr. Schmitt:

**SUBJECT: HYDROLOGICAL STUDY REVIEW FOR 45020 UKIAH STREET, APN 119-234-11,  
MENDOCINO, CALIFORNIA**

#### INTRODUCTION

This letter presents the results of our review of hydrological studies connected to the parcel at 45020 Ukiah Street (APN 119-234-11), in Mendocino, California (**Figure 1**), and provides an assessment of their adequacy to support a new Groundwater Extraction Permit for the property. The June 2017 version of this letter revised the proposed uses and water demand based on new information you provided to us on June 13, 2017.

We understand that you wish to (1) add a two-bedroom house to the parcel and (2) formally convert 300 square feet of the office space to a residential studio apartment, and need to know if the previous hydrogeological/water-supply studies conducted for the parcel will suffice for the necessary Groundwater Extraction Permit for the new house. The parcel is supplied water from a well (Well 127A) on the parcel at 45081 Calpella Street (APN 119-234-09). In addition to these two parcels, this well supplies water to 45091 Calpella Street (APN 119-234-08) and 45010 Ukiah Street (APN 119-234-12; **Figures 2 and 3**).

You have discussed the matter with Mr. Mike Kelly of the Mendocino City Community Services District (MCCSD), who recommended that you submit a formal report on the adequacy (or not) of previous studies to support your new Groundwater Extraction Permit.

You provided us with the following documents that you obtained from the MCCSD:

- Water use records for 45010 and 45020 Ukiah Street, from late 2006 to the current date.
- February 1985 letter report of long-term well test on a well located at the northeast corner of Ukiah and Ford Streets; by Scherf & Rau, Inc.
- October 1986 Hydrologic Study for well at 45020 Ukiah Street; by Consulting Engineer Services.
- December 1992 Hydrological Study for well located at 10485 Lansing Street; by Lawrence & Associates (L&A).
- November 2006 Hydrologic Study for well at 10501 Lansing Street; by Pacific GeoScience.
- December 2006 review of 10501 Lansing Street study; by L&A.

Our scope of work consisted of the following:

- Review of the above documents;
- Compilation of the data for the water-use records for 45010 and 45020 Ukiah Street;
- Calculation of the new water allotment; and
- Using data and results from the previous reports to estimate potential impacts (interference and water supply) from the proposed new allotment.

The work was conducted by Ms. Bonnie Lampley, California Certified Hydrogeologist No. 626 in accordance with *Mendocino City Community Services District Ordinance 07-1, Groundwater Extraction Permit* (Ordinance).

### SUMMARY

With the exception of transmissivity, the results of the original testing are still valid because the underlying geologic setting has not changed since 1986. Transmissivity is dependent on the saturated interval thickness which changes in response to seasonal recharge or drought, becoming either higher or lower. A decrease in transmissivity during drought was considered herein for estimation of cumulative impacts because the original testing was conducted in January, not during the dry season.

Using results from the original testing of Well 127A, an allotment of at least 2.3 gpm or 3,300 gpd would be permissible under the current Ordinance. The proposed total new extraction is 2,319 gpd (Table 1, page 3). This is less than the allotment that would be permissible under current standards. Therefore, based on the results of testing Well 127A, the proposed extraction amount is in compliance with the current Ordinance.

The additional cumulative interference that may be attributable to the new allotment ranges from 0.03 to 0.08 feet ( $\frac{1}{2}$  to 1 inch) at distances from 100 to 600 feet from the well, along an east-west transect through the well. Figure 10 summarizes those results.

For total cumulative effects, four different scenarios were modeled to assess total interference that may be attributable to the new additional allotment from Well 127A (438 gpd) plus the cumulative interference from the other three projects in the vicinity that have been approved since 1986.

Figure 11 summarizes the total maximum level of estimated interference along the same east-west transect after 180 days of continuous pumping during the dry season. For the wells used in the 1986 and subsequent studies, none show more than a 10% effect on the thickness of the water column. Thus, even with continuous pumping during the dry season (180 days), the modeling shows that the new allotment would not cause interference in excess of that allowed for by the Ordinance for just a three-day pumping period.

## DISCUSSION

### CURRENT AND FUTURE WATER DEMAND AND ALLOTMENTS

Based on the original testing of Well 127A conducted in 1986, the well has a safe extraction volume of 2,880 gpd (the details of that testing are discussed in the next section of this report, page 5, herein).

The existing water allotments for the four parcels supplied by the well are as follows:

• 45091 Calpella Street	335 gpd
• 45081 Calpella Street	305 gpd
• 45020 Ukiah Street	350 gpd
• 45010 Ukiah Street	<u>936 gpd</u>
TOTAL	1,926 gpd

The current allotment for the four parcels represents 67% of the original safe extraction volume (1,926 ÷ 2,880 gpd).

Based on records kept by the MCCSD, the actual, average current water use at 45010 and 45020 Ukiah Street is 240 and 159 gpd, respectively (**Figure 4**).

You are proposing to (1) add a two-bedroom house to the parcel and (2) formally convert 300 square feet of the office space to a residential art studio associated with the existing two-bedroom residence in the upstairs of the “Red House”. Based on the Water Use Standard in Appendix C of the Ordinance, the maximum total allotment you may request for both a two-bedroom house and a one-bedroom residence is 200 gpd each.

**Table 1** (following page) shows the calculations for the theoretical demand of the existing development at 45020 Ukiah Street, the potential new demand, the calculation of the net safe extraction remaining for the four parcels as they exist now and with your future development.

### PREVIOUS TESTING

Well 127A was tested in 1985, and the results reported in 1985 (Scherf & Rau, February 7, 1985, letter report to Mr. Walter Lamb, Mendo Realty) and 1986 (Consulting Engineer Services, October 1986, *Hydrologic Study, Bank of America Property, APN 119 234 01, 45020 Ukiah Street, Mendocino, California, 95460*). **Table 2** presents the details of Well 127A and summarizes the results of the test; **Table 3** presents additional data for the observation wells used during the testing.

TABLE 1. CALCULATION OF NEW WATER DEMAND AND REMAINING ALLOTMENT FOR FOUR PARCELS

Current Uses	Quantity	Units	Basis
<b>APN 119-234-11, 45020 Ukiah Street</b>			
Existing Permitted Allotment	350	gpd	
<b>Existing + Future Use:</b>			
New two-bedroom residence	200	gpd	2 bedroom single-family residence
Existing two-bedroom residence	200	gpd	1 to 2 bedroom residence
Convert 300 sq. ft. office space to studio apartment	200	gpd	1 to 2 bedroom residence
699 ft <sup>2</sup> office	105	gpd	699 ft <sup>2</sup> x 0.15 gpd/ft <sup>2</sup>
256 ft <sup>2</sup> "shoe repair" shop	38	gpd	256 ft <sup>2</sup> x 0.15 gpd/ft <sup>2</sup>
<b>Total Proposed Demand</b>	<b>788</b>	<b>gpd</b>	
<b>Net New Demand</b>	<b>0.55</b>	<b>gpm</b>	<b>gallons per minute</b>
<b>All Four Parcels</b>	<b>393</b>	<b>gpd</b>	
Original safe extraction with no impacts	2,880	gpd	From 1986 test
Approved extraction assigned to well	1,926	gpd	From original WEP (67% of safe extraction)
Net safe extraction remaining	954	gpd	Calculated - original yield less Approved extraction
Net new demand	393	gpd	
Net new demand + existing approved extraction	2,319	gpd	
Percentage of safe extraction remaining	19%		

TABLE 2. DESCRIPTION OF WELL AND SUMMARY OF TEST RESULTS FOR WELL 127A

ITEM	VALUE	UNITS
Well depth	99	feet bgs
Stratigraphy		
Top soil, brown sand	0 – 18	feet bgs
Brown sandstone and weathered rock	18 – 43	feet bgs
Sandy brown and gray rock	43 – 99	feet bgs
Static water level upon well completion (October 1984)	~33	feet bgs
Static water level at start of testing (January 1985)	~26	feet bgs
Casing internal diameter	4.0	inches
Surface seal	0 – 24	feet bgs
Perforated interval	39 – 99	feet bgs
Aquifer thickness at start of testing, b	77	feet
Test discharge, weighted average	5.73	gpm
Test drawdown	6.25	feet
Length of test, 98.7 hours	4.11	days
Transmissivity, T	2,200	gpd/ft
Hydraulic conductivity (calculated; T as $\text{gpd/ft}^2 \div b$ )	28.57	$\text{gpd/ft}^2$
Hydraulic conductivity (calculated; T as $\text{gpd/ft} \times 0.13369$ )	3.82	feet/day
Storage coefficient, S	6.49E-02	unitless

With the exception of transmissivity, the results shown in Table 1 are still valid because the underlying geologic setting has not changed since 1986. Because transmissivity is dependent on the saturated interval thickness and the saturated interval thickness changes in response to seasonal recharge or drought, transmissivity can vary over time. That is, when the saturated thickness increases (from seasonal recharge, long-term higher rainfall, etc.), the transmissivity increases. When the saturated thickness decreases (during the annual dry season, during drought, etc.), transmissivity decreases.

The characteristic that does not change that illustrates how well an aquifer can transmit water is hydraulic conductivity. Hydraulic conductivity remains the same no matter the saturated thickness of an aquifer. The hydraulic conductivity for the aquifer penetrated by Well 127A is approximately 3.82 feet/day; Table 2 shows the calculations.

Using the hydraulic conductivity and different aquifer thicknesses, then, it is possible to back calculate different transmissivities for different conditions. Here, we are concerned with drought conditions, when the transmissivity will be lower. To estimate a drought transmissivity, it is necessary to estimate the decrease in aquifer thickness. Although there is not data from Well 127A, the MCCSD maintains records of water levels in the District. Figure 5 (provided by MCCSD)

shows the average hydrograph for wells in the District, from 2002 to the present. The maximum seasonal decline in water level is approximately 12 feet.

Therefore, using the hydraulic conductivity of 28.57 gpd/ft<sup>2</sup> and multiplying by an aquifer thickness of 65 feet (77 – 12 feet) the dry season/drought transmissivity for Well 127A is approximately 1,857 gpd/ft. This is the value we used for the dry season/drought analysis because the original test on Well 127A was conducted in January when, presumably, water levels would be higher.

TABLE 3. ADDITIONAL TEST RESULTS FOR WELL 127A & OBSERVATION WELLS

Well (MCCSD #)	Well Depth feet	Depth to Water on Test Date feet	Water Column feet	Maximum Drawdown feet	Percent Effect on Water Column	Comment
45081 Calpella, Test Well (127A)	99	22.7	76.27	6.25	n/a	
10500 Ford, Post Office (27)	160	15.3	144.7	0.33	0.76%	
45051 Ukiah (126A)	100	19.0	81	0.67	1.37%	
45020 Ukiah (127B)	30	15.0	15	0.10	7.40%	No longer in use.
45040 Albion (230)	30	29.0	1.04 at start of test; 4.42 at end of test	n/a	n/a	Water level rose during test; apparently recovering from interference from another well during test.

At the time of the test on Well 127A, the current MCCSD standards for determining water allotments were not in place. Based on standard practice at the time (1986), the maximum safe yield of the well was estimated to be 7,200 gpd (5 gpm). To avoid impacts to neighboring wells, it was estimated that a yield of 2,880 gpd (2 gpm) would be appropriate. The rationale for choosing this value was to limit interference on neighboring wells to less than two inches of drawdown.

Using the current standard to calculate a permissible extraction amount shows that the weighted-average test pumping rate (5.73 gpm) did not cause significant interference on the neighboring observation wells (the percent effect on the water-column thickness was less than 10% in each well). Therefore, the original testing showed that an allotment of at least 2.3 gpm or 3,300 gpd would be permissible under the current Ordinance.

The proposed total new extraction is 2,319 gpd (Table 1, page 3). This is less than the allotment that would be permissible under current standards and based on the original testing. Therefore, based on the results of testing Well 127A, the proposed extraction amount is in compliance with the Ordinance.

### CUMULATIVE AND DROUGHT IMPACTS

Although analysis of the original test results show that the proposed extraction is in compliance with the Ordinance, there is a question of potential cumulative impacts and impacts during drought. To evaluate cumulative impacts, we assume that uses before 1986 represent baseline conditions. In addition to Well 127A, MCCSD provided us with the reports for the three nearby extractions that have been approved since 1986; **Figure 3** shows the locations:

December 1992, 10485 Lansing Street (Graham site); by L&A.

October 2005, 45066 Ukiah Street (Cone site); by Pacific GeoScience.

November 2006, 10501 Lansing Street (Harvest Market site); by Pacific GeoScience.

Using data from the test on Well 127A and the three tests listed above, **Figures 6** through **9** show calculations for the potential cumulative drawdown based on each well pumping at its approved allotment, simultaneously, for 180 days during the dry season (no recharge is assumed). Note that this pumping period is longer than that required by the Ordinance – the Ordinance requires a cumulative impacts analysis based on three (3) days of pumping only, not 180 days. Because we are using a 180-day period, the conclusions are conservative; that is, the conclusions do not underestimate the impacts.

The calculations are based on the modified Theis equation and the estimated aquifer parameters from the respective tests. Use of the Theis equation is very conservative in this instance, as it does not account for recharge. That is, it assumes that all pumped water comes from aquifer storage, and that none comes from recharge, such as infiltration of rainfall or irrigation water. For the dry season/drought scenarios, we used the lower transmissivity, as discussed on page 5. The reduction in transmissivity is approximately 16%; we did not reduce the transmissivity of the other wells because the tests originally were conducted during the dry season.

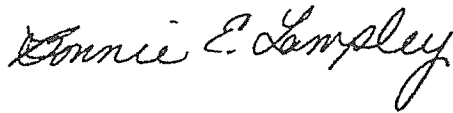
Four different scenarios were modeled, to assess both incremental and total interference that may be attributable to the new additional allotment from Well 127A (approximately 393 gpd) plus the cumulative interference from the other three projects.

The additional cumulative interference that may be attributable to the new allotment ranges from 0.03 to 0.08 feet ( $\frac{1}{2}$  to 1 inch) at distances from 100 to 600 feet from the well, along an east-west transect through the well. **Figure 10** summarizes those results.

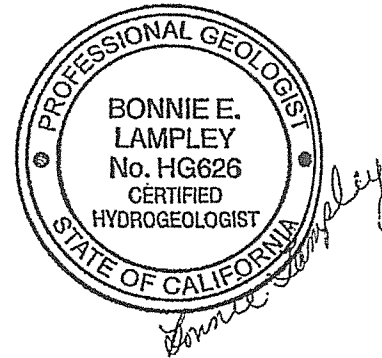
**Figure 11** summarizes the total maximum level of estimated interference along the same east-west transect after 180 days of continuous pumping during the dry season. For the wells used in the 1986 and subsequent studies, none show more than a 10% effect on the thickness of the water column. Thus, even with continuous pumping during the dry season (180 days), the modeling shows that the new allotment would not cause interference in excess of that allowed for by the Ordinance for just a three-day pumping period.

Please feel free to contact me at 530-275-4800 or [blampley@lwrnc.com](mailto:blampley@lwrnc.com) if you have any questions regarding this analysis.

Sincerely,

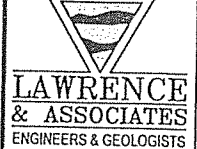
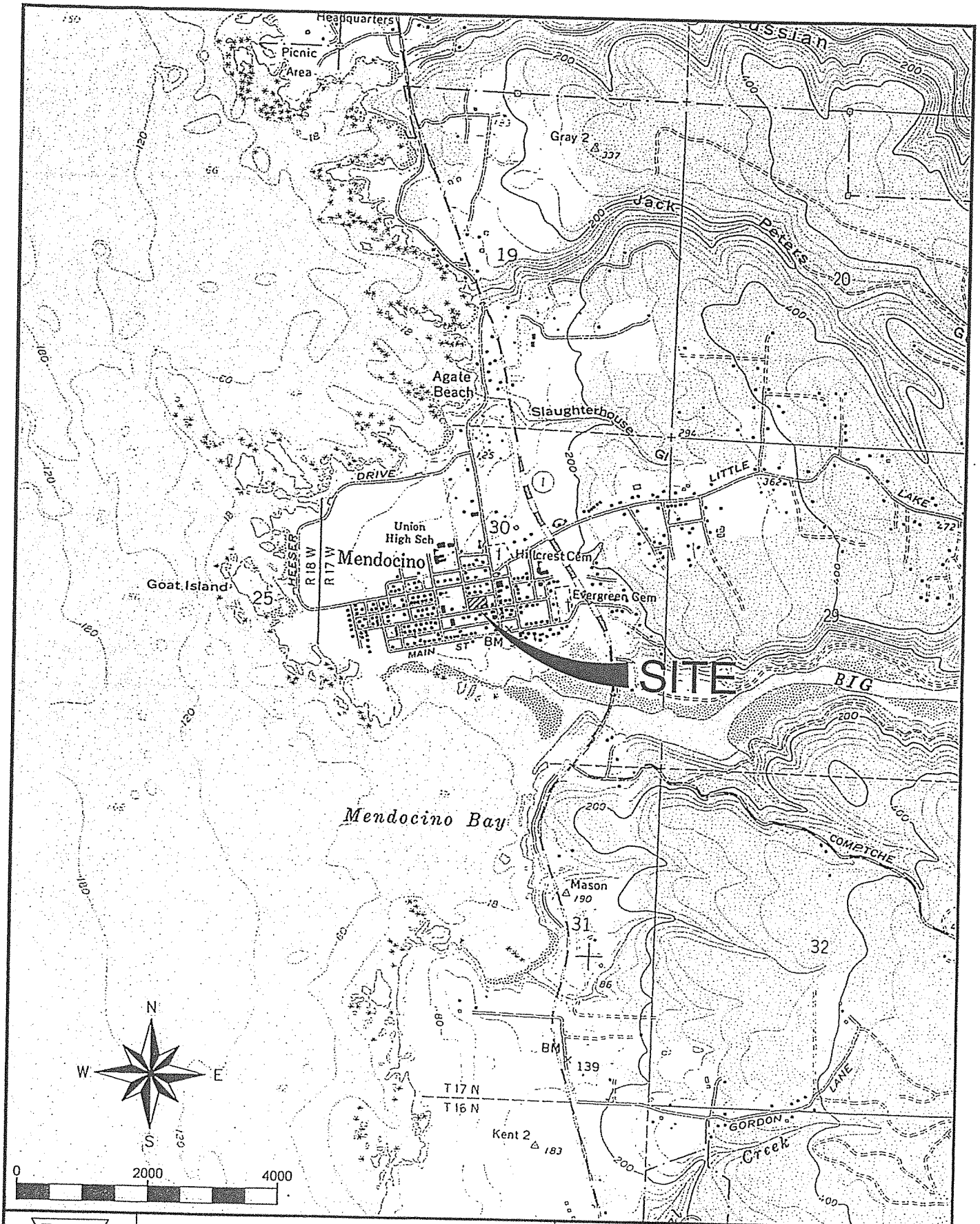


Bonnie Lampley  
President/Principal Hydrogeologist



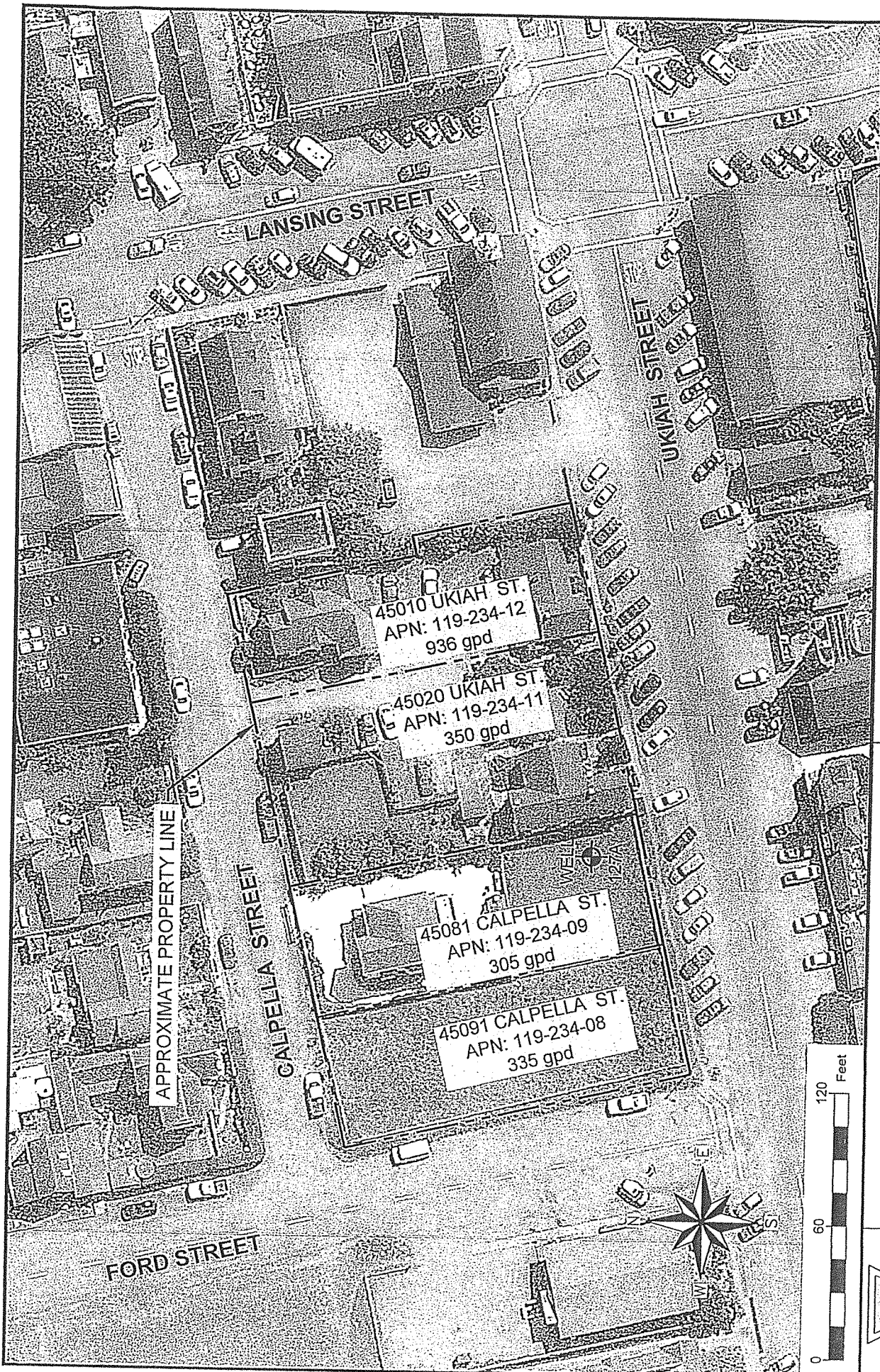
- enc.:     **Figure 1.** Site Location  
          **Figure 2.** Site Map  
          **Figure 3.** Hydrogeologic Studies Near Schmitt Parcel  
          **Figure 4.** Water Use at 45010 and 45020 Ukiah Street  
          **Figure 5.** Mendocino Depth to Water  
          **Figure 6.** Normal Conditions, Existing Allotment Distance Drawdown  
          **Figure 7.** Normal Conditions, New Allotment Distance Drawdown  
          **Figure 8.** Drought Conditions, Existing Allotment Distance Drawdown  
          **Figure 9.** Drought Conditions, New Allotment Distance Drawdown  
          **Figure 10.** Cumulative Drawdown & Net Change With New Allotment  
          **Figure 11.** Summary of Cumulative Impacts at 180 Days of Pumping





## SITE LOCATION

PROJECT NAME: HYDRO. STUDY	PROJECT NO: 016092.00	DATE: 10/21/2016
CLIENT: SCHMITT	DRAWN BY: J. BEERS	<b>FIGURE 1</b>
SCALE: 1" = 2000'	CHECKED BY: R I LAMPLEY	

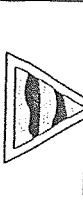


PROJECT NO:	016092.00	SCALE:	1" = 60'
DRAWN BY:	J. BEERS	DATE:	10/27/2016
CHECKED BY:	B. LAMPLEY		<b>FIGURE 2</b>

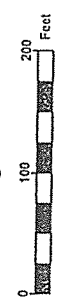
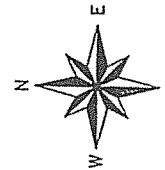
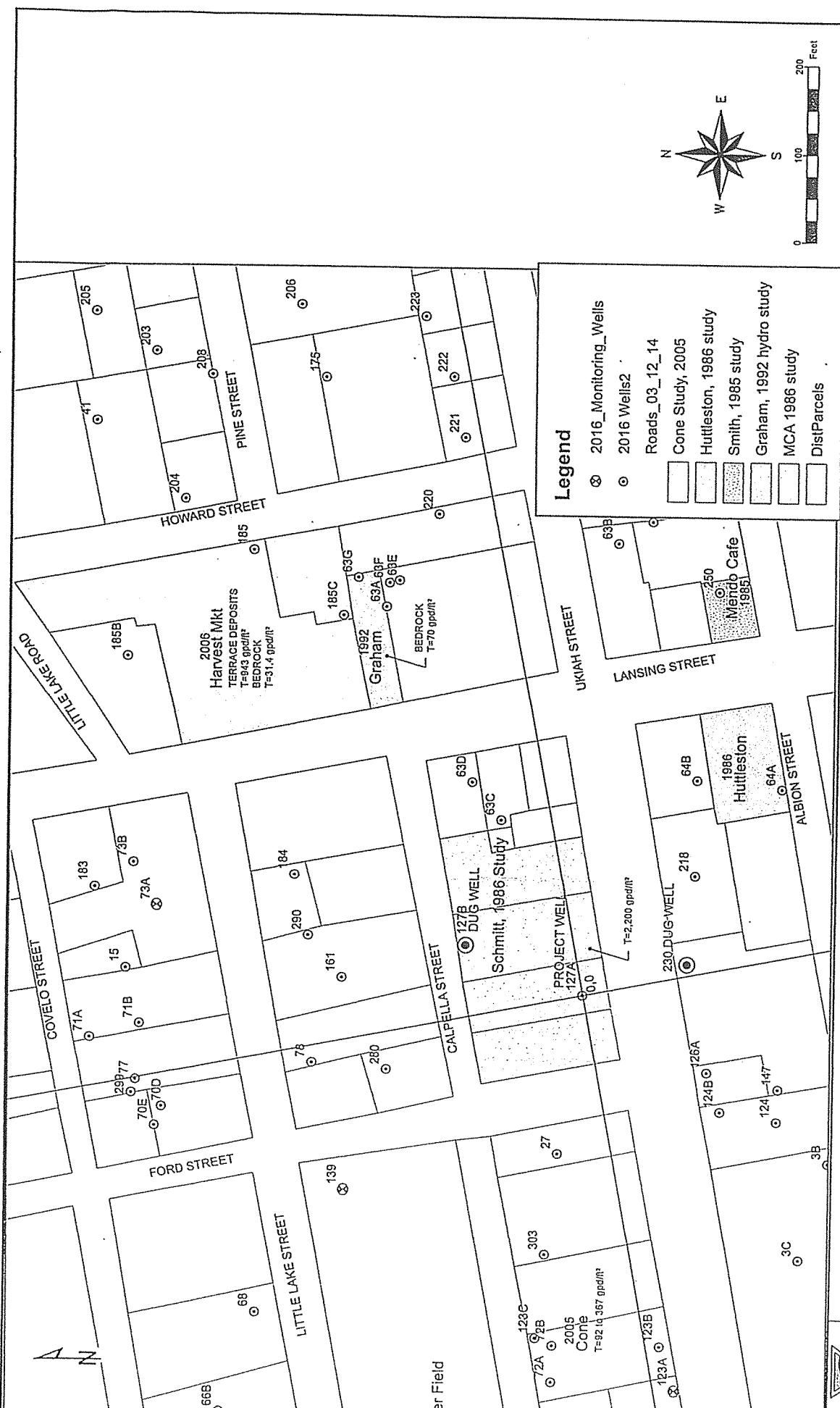
**HYDROLOGICAL STUDY REVIEW**

MS. ROBERT SCHMITT  
 45020 UKIAH STREET  
 MENDOCINO, CA.

**SITE MAP**



**LAWRENCE  
& ASSOCIATES**  
 ENGINEERS & GEOLOGISTS



**Legend**

- ⊗ 2016\_Monitoring\_Wells
- ⊙ 2016 Wells2
- ▭ Roads\_03\_12\_14
- ▭ Cone Study, 2005
- ▭ Huttleston, 1986 study
- ▭ Smith, 1985 study
- ▭ Graham, 1992 hydro study
- ▭ MCA 1986 study
- ▭ DistParcels

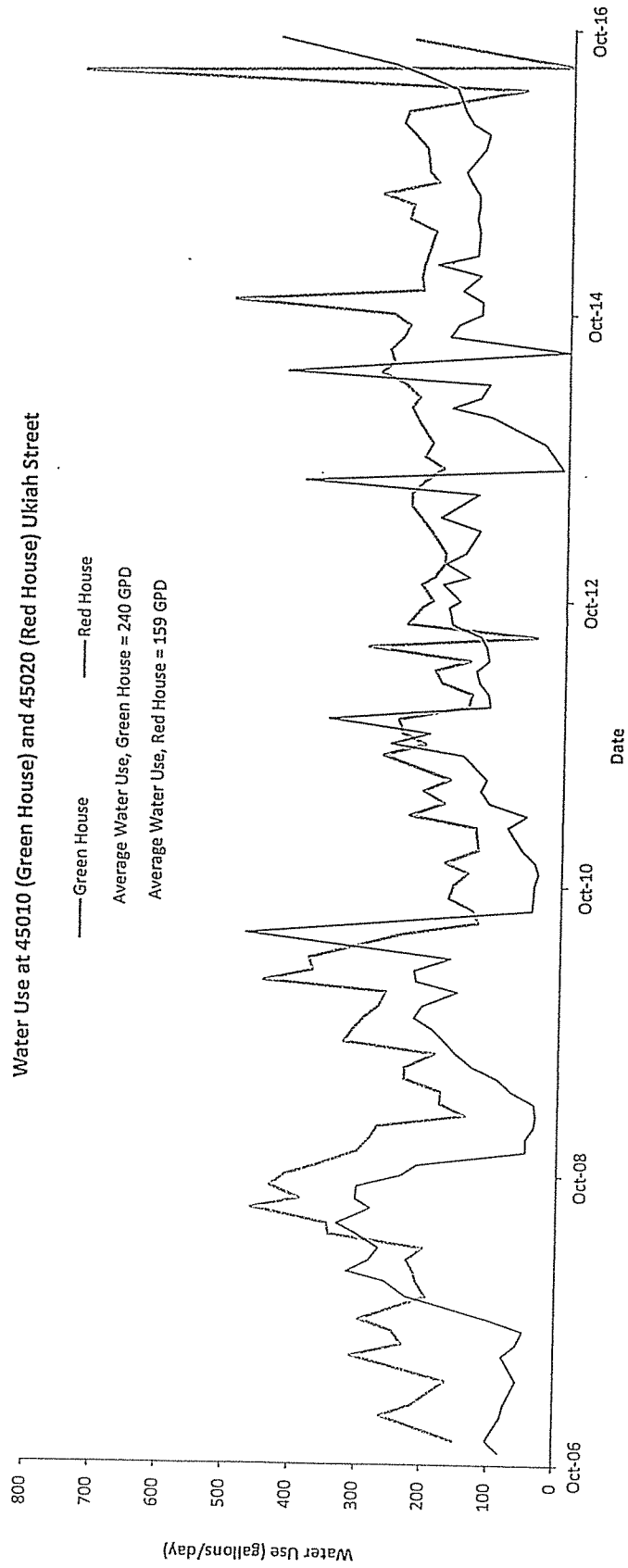
PROJECT NO.:	010092.00	SCALE:	1" = 100'
DRAWN BY:	J. BEERS	DATE:	10/25/2016
CHECKED BY:	B. LAMPLEY	<b>FIGURE 3</b>	

**HYDROLOGICAL STUDY REVIEW**  
 MS. ROBERT SCHMITT  
 45020 UKIAH STREET  
 MENDOCINO, CA.

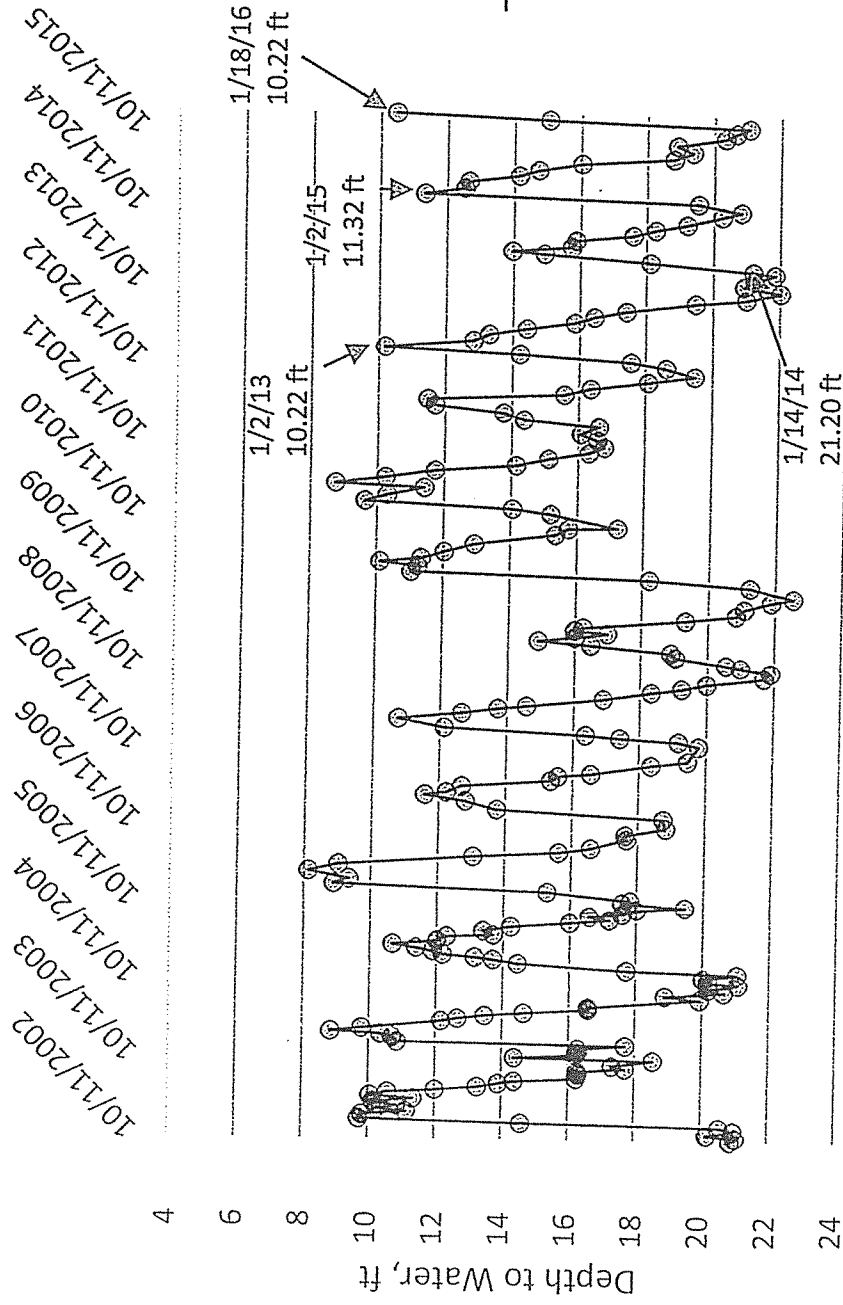
**HYDROGEOLOGIC STUDIES NEAR SCHMITT PARCEL**



9 10/25/2016 10:00 AM C:\Users\jbeers\OneDrive\Documents\Projects\10092\10092.dwg JTB 10/25/2016



# Mendocino Depth to Water, feet



Adapted from figure supplied by MCCSD.

FIGURE 5

Normal Conditions, Existing Allotment

Project: Schmitt, 45020 Ukiah Street  
 Calculated by: B. Lampley  
 Date: 24-Oct-16  
 Datum: Theoretical; through Well 127A

Well	T gpd/ft	S	Q gpm	Distance Along Datum ft, x	Offset From Datum ft, y
Harvest	943	1.00E-02	1.59	560	272
45020 Albion (Schmitt)	2200	6.49E-02	1.34	1	1
Cone	367	1.00E-02	0.34	-414	124

Elapsed time, t in days:

180  
 3.27 gpm total  
 4705.2 gpd total

Distance Along Datum, feet	-600	-500	-400	-300	-200	-100	0	100	200	300	400	500	600
u*	1.56E-01	1.32E-01	1.10E-01	8.96E-02	7.18E-02	5.61E-02	4.27E-02	3.15E-02	2.24E-02	1.56E-02	1.05E-02	6.55E-03	4.33E-03
	1.11E-01	7.69E-02	4.93E-02	2.78E-02	1.24E-02	3.13E-03	6.13E-07	3.00E-03	1.21E-02	2.74E-02	4.88E-02	7.63E-02	1.10E-01
	1.41E-02	6.45E-03	4.41E-03	8.03E-03	1.73E-02	3.23E-02	5.29E-02	7.91E-02	1.11E-01	1.49E-01	1.92E-01	2.41E-01	2.95E-01
W(u)	1.72E+00	1.84E+00	2.01E+00	2.20E+00	2.41E+00	2.66E+00	2.94E+00	3.24E+00	3.56E+00	3.91E+00	4.20E+00	4.43E+00	4.62E+00
	1.54E+00	2.14E+00	3.00E+00	3.84E+00	4.66E+00	5.29E+00	5.74E+00	6.00E+00	6.11E+00	6.07E+00	5.84E+00	5.46E+00	4.94E+00
	3.11E+00	4.88E+00	6.86E+00	8.96E+00	1.10E+00	1.24E+00	1.37E+01	1.49E+01	1.59E+01	1.66E+01	1.70E+01	1.71E+01	1.70E+01
Drawdown (feet)	3.04E-01	3.28E-01	3.56E-01	3.88E-01	4.24E-01	4.65E-01	5.14E-01	5.69E-01	6.31E-01	6.99E-01	7.65E-01	8.17E-01	8.55E-01
	1.28E-01	1.49E-01	1.76E-01	2.13E-01	2.67E-01	3.40E-01	4.34E-01	5.49E-01	6.86E-01	8.47E-01	1.03E-01	1.24E-01	1.46E-01
	3.04E-01	4.76E-01	5.16E-01	4.53E-01	3.75E-01	3.05E-01	2.52E-01	2.24E-01	1.95E-01	1.71E-01	1.52E-01	1.38E-01	1.28E-01
Total Drawdown (feet)	0.8256	0.9527	1.0478	1.0539	1.0648	1.1382	1.2322	1.3479	1.4842	1.6335	1.7936	1.9590	2.1071

THEORETICAL CUMULATIVE DISTANCE DRAWDOWN AFTER 180 DAYS PUMPING IN DRY SEASON

Normal Conditions, Existing Allotment

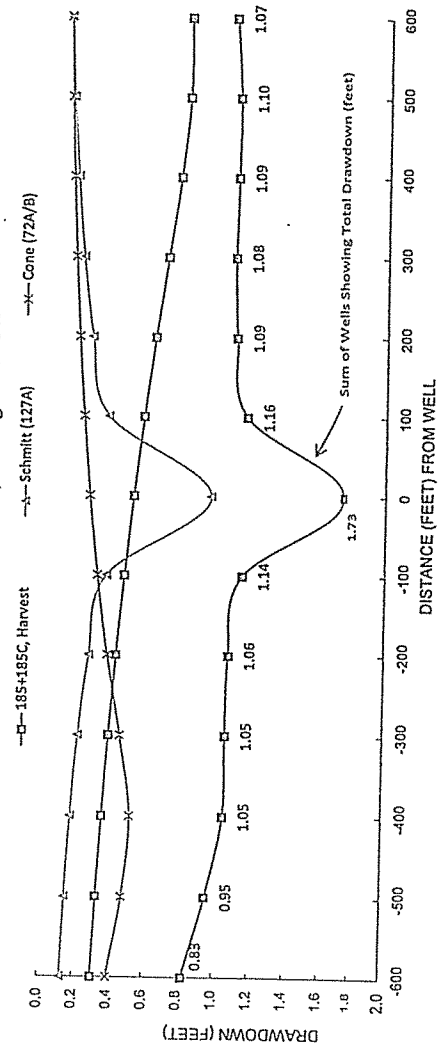


FIGURE 6

**Normal Conditions, New Allotment**

Project: Schmitt, 45020 Ukiah Street  
 Calculated by: B. Lampley  
 Date: 16-Jun-17  
 Datum: Theoretical; through Well 127A

Well	T gpd/ft	S	Q gpm	Distance Along Datum ft, x	Offset From Datum ft, y
Harvest	943	1.00E-02	1.59	560	272
45020 Albion (Schmitt)	2200	6.49E-02	1.61	1	1
Cone	367	1.00E-02	0.34	-414	124

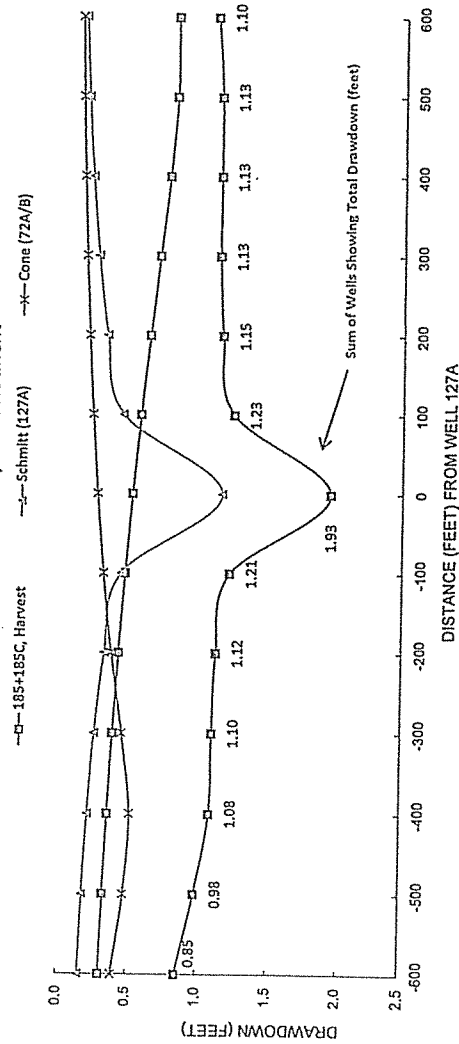
Elapsed time, t in days:

180  
 3.54 gpm total  
 5098.2 gpd total

Distance Along Datum, feet	-500	-400	-300	-200	-100	0	100	200	300	400	500	600
u'	1.56E-01	1.33E-01	1.10E-01	8.96E-02	7.18E-02	5.61E-02	4.37E-02	3.15E-02	2.24E-02	1.58E-02	1.10E-02	8.33E-03
	1.11E-01	7.69E-02	4.93E-02	2.78E-02	1.24E-02	3.13E-03	6.13E-07	3.00E-03	1.21E-02	2.74E-02	4.88E-02	1.10E-01
	1.41E-02	6.45E-03	4.41E-03	8.03E-03	1.73E-02	3.23E-02	5.29E-02	7.91E-02	1.11E-01	1.49E-01	1.93E-01	2.59E-01
W(u)	1.57E+00	1.70E+00	1.84E+00	2.01E+00	2.20E+00	2.41E+00	2.66E+00	2.94E+00	3.26E+00	3.61E+00	4.02E+00	4.23E+00
	1.84E+00	2.14E+00	2.53E+00	3.06E+00	3.84E+00	5.20E+00	1.37E+01	5.24E+00	3.86E+00	3.07E+00	2.54E+00	1.84E+00
	3.71E+00	4.48E+00	4.86E+00	4.76E+00	3.51E+00	2.92E+00	2.47E+00	2.11E+00	1.83E+00	1.61E+00	1.43E+00	1.21E+00
Drawdown (feet)	3.04E-01	3.28E-01	3.56E-01	3.88E-01	4.24E-01	4.65E-01	5.14E-01	5.69E-01	6.31E-01	6.98E-01	7.65E-01	8.17E-01
	1.54E-01	1.79E-01	2.12E-01	2.57E-01	3.22E-01	4.36E-01	1.15E+00	4.39E-01	2.24E-01	2.58E-01	2.13E-01	1.54E-01
	3.94E-01	4.76E-01	5.16E-01	4.53E-01	3.73E-01	3.10E-01	2.61E-01	2.24E-01	1.95E-01	1.71E-01	1.52E-01	1.28E-01
Total Drawdown (feet)	0.9917	1.0937	1.0973	1.1194	1.2121	1.2374	1.2334	1.1490	1.1272	1.1295	1.1295	1.0993

**THEORETICAL CUMULATIVE DISTANCE DRAWDOWN AFTER 3 DAYS PUMPING IN DRY SEASON**

Normal Conditions, New Allotment



### Drought Conditions, Existing Allotment

Project: Schmitt, 45020 Ukiah Street  
 Calculated by: B. Lampley  
 Date: 24-Oct-16  
 Datum: Theoretical; through Well 127A

Well	T gpd/ft	S	Q gpm	Distance Along Datum ft, x	Offset From Datum ft, y
Harvest	943	1.00E-02	1.59	560	272
45020 Albion (Schmitt)	2200	6.49E-02	1.34	1	1
Cone	367	1.00E-02	0.34	-414	124

Elapsed time, t in days:

180  
 3.27 gpm total 4705.2 gpd total

Distance Along Datum, feet	-600	-500	-400	-300	-200	-100	0	100	200	300	400	500	600
$u^*$	1.56E-01	1.37E-01	1.10E-01	8.95E-02	7.18E-02	5.61E-02	4.27E-02	3.15E-02	2.24E-02	1.56E-02	1.10E-02	8.33E-03	8.33E-03
$W(u)$	1.11E-01	7.89E-02	4.93E-02	2.78E-02	1.24E-02	3.13E-03	6.13E-07	3.00E-03	1.21E-02	2.74E-02	4.88E-02	7.63E-02	1.10E-01
Drawdown (feet)	1.41E-02	6.45E-03	4.41E-03	8.03E-03	1.73E-02	3.23E-02	5.29E-02	7.91E-02	1.11E-01	1.49E-01	1.93E-01	2.41E-01	2.95E-01
	1.57E+00	1.70E+00	1.84E+00	2.01E+00	2.20E+00	2.41E+00	2.66E+00	2.94E+00	3.26E+00	3.61E+00	3.98E+00	4.20E+00	4.23E+00
	1.84E+00	2.14E+00	2.53E+00	3.06E+00	3.84E+00	5.20E+00	1.37E+01	5.24E+00	3.86E+00	3.07E+00	2.54E+00	2.14E+00	1.84E+00
	3.71E+00	4.48E+00	4.86E+00	4.26E+00	3.51E+00	2.92E+00	2.47E+00	2.11E+00	1.83E+00	1.61E+00	1.43E+00	1.30E+00	1.21E+00
	3.04E-01	3.28E-01	3.56E-01	3.88E-01	4.24E-01	4.66E-01	5.14E-01	5.69E-01	6.31E-01	6.98E-01	7.65E-01	8.12E-01	8.17E-01
	1.28E-01	1.49E-01	1.76E-01	2.13E-01	2.67E-01	3.62E-01	9.56E-01	3.65E-01	2.65E-01	2.14E-01	1.77E-01	1.49E-01	1.28E-01
	3.94E-01	4.76E-01	5.16E-01	4.53E-01	3.73E-01	3.10E-01	2.63E-01	2.24E-01	1.95E-01	1.71E-01	1.52E-01	1.38E-01	1.28E-01
Total Drawdown (feet)	0.82556	0.9527	1.0478	1.0538	1.0568	1.1382	1.7322	1.1579	1.0942	1.0835	1.0936	1.0950	1.0731

### THEORETICAL CUMULATIVE DISTANCE DRAWDOWN AFTER 3 DAYS PUMPING IN DRY SEASON

Drought Conditions, Existing Allotment

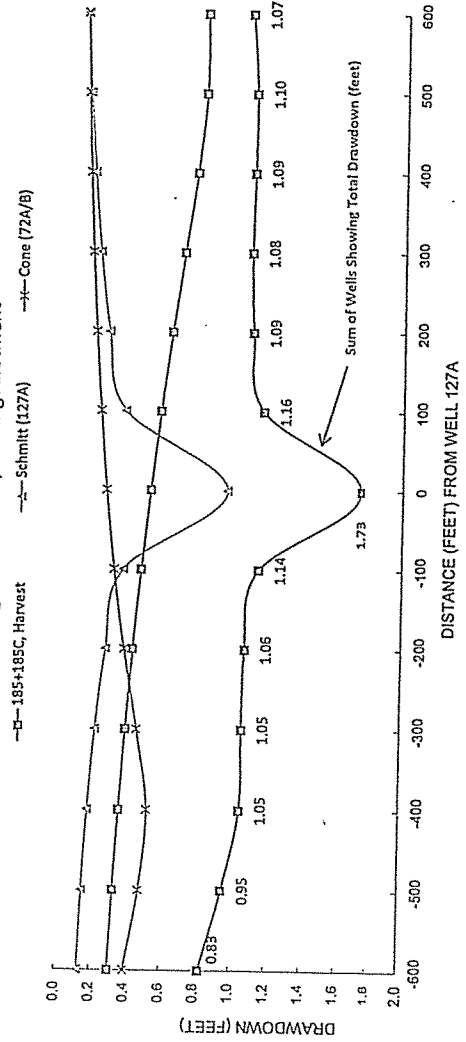


FIGURE 8



Drought Conditions, New Allotment

Project: Schmitt, 45020 Ukiah Street  
 Calculated by: B. Lampley  
 Date: 16-Jun-17  
 Datum: Theoretical through Well 127A

Well	T sgd/ft	S	Q gpm	Distance Along Datum ft, x	Offset From Datum ft, y
Harvest	943	1.00E-02	1.59	560	272
45020 Albion (Schmitt)	2200	6.49E-02	1.61	1	1
Cone	367	1.00E-02	0.34	-414	124

Elapsed time, t in days:

180  
 3.54 gpm total  
 5098.2 gpd total

Distance Along Datum, feet	-600	-500	-400	-300	-200	-100	0	100	200	300	400	500	600
u'	1.56E-01	1.37E-01	1.10E-01	8.96E-02	7.18E-02	5.61E-02	4.27E-02	3.15E-02	2.24E-02	1.56E-02	1.10E-02	8.55E-03	8.33E-03
	1.11E-01	7.69E-02	4.93E-02	2.78E-02	1.24E-02	3.13E-03	6.13E-07	3.00E-03	1.21E-02	2.74E-02	4.88E-02	7.63E-02	1.10E-01
	1.41E-02	6.45E-03	4.41E-03	8.03E-03	1.73E-02	3.23E-02	5.29E-02	7.91E-02	1.11E-01	1.49E-01	1.92E-01	2.41E-01	2.95E-01
V(u)	1.57E+00	1.70E+00	1.84E+00	2.01E+00	2.20E+00	2.41E+00	2.66E+00	2.94E+00	3.26E+00	3.61E+00	3.98E+00	4.20E+00	4.23E+00
	1.84E+00	2.14E+00	2.53E+00	3.06E+00	3.84E+00	5.20E+00	1.37E+01	5.24E+00	3.86E+00	3.07E+00	2.54E+00	2.14E+00	1.84E+00
	3.71E+00	4.48E+00	4.96E+00	4.28E+00	3.53E+00	2.92E+00	2.47E+00	2.11E+00	1.83E+00	1.61E+00	1.43E+00	1.30E+00	1.21E+00
Drawdown (feet)	3.04E-01	3.28E-01	3.56E-01	3.88E-01	4.24E-01	4.66E-01	5.14E-01	5.69E-01	6.31E-01	6.98E-01	7.65E-01	8.12E-01	8.47E-01
	1.54E-01	1.79E-01	2.12E-01	2.57E-01	3.23E-01	4.18E-01	1.15E+00	4.39E-01	3.24E-01	2.38E-01	2.13E-01	1.80E-01	1.54E-01
	3.84E-01	4.76E-01	5.16E-01	4.53E-01	3.73E-01	3.10E-01	2.65E-01	2.48E-01	1.95E-01	1.71E-01	1.52E-01	1.38E-01	1.28E-01
Total Drawdown (feet)	0.9837	1.0837	1.0973	1.0973	1.1184	1.2121	1.9274	1.3324	1.1490	1.1272	1.1297	1.1295	1.0993

THEORETICAL CUMULATIVE DISTANCE DRAWDOWN AFTER 3 DAYS PUMPING IN DRY SEASON

Drought Conditions, New Allotment

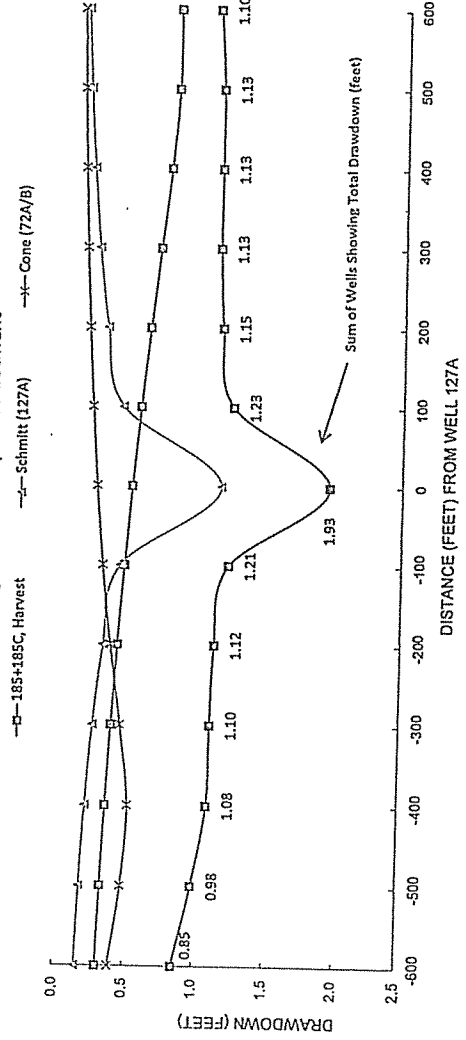


FIGURE 9

CUMULATIVE DRAWDOWN & NET CHANGE WITH NEW ALLOTMENT, ALONG DATUM THROUGH WELL 127A (see Figure 3 for location)

Distance Along Datum, feet -->	-600	-500	-400	-300	-200	-100	0	100	200	300	400	500	600
Normal Conditions, Existing Allotment	0.83	0.95	1.05	1.05	1.06	1.14	1.73	1.16	1.09	1.08	1.09	1.10	1.07
Normal Conditions, New Allotment	0.85	0.99	1.09	1.10	1.13	1.22	1.95	1.24	1.16	1.13	1.13	1.13	1.10
NET CHANGE	0.03	0.03	0.04	0.05	0.06	0.08	0.22	0.08	0.06	0.05	0.04	0.03	0.03
Drought Conditions, Existing Allotment	0.83	0.95	1.05	1.05	1.06	1.14	1.73	1.16	1.09	1.08	1.09	1.10	1.07
Drought Conditions, New Allotment	0.85	0.99	1.09	1.10	1.13	1.22	1.95	1.24	1.16	1.13	1.13	1.13	1.10
NET CHANGE	0.03	0.03	0.04	0.05	0.06	0.08	0.22	0.08	0.06	0.05	0.04	0.03	0.03

**SUMMARY OF CUMULATIVE IMPACTS AT 180 DAYS OF PUMPING  
(ORDINANCE REQUIRES ANALYSIS OF THREE DAY PUMPING PERIOD)**

Well	Approximate Distance from Schmitt Well	Well Depth	Depth to		Water Column	Predicted Cumulative Interference at 180 days*	Predicted Effect
			feet	Date			
<b>1986 Study, 45081 Calpella</b>							
45081 Calpella, Test Well (127A)	n/a	99	22.7		76.27	n/a	n/a
10500 Ford, Post Office (27)	180	160	15.3		144.7	1.2	0.8%
45051 Ukiah (126A)	170	100	19.0		81	1.2	1.4%
45020 Ukiah (127B)	158	30	15.0		15	1.2	7.8% No longer in use.
45040 Albion (230)	120	30	29.0		True column unknown	1.2	n/a No longer in use.
<b>1992 Study, 10485 Lansing</b>							
Graham well	494	200	44		156	1.0	0.6%
<b>2005 Study, 45066 Ukiah, Cone Property</b>							
Well 72A	414	110	16.67		93.33	0.6	0.6%
Well 72B	414	160	15.16		144.84	0.6	0.4%
Well 123C	414	27	16.44		10.56	0.6	5.7%
<b>2006 Study, 10501 Lansing, Harvest Market</b>							
Well 185	568	26.95	11.22		15.73	0.6	3.9%
Well 185C	444	220	48.84		171.16	0.6	0.4%

\* Cumulative interference from wells at 45081 Calpella, 45066 Ukiah, & 10501 Lansing; pumping from 10485 Lansing not included because predicted interference extends less than 50 feet from well; interference at given well does not include drawdown from pumping that well itself.

received  
10/17/22

**MENDOCINO CITY COMMUNITY SERVICES DISTRICT  
APPLICATION FOR GROUNDWATER EXTRACTION PERMIT**

**Fees:** Administrative \_\_\_\_\_ \$200.00  
Board Approval \_\_\_\_\_ x \$300.00  
Hydrological Study with Board Approval \_\_\_\_\_ \$700.00

The attached Groundwater Extraction Permit Ordinance (2020-01) shall be the presiding reference for processing this application.

Name of Property Owner Robert J Schmitt and Mackenzie Skye-Schmitt

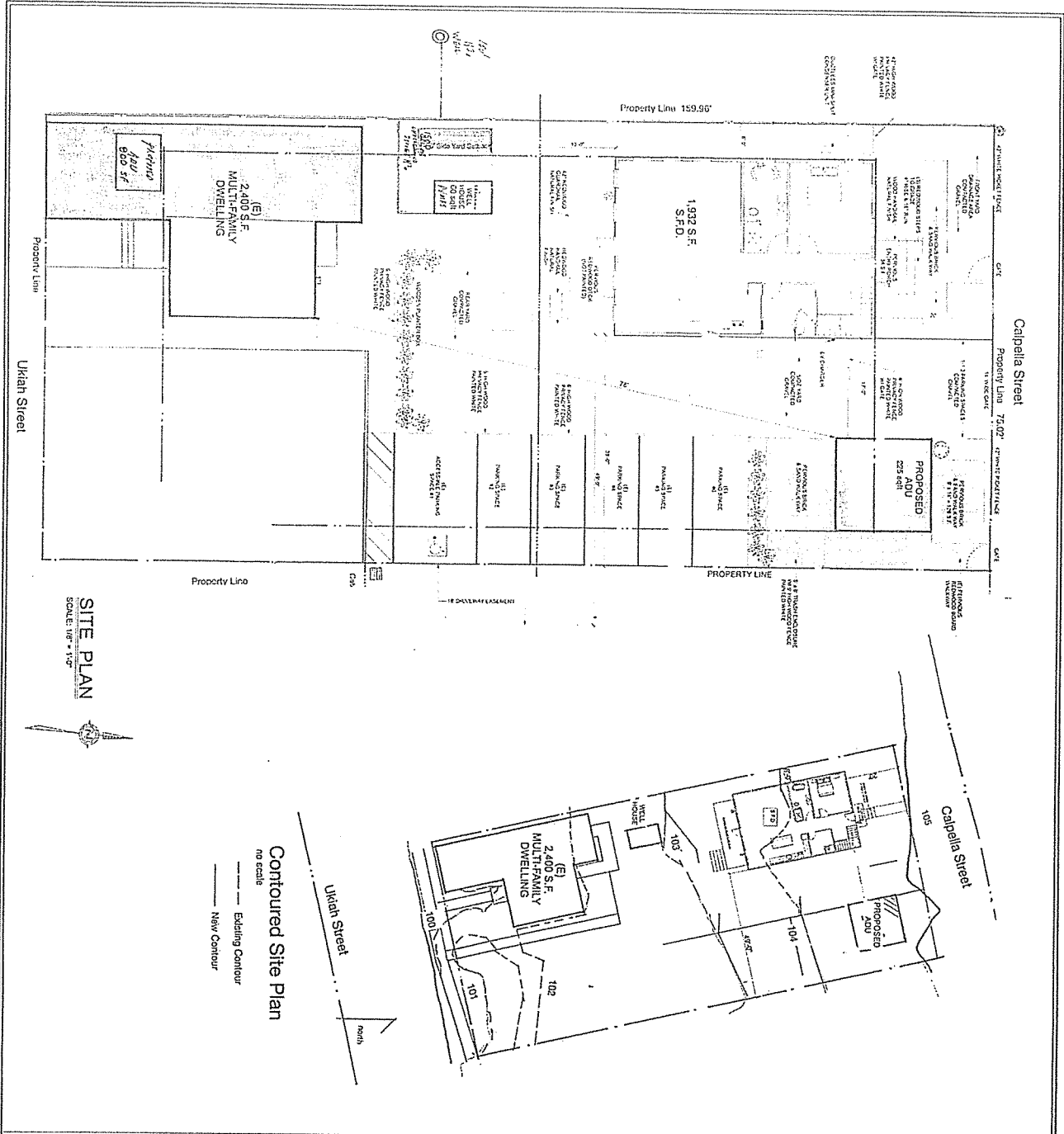
Address of Property Owner 45045 Calpella Street Mendocino CA 95460  
(aka 45020 Ukiah Street Mendocino CA 95460)

Assessor's Parcel Number(s): 119-234-1100

Street Address of Project 45020 Ukiah St

Contact Person Robert J Schmitt Telephone 707-239-8447

1. Is this application being submitted as an emergency request? Please attach explanation (see definition of "emergency" in Ordinance) No
2. Description of the Proposed Project, describing the proposed size and type of use and defining any change in water source or water use including any increase or decrease of water demand. Please include total square footage of the parcels being served.  
office conversions to 2 ADU uses, a 225 sf office and a 800 sf office  
Water usage on average has declined each month over last 4 years.  
We are requesting an increase of 257 GPD from our hydrological study of the remaining  
availability of 561 GPD. Our present allotment is 743 GPD.  
Total sf of parcel is 12,196.
3. Maximum daily amount of water use anticipated as a result of proposed change 257 GPD
4. Does the proposal require new well construction and/or the structural modification of an existing well? Yes \_\_\_\_\_ No X
5. Have you obtained a well drilling permit from the County? Yes \_\_\_\_\_ No X If yes, please attach copy.
6. Have you obtained Coastal Commission approval for well drilling?

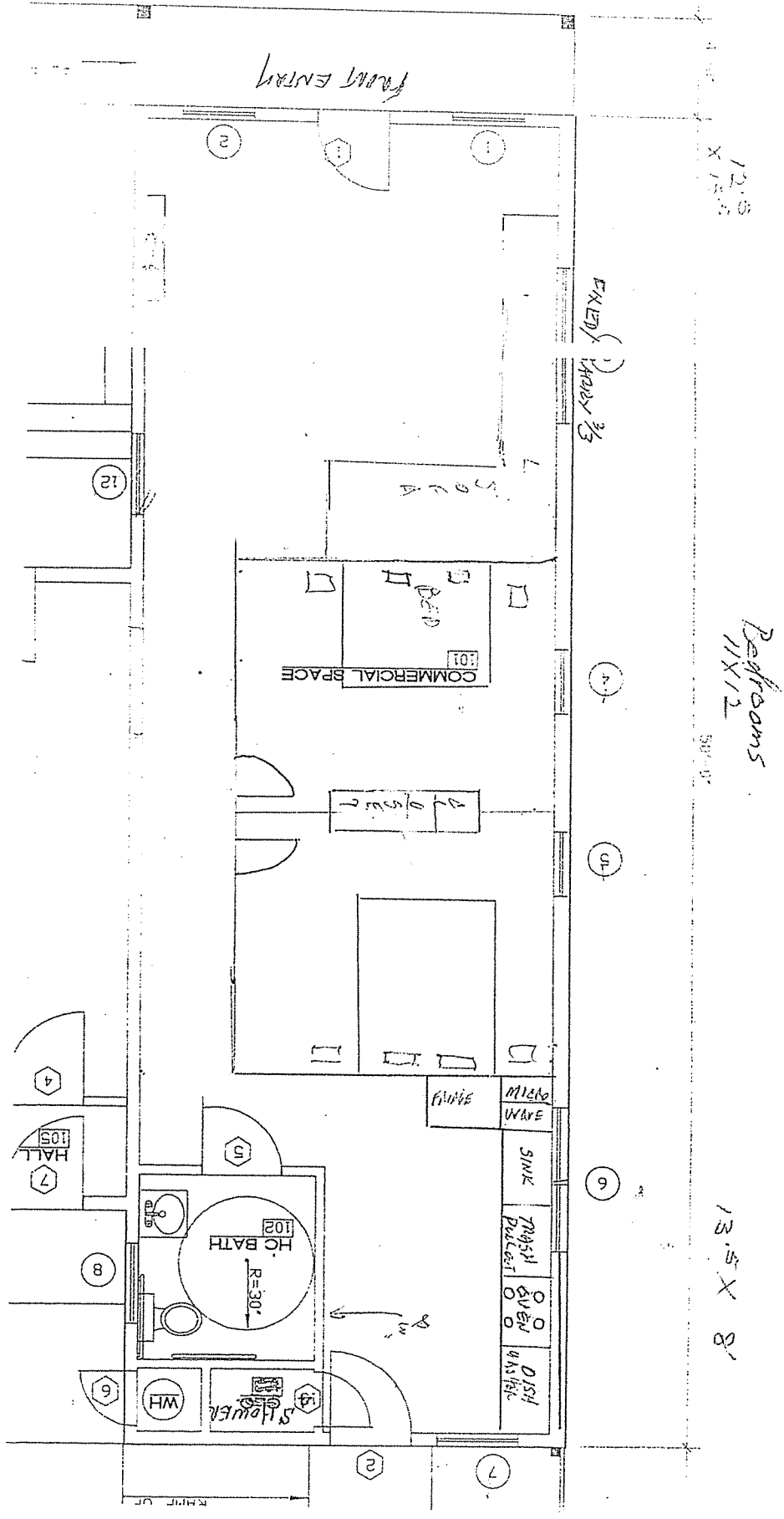


<b>PROJECT DATA:</b>	
APN: 119-234-119	12,198 S.F.
LOT SIZE:	1,932 S.F.
Legal Structure: Auto. Summary	2,400 S.F.
(E) S.F.D. (2 Occupancy)	69 S.F.
(E) Multi-Family (E3)	223 S.F.
(E) Private Home (2 Occupancy)	235 S.F.
Proposed ADU (2 Occupancy)	
Proposed ADU (1 Occupancy)	
Proposed ADU (1 Occupancy)	
MAX LOT COVERAGE: 21.1%	2,549 S.F.
ACTUAL LOT COVERAGE:	2,549 S.F.
MAX BUILDING HEIGHT: 15'-0"	ACTUAL: 15'-0"
OC/OCCUPANCY: R-3	
TYPE OF CONSTRUCTION: V/1N	
FIRE SPRINKLERS: None	
WATER SOURCE: WELL	
SEWER: HICEDD	
POWER: PG&E	
GAZ: NONE	
HEAT SOURCE: BASEBOARD	
WATER HEATER: ELECTRIC	
ACRES: .28	
<b>SCOPE OF WORK:</b> CONVERT (E) TOWER BASE BUILDING FROM AN OFFICE SPACE TO AN ACCESSORY DWELLING UNIT (ADU). NO WORK PROPOSED TO THIS BUILDING THAT REQUIRES A PERMIT.	
<b>SHEET SCHEDULE:</b> SPT SITE PLAN & VICINITY MAP A1 FLOOR PLAN & EXTERIOR ELEVATIONS	
<b>VICINITY MAP:</b> 	

<b>SCHMITT / SKYE RESIDENCE</b> SINGLE STORY OFFICE TO ADU CONVERSION 45041 Calpella Street Mendocino, CA, 95460	
<b>SP2</b>	

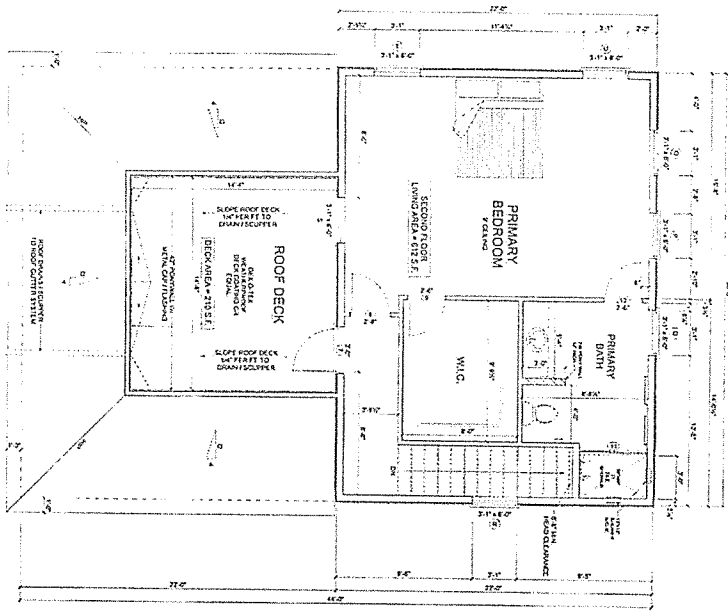


45020 VIKING ST.  
 DWARF USE: OFFICE  
 PROPOSED USE: ADU  
 800 SQ. FT.



Bedrooms  
 11X12

13.5 X 8'

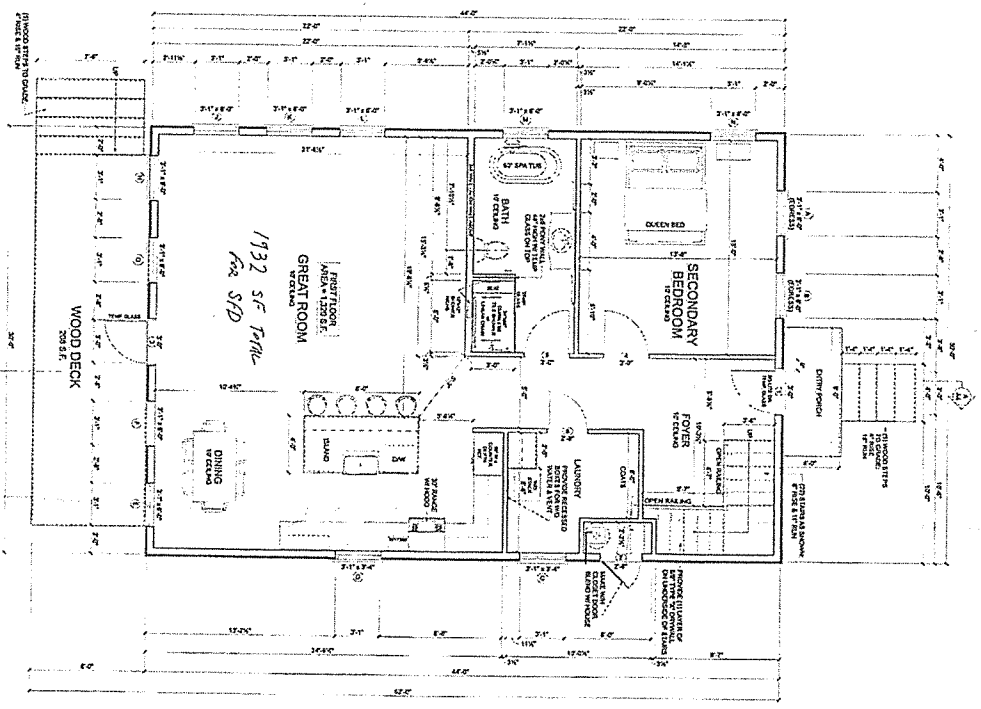


**SECOND FLOOR - WINDOW SCHEDULE**

SYMBOL	TYPE	WIDTH	HEIGHT	GLASS	FINISH
1	WINDOW	3'-0"	4'-0"	1/2"	W/1
2	WINDOW	3'-0"	4'-0"	1/2"	W/1
3	WINDOW	3'-0"	4'-0"	1/2"	W/1
4	WINDOW	3'-0"	4'-0"	1/2"	W/1
5	WINDOW	3'-0"	4'-0"	1/2"	W/1
6	WINDOW	3'-0"	4'-0"	1/2"	W/1
7	WINDOW	3'-0"	4'-0"	1/2"	W/1
8	WINDOW	3'-0"	4'-0"	1/2"	W/1
9	WINDOW	3'-0"	4'-0"	1/2"	W/1
10	WINDOW	3'-0"	4'-0"	1/2"	W/1
11	WINDOW	3'-0"	4'-0"	1/2"	W/1
12	WINDOW	3'-0"	4'-0"	1/2"	W/1
13	WINDOW	3'-0"	4'-0"	1/2"	W/1
14	WINDOW	3'-0"	4'-0"	1/2"	W/1
15	WINDOW	3'-0"	4'-0"	1/2"	W/1
16	WINDOW	3'-0"	4'-0"	1/2"	W/1
17	WINDOW	3'-0"	4'-0"	1/2"	W/1
18	WINDOW	3'-0"	4'-0"	1/2"	W/1
19	WINDOW	3'-0"	4'-0"	1/2"	W/1
20	WINDOW	3'-0"	4'-0"	1/2"	W/1
21	WINDOW	3'-0"	4'-0"	1/2"	W/1
22	WINDOW	3'-0"	4'-0"	1/2"	W/1
23	WINDOW	3'-0"	4'-0"	1/2"	W/1
24	WINDOW	3'-0"	4'-0"	1/2"	W/1
25	WINDOW	3'-0"	4'-0"	1/2"	W/1
26	WINDOW	3'-0"	4'-0"	1/2"	W/1
27	WINDOW	3'-0"	4'-0"	1/2"	W/1
28	WINDOW	3'-0"	4'-0"	1/2"	W/1
29	WINDOW	3'-0"	4'-0"	1/2"	W/1
30	WINDOW	3'-0"	4'-0"	1/2"	W/1

**SECOND FLOOR - DOOR SCHEDULE**

SYMBOL	TYPE	WIDTH	HEIGHT	FINISH
1	DOOR	3'-0"	7'-0"	D/1
2	DOOR	3'-0"	7'-0"	D/1
3	DOOR	3'-0"	7'-0"	D/1
4	DOOR	3'-0"	7'-0"	D/1
5	DOOR	3'-0"	7'-0"	D/1
6	DOOR	3'-0"	7'-0"	D/1
7	DOOR	3'-0"	7'-0"	D/1
8	DOOR	3'-0"	7'-0"	D/1
9	DOOR	3'-0"	7'-0"	D/1
10	DOOR	3'-0"	7'-0"	D/1
11	DOOR	3'-0"	7'-0"	D/1
12	DOOR	3'-0"	7'-0"	D/1
13	DOOR	3'-0"	7'-0"	D/1
14	DOOR	3'-0"	7'-0"	D/1
15	DOOR	3'-0"	7'-0"	D/1
16	DOOR	3'-0"	7'-0"	D/1
17	DOOR	3'-0"	7'-0"	D/1
18	DOOR	3'-0"	7'-0"	D/1
19	DOOR	3'-0"	7'-0"	D/1
20	DOOR	3'-0"	7'-0"	D/1
21	DOOR	3'-0"	7'-0"	D/1
22	DOOR	3'-0"	7'-0"	D/1
23	DOOR	3'-0"	7'-0"	D/1
24	DOOR	3'-0"	7'-0"	D/1
25	DOOR	3'-0"	7'-0"	D/1
26	DOOR	3'-0"	7'-0"	D/1
27	DOOR	3'-0"	7'-0"	D/1
28	DOOR	3'-0"	7'-0"	D/1
29	DOOR	3'-0"	7'-0"	D/1
30	DOOR	3'-0"	7'-0"	D/1



**FIRST FLOOR - WINDOW SCHEDULE**

SYMBOL	TYPE	WIDTH	HEIGHT	GLASS	FINISH
1	WINDOW	3'-0"	4'-0"	1/2"	W/1
2	WINDOW	3'-0"	4'-0"	1/2"	W/1
3	WINDOW	3'-0"	4'-0"	1/2"	W/1
4	WINDOW	3'-0"	4'-0"	1/2"	W/1
5	WINDOW	3'-0"	4'-0"	1/2"	W/1
6	WINDOW	3'-0"	4'-0"	1/2"	W/1
7	WINDOW	3'-0"	4'-0"	1/2"	W/1
8	WINDOW	3'-0"	4'-0"	1/2"	W/1
9	WINDOW	3'-0"	4'-0"	1/2"	W/1
10	WINDOW	3'-0"	4'-0"	1/2"	W/1
11	WINDOW	3'-0"	4'-0"	1/2"	W/1
12	WINDOW	3'-0"	4'-0"	1/2"	W/1
13	WINDOW	3'-0"	4'-0"	1/2"	W/1
14	WINDOW	3'-0"	4'-0"	1/2"	W/1
15	WINDOW	3'-0"	4'-0"	1/2"	W/1
16	WINDOW	3'-0"	4'-0"	1/2"	W/1
17	WINDOW	3'-0"	4'-0"	1/2"	W/1
18	WINDOW	3'-0"	4'-0"	1/2"	W/1
19	WINDOW	3'-0"	4'-0"	1/2"	W/1
20	WINDOW	3'-0"	4'-0"	1/2"	W/1
21	WINDOW	3'-0"	4'-0"	1/2"	W/1
22	WINDOW	3'-0"	4'-0"	1/2"	W/1
23	WINDOW	3'-0"	4'-0"	1/2"	W/1
24	WINDOW	3'-0"	4'-0"	1/2"	W/1
25	WINDOW	3'-0"	4'-0"	1/2"	W/1
26	WINDOW	3'-0"	4'-0"	1/2"	W/1
27	WINDOW	3'-0"	4'-0"	1/2"	W/1
28	WINDOW	3'-0"	4'-0"	1/2"	W/1
29	WINDOW	3'-0"	4'-0"	1/2"	W/1
30	WINDOW	3'-0"	4'-0"	1/2"	W/1

**FIRST FLOOR - DOOR SCHEDULE**

SYMBOL	TYPE	WIDTH	HEIGHT	FINISH
1	DOOR	3'-0"	7'-0"	D/1
2	DOOR	3'-0"	7'-0"	D/1
3	DOOR	3'-0"	7'-0"	D/1
4	DOOR	3'-0"	7'-0"	D/1
5	DOOR	3'-0"	7'-0"	D/1
6	DOOR	3'-0"	7'-0"	D/1
7	DOOR	3'-0"	7'-0"	D/1
8	DOOR	3'-0"	7'-0"	D/1
9	DOOR	3'-0"	7'-0"	D/1
10	DOOR	3'-0"	7'-0"	D/1
11	DOOR	3'-0"	7'-0"	D/1
12	DOOR	3'-0"	7'-0"	D/1
13	DOOR	3'-0"	7'-0"	D/1
14	DOOR	3'-0"	7'-0"	D/1
15	DOOR	3'-0"	7'-0"	D/1
16	DOOR	3'-0"	7'-0"	D/1
17	DOOR	3'-0"	7'-0"	D/1
18	DOOR	3'-0"	7'-0"	D/1
19	DOOR	3'-0"	7'-0"	D/1
20	DOOR	3'-0"	7'-0"	D/1
21	DOOR	3'-0"	7'-0"	D/1
22	DOOR	3'-0"	7'-0"	D/1
23	DOOR	3'-0"	7'-0"	D/1
24	DOOR	3'-0"	7'-0"	D/1
25	DOOR	3'-0"	7'-0"	D/1
26	DOOR	3'-0"	7'-0"	D/1
27	DOOR	3'-0"	7'-0"	D/1
28	DOOR	3'-0"	7'-0"	D/1
29	DOOR	3'-0"	7'-0"	D/1
30	DOOR	3'-0"	7'-0"	D/1

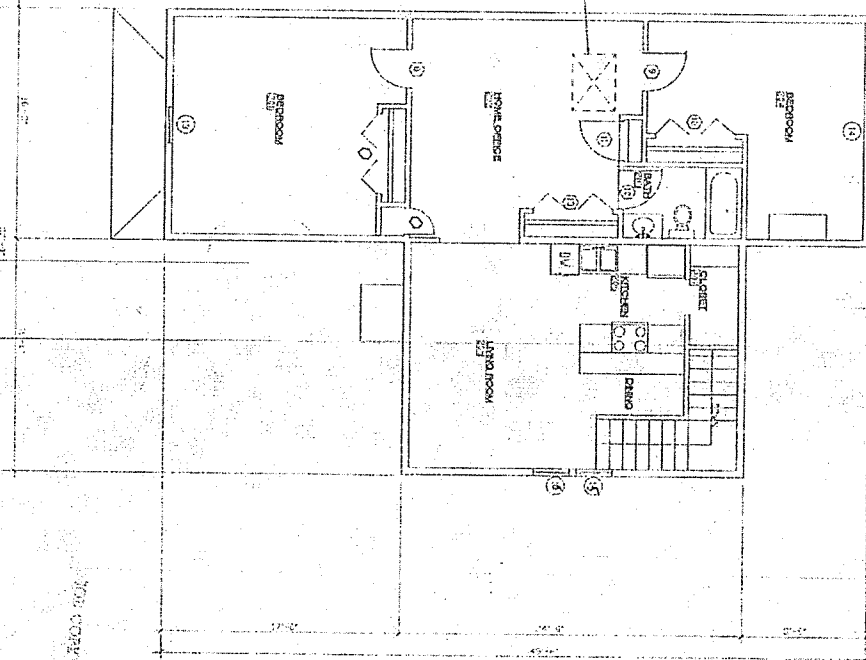
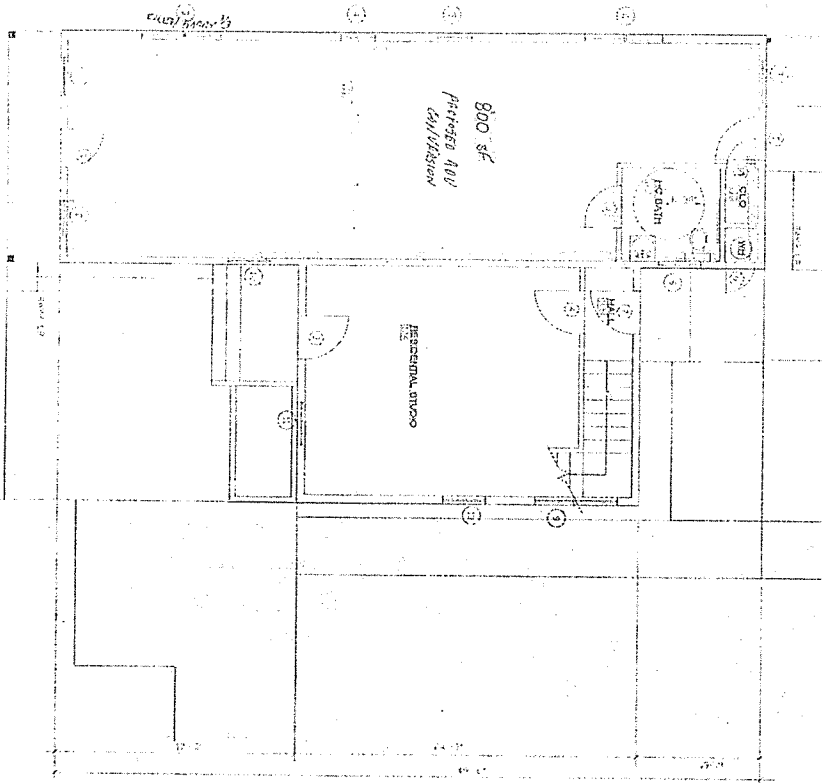


1ST FLOOR PLAN

45020 Ukiah St

FLOOR PLANS

2ND FLOOR PLAN



A21

DATE	04-11-12
BY	DWG
CHECKED	DWG
DATE	04-11-12
PROJECT	RENOVATION OF REGO HOUSE
CLIENT	FOR ANTHONY & CENTER ASSOCIATES

**FLOOR PLANS**  
 RENOVATION OF  
**REGO HOUSE**  
 BERNDORF, CA  
 FOR ANTHONY & CENTER ASSOCIATES

ARCHITECTS & ENGINEERS  
**A&E**  
 ASSOCIATED

ARCHITECTURE • PLANNING • ENGINEERING  
 DENIS MCGROSKY STRUCTURAL ENGINEER  
 ARCHITECT

1703 627-4476  
 14100242, CA 92480



NO.	SECTION
1	
2	

## Memo

**To:** MCCSD Board  
**From:** District Superintendent  
**cc:** Jim Jackson  
**Date:** October 20, 2022  
**Re:** Governance Guidelines Revisions and Updates

---

MCCSD Board has a set of Governance Guidelines, adopted in 2008. As State and County laws change it is important District guidelines stay up to date.

In January of 2022 the Board discussed making some revisions and updates to the guidelines. Suggestions were brought by Directors and reviewed by legal. An ad-hoc committee was formed and assigned the task of reviewing the guidelines and proposing updates. The committee then fell apart. The committee review was not completed and changes were not adopted.

Previously it was suggested that this Board be the ones to complete the task rather than leaving it for a new Board. Rather than just adopt the previously proposed changes it seems important to go through the process and create a thorough more detailed review by committee.

The goal today is to discuss the process and possibly create a new ad-hoc committee to propose updates to the District Governance Guideline.

## Memo

**To:** MCCSD Board  
**From:** District Superintendent  
**cc:** James Jackson  
**Date:** October 12, 2022  
**Re:** Cal OES PSPS Grant Proposed Purchases

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In March of 2021 MCCSD received a grant from Cal Office of Emergency Services related to Power Safety Power Shutoff events. The award amount was \$112,000.00

The application as submitted and awarded was to buy two large generators and a portable bypass/generator pump. When we received notification of the award we were advised that the portable bypass pump/generator did not qualify for purchase under the program, but they awarded us the money for it anyway.

After purchasing and installing a backup generator at the Heeser Drive lift station we found approximately \$85,000 remaining.

Over the past year and a half the District has investigated other possible ways to spend this grant money, which would be of greatest benefit to the District and keep within the rather strict requirements of the program. The program is really intended to purchase generators, generator fuel, and radios. We looked into solar and found that design work did not qualify, roof space was insufficient, and panels would cost around \$1 million. We looked a battery backup and found it to be around \$2 million and we did not qualify for the government funded program. We looked for a new fuel vault but distributors in CA never followed up. We looked into an electric vehicle charging station but do not have a great location or vehicle to charge. We asked about purchasing an electric service vehicle and found it did not qualify. District staff have now come up with the following proposed purchases, and the administrators of the PSPS program have given us the green light to make the purchases. District staff are requesting Board approval to make these purchases with the remaining PSPS grant funds.

**2- 3,000W Small Portable Generator for emergency lighting and tools = \$2285.00**

**1- 7,000W Portable Gas Generator for Main St. lift station back up pump \$ 1290 =\$1290.00**

**1-80KW portable/towable diesel generator to be used at all three lift stations as emergency backup or could run entire WWTP on limp mode. \$69,039 (Quote received from Electric Generators Direct and Fort Bragg Electric, and Willits Power Supply)**

**970 gal generator fuel, red diesel \$5.25 per gal = \$5,092.5**

**1- 6x12' generator transport trailer \$5,000**

**Proposed Purchases Total \$82,706.50**

Additional funds not spent on the listed purchases will go towards Fort Bragg electric installing generator transfer outlets. Any funds not spent by December 31, 2022 will need to be returned to the State.

District staff seek Board approval to make the purchases as listed above or similar purchases with the remaining PSPS grant funding.

11/2/22, 9:00 AM

MCN Webmail :: FY20 CPR: Important Upcoming Dates

Subject **FY20 CPR: Important Upcoming Dates**  
From CalOES Public Safety Power Shutoff  
<PSPS@caloes.ca.gov>  
Date 2022-11-01 2:17 pm  
Priority Highest



Hello,

This is a reminder for subrecipients of the FY20 Community Power Resiliency (CPR) Program that the performance period for this grant program ends on December 31, 2022. **This means that all grant funds must be encumbered by December 31, 2022. Subrecipients will then have 60 days to liquidate funds after the performance period end date.**

Cal OES would like to clarify that encumbered funds are defined as funds that have been allocated through a purchase order or similar means. Liquidated funds are defined as funds that are expended/disbursed.

For questions or assistance regarding CPR, please email us at [PSPS@caloes.ca.gov](mailto:PSPS@caloes.ca.gov).

Respectfully,

Nick Martin  
Community Power Resiliency Program Unit Analyst  
California Governor's Office of Emergency Services  
[Nicolas.Martin@caloes.ca.gov](mailto:Nicolas.Martin@caloes.ca.gov)

MEMO  
MCCSD BOARD PACKET

To: MCCSD Board

From: Jim Sullivan, MCCSD Board Member/Vice President

Meeting Date: Monday, November 7, 2022

Regarding Agenda Item: 10 c. SAFER Program Engagement

Board Member Sullivan would like to discuss MCCSD's role in regards to engaging in discussions with the Safe and Affordable Funding for Equity and Resilience (SAFER) program specialists. Board discussion and guidance is sought in the appropriate manner of how the MCCSD staff and the Board should interact with the SAFER staff to maximize the Town of Mendocino's public participation in Community Water System discussions and compliant with California's Brown Act for public participation.

The SAFER Engagement Unit is a subset of the Division of Drinking Water of the SAFER program which includes a team of engineers and program specialists with a goal of organizing water quality and water quantity improvement projects for "at risk" communities in providing safe and affordable drinking water supporting the state's Human Right to Water (HR2W) efforts. Significant grant funding is available for public engagement as well as drinking water infrastructure projects through the SAFER program, but funding is dependant upon the local community to engage and apply for such grant funding opportunities.

## October 2022 Superintendent's Report

### **Wastewater Treatment Plant:**

Operators performed routine repair and maintenance to the WWTP in October of 2022. Operators continue to work on completing the other ½ of the annual sewer main cleaning.

**Outfall Update:** Alpha Diving returned the week of 10/3/22 to conduct the scheduled outfall maintenance and the annual survey. Ocean conditions and boat problems continued to impact operations. The team left on Sunday 10/9/22, stating that most of the material required for the annual survey had been successfully obtained, and three (3) new hold down brackets had been successfully installed. Another dive is planned before the end of the year at no charge to collect additional data.

### **Recycled Water:**

MCCSD is now operating under the new NPDES Discharge Permit. In order to maintain compliance, MCCSD has stopped transferring recycled water to MUSD. Upgrades to the recycled water system are needed to continue transferring water. Tuesday November 1, 2022 the Mendocino County Board of Supervisors listed the MCCSD Recycled Water System Upgrades as one of the top five (5) County priority water projects, and the top priority for the 5<sup>th</sup> District.

### **Biosolids Trailer and Transport:**

MCCSD transported one load of biosolids in October 2022.

### **Drought Update:**

The District continues to focus on water conservation and we continue to see higher than expected groundwater levels. We haven't seen any recent water trucks in town, and still have not received any official reports of dry wells. The 3.4" of recorded rainfall on 9/18/22 came at a much appreciated time, but October was dryer than normal.

In this third year of drought District admin continue to spend 80-90% of staff time on issues related to groundwater and groundwater management.

The California SAFER program (Safer and Affordable Funding for Equity and Resilience) hosted a community meeting on October 18, 2022. 18 people attended, and they started a dialogue about what they do and some of the water related challenges facing Mendocino. They have sent out an online survey to property owners.

### **Grant and Project Updates:**

GHD continues to move forward on environmental and hydrological work for the Emergency Water Storage Tank Project. MCCSD has not received any office updates on other recent grant applications, but announcements for the Federal Bureau of Reclamation are expected by the end of November. MCCSD did write a letter of support for a proposed Fort Bragg desalination project. The District investigated the possibility of grant funding for a battery backup system similar to what the Willits and Humboldt Bay wastewater Districts have. Unfortunately property owners of this District are not financially disadvantaged

enough to qualify for the program. The Superintendent has come up with a list of items to purchase with the remaining PSPS grant funds. This list meets all the program criteria and has been approved by the program staff. Tonight we are seeking Board approval for the purchases.

**Office Update:**

The 3<sup>rd</sup> Qrt self-monitoring report was successfully submitted to the State on time. That was the last report under the old discharge permit. On Friday, October 7, 2022. MCCSD successfully mailed over 400+ notices of Public Hearing and ballots to property owners. On that same day MCCSD also publically posted the notice of public hearing four places around town, on the MCCSD web page, and sent notice to the Mendocino Beacon for two weeks of publication. All of this more than 45 days before the scheduled November 28, 2022 Public Hearing in compliance with prop 218. A Director contacted the office after receiving their notice of public hearing of a misprint on the sewer service ballot. District staff received two legal opinions and review by members of the Rate Study Committee. The misprint has been corrected and a corrected ballot and erratum letter was mailed to property owners on Friday 10/21/22.

Scheduled time off, illness, and Covid, have all plagued MCCSD this past month and we have been severely short staffed in both October and early November.

**Safety Meeting and Plant Safety Inspection:**

The District is still following County, State, Federal, and CDC guidelines regarding COVID-19 safety precautions. The 30-minute monthly safety meeting was held October 19, 2022. The topic was *Electrical Safety*.

**Sanitary Sewer Collection System:**

There were no MCCSD collection system sanitary sewer overflows to report during January 1, 2020 to November 3, 2022. Operators hope to complete sewer main cleaning this month.

## October's Secretary's Report

This month's violation letters went out Thursday, October 20. The results are listed below:

No Readings Violation #1: 24

No Readings Violation #2: 0

No Readings Violation #3: 1

Overage Violation #1: 0

Overage Violation #2: 0

Overage Violation #3: 0

The end of last month and beginning of this month was completely devoted to getting the ballots ready and mailed. Unfortunately, it was pointed out that there was a misprint on the Sewer ballot, so I have been updating them and stuffing envelopes with an erratum letter and new ballot. Anyone who has already submitted a ballot can rest assured it will count.

Sadly, I got Covid at the beginning of the month and it knocked me out! I have been on the mend and am almost back to 100%.