#28

County of San Bernardino — Environmental Public Works Agency
ENVIRONMENTAL HEALTH SERVICES DEPARTMENT
385 North Arrowhead Avenue, San Bernardino, CA 92415-0160

Do Not Fill In
Permit No. 022 79013
Expiration 2-27-91
FF
FA
SN

WELL PERMIT

Well #72
2S/1W-3H1

PLEASE PRINT:

1. OWNER: Name [redacted]
Mailing Address [redacted]
City Los Angeles Zip 90004
Phone No. (213) 463-1181

2. DATE OF WORK *(approximate)*:
Start 3/1/90 Complete 3/6/90

3. WELL DRILLER *(Check One)*:
☐ Owner ☒ Contractor SAM CRUM WATER WELL DRILLING
Name

4. WELL USE *(check)*:
☐ Community ☐ Horizontal ☐ Other
☐ Individual ☒ Test
☐ Agricultural ☐ Monitoring
☐ Dairy ☐ Public Water Supply

5. TYPE OF WORK *(check)*:
☒ New ☐ Reconstruction ☐ Destruction

Items 6 through 10 to be estimated for new wells, and exact for all other wells.

6. ANNULAR SEAL: Seal Depth _____ ft.
Furnished by: ☐ Owner ☐ Contractor
☐ Driven Conductor Dia. _____ in., Wall (Gage) _____
☐ Sealing Material _____, Thickness _____ in.

7. DEPTH OF WELL *(feet)*:
Proposed 500 Existing _____
DIAMETER OF BORE *(in.)*: 8

8. CASING INSTALLED:
☐ Steel ☐ Plastic ☐ Other

From (ft.)	To (ft.)	Dia. (in.)	Wall (Gage)

GRAVEL PACK: ☐ Yes ☐ No
From _____ to _____ ft.

9. PERFORATIONS *(if applicable)*:
From _____ to _____ ft.

10. SEALED ZONES *(if applicable)*:
From _____ to _____ ft.

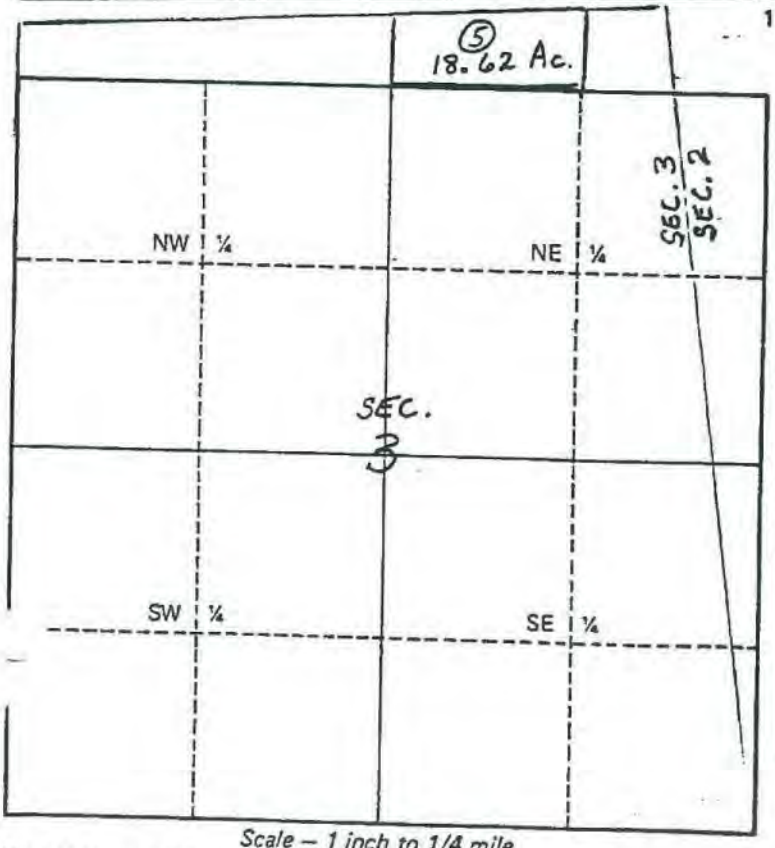
11. LOCATION INFORMATION: 20C-6D

(a) Township 2S N/S Range 1W E/W
Section 3

(b) Assessor's Parcel No. 325 011 05

(c) Solid or liquid waste disposal site within two miles?
☐ Yes ☒ No

Location: Gov. Lot #2 - Off Pisgah Peak Fire R



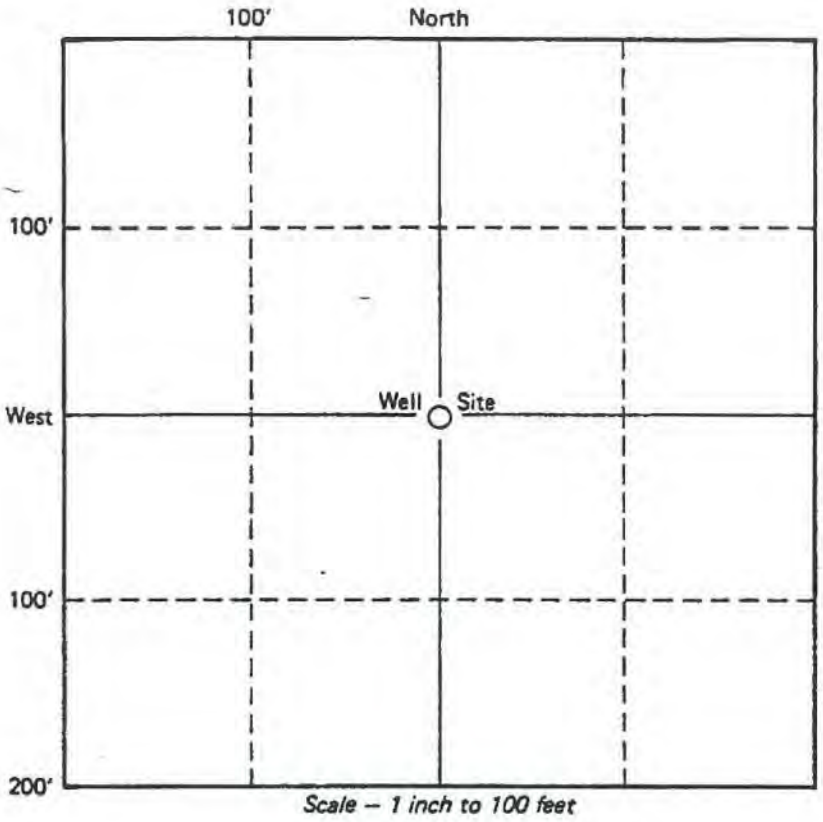
Scale – 1 inch to 1/4 mile

Do Not Fill In

SAN BERNARDINO CO.
LAND MANAGEMENT - E.P.W.A.
01 00027239 0045 CHR 02/20/90 15:01 F
005 ENV HEALTH SERV TOT PAID: 110.00
0 00000000
561 EHS 110.0

03-14785-631 Rev. 8/90

well #12 25/1 W-34J



Scale – 1 inch to 100 feet

12. PLOT PLAN:

(a) In perspective to the well site, sketch and label the following items: well lot property lines, other wells *(include abandoned wells)*, sewage disposal systems *(sewers, septic tanks, leaching fields, seepage pits, cesspools)*, lakes and ponds, water courses and animals or fowl kept.

(b) Indicate the distance in *feet*, of any of the following which are within 200 ft. of the well site:

Other wells	_____
Sewers	_____
Septic tanks	_____
Leaching fields	_____
Seepage pits	_____
Cesspools	_____
Lakes and ponds	_____
Water courses	_____
Animals or fowl kept	_____

(c) ☒ None of the above are within 200 feet of the well site.

13. I have read this application and agree to comply with all laws regulating the type of work being performed. The California Labor Code requires Workers' Compensation Insurance as a prerequisite to permit issuance unless the applicant signs the following certificate:

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation laws of California.

Owner's Signature _____ Date _____

☒ Contractor's Signature Sam Cuan Date 2/7/90 Reg. No. 134

DISPOSITION OF PERMIT

(Do Not Fill In)

☒ Approved subject to the following:

A. Notify the Department, Jon Tracey (714) 387-4666, twenty-four (24) hours in advance to make an inspection of the following operations:

☒ Prior to sealing of the annular space or filling of the conductor casing.

2/26/90 ☐ Verify the depth of the conductor (outer) casing prior to further drilling and installation of the inner casing.

AB ☒ After installation of the surface protective slab and pumping equipment.

☐ During destruction of wells, prior to pouring the sealing material.

B. Submit to the Department within thirty (30) days after completion of work, a copy of:

☒ Water Well Driller's Report ☐ Bacteriological Analysis ☐ Inorganic Chemical Analysis

☐ Radiological Analysis ☐ General Mineral ☐ Organic Chemical Analysis ☐ General Physical

C. Other Test wells shall be amended or destroyed under permit within 24 hours of completion of test work.

☐ DENIED _____

Well #18 NOW YVWD WELL #73

TRIPLICATE
Owner's Copy 2S/W-3B1

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in
No. 204467

Notice of Intent No.
Permit No. or Date
State Well No.
Other Well No.

(1) OWNER: Name [redacted]
Address [redacted]
City Los Angeles, CA Zip 90057

(2) LOCATION OF WELL (See instructions):
County San Bernadino Owner's Well Number 18
Well address if different from above Wildwood Cyan Rd.
Township Range Section
Distance from cities, roads, railroads, fences, etc.

WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☒
Irrigation ☐
Industrial ☐
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☒
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☐ Size
Diameter of bore
Packed from to ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	400	8	

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 50 ft.
Were strata sealed against pollution? Yes ☐ No ☐ Interval ft.
Method of sealing Steel- cement

(10) WATER LEVELS:
Depth of first water, if known 240 XXXXX ft.
Standing level after well completion 145 ft.

(11) WELL TESTS:
Was well test made? Yes ☐ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test ft. At end of test ft.
Discharge gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?
electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 400 ft. Depth of completed well 400 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	- 20	Broken brown DG
20	- 60	Broken to hard blue green roc
60	- 80	Broken up blue green rock
80	-120	clay brown white mix
1200	-140	Blck granite
140	-180	Broken up blue/green
180	-200	Bronw & green boke up
200	-240	water brown
240	-280	brown & green broken up
280	-320	water- green broken up
320	-340	green & brown broken up
340	-400	Black granite- STOP

Work started 1-18 19 88 Completed 1-26 19 88

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
SIGNED (Well Driller)
NAME Jack Jones WElls & Pumps
(Person, firm, or corporation) (Typed or printed)
Address P.O. Box 250
City Hemet, CA 92343
License No. 436011 Date of this report 3-18-88

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

2S/1W-3A1 NOW YVWD WELL # 74

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in

No. 217126

State Well No.________
Other Well No.________

Notice of Intent No.________
Permit No. or Date 08158807

(1) OWNER: Name [redacted]
Address [redacted]
City Los Angeles, CA Zip 90004

(2) LOCATION OF WELL (See instructions):
County San Bernardino Owner's Well Number 20
Well address if different from above Parcel 325-011-08
Township 2S Range 1W Section 3
Distance from cities, roads, railroads, fences, etc.________

WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☒
Irrigation ☐
Industrial ☐
Test Well ☐
Stock ☒
Municipal ☐
Other ☐

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☒
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size 6x14 Well Rock
Diameter of bore 12½"
Packed from 50 to 583 ft.

(7) CASING INSTALLED:
Steel ☒ Plastic ☐ Concrete ☐

(8) PERFORATIONS:
Type of perforation or size of screen________

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	200	8-5/8	.188	200	583	.100

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 50 ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval________ft.
Method of sealing________

(10) WATER LEVELS:
Depth of first water, if known________ft.
Standing level after well completion 232 ft.

(11) WELL TESTS:
Was well test made? Yes ☒ No ☐ If yes, by whom?________
Type of test Pump ☐ Bailer ☐ Air lift ☐
Depth to water at start of test________ft. At end of test________ft.
Discharge________gal/min after________hours Water temperature________
Chemical analysis made? Yes ☐ No ☐ If yes, by whom?________
Electric log made? Yes ☐ No ☐ If yes, attach copy to this report

(12) WELL LOG: Total depth 0 ft. Depth of completed well 583 ft.
from ft. to ft. Formation (Describe by color, character, size or material)

0 - 18 - Fine sand & brown clay.
18 - 39 - Fine sand & shale.
39 - 78 - Fine sand & rock with shale mix.
78 - 129 - Fine & medium coarse sand with streaks of shale & granite.
129 - 318 - Decomposed granite - blue in color.
318 - 583 - Decomposed granite - solid formation - blue green in color.

Work started________19____ Completed________19____

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED William Steese
(Well Driller)

NAME William Steese - SoCal Pump & Well Service
(Person, firm, or corporation) (Typed or printed)
Address 585 W. Valley Blvd.
City Bloomington, CA Zip 92316
License No. 510836 Date of this report 11/29/88

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Well #16 NOW YVWD WELL # 75

TRIPLICATE
Owner's Copy

1S/1W-34Q1

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in
No. 193900

Notice of Intent No.
Permit No. or Date.

State Well No.
Other Well No.

(1) OWNER: Name [redacted]
Address [redacted]
City Los Angeles, Ca. Zip 90057

(2) LOCATION OF WELL (See instructions):
County San Bernadino Owner's Well Number
Well address if different from above
Township Range Section
Distance from cities, roads, railroads, fences, etc.

WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☐
Test Well ☐
Stock ☐
Municipal ☐
Other ☐

(5) EQUIPMENT:
Rotary ☐ Reverse ☐
Cable ☐ Air ☒
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☐ No ☐ Size
Diameter of bore
Packed from ft. to ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
	420	8"	

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 50 ft.
Were strata sealed against pollution? Yes ☐ No ☒ Interval ft.
Method of sealing Cement-Steel/10"

(10) WATER LEVELS:
Depth of first water, if known 240 ft.
Standing level after well completion 145 ft.

(11) WELL TESTS:
Was well test made? Yes ☒ No ☐ If yes, by whom?
Type of test Pump ☐ Bailer ☐ Air lift ☒
Depth to water at start of test ft. At end of test ft.
Discharge 150 gal/min after hours Water temperature
Chemical analysis made? Yes ☐ No ☒ If yes, by whom?
Electric log made? Yes ☐ No ☒ If yes, attach copy to this report

(12) WELL LOG: Total depth 420 ft. Depth of completed well 420 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	20	Broke Up Brown DG
20	40	Broke Up blue/green rock
40	60	Hard blue/green rock
60	80	Broke Up Blue/green rock
80	100	Hard blue/green rock
100	120	Clay brown/white mix broke up
120	140	Black gran. & blue/green mix
140	160	Broke Up Blue/Green
160	180	Brke Up Blue/ Green
180	200	Broke Up blue/green rock
200	220	Brown & green broke up
220	240	" " water
240	260	water " "
260	280	" " water
280	300	" " water
300	320	" " water
320	340	" " water
340	360	" " water
360	380	" " water
380	400	" " water
400	420	Hard black granite

Work started 3-13 19 87 Completed 4-1 19 87

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

SIGNED (Well Driller)

NAME Ron Engeldinger (Person, firm, or corporation) (Typed or printed)
Address P.O. Box 250
City Hemet, Ca. Zip 92343
License No. 294625 Date of this report 4-16-878

188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

Well 106

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0107583

Page 1 of 1

Owner's Well Number MW-4

Date Work Began 11/18/2009 Date Work Ended 11/18/2009

Local Permit Agency Riverside County Department of Environmental Health

Permit Number WP 20441 Permit Date 11/10/09

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Hollow Stem Auger Drilling Fluid Air

Depth from Surface Feet	to Feet	Description (Describe material, grain size, color, etc)
0	4	Silty sand, fine to medium with gravel, light brown
4	9	Sand, fine to coarse with silt and gravel, brown
9	27	Silty sand, fine with medium and clay, brown
27	46	Silty sand, fine to medium with clay, brown
46	54	Silty sand, fine, gray brown
54	82	Sandy silt, fine with clay, brown

Total Depth of Boring 82 Feet

Total Depth of Completed Well 80 Feet

Well Owner

Name [redacted]

Mailing Address [redacted]

City Yucaipa State CA Zip 92399

Well Location

Address San Timoteo Canyon Road

City Calimesa County Riverside

Latitude 33 Deg. 59 Min. 15 Sec. N Longitude 117 Deg. 8 Min. 4 Sec. W

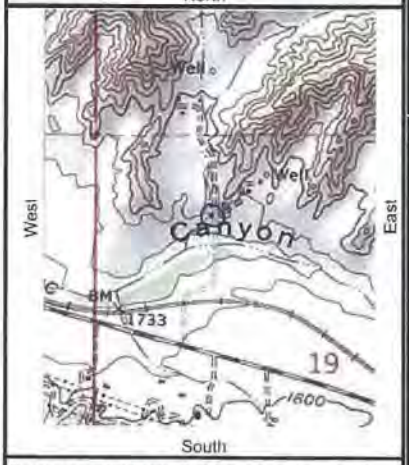
Datum NAD83 Decimal Lat. 33.987 Decimal Long. 117.134

APN Book 413 Page 380 Parcel 004

Township 2S Range 2W Section 19

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. **Please be accurate and complete.**

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 60 (Feet below surface)

Depth to Static Water Level (Feet) Date Measured

Estimated Yield * (GPM) Test Type

Test Length (Hours) Total Drawdown (Feet)

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

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	65	10	Blank	PVC Sch. 40		4		
65	80	10	Screen	PVC Sch. 40		4	Milled Slots	0.020

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	51	Cement	seal
51	55	Bentonite	seal
55	80	Filter Pack	sand

Attachments

☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other

Attach additional information, if it exists.

Certification Statement

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

Name Jay J. Martin for C.H.J., Incorporated, Vice President, CEG 1529
Person, Firm or Corporation

1355 E. Cooley Drive Colton CA 92324
Address City State Zip

Signed [signature] 3/18/2010 766402
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

MONITORING WELL NO. MW-4

Date Drilled: 11/18/09 Client: [redacted]

Equipment: B-61 Hollow-Stem Auger Driving Weight / Drop: 140 lbs./30 in.

Coordinates: 33.987°-117.134° Logged by: VJR Groundwater First Encountered (ft): 60.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	SAMPLE NO.	SAMPLES: DRIVE	SAMPLES: BULK	BLOWS/FOOT (Equiv. SPT)	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		(SM) Silty Sand, fine to medium, gravel, light brown	Native	X		4 4 4			SPT
5		(SP-SM) Sand, fine to coarse with silt, gravel, brown		X		5 7 10			SPT
10		(SM) Silty Sand, fine with medium, clay, brown		X		5 8 13			SPT
15				X		6 9 13			SPT
20				X		6 10 18			SPT
25		(SM) Silty Sand, fine to medium, clay, brown							
30				X		9 15 19			SPT

MONITORING_WELL 09631-8.GPJ CHJ.GDT 11/24/09

C.H.J.

WELLS - SAN TIMOTEO & LIVE OAK CANYONS
RIVERSIDE COUNTY, CALIFORNIA

Job No. 09631-8

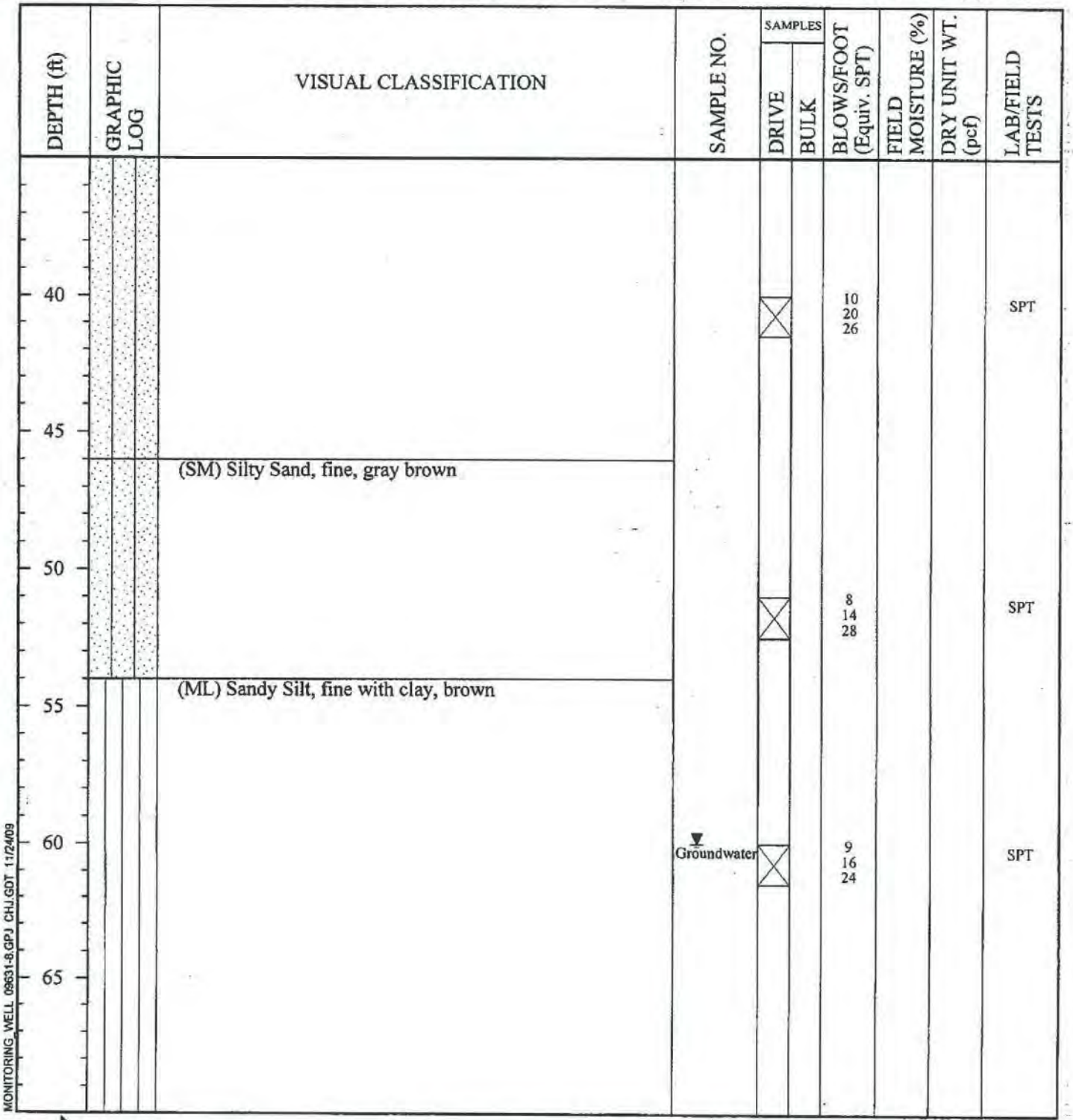
Enclosure B-4a

MONITORING WELL NO. MW-4

Date Drilled: 11/18/09 Client: [redacted]

Equipment: B-61 Hollow-Stem Auger Driving Weight / Drop: 140 lbs./30 in.

Coordinates: 33.987°-117.134° Logged by: VJR Groundwater First Encountered (ft): 60.0



MONITORING_WELL 09631-8.GPJ CHJ.GDT 11/24/09

C.H.J.

WELLS - SAN TIMOTEO & LIVE OAK CANYONS
RIVERSIDE COUNTY, CALIFORNIA

Job No. 09631-8

Enclosure B-4b

MONITORING WELL NO. MW-4

Date Drilled: 11/18/09 Client: [redacted]

Equipment: B-61 Hollow-Stem Auger Driving Weight / Drop: 140 lbs./30 in.

Coordinates: 33.987°-117.134° Logged by: VJR Groundwater First Encountered (ft): 60.0

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	SAMPLE NO.	SAMPLES: DRIVE	SAMPLES: BULK	BLOWS/FOOT (Equiv. SPT)	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
				X		45 50/3"			SPT
75									
80				X		14 27 46			SPT
		END OF BORING	Refusal						
		REFUSAL AT 81.5', NO BEDROCK NO FILL, SLIGHT CAVING PERCHED LAYER OF GROUNDWATER ENCOUNTERED AT 60.0'							
85									
90									
95									
100									

MONITORING_WELL 09631-8.GPJ CHJ.GDT 11/24/09

C.H.J.

WELLS - SAN TIMOTEO & LIVE OAK CANYONS
RIVERSIDE COUNTY, CALIFORNIA

Job No. 09631-8

Enclosure B-4c

MW 107

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0115380

Page 1 of 2

Owner's Well Number

Date Work Began 07/29/2010 Date Work Ended 8/4/2010

Local Permit Agency San Bernardino Department of Public Health

Permit Number 7010070342 Permit Date 7/23/10

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Reverse Rotary Drilling Fluid Fresh Water

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
35	90	Sand Gravel
90	120	Sand Clay
120	200	Sand Gravel
200	250	Sand Gravel Clay
250	310	Sand Gravel
310	340	Sand Gravel Clay
340	417	Sand Gravel

Total Depth of Boring 417 Feet

Total Depth of Completed Well 415 Feet

Well Owner

Name [redacted]

Mailing Address [redacted]

City [redacted] State CA. Zip 92399

Well Location

Address San Timoteo Canyon Road

City Yucaipa County San Bernardino

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

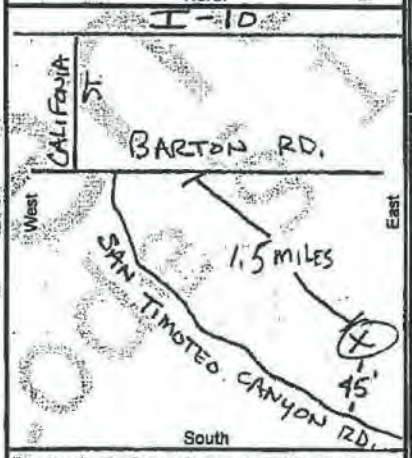
Datum Decimal Lat. Decimal Long.

APN Book 0175 Page 221 Parcel 06

Township 2S Range 3W Section 4

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water (Feet below surface)

Depth to Static Water Level (Feet) Date Measured

Estimated Yield* (GPM) Test Type

Test Length (Hours) Total Drawdown (Feet)

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

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	35	32	Conductor	Low Carbon Steel	.250	20		
0	340	17.5	Blank	PVC Sch. 80	.214	5		
340	360	17.5	Screen	PVC Sch. 80	.214	5		0.050
0	285	17.5	Blank	PVC Sch. 80	.214	5		
285	305	17.5	Screen	PVC Sch. 80	.214	5		0.050
0	120	17.7	Blank	PVC Sch. 80	.214	5		

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	225	Filter Pack	8x16 Midcal
225	230	Fill	Sand
230	250	Bentonite	Seal
250	255	Fill	Sand
255	310	Filter Pack	8x16 Gravel
310	315	Fill	Sand

Attachments

☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other

Attach additional information, if it exists.

Certification Statement

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

Name Bakersfield Well & Pump Co.
Person, Firm or Corporation

7212 Fruitvale Ave Address Bakersfield City CA State 93308 Zip

Signed C-57 Licensed Water Well Contractor

8/20/2010 Date Signed

440537 C-57 License Number

VR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0115380

Page 2 of 2

Owner's Well Number

Date Work Began 07/29/2010 Date Work Ended 8/4/2010

Local Permit Agency San Bernardino Department of Public Health

Permit Number 7010070342 Permit Date 7/23/10

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Reverse Rotary Drilling Fluid Fresh Water

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
35	90	Sand Gravel
90	120	Sand Clay
120	200	Sand Gravel
200	250	Sand Gravel Clay
250	310	Sand Gravel
310	340	Sand Gravel Clay
340	417	Sand Gravel

Total Depth of Boring 417 Feet

Total Depth of Completed Well 415 Feet

Well Owner

Name [redacted]

Mailing Address [redacted]

City [redacted] State CA Zip 92399

Well Location

Address San Timoteo Canyon Road

City Yucaipa County San Bernardino

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

Datum Decimal Lat. Decimal Long.

APN Book 0175 Page 221 Parcel 06

Township 2S Range 3W Section 4

Location Sketch

(Sketch must be drawn by hand after form is printed.)

Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

○ Water Supply
☐ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
◉ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water (Feet below surface)

Depth to Static Water Level (Feet) Date Measured

Estimated Yield * (GPM) Test Type

Test Length (Hours) Total Drawdown (Feet)

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

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
120	140	17.5	Screen	PVC Sch. 80	.214	5		0.050

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
315	330	Bentonite	Seal
330	335	Fill	Sand
335	415	Filter Pack	8x16 Midcal

Attachments

☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other

Attach additional information, if it exists.

Certification Statement

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

Name Bakersfield Well & Pump Co.
Person, Firm or Corporation

Address 7212 Fruitvale Ave City Bakersfield State CA Zip 93308

Signed [signature] 8/20/2010 440537
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

Appendix 3-B

Monitoring Forms and Protocols

WATER-LEVEL MEASUREMENT FIELD FORM

Date (YYYY/MM/DD): Site ID:

Well Type: Production / Monitoring / Private Measuring Agency/Entity:

Well Pumping? Is Water Level Static?

Method of Water Level Measurement (see below): Site Status (see below):

Measuring Equipment ID: Measuring Point Elevation (ft NAVD88):

WATER LEVEL DATA

Time of Measurement					
Measurement (feet)					
Tape Correction (feet)					
Water Level below MP (feet)					
Measuring Point Correction					
Water Level below Land Surface					
Water Elevation (ft NAVD88)					

Measured by: Comments:*

*Comments should include quality concerns and changes that affect the representativeness of the measurements (e.g., changes in MP elevation, ownership, well operations, access to measure DTW, etc.)

Site Status: D = dry; O = obstructed; P = pumping; R = recently pumped and recovering; NP = nearby pumping; V = foreign substance; WD = well destroyed; SW = surface water effects; Z = other; S = Static

Method of Water Level Measurement: A = airline; B = analog; C = calibrated airline; E = estimated; G = pressure gauge; H = calibrated pressure gage; M = manometer; R = reported; S = steel tape; T = electric tape; V = calibrated electric tape; Z = other.

NOTES:

Measuring Protocol:

1. Check circuitry of electrical tape before lowering the probe into the well by dipping probe into tap water.
2. Make all readings using the same indicator for consistency (light intensity or sound).
3. Lower electrode probe slowly into the well until the indicator shows that the circuit is closed and contact with the water surface is made. Place the nail of the index finger on the insulated wire at the MP (Measuring Point) and read the depth-to-water.
4. Record time of measurement. Record depth to water in the row “Measurement (feet)”. If the tape has been repaired and spliced or has a calibration correction, subtract the “Tape Correction” value from the “Measurement” value and record the difference in the row “Water Level below MP”.
5. Pull the tape up and make a check measurement by repeating steps 3-4. Record the check measurement in column 2. If check measurement does not agree with the original measurement within 0.02 foot, continue to make measurements until the reason of lack of agreement is determined or the results are shown to be reliable. If more than 2 measurements are made, use best judgment to select measurement most representative of field conditions.
6. Disinfect and rinse that part of tape that was submerged below water. Dry tape and rewind.

Format instructions and notes:

Site ID:	Well identified or State Well No.
MP:	measuring point
ft NAVD88:	feet above the National Vertical Datum of 1988.
Measuring Equipment ID:	serial number or identifier of measuring equipment

WELL PRODUCTION RECORD

Date	Time	Well ID	Totalizer Reading (Gallons)	Instantaneous Pumping Rate (GPM)	Estimated Pumping Rate (GPM)	Model and Make of Totalizer

WATER QUALITY FIELD FORM

Date (YYYY/MM/DD): Site ID:

Well Type: Production / Monitoring / Private Measuring Agency/Entity:

Well Pumping? If so, how long? Is Initial Water Level Static?

Method of Well Purging (see below): Site Status (see below):

Purging Equipment ID: Water Quality Meter ID:

Purge Volume Calculation:

[A] Total depth of well casing (ft bls): [C] Well Casing Inside Diameter (inches):

[B] Static depth to water, if not pumping (ft bls): [D] Length of Water Column, [A] - [B] (ft):

Purge Volume (3 Casing Volumes), ([D] * π/4 * ([C]/12)^2) * 3 =

WATER QUALITY PARAMETERS

Time	Purge Rate	Temperature (^{o}C)	pH	Conductivity ( )	Oxidation-Reduction Potential (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)

Measured by: Comments:*

WATER QUALITY FIELD FORM

*Comments should include quality concerns and changes that affect the representativeness of the measurements (e.g., changes in pump placement, ownership, well operations, access to sampling port, etc.)

Site Status: D = dry; O = obstructed; P = pumping; R = recently pumped and recovering; NP = nearby pumping; V = foreign substance; WD = well destroyed; SW = surface water effects; Z = other; S = Static

Method of Well Purging: B = bailer; D = dedicated submersible pump; P = portable submersible pump; T = dedicated turbine pump; S = peristaltic pump.

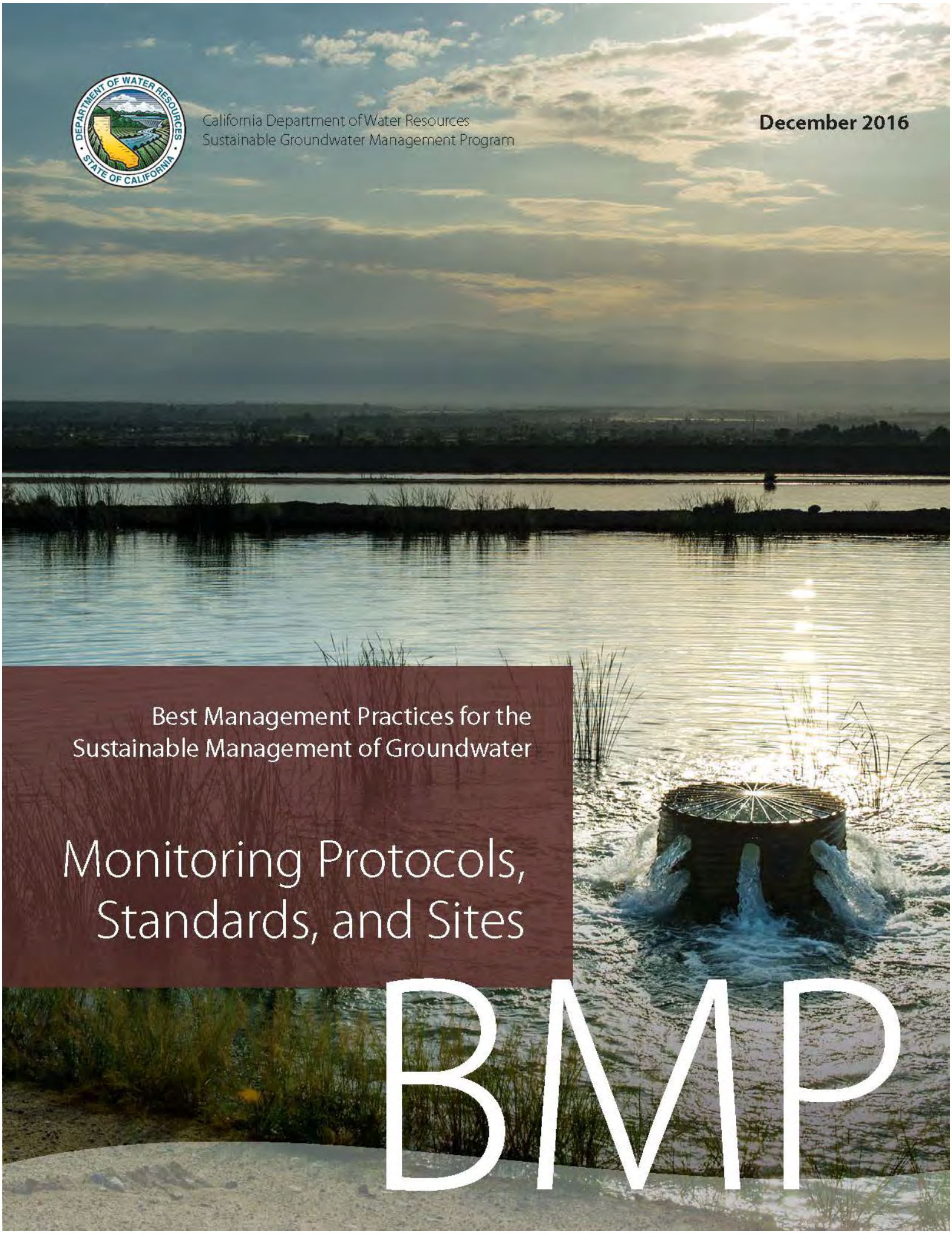
NOTES:

Purging and Sampling Protocol:

1	If the well has a dedicated pump and it is operating, ensure that it has been operating consistently and at least three (3) casing volumes have been pumped. If not, note pumping rate and time to purge 3 casing volumes before collecting representative samples. Measure and record water quality parameters through purging process.
2	If the well does not have a dedicate pump, then use purging equipment (e.g., portable submersible pump, bailer) to purge well. If using a portable submersible pump, lower pump to depth (consistent with previous smapling events) that ensures pump will not draw water level down to intake and, if possible, is positioned above the top of the well screen.
3	Ensure that portable purging equipment is properly decontaminated prior to use. Any decontamination must be documented (e.g., material used to decontaminate equipment, rinsing method, containment of waste, waste disposal).
4	Measure and/or record purge rate periodically. Collect purge sample to measure parameters periodically. Parameters should stablize (within 10% of previous three readings) before collecting the water quality sample.
5	Use the appropriate sample containers provided by the analytical laboratory. Sample containers shoud be labeled prior to sample collection. The sample label should include: Sample ID (often well ID), sample date and time of collection, sampling personnel, preservative used (if any), and the analytical method to be used on the sample.
6	All samples should be preserved as soon as possible in an ice chest containing ice. The samples should be chilled and maintained at 4 ^{o}C.
7	The Chain-of-Custory form should be filled out as the sample is collected and preserved.

Format instructions and notes:

Site ID:	Well identifier or State Well No.
ft bls:	feet below land surface
Purging Equipment ID/description:	serial number or identifier of measuring equipment



California Department of Water Resources
Sustainable Groundwater Management Program

December 2016

Best Management Practices for the Sustainable Management of Groundwater

Monitoring Protocols, Standards, and Sites

BMP

State of California
Edmund G. Brown Jr., Governor

California Natural Resources Agency
John Laird, Secretary for Natural Resources

Department of Water Resources
Mark W. Cowin, Director

Carl A. Torgersen, Chief Deputy Director

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Groundwater Monitoring Protocols, Standards, and Sites Best Management Practice

1. OBJECTIVE

The objective of this *Best Management Practice* (BMP) is to assist in the development of Monitoring Protocols. The California Department of Water Resources (the Department or DWR) has developed this document as part of the obligation in the Technical Assistance chapter (Chapter 7) of the Sustainable Groundwater Management Act (SGMA) to support the long-term sustainability of California's groundwater *basins*. Information provided in this BMP provides technical assistance to Groundwater Sustainability Agencies (GSAs) and other stakeholders to aid in the establishment of consistent data collection processes and procedures. In addition, this BMP can be used by GSAs to adopt a set of sampling and measuring procedures that will yield similar data regardless of the monitoring personnel. Finally, this BMP identifies available resources to support the development of monitoring protocols.

This BMP includes the following sections:

1. Objective. A brief description of how and where monitoring protocols are required under SGMA and the overall objective of this BMP.
2. Use and Limitations. A brief description of the use and limitations of this BMP.
3. Monitoring Protocol Fundamentals. A description of the general approach and background of groundwater monitoring protocols.
4. Relationship of Monitoring Protocols to other BMPs. A description of how this BMP is connected with other BMPS.
5. Technical Assistance. Technical content providing guidance for regulatory sections.
6. Key Definitions. Descriptions of definitions identified in the GSP Regulations or SGMA.
7. Related Materials. References and other materials that provide supporting information related to the development of Groundwater Monitoring Protocols.

2. USE AND LIMITATIONS

BMPs developed by the Department provide technical guidance to GSAs and other stakeholders. Practices described in these BMPs do not replace the GSP Regulations, nor do they create new requirements or obligations for GSAs or other stakeholders. In addition, using this BMP to develop a GSP does not equate to an approval determination by the Department. All references to GSP Regulations relate to Title 23 of the California Code of Regulations (CCR), Division 2, Chapter 1.5, and Subchapter 2. All references to SGMA relate to California Water Code sections in Division 6, Part 2.74.

3. MONITORING PROTOCOL FUNDAMENTALS

Establishing data collection protocols that are based on best available scientific methods is essential. Protocols that can be applied consistently across all basins will likely yield comparable data. Consistency of data collection methods reduces uncertainty in the comparison of data and facilitates more accurate communication within basins as well as between basins.

Basic minimum technical standards of accuracy lead to quality data that will better support implementation of GSPs.

4. RELATIONSHIP OF MONITORING PROTOCOL TO OTHER BMPS

Groundwater monitoring is a fundamental component of SGMA, as each GSP must include a sufficient network of data that demonstrates measured progress toward the achievement of the sustainability goal for each basin. For this reason, a standard set of protocols need to be developed and utilized.

It is important that data is developed in a manner consistent with the basin setting, planning, and projects/management actions steps identified on **Figure 1** and the GSP Regulations. The inclusion of monitoring protocols in the GSP Regulations also emphasizes the importance of quality empirical data to support GSPs and provide comparable information from basin to basin.

Figure 1 provides a logical progression for the development of a GSP and illustrates how monitoring protocols are linked to other related BMPs. This figure also shows the context of the BMPs as they relate to various steps to sustainability as outlined in the GSP Regulations. The monitoring protocol BMP is part of the Monitoring step identified in **Figure 1**.

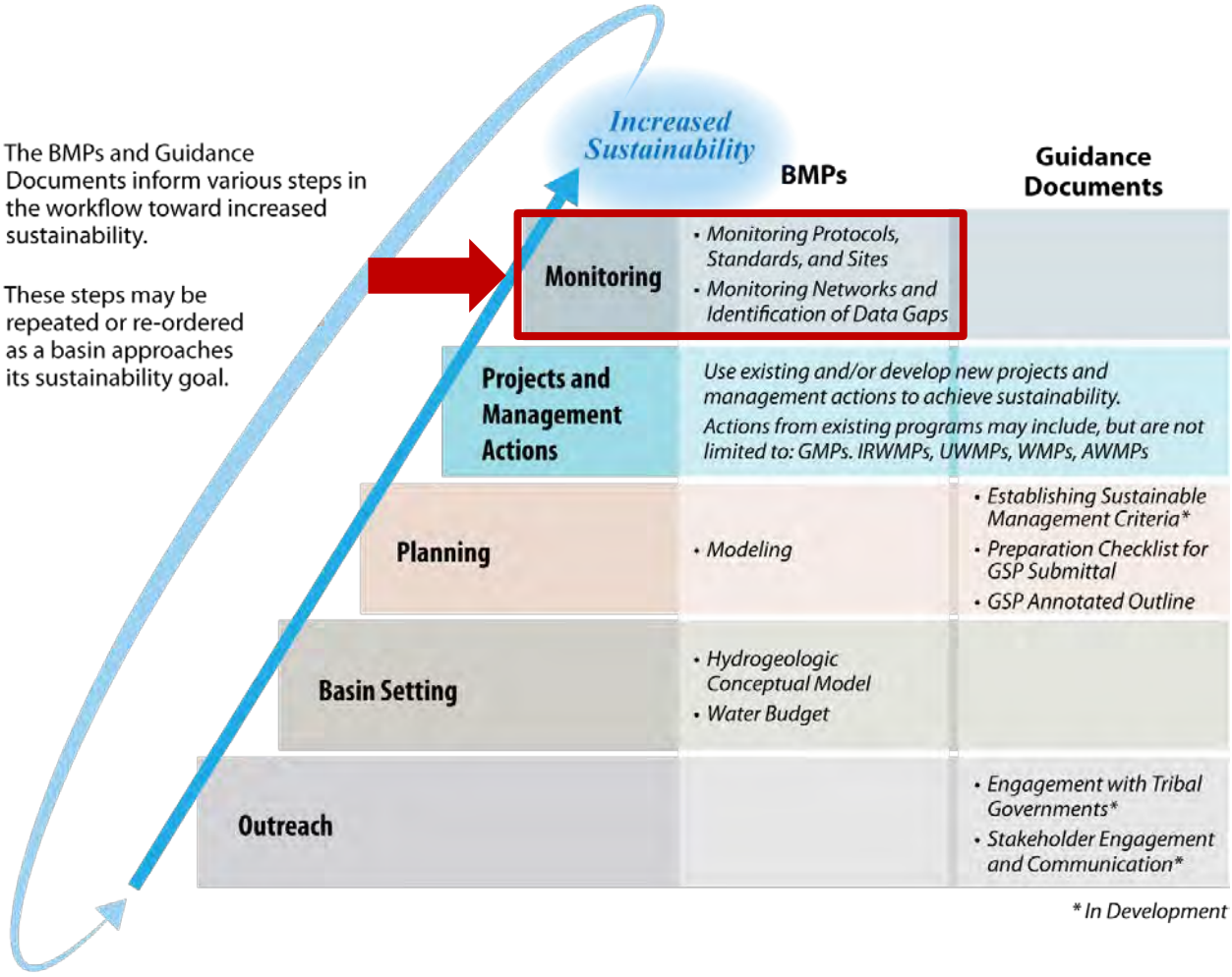

Figure 1 – Logical Progression of Basin Activities Needed to Increase Basin Sustainability

5. TECHNICAL ASSISTANCE

23 CCR §352.2. Monitoring Protocols. Each Plan shall include monitoring protocols adopted by the Agency for data collection and management, as follows:
(a) Monitoring protocols shall be developed according to best management practices.
(b) The Agency may rely on monitoring protocols included as part of the best management practices developed by the Department, or may adopt similar monitoring protocols that will yield comparable data.
(c) Monitoring protocols shall be reviewed at least every five years as part of the periodic evaluation of the Plan, and modified as necessary.

The GSP Regulations specifically call out the need to utilize protocols identified in this BMP, or develop similar protocols. The following technical protocols provide guidance based upon existing professional standards and are commonly adopted in various groundwater-related programs. They provide clear techniques that yield quality data for use in the various components of the GSP. They can be further elaborated on by individual GSAs in the form of standard operating procedures which reflect specific local requirements and conditions. While many methodologies are suggested in this BMP, it should be understood that qualified professional judgment should be used to meet the specific monitoring needs.

The following BMPs may be incorporated into a GSP's monitoring protocols section for collecting groundwater elevation data. A GSP that adopts protocols that deviate from these BMPs must demonstrate that they will yield comparable data.

PROTOCOLS FOR ESTABLISHING A MONITORING PROGRAM

The protocol for establishment of a monitoring program should be evaluated in conjunction with the *Monitoring Network and Identification of Data Gaps* BMP and other BMPs. Monitoring protocols must take into consideration the *Hydrogeologic Conceptual Model, Water Budget, and Modeling* BMPs when considering the data needs to meet GSP objectives and the sustainability goal.

It is suggested that each GSP incorporate the Data Quality Objective (DQO) process following the U.S. EPA *Guidance on Systematic Planning Using the Data Quality Objectives Process* (EPA, 2006). Although strict adherence to this method is not required, it does provide a robust approach to consider and assures that data is collected with a specific purpose in mind, and efforts for monitoring are as efficient as possible to achieve the objectives of the GSP and compliance with the GSP Regulations.

The DQO process presents a method that can be applied directly to the sustainability criteria quantitative requirements through the following steps.

1. State the problem – Define sustainability indicators and planning considerations of the GSP and sustainability goal.
2. Identify the goal – Describe the quantitative measurable objectives and minimum thresholds for each of the sustainability indicators.
3. Identify the inputs – Describe the data necessary to evaluate the sustainability indicators and other GSP requirements (i.e. water budget).
4. Define the boundaries of the study – This is commonly the extent of the Bulletin 118 groundwater basin or subbasin, unless multiple GSPs are prepared for a given basin. In that case, evaluation of the coordination plan and specifically how the monitoring will be comparable and meet the sustainability goals for the entire basin.
5. Develop an analytical approach – Determine how the quantitative sustainability indicators will be evaluated (i.e. are special analytical methods required that have specific data needs).
6. Specify performance or acceptance criteria – Determine what quality the data must have to achieve the objective and provide some assurance that the analysis is accurate and reliable.
7. Develop a plan for obtaining data – Once the objectives are known determine how these data should be collected. Existing data sources should be used to the greatest extent possible.

These steps of the DQO process should be used to guide GSAs to develop the most efficient monitoring process to meet the measurable objectives of the GSP and the sustainability goal. The DQO process is an iterative process and should be evaluated regularly to improve monitoring efficiencies and meet changing planning and project needs. Following the DQO process, GSAs should also include a data quality control and quality assurance plan to guide the collection of data.

Many monitoring programs already exist as part of ongoing groundwater management or other programs. To the extent possible, the use of existing monitoring data and programs should be utilized to meet the needs for characterization, historical record documentation, and continued monitoring for the SGMA program. However, an evaluation of the existing monitoring data should be performed to assure the data being collected meets the DQOs, regulatory requirements, and data collection protocol described in this BMP. While this BMP provides guidance for collection of various

regulatory based requirements, there is flexibility among the various methodologies available to meet the DQOs based upon professional judgment (local conditions or project needs).

At a minimum, for each monitoring site, the following information or procedure should be collected and documented:

- Long-term access agreements. Access agreements should include year-round site access to allow for increased monitoring frequency.
- A unique identifier that includes a general written description of the site location, date established, access instructions and point of contact (if necessary), type of information to be collected, latitude, longitude, and elevation. Each monitoring location should also track all modifications to the site in a modification log.

PROTOCOLS FOR MEASURING GROUNDWATER LEVELS

This section presents considerations for the methodology of collection of groundwater level data such that it meets the requirements of the GSP Regulations and the DQOs of the specific GSP. Groundwater levels are a fundamental measure of the status of groundwater conditions within a basin. In many cases, relationships of the sustainability indicators may be able to be correlated with groundwater levels. The quality of this data must consider the specific aquifer being monitored and the methodology for collecting these levels.

The following considerations for groundwater level measuring protocols should ensure the following:

- Groundwater level data are taken from the correct location, well ID, and screen interval depth
- Groundwater level data are accurate and reproducible
- Groundwater level data represent conditions that inform appropriate basin management DQOs
- All salient information is recorded to correct, if necessary, and compare data
- Data are handled in a way that ensures data integrity

General Well Monitoring Information

The following presents considerations for collection of water level data that include regulatory required components as well as those which are recommended.

- Groundwater elevation data will form the basis of basin-wide water-table and piezometric maps, and should approximate conditions at a discrete period in time. Therefore, all groundwater levels in a basin should be collected within as short a time as possible, preferably within a 1 to 2 week period.
- Depth to groundwater must be measured relative to an established Reference Point (RP) on the well casing. The RP is usually identified with a permanent marker, paint spot, or a notch in the lip of the well casing. By convention in open casing monitoring wells, the RP reference point is located on the north side of the well casing. If no mark is apparent, the person performing the measurement should measure the depth to groundwater from the north side of the top of the well casing.
- The elevation of the RP of each well must be surveyed to the North American Vertical Datum of 1988 (NAVD88), or a local datum that can be converted to NAVD88. The elevation of the RP must be accurate to within 0.5 foot. It is preferable for the RP elevation to be accurate to 0.1 foot or less. Survey grade global navigation satellite system (GNSS) global positioning system (GPS) equipment can achieve similar vertical accuracy when corrected. Guidance for use of GPS can be found at USGS http://water.usgs.gov/osw/gps/. Hand-held GPS units likely will not produce reliable vertical elevation measurement accurate enough for the casing elevation consistent with the DQOs and regulatory requirements.
- The sampler should remove the appropriate cap, lid, or plug that covers the monitoring access point listening for pressure release. If a release is observed, the measurement should follow a period of time to allow the water level to equilibrate.
- Depth to groundwater must be measured to an accuracy of 0.1 foot below the RP. It is preferable to measure depth to groundwater to an accuracy of 0.01 foot. Air lines and acoustic sounders may not provide the required accuracy of 0.1 foot.
- The water level meter should be decontaminated after measuring each well.

Where existing wells do not meet the base standard as described in the GSP Regulations or the considerations provided above, new monitoring wells may need to be constructed to meet the DQOs of the GSP. The design, installation, and documentation of new monitoring wells must consider the following:

- Construction consistent with California Well Standards as described in Bulletins 74-81 and 74-90, and local permitting agency standards of practice.
- Logging of borehole cuttings under the supervision of a California Professional Geologist and described consistent with the Unified Soil Classification System methods according to ASTM standard D2487-11.
- Written criteria for logging of borehole cuttings for comparison to known geologic formations, principal aquifers and aquitards/aquicludes, or specific marker beds to aid in consistent stratigraphic correlation within and across basins.
- Geophysical surveys of boreholes to aid in consistency of logging practices. Methodologies should include resistivity, spontaneous potential, spectral gamma, or other methods as appropriate for the conditions. Selection of geophysical methods should be based upon the opinion of a professional geologist or professional engineer, and address the DQOs for the specific borehole and characterization needs.
- Prepare and submit State well completion reports according to the requirements of §13752. Well completion report documentation should include geophysical logs, detailed geologic log, and formation identification as attachments. An example well completion as-built log is illustrated in **Figure 2.** DWR well completion reports can be filed directly at the Online System for Well Completion Reports (OSWCR) http://water.ca.gov/oswcr/index.cfm.

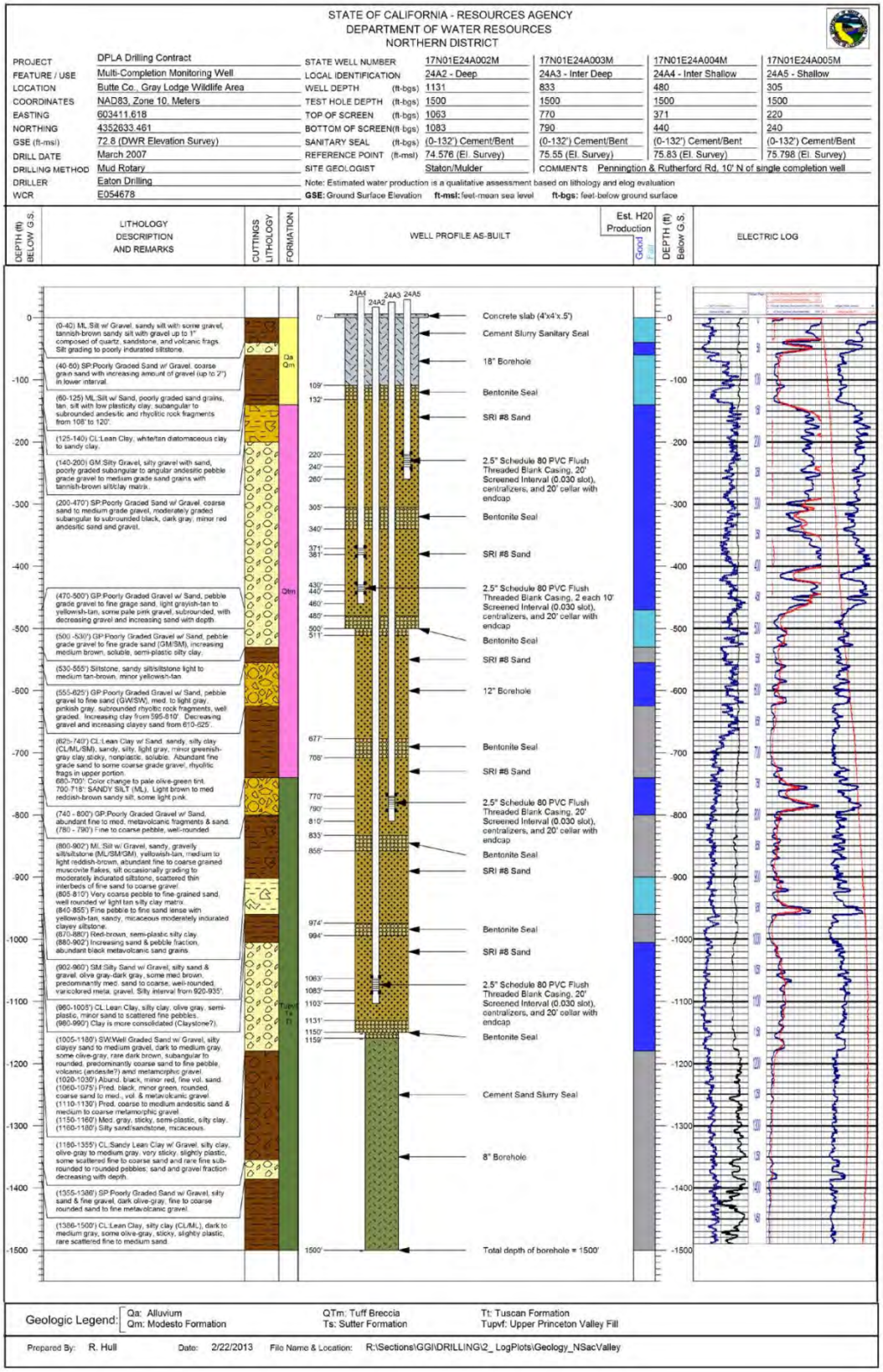

Figure 2 – Example As-Built Multi-Completion Monitoring Well Log

Measuring Groundwater Levels

Well construction, anticipated groundwater level, groundwater level measuring equipment, field conditions, and well operations should be considered prior collection of the groundwater level measurement. The USGS *Groundwater Technical Procedures* (Cunningham and Schalk, 2011) provide a thorough set of procedures which can be used to establish specific Standard Operating Procedures (SOPs) for a local agency. **Figure 3** illustrates a typical groundwater level measuring event and simultaneous pressure transducer download.

Figure 3 – Collection of Water Level Measurement and Pressure Transducer Download

The following points provide a general approach for collecting groundwater level measurements:

- Measure depth to water in the well using procedures appropriate for the measuring device. Equipment must be operated and maintained in accordance with manufacturer's instructions. Groundwater levels should be measured to the nearest 0.01 foot relative to the RP.
- For measuring wells that are under pressure, allow a period of time for the groundwater levels to stabilize. In these cases, multiple measurements should be collected to ensure the well has reached equilibrium such that no significant changes in water level are observed. Every effort should be made to ensure that a representative stable depth to groundwater is recorded. If a well does not stabilize, the quality of the value should be appropriately qualified as a

questionable measurement. In the event that a well is artesian, site specific procedures should be developed to collect accurate information and be protective of safety conditions associated with a pressurized well. In many cases, an extension pipe may be adequate to stabilize head in the well. Record the dimension of the extension and document measurements and configuration.

- The sampler should calculate the groundwater elevation as:

$$GWE = RPE - DTW$$

Where:

GWE = Groundwater Elevation
RPE = Reference Point Elevation
DTW = Depth to Water

The sampler must ensure that all measurements are in consistent units of feet, tenths of feet, and hundredths of feet. Measurements and RPEs should not be recorded in feet and inches.

Recording Groundwater Levels

- The sampler should record the well identifier, date, time (24-hour format), RPE, height of RP above or below ground surface, DTW, GWE, and comments regarding any factors that may influence the depth to water readings such as weather, nearby irrigation, flooding, potential for tidal influence, or well condition. If there is a questionable measurement or the measurement cannot be obtained, it should be noted. An example of a field sheet with the required information is shown in **Figure 4**. It includes questionable measurement and no measurement codes that should be noted. This field sheet is provided as an example. Standardized field forms should be used for all data collection. The aforementioned USGS *Groundwater Technical Procedures* offers a number of example forms.
- The sampler should replace any well caps or plugs, and lock any well buildings or covers.
- All data should be entered into the GSA data management system (DMS) as soon as possible. Care should be taken to avoid data entry mistakes and the entries should be checked by a second person for compliance with the DQOs.

STATE OF CALIFORNA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WELL DATA

STATE WELL NUMBER	COUNTY	REFERENCE POINT ELEV.	MEASURING AGENCY
			DWR

NO MEASUREMENT	QUESTIONABLE MEASUREMENT
0. Measurement discontinued	0. Caved or deepened
1. Pumping	1. Pumping
2. Pump house locked	2. Nearby pump operating
3. Tape hung up	3. Casing leaky or wet
4. Can't get tape in casing	4. Pumped recently
5. Unable to locate well	5. Air or pressure gauge measurement
6. Well has been destroyed	6. Other
7. Special	7. Recharge operation at or nearby well
8. Casing leaky or wet	8. Oil in casing
9. Temporarily inaccessible	

DATE	N M	Q M	TAPE AT RP	TAPE AT WS	RP to WS	OBSR VR	COMMENTS

DWR 1213

Figure 4 – Example of Water Level Well Data Field Collection Form

Pressure Transducers

Groundwater levels and/or calculated groundwater elevations may be recorded using pressure transducers equipped with data loggers installed in monitoring wells. When installing pressure transducers, care must be exercised to ensure that the data recorded by the transducers is confirmed with hand measurements.

The following general protocols must be followed when installing a pressure transducer in a monitoring well:

- The sampler must use an electronic sounder or chalked steel tape and follow the protocols listed above to measure the groundwater level and calculate the groundwater elevation in the monitoring well to properly program and reference the installation. It is recommended that transducers record measured groundwater level to conserve data capacity; groundwater elevations can be calculated at a later time after downloading.
- The sampler must note the well identifier, the associated transducer serial number, transducer range, transducer accuracy, and cable serial number.
- Transducers must be able to record groundwater levels with an accuracy of at least 0.1 foot. Professional judgment should be exercised to ensure that the data being collected is meeting the DQO and that the instrument is capable. Consideration of the battery life, data storage capacity, range of groundwater level fluctuations, and natural pressure drift of the transducers should be included in the evaluation.
- The sampler must note whether the pressure transducer uses a vented or non-vented cable for barometric compensation. Vented cables are preferred, but non-vented units provide accurate data if properly corrected for natural barometric pressure changes. This requires the consistent logging of barometric pressures to coincide with measurement intervals.
- Follow manufacturer specifications for installation, calibration, data logging intervals, battery life, correction procedure (if non-vented cables used), and anticipated life expectancy to assure that DQOs are being met for the GSP.
- Secure the cable to the well head with a well dock or another reliable method. Mark the cable at the elevation of the reference point with tape or an indelible marker. This will allow estimates of future cable slippage.
- The transducer data should periodically be checked against hand measured groundwater levels to monitor electronic drift or cable movement. This should happen during routine site visits, at least annually or as necessary to maintain data integrity.

- The data should be downloaded as necessary to ensure no data is lost and entered into the basin's DMS following the QA/QC program established for the GSP. Data collected with non-vented data logger cables should be corrected for atmospheric barometric pressure changes, as appropriate. After the sampler is confident that the transducer data have been safely downloaded and stored, the data should be deleted from the data logger to ensure that adequate data logger memory remains.

PROTOCOLS FOR SAMPLING GROUNDWATER QUALITY

The following protocols can be incorporated into a GSP's monitoring protocols for collecting groundwater quality data. More detailed sampling procedures and protocols are included in the standards and guidance documents listed at the end of this BMP. A GSP that adopts protocols that deviate from these BMPs must demonstrate that the adopted protocols will yield comparable data.

In general, the use of existing water quality data within the basin should be done to the greatest extent possible if it achieves the DQOs for the GSP. In some cases it may be necessary to collect additional water quality data to support monitoring programs or evaluate specific projects. The USGS *National Field Manual for the Collection of Water Quality Data* (Wilde, 2005) should be used to guide the collection of reliable data. **Figure 5** illustrates a typical groundwater quality sampling setup.

Figure 5 – Typical Groundwater Quality Sampling Event

All analyses should be performed by a laboratory certified under the State Environmental Laboratory Accreditation Program. The specific analytical methods are beyond the scope of this BMP, but should be commiserate with other programs evaluating water quality within the basin for comparative purposes.

Groundwater quality sampling protocols should ensure that:

- Groundwater quality data are taken from the correct location
- Groundwater quality data are accurate and reproducible
- Groundwater quality data represent conditions that inform appropriate basin management and are consistent with the DQOs
- All salient information is recorded to normalize, if necessary, and compare data
- Data are handled in a way that ensures data integrity

The following points are general guidance in addition to the techniques presented in the previously mentioned USGS *National Field Manual for the Collection of Water Quality Data.*

Standardized protocols include the following:

- Prior to sampling, the sampler must contact the laboratory to schedule laboratory time, obtain appropriate sample containers, and clarify any sample holding times or sample preservation requirements.
- Each well used for groundwater quality monitoring must have a unique identifier. This identifier must appear on the well housing or the well casing to avoid confusion.
- In the case of wells with dedicated pumps, samples should be collected at or near the wellhead. Samples should not be collected from storage tanks, at the end of long pipe runs, or after any water treatment.
- The sampler should clean the sampling port and/or sampling equipment and the sampling port and/or sampling equipment must be free of any contaminants. The sampler must decontaminate sampling equipment between sampling locations or wells to avoid cross-contamination between samples.
- The groundwater elevation in the well should be measured following appropriate protocols described above in the groundwater level measuring protocols.
- For any well not equipped with low-flow or passive sampling equipment, an adequate volume of water should be purged from the well to ensure that the groundwater sample is representative of ambient groundwater and not stagnant water in the well casing. Purging three well casing volumes is generally

considered adequate. Professional judgment should be used to determine the proper configuration of the sampling equipment with respect to well construction such that a representative ambient groundwater sample is collected. If pumping causes a well to be evacuated (go dry), document the condition and allow well to recover to within 90% of original level prior to sampling. Professional judgment should be exercised as to whether the sample will meet the DQOs and adjusted as necessary.

- Field parameters of pH, electrical conductivity, and temperature should be collected for each sample. Field parameters should be evaluated during the purging of the well and should stabilize prior to sampling. Measurements of pH should only be measured in the field, lab pH analysis are typically unachievable due to short hold times. Other parameters, such as oxidation-reduction potential (ORP), dissolved oxygen (DO) (in situ measurements preferable), or turbidity, may also be useful for meeting DQOs of GSP and assessing purge conditions. All field instruments should be calibrated daily and evaluated for drift throughout the day.
- Sample containers should be labeled prior to sample collection. The sample label must include: sample ID (often well ID), sample date and time, sample personnel, sample location, preservative used, and analytes and analytical method.
- Samples should be collected under laminar flow conditions. This may require reducing pumping rates prior to sample collection.
- Samples should be collected according to appropriate standards such as those listed in the *Standard Methods for the Examination of Water and Wastewater*, USGS *National Field Manual for the Collection of Water Quality Data*, or other appropriate guidance. The specific sample collection procedure should reflect the type of analysis to be performed and DQOs.
- All samples requiring preservation must be preserved as soon as practically possible, ideally at the time of sample collection. Ensure that samples are appropriately filtered as recommended for the specific analyte. Entrained solids can be dissolved by preservative leading to inconsistent results of dissolve analytes. Specifically, samples to be analyzed for metals should be field-filtered prior to preservation; do not collect an unfiltered sample in a preserved container.
- Samples should be chilled and maintained at 4 °C to prevent degradation of the sample. The laboratory's Quality Assurance Management Plan should detail appropriate chilling and shipping requirements.

- Samples must be shipped under chain of custody documentation to the appropriate laboratory promptly to avoid violating holding time restrictions.
- Instruct the laboratory to use reporting limits that are equal to or less than the applicable DQOs or regional water quality objectives/screening levels.

Special protocols for low-flow sampling equipment

In addition to the protocols listed above, sampling using low-flow sample equipment should adopt the following protocols derived from EPA's *Low-flow (minimal drawdown) ground-water sampling procedures* (Puls and Barcelona, 1996). These protocols apply to low-flow sampling equipment that generally pumps between 0.1 and 0.5 liters per minute. These protocols are not intended for bailers.

Special protocols for passive sampling equipment

In addition to the protocols listed above, passive diffusion samplers should follow protocols set forth in USGS Fact Sheet 088-00.

PROTOCOLS FOR MONITORING SEAWATER INTRUSION

Monitoring seawater intrusion requires analysis of the chloride concentrations within groundwater of each principal aquifer subject to seawater intrusion. While no significant standardized approach exists, the methodologies described above for degraded water quality can be applied for the collection of groundwater samples. In addition to the protocol described above, the following protocols should be followed:

- Water quality samples should be collected and analyzed at least semi-annually. Samples will be analyzed for dissolved chloride at a minimum. It may be beneficial to include analyses of iodide and bromide to aid in determination of salinity source. More frequent sampling may be necessary to meet DQOs of GSP. The development of surrogate measures of chloride concentration may facilitate cost-effective means to monitor more frequently to observe the range of conditions and variability of the flow dynamics controlling seawater intrusion.
- Groundwater levels will be collected at a frequency adequate to characterize changes in head in the vicinity of the leading edge of degraded water quality in each principal aquifer. Frequency may need to be increased in areas of known preferential pathways, groundwater pumping, or efficacy evaluation of mitigation projects.
- The use of geophysical surveys, electrical resistivity, or other methods may provide for identification of preferential pathways and optimize monitoring well placement and evaluation of the seawater intrusion front. Professional judgment

should be exercised to determine the appropriate methodology and whether the DQOs for the GSP would be met.

PROTOCOLS FOR MEASURING STREAMFLOW

Monitoring of streamflow is necessary for incorporation into water budget analysis and for use in evaluation of stream depletions associated with groundwater extractions. The use of existing monitoring locations should be incorporated to the greatest extent possible. Many of these streamflow monitoring locations currently follow the protocol described below.

Establishment of new streamflow discharge sites should consider the existing network and the objectives of the new location. Professional judgment should be used to determine the appropriate permitting that may be necessary for the installation of any monitoring locations along surface water bodies. Regular frequent access will be necessary to these sites for the development of ratings curves and maintenance of equipment.

To establish a new streamflow monitoring station special consideration must be made in the field to select an appropriate location for measuring discharge. Once a site is selected, development of a relationship of stream stage to discharge will be necessary to provide continuous estimates of streamflow. Several measurements of discharge at a variety of stream stages will be necessary to develop the ratings curve correlating stage to discharge. The use of Acoustic Doppler Current Profilers (ADCPs) can provide accurate estimates of discharge in the correct settings. Professional judgment must be exercised to determine the appropriate methodology. Following development of the ratings curve a simple stilling well and pressure transducer with data logger can be used to evaluate stage on a frequent basis. A simple stilling well and staff gage is illustrated in **Figure 6**.

Streamflow measurements should be collected, analyzed, and reported in accordance with the procedures outlined in USGS Water Supply Paper 2175, *Volume 1. – Measurement of Stage Discharge* and *Volume 2. – Computation of Discharge.* This methodology is currently being used by both the USGS and DWR for existing streamflow monitoring throughout the State.

Figure 6 – Simple Stilling Well and Staff Gage Setup

PROTOCOLS FOR MEASURING SUBSIDENCE

Evaluating and monitoring inelastic land subsidence can utilize multiple data sources to evaluate the specific conditions and associated causes. To the extent possible, the use of existing data should be utilized. Subsidence can be estimated from numerous techniques, they include: level surveying tied to known stable benchmarks or benchmarks located outside the area being studied for possible subsidence; installing and tracking changes in borehole extensometers; obtaining data from continuous GPS (CGPS) locations, static GPS surveys or Real-Time-Kinematic (RTK) surveys; or analyzing Interferometric Synthetic Aperture Radar (InSAR) data. No standard procedures exist for collecting data from the potential subsidence monitoring approaches. However, an approach may include:

- Identification of land subsidence conditions.
    - Evaluate existing regional long-term leveling surveys of regional infrastructure, i.e. roadways, railroads, canals, and levees.
    - Inspect existing county and State well records where collapse has been noted for well repairs or replacement.
    - Determine if significant fine-grained layers are present such that the potential for collapse of the units could occur should there be significant depressurization of the aquifer system.

  - Inspect geologic logs and the hydrogeologic conceptual model to aid in identification of specific units of concern.
  - Collect regional remote-sensing information such as InSAR, commonly provided by USGS and NASA. Data availability is currently limited, but future resources are being developed.
- Monitor regions of suspected subsidence where potential exists.
  - Establish CGPS network to evaluate changes in land surface elevation.
  - Establish leveling surveys transects to observe changes in land surface elevation.
  - Establish extensometer network to observe land subsidence. An example of a typical extensometer design is illustrated in **Figure 7**. There are a variety of extensometer designs and they should be selected based on the specific DQOs.

Various standards and guidance documents for collecting data include:

- Leveling surveys must follow surveying standards set out in the California Department of Transportation's Caltrans Surveys Manual.
- GPS surveys must follow surveying standards set out in the California Department of Transportation's Caltrans Surveys Manual.
- USGS has been performing subsidence surveys within several areas of California. These studies are sound examples for appropriate methods and should be utilized to the extent possible and where available:
  - http://ca.water.usgs.gov/land_subsidence/california-subsidence-measuring.html
- Instruments installed in borehole extensometers must follow the manufacturer's instructions for installation, care, and calibration.
- Availability of InSAR data is improving and will increase as programs are developed. This method requires expertise in analysis of the raw data and will likely be made available as an interpretative report for specific regions.

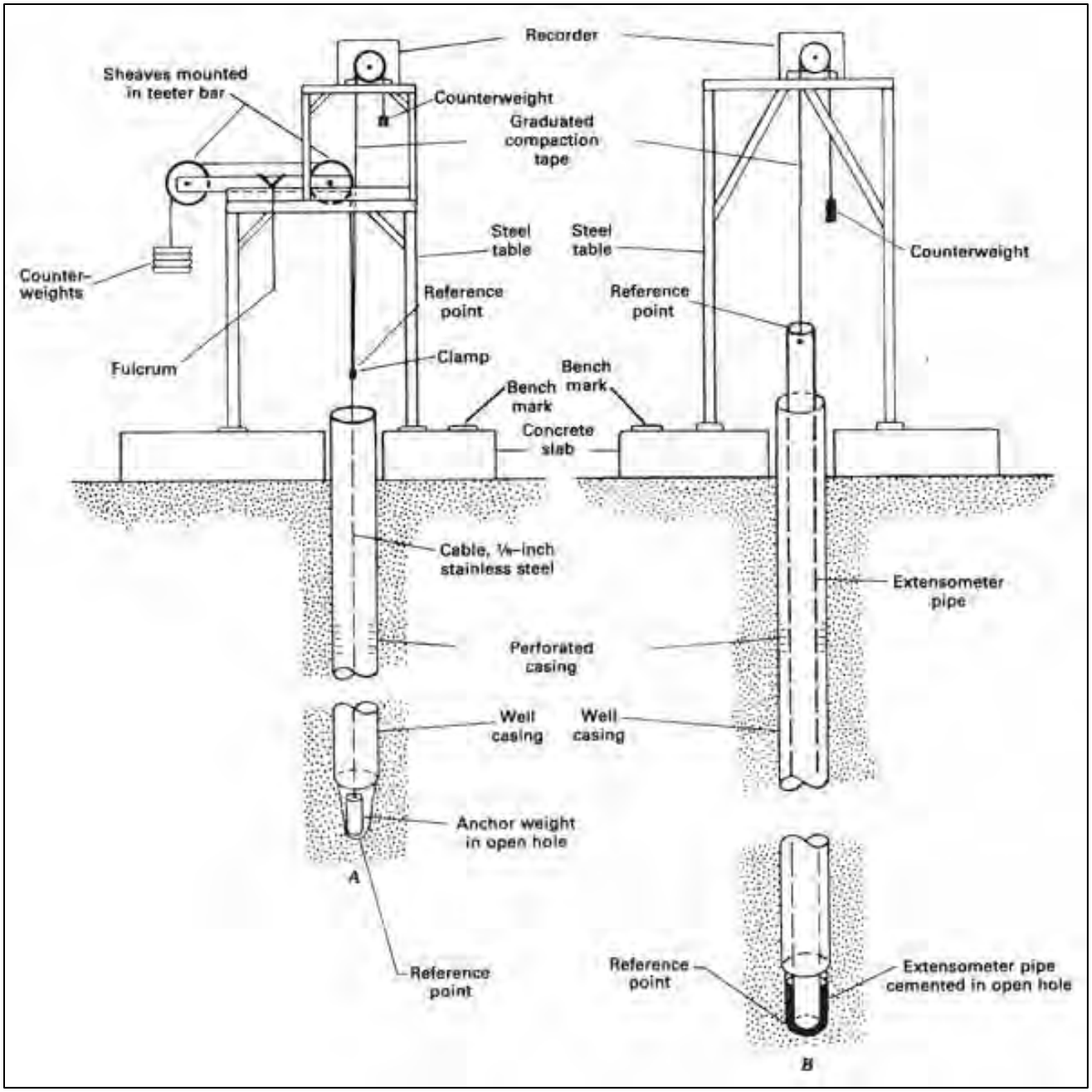

Figure 7 – Simplified Extensometer Diagram

6. KEY DEFINITIONS

The key definitions and sections related to Groundwater Monitoring Protocols, Standards, and Sites outlined in applicable SGMA code and regulations are provided below for reference.

Groundwater Sustainability Plan Regulations (California Code of Regulations §351)

- §351(h) "Best available science" refers to the use of sufficient and credible information and data, specific to the decision being made and the time frame available for making that decision, that is consistent with scientific and engineering professional standards of practice.
- §351(i) "Best management practice" refers to a practice, or combination of practices, that are designed to achieve sustainable groundwater management and have been determined to be technologically and economically effective, practicable, and based on best available science.

Monitoring Protocols Reference

§352.2. Monitoring Protocols

Each Plan shall include monitoring protocols adopted by the Agency for data collection and management, as follows:

(a) Monitoring protocols shall be developed according to best management practices.

(b) The Agency may rely on monitoring protocols included as part of the best management practices developed by the Department, or may adopt similar monitoring protocols that will yield comparable data.

(c) Monitoring protocols shall be reviewed at least every five years as part of the periodic evaluation of the Plan, and modified as necessary.

SGMA Reference

§10727.2. Required Plan Elements

(f) Monitoring protocols that are designed to detect changes in groundwater levels, groundwater quality, inelastic surface subsidence for basins for which subsidence has been identified as a potential problem, and flow and quality of surface water that directly affect groundwater levels or quality or are caused by groundwater extraction in the basin. The monitoring protocols shall be designed to generate information that promotes efficient and effective groundwater management.

7. Related Materials

CASE STUDIES

Luhdorff & Scalmanini Consulting Engineers, J.W. Borchers, M. Carpenter. 2014. *Land Subsidence from Groundwater Use in California*. Full Report of Findings prepared for California Water Foundation. April 2014. 151 p. http://ca.water.usgs.gov/land_subsidence/california-subsidence-cause-effect.html

Faunt, C.C., M. Sneed, J. Traum, and J.T. Brandt, 2015. *Water availability and land subsidence in the Central Valley, California, USA*. Hydrogeol J (2016) 24: 675. doi:10.1007/s10040-015-1339-x.
https://pubs.er.usgs.gov/publication/701605

Poland, J.F., B.E. Lofgren, R.L. Ireland, and R.G. Pugh, 1975. *Land subsidence in the San Joaquin Valley, California, as of 1972*; US Geological Survey Professional Paper 437-H; prepared in cooperation with the California Department of Water Resources, 87 p.
http://pubs.usgs.gov/pp/0437h/report.pdf

Sneed, M., J.T. Brandt, and M. Solt, 2013. *Land subsidence along the Delta-Mendota Canal in the northern part of the San Joaquin Valley, California, 2003-10*; USGS Scientific Investigations Report 2013-5142, prepared in cooperation with U.S. Bureau of Reclamation and the San Luis and Delta-Mendota Water Authority.
https://pubs.er.usgs.gov/publication/sir20135142

Sneed, M., J.T. Brandt, and M. Solt, 2014. *Land subsidence, groundwater levels, and geology in the Coachella Valley, California, 1993–2010*: U.S. Geological Survey, Scientific Investigations Report 2014–5075, 62 p.
http://dx.doi.org/10.3133/sir20145075.

STANDARDS

California Department of Transportation, various dates. *Caltrans Surveys Manual*.
http://www.dot.ca.gov/hq/row/landsurveys/SurveysManual/Manual_TOC.html

U.S. Environmental Protection Agency, 2006. Guidance on Systematic Planning Using the Data Quality Objectives Process, EPA QA/G-4
https://www.epa.gov/sites/production/files/documents/guidance_systematic_planning_dqo_process.pdf

Rice, E.W., R.B. Baire, A.D. Eaton, and L.S. Clesceri ed. 2012. *Standard methods for the examination of water and wastewater*. Washington, DC: American Public Health Association, American Water Works Association, and Water Environment Federation.

GUIDANCE

Barcelona, M.J., J.P. Gibb, J.A. Helfrich, and E.E.Graske. 1985. *Practical Guide for Ground-Water Sampling*. Illinois State Water Survey, Champaign, Illinois, 103 pages. www.orau.org/ptp/PTP%20Library/library/epa/samplings/pracgw.pdf

Buchanan, T.J., and W.P. Somers, 1969. *Discharge measurements at gaging stations; techniques of water-resources investigations of the United States Geologic Survey chapter A8*, Washington D.C. http://pubs.usgs.gov/twri/twri3a8/html/pdf.html

Cunningham, W.L., and Schalk, C.W., comps., 2011, *Groundwater technical procedures of the U.S. Geological Survey*: U.S. Geological Survey Techniques and Methods 1–A1. https://pubs.usgs.gov/tm/1a1/pdf/tm1-a1.pdf

California Department of Water Resources, 2010. *Groundwater elevation monitoring guidelines*. http://www.water.ca.gov/groundwater/casgem/pdfs/CASGEM%20DWR%20GW%20Guidelines%20Final%20121510.pdf

Holmes, R.R. Jr., P.J. Terrio, M.A. Harris, and P.C. Mills, 2001. *Introduction to field methods for hydrologic and environmental studies*, open-file report 01-50, USGS, Urbana, Illinois, 241 p. https://pubs.er.usgs.gov/publication/ofr0150

Puls, R.W., and Barcelona, M.J., 1996, *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures*; US EPA, Ground Water Issue EPA/540/S-95/504. https://www.epa.gov/sites/production/files/2015-06/documents/lwflw2a.pdf

Rantz, S.E., and others, 1982. *Measurement and computation of streamflow*; U.S. Geological Survey, Water Supply Paper 2175. http://pubs.usgs.gov/wsp/wsp2175/#table

Subcommittee on Ground Water of the Advisory Committee on Water Information, 2013. *A national framework for ground-water monitoring in the United States*. http://acwi.gov/sogw/ngwmn_framework_report_july2013.pdf

Vail, J., D. France, and B. Lewis. 2013. *Operating Procedure: Groundwater Sampling SESDPROC-301-R3*.

https://www.epa.gov/sites/production/files/2015-06/documents/Groundwater-Sampling.pdf

Wilde, F.D., January 2005. *Preparations for water sampling (ver. 2.0)*: U.S. Geological Survey Techniques of Water-Resources Investigations, book 9, chap. A1, http://water.usgs.gov/owq/FieldManual/compiled/NFM_complete.pdf

ONLINE RESOURCES

Online System for Well Completion Reports (OSWCR). California Department of Water Resources. http://water.ca.gov/oswcr/index.cfm

Measuring Land Subsidence web page. U.S. Geological Survey. http://ca.water.usgs.gov/land_subsidence/california-subsidence-measuring.html

USGS Global Positioning Application and Practice web page. U.S. Geological Survey. http://water.usgs.gov/osw/gps/

California Statewide Groundwater Elevation Monitoring (CASGEM) Program

Procedures for Monitoring Entity Reporting

December 2010

Department of Water Resources (DWR) will use the internet as the primary communication tool to notify interested parties and groundwater Monitoring Entities of the status of the CASGEM program on an ongoing basis. Information will be posted at the following website: http://www.water.ca.gov/groundwater/casgem

In addition to the above-referenced website, DWR will distribute information via email. In order to be placed on the CASGEM contact list, please register your contact information at the following website: http://www.water.ca.gov/groundwater/casgem/register/

For questions about the Reporting Procedures, or other technical issues, please contact:

DWR Headquarters
Mary Scruggs
901 P Street
Sacramento, CA 95814
(916) 654-1324
mscruggs@water.ca.gov

Northern Region Office
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2440 Main Street
Red Bluff, CA 96080
530-529-7344
staton@water.ca.gov

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3500 Industrial Avenue
West Sacramento, CA 95691
(916) 376-9657
cbonds@water.ca.gov

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Dane Mathis
3374 Shields Avenue
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(559) 230-3354
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Glendale, CA 91203
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INTRODUCTION TO CASGEM PROGRAM

In November 2009 Part 2.11 (Groundwater Monitoring) was added to Division 6 of the Water Code by Senate Bill 6 (7th Extraordinary Session) (SB 6), a copy of which is included in the Appendix. (All statutory references in this document are to the Water Code.) The new law directs that groundwater elevations in all basins and subbasins in California be regularly and systematically monitored, preferably by local entities, with the goal of demonstrating seasonal and long-term trends in groundwater elevations. The Department of Water Resources (DWR) is directed to make the resulting information readily and widely available.

DWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program in accordance with SB 6 to establish a permanent, locally-managed system to monitor groundwater elevation in California's alluvial groundwater basins and subbasins identified in DWR Bulletin 118. The CASGEM program will rely and build on the many, established local long-term groundwater monitoring and management programs. DWR's role is to coordinate information collected locally through the CASGEM program and to maintain the collected groundwater elevation data in a readily and widely available public database. DWR will also continue measuring its current network of groundwater monitoring wells as funding allows.

The goals of the CASGEM program are to:

- Establish procedures for notification and data reporting by prospective Monitoring Entities (this document)
- Verify local Monitoring Entities in accordance with the Water Code
- Develop an interface for local entities to enter data into a database compatible with DWR's Water Data Library
- Maintain the database and make it easily accessible to the public and local entities for use in water supply planning and management

If no local entities volunteer to monitor groundwater elevations in a basin or part of a basin, DWR may be required to develop a monitoring program for that part. If DWR takes over monitoring of a basin, certain entities in the basin may not be eligible for water grants or loans administered by the state.

During August and September 2010, DWR held 10 workshops throughout the state in cooperation with Association of California Water Agencies (ACWA) to introduce the CASGEM program and explain the purpose and process of the program to local agencies and stakeholders. A copy of the DWR presentation is available on the CASGEM website (http://www.water.ca.gov/groundwater/casgem). A summary of

Frequently Asked Questions (FAQs), primarily from the workshops, is provided in on the CASGEM website.

DWR's main role is to administer the CASGEM program through providing public outreach; creating and maintaining the CASGEM website and online data submittal system; and, supporting local entities through the process of becoming a Monitoring Entity and preparing Monitoring Plans. DWR will use the CASGEM website to provide up-to-date information on the program. The website will also be the access point for the online notification and data submittal systems.

Staff from the DWR regional offices will be available to assist potential Monitoring Entities with the online notification submittal process. After receiving notification from prospective Monitoring Entities, DWR will review them for completeness, verify the authority of the applying entity under Section 10927, and check for overlapping monitoring areas. DWR will advise each party on the status of their notification within three months of submittal and will work with entities to address any deficiencies in their submittals.

DWR encourages local agencies and groups to collaborate to determine who will serve as the Monitoring Entity for the area. However, if more than one party seeks to become the Monitoring Entity for the same area and overlapping monitoring area issues cannot be resolved locally, DWR will make a final determination of the Monitoring Entity for the area. DWR's determinations will consider the order in which entities are identified in Section 10927 and other factors as described in the Water Code.

DWR will post the selection of each Monitoring Entity and its monitoring area on the CASGEM website and will notify each Monitoring Entity in writing. A map-based interface will be available for users to identify the Monitoring Entity for each basin in the state.

DWR will prepare the first status report on the CASGEM program for the Governor and Legislature by January 1, 2012. In this initial report, DWR will report on the extent of groundwater elevation monitoring within each basin. This report will include a statewide prioritization of basins based on water supply, water demand, and other factors identified in Section 10933. DWR will explore options for basins without identified monitoring, with a focus on identifying options for local monitoring. Future status reports on the CASGEM program will be prepared by DWR in years ending in 5 or 0.

PURPOSE OF MONITORING ENTITY REPORTING PROCEDURES

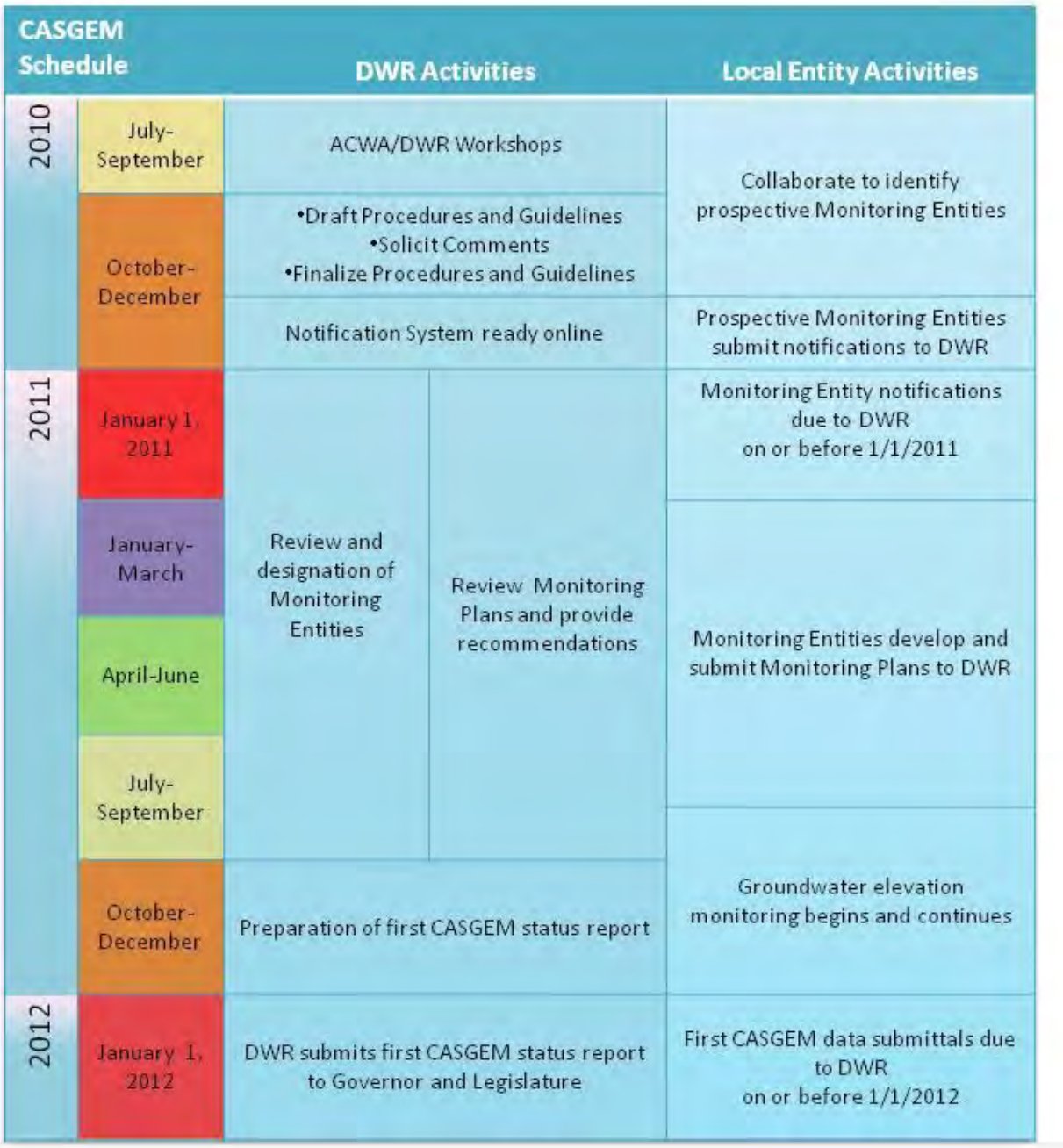
The purpose of these procedures is to introduce the CASGEM program and its components as the framework for implementing SB 6, with particular emphasis on the initial step of establishing Monitoring Entities for each Bulletin 118 basin in the state.

A summary of the requirements of local entities to comply with the CASGEM program is presented in Table 1.

Table 1. Quick Guide for Local Entities

- Determine whether you qualify as a potential Monitoring Entity (see "Requirements to become Monitoring Entity" on pages 9-13)
- Identify the basins within your area (see Bulletin 118)
- Collaborate with other local entities to identify and choose the prospective Monitoring Entity (or Entities) for your area
- Submit Monitoring Entity notification to DWR through CASGEM website (http://www.water.ca.gov/groundwater/casgem) on or before January 1, 2011
- DWR will review the notification and advise the prospective Monitoring Entity of the status of the notification within 3 months of submittal
- Work with staff of the DWR regional office to address any deficiencies in the submittal
- If more than one party seeks to become the Monitoring Entity for the same area, work with staff of the DWR regional office to resolve
- Check the CASGEM website for a listing of the selected Monitoring Entities
- Develop and submit a Monitoring Plan to DWR through the CASGEM website
- Staff from the DWR regional office are available to assist with the Monitoring Plan and to recommend changes
- Submit monitoring data to DWR through the CASGEM website on or before January 1, 2012

CASGEM SCHEDULE



CASGEM Schedule		DWR Activities		Local Entity Activities
2010	July-September	ACWA/DWR Workshops		Collaborate to identify prospective Monitoring Entities
	October-December	•Draft Procedures and Guidelines •Solicit Comments •Finalize Procedures and Guidelines		
		Notification System ready online		Prospective Monitoring Entities submit notifications to DWR
2011	January 1, 2011	Review and designation of Monitoring Entities	Review Monitoring Plans and provide recommendations	Monitoring Entity notifications due to DWR on or before 1/1/2011
	January-March			Monitoring Entities develop and submit Monitoring Plans to DWR
	April-June			
	July-September			
	October-December	Preparation of first CASGEM status report		Groundwater elevation monitoring begins and continues
2012	January 1, 2012	DWR submits first CASGEM status report to Governor and Legislature		First CASGEM data submittals due to DWR on or before 1/1/2012

A timetable for implementing the CASGEM schedule is shown above.

MONITORING ENTITIES

The CASGEM program establishes the framework for collaboration between local monitoring parties and DWR to collect groundwater elevation data throughout the state's 515 basins as defined in Bulletin 118. A Monitoring Entity is a local agency or group that voluntarily takes responsibility for conducting or coordinating groundwater elevation monitoring and reporting for all or part of a groundwater basin.

To determine if you are within a Bulletin 118 basin, please refer to maps and descriptions in Bulletin 118, available online at: http://www.water.ca.gov/groundwater/bulletin118/gwbasin_maps_descriptions.cfm. Geographic Information System (GIS) shapefiles of the basins are also available at this website. DWR can assist in identifying other potential local monitoring parties in each basin.

ROLES AND RESPONSIBILITIES OF MONITORING ENTITIES

Through the CASGEM program, local entities with appropriate authority may notify DWR of their intent to be a Monitoring Entity. Monitoring Entities will have specific responsibilities, including:

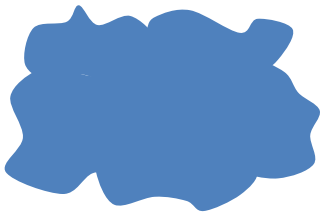
- Coordinate with DWR to establish a Monitoring Plan
- Conduct or coordinate the regular and systematic monitoring of groundwater elevations as specified in the Monitoring Plan
- Submit monitoring data to DWR in a timely manner

A Monitoring Entity can perform monitoring for any number of basins or portions thereof, but no area can have more than one Monitoring Entity. While the Monitoring Entity is responsible for compiling the data and submitting it to DWR for a particular area, the actual measurements can be taken by any number of agencies that would work under the direction of the Monitoring Entity. (Cooperating agencies would submit data to the Monitoring Entity, not to DWR.) Thus, assuming there are no overlapping areas or gaps in basin coverage for a given area, there are three possible basic scenarios, illustrated in Figure 1:

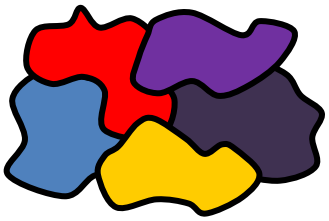
- A single Monitoring Entity that collects and reports groundwater elevation data for the entire basin (Scenario A);
- Multiple Monitoring Entities that collect and report groundwater elevation data for their portion of the basin (Scenario B); or

- An umbrella Monitoring Entity that coordinates and reports groundwater elevation data collected by multiple agencies within the basin (Scenario C).

Scenario A. One Monitoring Entity collects and reports data for entire basin



Scenario B. One basin, several Monitoring Entities collecting and submitting data



Scenario C. One basin, one Monitoring Entity coordinating and submitting data collected by several agencies

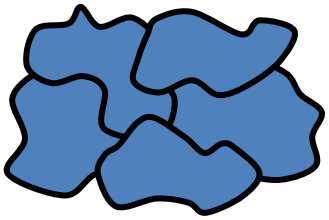


Figure 1. Illustration of possible Monitoring Entity scenarios for a monitored basin.

DWR currently monitors water elevations in about 4,000 wells statewide and cooperates with local and federal agencies to monitor roughly an additional 6,000 wells. DWR plans to continue monitoring groundwater elevations, contingent upon available funding. In some basins DWR currently does most, if not all, of the water-elevation monitoring. In these basins, a local entity still needs to notify DWR of their intent to become the Monitoring Entity. The Monitoring Entity must determine which DWR wells will be included in their CASGEM monitoring network. As long as DWR continues its monitoring program, the department will transmit its groundwater elevation data to the CASGEM system. However, if DWR is unable to continue monitoring for any reason, the Monitoring Entity will be required to re-evaluate its monitoring network to determine which wells to retain in its monitoring network.

REQUIREMENTS TO BECOME MONITORING ENTITY

Section 10927 of the Water Code defines the types of entities that may assume responsibility for monitoring and reporting groundwater elevations as part of the CASGEM program.

A summary list of eligible entities, in order of priority, and notification requirements for each entity is provided below:

1. A **watermaster or water management engineer** appointed by a court or pursuant to statute to administer a final judgment determining rights to groundwater [Section 10927(a)].
   Notification Requirements:
   - Name of Agency
   - Agency Contact Name
   - Address
   - Telephone Number
   - Email Address
   - Any other relevant contact information
   - Authority (as listed in Section 10927)
   - Name and number of basin to be monitored (from Bulletin 118)
   - Map and shapefile showing area to be monitored (Shapefiles do not need to be submitted by the initial January 1, 2011 notification date; Regional Offices can provide assistance to potential Monitoring Entities with shapefiles.)
   - Statement that the entity will comply with the requirements of Water Code Part 2.11
   - Additional information deemed necessary by DWR to identify monitoring area or qualifications of the Monitoring Entity

2. A **groundwater management agency** with statutory authority to manage groundwater pursuant to its principal act that is monitoring groundwater elevations in all or a part of a groundwater basin on or before January 1, 2010 [Section 10927(b)(1)].
   Notification Requirements:
   - Name of Agency
   - Agency Contact Name
   - Address
   - Telephone Number
   - Email Address
   - Any other relevant contact information
   - Authority (as listed in Section 10927)

- Name and number of basin to be monitored (from Bulletin 118)
- Map and shapefile showing area to be monitored (Shapefiles do not need to be submitted by the initial January 1, 2011 notification date; Regional Offices can provide assistance to potential Monitoring Entities with shapefiles.)
- Statement that the entity will comply with the requirements of Water Code Part 2.11
- Additional information deemed necessary by DWR to identify monitoring area or qualifications of the Monitoring Entity

3. A **water replenishment district** established pursuant to Water Code Division 18 (commencing with Section 60000). This part does not expand or otherwise affect the authority of a water replenishment district relating to monitoring elevations [Section 10927(b)(2)].

   Notification Requirements:
   - Name of Agency
   - Agency Contact Name
   - Address
   - Telephone Number
   - Email Address
   - Any other relevant contact information
   - Authority (as listed in Section 10927)
   - Name and number of basin to be monitored (from Bulletin 118)
   - Map and shapefile showing area to be monitored (Shapefiles do not need to be submitted by the initial January 1, 2011 notification date; Regional Offices can provide assistance to potential Monitoring Entities with shapefiles.)
   - Statement that the entity will comply with the requirements of Water Code Part 2.11
   - Additional information deemed necessary by DWR to identify monitoring area or qualifications of the Monitoring Entity

4. A **local agency that is managing all or part of a groundwater basin pursuant to Water Code Part 2.75** (commencing with Section 10750) and that was monitoring groundwater elevations in all or part of a groundwater basin on or before January 1, 2010, or a local agency or county that is managing all or part of a groundwater basin pursuant to any other legally enforceable groundwater management plan with provisions that are substantively similar to those described in that part and that was monitoring groundwater elevations in all or a part of a groundwater basin on or before January 1, 2010 [Section 10927(c)].

Notification Requirements:

- Name of Agency
- Agency Contact Name
- Address
- Telephone Number
- Email Address
- Any other relevant contact information
- Authority (as listed in Section 10927)
- Name and number of basin to be monitored (from Bulletin 118)
- Map and shapefile showing area to be monitored (Shapefiles do not need to be submitted by the initial January 1, 2011 notification date; Regional Offices can provide assistance to potential Monitoring Entities with shapefiles.)
- Statement that the entity will comply with the requirements of Water Code Part 2.11
- Copy of current groundwater management plan
- Statement describing the ability or qualifications of the entity to conduct the groundwater monitoring functions required
- Additional information deemed necessary by DWR to identify monitoring area or qualifications of the Monitoring Entity

5. A **local agency that is managing all or part of a groundwater basin pursuant to an integrated regional water management plan** prepared pursuant to Water Code Part 2.2 (commencing with Section 10530) that includes a groundwater management component that complies with the requirements of Section 10753.7 [Section 10927(d)].

   Notification Requirements:

   - Name of Agency
   - Agency Contact Name
   - Address
   - Telephone Number
   - Email Address
   - Any other relevant contact information
   - Authority (as listed in Section 10927)
   - Name and number of basin to be monitored (from Bulletin 118)
   - Map and shapefile showing area to be monitored (Shapefiles do not need to be submitted by the initial January 1, 2011 notification date; Regional Offices can provide assistance to potential Monitoring Entities with shapefiles.)
   - Statement that the entity will comply with the requirements of Water Code Part 2.11
   - Copy of current groundwater component of integrated regional water management plan
   - Statement describing the ability or qualifications of the entity to conduct the groundwater monitoring functions required

- Additional information deemed necessary by DWR to identify monitoring area or qualifications of the Monitoring Entity

6. A **county** that is not managing all or a part of a groundwater basin pursuant to a legally enforceable groundwater management plan with provisions that are substantively similar to those described in Water Code Part 2.75 (commencing with Section 10750) [Section 10927(e)].
   Notification Requirements:
   - Name of County
   - County Contact Name
   - Address
   - Telephone Number
   - Email Address
   - Any other relevant contact information
   - Authority (as listed in Section 10927)
   - Name and number of basin to be monitored (from Bulletin 118)
   - Map and shapefile showing area to be monitored (Shapefiles do not need to be submitted by the initial January 1, 2011 notification date; Regional Offices can provide assistance to potential Monitoring Entities with shapefiles.)
   - Statement that the entity will comply with the requirements of Water Code Part 2.11
   - Statement describing the ability or qualifications of the entity to conduct the groundwater monitoring functions required
   - Additional information deemed necessary by DWR to identify monitoring area or qualifications of the Monitoring Entity

7. A **voluntary cooperative groundwater monitoring association** formed pursuant to Section 10935 [Section 10927(f)]. As described in the Water Code Section 10935, the voluntary associations may be established by contract, a joint powers agreement, a memorandum of agreement, or other form of agreement deemed acceptable by DWR, so long as it contains: the names of the participants; the boundaries of the area covered by the agreement; the name or names of the parties responsible for meeting the requirements; the method of recovering the costs associated with meeting the requirements; and other provisions that may be required by DWR. Entities seeking to form a voluntary association should notify DWR, which will work cooperatively with the interested parties to facilitate the formation of the association.

Notification Requirements:

- Name of Association
- Association Contact Name
- Address
- Telephone Number
- Email Address
- Any other relevant contact information
- Authority (as listed in Section 10927)
- Name and number of basin to be monitored (from Bulletin 118)
- Map and shapefile showing area to be monitored (Shapefiles do not need to be submitted by the initial January 1, 2011 notification date; Regional Offices can provide assistance to potential Monitoring Entities with shapefiles.)
- Statement that the entity will comply with the requirements of Water Code Part 2.11
- Statement describing the ability or qualifications of the entity to conduct the groundwater monitoring functions required
- Statement of intent to meet the association formation requirements described in Section 10935
- Additional information deemed necessary by DWR to identify monitoring area or qualifications of the Monitoring Entity

Local agencies are encouraged to coordinate among themselves to determine the proposed Monitoring Entity or Entities that best suits their area. The resulting interested entity (or entities) should notify DWR of its intent to become a groundwater Monitoring Entity for one or more basins, or portions thereof by the January 1, 2011 deadline. Certain basic information is required for notification, including contact information and additional details depending on the authority of the entity desiring to monitor groundwater (Section 10928), as listed above. This notification information will be submitted to DWR using an online system that will be available by mid-December 2010.

MONITORING PLANS

Monitoring Entities will each develop a Monitoring Plan that includes the following sections: Monitoring Sites and Timing, Field Methods, and Data Reporting. Monitoring Plans should be completed and submitted to DWR by summer 2011. Staff from the DWR regional offices will be available to assist Monitoring Entities with the development of Monitoring Plans, if needed. In determining what information should be reported to DWR, the department will defer to existing monitoring programs if those programs result in information that demonstrates seasonal (annual high and low groundwater elevations) and long-term trends in groundwater elevations. Staff from the DWR regional offices will assist Monitoring Entities to address any gaps in basin coverage

(see below) and other monitoring issues and may make recommendations for the location of additional wells. However, the department has no authority to require a Monitoring Entity to install additional wells unless funds are provided for that purpose. Once a Monitoring Plan is established with DWR, Monitoring Entities should notify DWR of any changes to the plan.

Key Components of Monitoring Plans

Submit to DWR by summer 2011

- Monitoring Sites and Timing
  - Well Network Design
  - Selected wells (current)
  - Planned (future) wells
  - Frequency to capture seasonal highs and lows
  - Map and shapefile of monitoring area and well locations

Field Methods for groundwater monitoring

- Methods for measuring
  - Reference Point
  - Static water level
  - Depth to water
  - Standardized form for data collection

Data Reporting

- Online data submittal, minimum July & January each year

Data Gaps

A data gap refers to a basin or portion of a basin that is not included in any of the Monitoring Plans submitted to DWR. This is essentially an area that lacks the density of monitoring wells that would allow seasonal and long-term trends in groundwater elevations to be determined for the basin, subbasin, or a portion thereof. Among the 515 basins defined by Bulletin 118, data gaps may exist for a variety of reasons, including a lack of suitable monitoring wells, lack of groundwater use, access issues, and jurisdictional issues, among others.

If no local entity is able and/or willing to fill a data gap, the department may be required to perform groundwater monitoring functions. If DWR performs this monitoring, local agencies and the county that have the authority under Section 10927 to monitor the area of the data gap would be potentially ineligible for a water grant or loan awarded or administered by the state. The Monitoring Entity or entities with the authority to monitor the area of the data gap should provide detailed information regarding the nature of and reason for the data gap so that DWR may include such information in the prioritization of groundwater basins and subbasins as appropriate.

Agencies and counties that are eligible to be designated Monitoring Entities but choose not participate in the CASGEM program will not lose their state water grant and loan eligibility if their entire service area qualifies as a disadvantaged community (Water Code Section 10933.7(b)). It will be the responsibility of the local agency or county applying for a state water grant or loan to demonstrate their disadvantaged community status at the time they are applying for the grant or loan.

MONITORING SITES AND TIMING

The Monitoring Plan will identify the wells to be monitored and the frequency with which they will be monitored. The Monitoring Plan should explain how proposed monitoring will be sufficient to demonstrate the seasonal and long-term groundwater elevation trends in the monitored area. The density of monitoring locations will depend on the complexity of the basin.

Because of security concerns, the California Department of Public Health (DPH) routinely limits the disclosure of detailed public water supply well location information. Pursuant to Water Code Section 10931, the DWR is required to collaborate with DPH to ensure that the information reported to the CASGEM program will not result in the inappropriate disclosure of information of concern to DPH. At this time, DWR has reached no agreement with DPH regarding the appropriate treatment of public water supply well data. As a result, CASGEM does not currently plan to use such well information in its database.

The Monitoring Plan should contain a table identifying the wells to be monitored and the timing of that monitoring. Because the law specifies that information should demonstrate seasonal and long-term trends in groundwater elevations, at a minimum monitoring should be conducted at each location for the yearly high and low for the basin. The yearly high and low groundwater elevations typically occur in spring and fall, but this may vary from basin to basin. It is very important that the timing of all the measurements in the basin is coordinated. Rationale for selection of the timing (seasonal highs and lows) should be included in the Monitoring Plan.

The information on the monitoring sites and timing to be submitted in the online system should include:

- Well identification number
- State well number
- Location (decimal latitude and longitude, North American Datum (NAD) 83)
- Reference point elevation (feet, North American Vertical Datum (NAVD) 88)
- Land surface datum (feet, NAVD88)
- Map and shapefile with monitoring locations, Bulletin 118 groundwater basin boundary, and boundary of monitoring area
- Frequency and timing of measurements

FIELD METHODS

The consistent and documented collection of groundwater elevation data is important for ensuring that the data can be used across the state, regardless of the Monitoring Entity. The field methods should meet a common set of basic requirements; however, the methods do not have to be exactly the same. Many entities already have in place monitoring efforts that are successful in meeting local needs and that can meet the needs for this program, either as-is or with the incorporation of individual components. The CASGEM program wishes to maintain, to the greatest extent possible, the procedures of high-quality local groundwater elevation monitoring programs, so long as they meet the overall program goals and policies. Of particular concern are the following basic requirements:

- Method(s) to establish the Reference Point, including step-by-step instructions
- Method(s) to ensure static groundwater elevation
- Method(s) to measure depth to water, including step-by-step instructions
- Method(s) and form(s) for recording measurements

It is the responsibility of each Monitoring Entity to develop and implement monitoring protocols that are appropriate to local groundwater basin conditions, protect the water quality of its monitoring wells, and maintain the quality of the data that it submits to the CASGEM Program. DWR has developed field guidelines (Department of Water Resources Groundwater Elevation Monitoring Guidelines) based on a review of existing field methods from DWR and other organizations, which is available on the CASGEM website. Monitoring Entities are welcome to refer to these guidelines when developing field methods for their own Monitoring Plans. However, the DWR guidelines are for internal use in the event that the Department is required to perform groundwater monitoring functions pursuant to Section 10933.5 and are not binding on any other agency. The core of the CASGEM program will rely and build on the many, established local long-term groundwater monitoring and management programs. The department will defer to existing monitoring programs that result in information that demonstrates seasonal and long-term trends in groundwater elevations.

DATA REPORTING

DWR will develop an online data submittal system for Monitoring Entities to submit their groundwater elevation data. Several methods of submitting data will be available, such as direct online data entry, or upload of data files for batch entry. Initial groundwater elevation data should be submitted to DWR by January 1, 2012. Thereafter, data

should be submitted as soon as possible after collection, but no later than January 1st and July 1st of each year, at the minimum. Historical data can also be submitted via the DWR data system to aid in data interpretation. All submitted data will be available to the public, except for confidential data.

Each groundwater elevation data measurement submitted to the online system should include:

- Well identification number
- Measurement date
- Reference point and land surface elevation
- Depth to water
- Method of measuring water depth
- Measurement quality codes

The Monitoring Entity information, well information, and groundwater elevation information is to be provided by the Monitoring Entity. Items labeled as required must be submitted to DWR to report groundwater elevations. Items labeled as recommended should be submitted to DWR if they are available, as they assist in fully evaluating the quality of measurements. DWR will provide standard form(s) for Monitoring Entities to submit groundwater elevation data online. However, if Monitoring Entities cannot use the standard form(s) or provide the data elements listed below, DWR will work cooperatively with Monitoring Entities to develop alternate methods of submitting data.

Entity Information

All entities assuming groundwater monitoring functions as delineated in Section 10927 (a)-(f) are required to submit the following information:

- Monitoring Entity's name, address, telephone number, contact person name and email address, and any other relevant contact information (Section 10928 (a) (1), 10928 (b) (1))
- Name, address, telephone number, email address and any other relevant contact information for entities collecting data that is submitted by a designated submitting entity (Monitoring Entity)
- Groundwater basins being monitored
    - Identify entire basins monitored
    - Identify partial basins monitored

Well Information

The following information about each well is required for the CASGEM online system:

- Unique well identification number. Agencies may use an existing State Well Number, an existing local well designation, or develop their own identification name, using the following protocol:
    - Agency name, abbreviation, or acronym followed by a sequential number (e.g., SGA 01)
    - Groundwater basin – followed by a sequential number (e.g., Llagas 03)
    - Geographic name – followed by a sequential number (e.g., Yolo 12)
    - Well names should be 15 characters long or less
    - Avoid using owner/business names or specific locational information for privacy and security
- Decimal latitude/longitude coordinates of well, using horizontal datum NAD83, and the method of determining coordinates (Actual coordinates are preferred; however, Monitoring Entities may submit approximate locations, as needed, to protect the privacy of well owners. For example, to protect the privacy of a well owner, a Monitoring Entity may submit well coordinate locations that are only within 1000-feet of the actual well location.)
- Groundwater basin or sub-basin
- Reference point elevation of the well (feet) using NAVD88 vertical datum
- Elevation of land surface datum at the well (feet) using NAVD88 vertical datum
- Use of well (e.g., dedicated monitoring, irrigation, domestic, etc)
- Well completion type (e.g. single well, nested, or multi-completion wells)
- Depth of screened interval(s) and total well depth of well, if available (feet)
- Well Completion Report number (DWR Form 188), if available

The following information about each well is recommended for the CASGEM online system:

- State Well Number – assigned by DWR in most cases
- Method by which land surface elevation was determined (for example, topographic map, GPS, etc.)
- Written description of location of well, including distance from nearby landmarks and location of reference point in relation to well appurtenances (DWR Form 429)
- Well information comments

Groundwater Elevation Information

The following information for each groundwater elevation measurement is required for the CASGEM online system:

- Well identification number (see Well Information, above)
- Measurement date
- Reference point elevation of the well (feet) using NAVD88 vertical datum
- Elevation of land surface datum at the well (feet) using NAVD88 vertical datum
- Depth to water below reference point (feet) (unless no measurement was taken)
- Method of measuring water depth
- Measurement Quality Codes

    - If no measurement is taken, a specified “no measurement” code, must be recorded. Standard codes will be provided by the online system. If a measurement is taken, a “no measurement” code is not recorded.)
    - If the quality of a measurement is uncertain, a “questionable measurement” code can be recorded. Standard codes will be provided by the online system. If no measurement is taken, a “questionable measurement” code is not recorded.)
- Measuring agency identification

The following information for each groundwater elevation measurement is recommended for the CASGEM online system:

- Measurement time (PST/PDT with military time/24 hour format)
- Comments about measurement, if applicable

Groundwater elevation data shall be submitted electronically to DWR’s online system. DWR will develop electronic data transmittal (EDT) alternatives and data standards to permit bulk data transfer and assist Monitoring Entities in EDT reporting to DWR. As stated above, if Monitoring Entities cannot use the standard form(s) or provide the necessary groundwater elevation data elements, DWR will work cooperatively with Monitoring Entities to develop alternate methods of submitting data.

The CASGEM online data submittal system will be compatible with the Water Data Library (WDL) (http://www.water.ca.gov/waterdatalibrary/), DWR’s existing groundwater elevation database. The CASGEM system will include data reporting options similar to those in WDL, such as hydrographs, seasonal contour data, and data downloads. The combined accessibility of the WDL and the CASGEM system will be a significant resource for local agencies in making sound groundwater management decisions.

REFERENCES

California Departement of Water Resources. (2003). *California's Groundwater, Bulletin 118-03.*

California Department of Water Resources. (2009). *California Water Plan Update 2009, Bulletin 160-09.*

APPENDIX – SENATE BILL 6 (7TH EXTRAORDINARY SESSION) - GROUNDWATER MONITORING

Senate Bill No. 6

CHAPTER 1

An act to add Part 2.11 (commencing with Section 10920) to Division 6 of, and to repeal and add Section 12924 of, the Water Code, relating to groundwater.

[Approved by Governor November 6, 2009. Filed with Secretary of State November 6, 2009.]

Legislative Counsel's Digest

SB 6, Steinberg. Groundwater.

(1) Existing law authorizes a local agency whose service area includes a groundwater basin that is not subject to groundwater management to adopt and implement a groundwater management plan pursuant to certain provisions of law. Existing law requires a groundwater management plan to include certain components to qualify as a plan for the purposes of those provisions, including a provision that establishes funding requirements for the construction of certain groundwater projects.

This bill would establish a groundwater monitoring program pursuant to which specified entities, in accordance with prescribed procedures, may propose to be designated by the Department of Water Resources as groundwater monitoring entities, as defined, for the purposes of monitoring and reporting with regard to groundwater elevations in all or part of a basin or subbasin, as defined. The bill would require the department to work cooperatively with each monitoring entity to determine the manner in which groundwater elevation information should be reported to the department. The bill would authorize the department to make recommendations for improving an existing monitoring program, and to require additional monitoring wells under certain circumstances. Under certain circumstances, the department would be required to perform groundwater monitoring functions. In that event, prescribed entities with authority to assume groundwater monitoring functions with regard to a basin or subbasin for which the department has assumed those functions would not be eligible for a water grant or loan awarded or administered by the state.

(2) Existing law requires the department to conduct an investigation of the state's groundwater basins and to report its findings to the Governor and the Legislature not later than January 1, 1980.

This bill would repeal that provision. The department would be required to conduct an investigation of the state's groundwater basins and to report its findings to the Governor and the Legislature not later than January 1, 2012, and thereafter in years ending in 5 or 0.

(3) The bill would take effect only if SB 1 and SB 7 of the 2009–10 7th Extraordinary Session of the Legislature are enacted and become effective.

The people of the State of California do enact as follows:

SECTION 1. Part 2.11 (commencing with Section 10920) is added to Division 6 of the Water Code, to read:

PART 2.11. GROUNDWATER MONITORING

Chapter 1. General Provisions

10920. (a) It is the intent of the Legislature that on or before January 1, 2012, groundwater elevations in all groundwater basins and subbasins be regularly and systematically monitored locally and that the resulting groundwater information be made readily and widely available.

(b) It is further the intent of the Legislature that the department continue to maintain its current network of monitoring wells, including groundwater elevation and groundwater quality monitoring wells, and that the department continue to coordinate monitoring with local entities.

10921. This part does not require the monitoring of groundwater elevations in an area that is not within a basin or subbasin.

10922. This part does not expand or otherwise affect the powers or duties of the department relating to groundwater beyond those expressly granted by this part.

Chapter 2. Definitions

10925. Unless the context otherwise requires, the definitions set forth in this section govern the construction of this part.

(a) “Basin” or “subbasin” means a groundwater basin or subbasin identified and defined in the department’s Bulletin No. 118.

(b) “Bulletin No. 118” means the department’s report entitled “California’s Groundwater: Bulletin 118” updated in 2003, or as it may be subsequently updated or revised in accordance with Section 12924.

(c) “Monitoring entity” means a party conducting or coordinating the monitoring of groundwater elevations pursuant to this part.

(d) “Monitoring functions” and “groundwater monitoring functions” means the monitoring of groundwater elevations, the reporting of those elevations to the department, and other related actions required by this part.

(e) “Monitoring groundwater elevations” means monitoring groundwater elevations, coordinating the monitoring of groundwater elevations, or both.

(f) “Voluntary cooperative groundwater monitoring association” means an association formed for the purposes of monitoring groundwater elevations pursuant to Section 10935.

Chapter 3. Groundwater Monitoring Program

10927. Any of the following entities may assume responsibility for monitoring and reporting groundwater elevations in all or a part of a basin or subbasin in accordance with this part:

(a) A watermaster or water management engineer appointed by a court or pursuant to statute to administer a final judgment determining rights to groundwater.

(b) (1) A groundwater management agency with statutory authority to manage groundwater pursuant to its principal act that is monitoring groundwater elevations in all or a part of a groundwater basin or subbasin on or before January 1, 2010.

(2) A water replenishment district established pursuant to Division 18 (commencing with Section 60000). This part does not expand or otherwise affect the authority of a water replenishment district relating to monitoring groundwater elevations.

(c) A local agency that is managing all or part of a groundwater basin or subbasin pursuant to Part 2.75 (commencing with Section 10750) and that was monitoring

groundwater elevations in all or a part of a groundwater basin or subbasin on or before January 1, 2010, or a local agency or county that is managing all or part of a groundwater basin or subbasin pursuant to any other legally enforceable groundwater management plan with provisions that are substantively similar to those described in that part and that was monitoring groundwater elevations in all or a part of a groundwater basin or subbasin on or before January 1, 2010.

(d) A local agency that is managing all or part of a groundwater basin or subbasin pursuant to an integrated regional water management plan prepared pursuant to Part 2.2 (commencing with Section 10530) that includes a groundwater management component that complies with the requirements of Section 10753.7.

(e) A county that is not managing all or a part of a groundwater basin or subbasin pursuant to a legally enforceable groundwater management plan with provisions that are substantively similar to those described in Part 2.75 (commencing with Section 10750).

(f) A voluntary cooperative groundwater monitoring association formed pursuant to Section 10935.

10928. (a) Any entity described in subdivision (a) or (b) of Section 10927 that seeks to assume groundwater monitoring functions in accordance with this part shall notify the department, in writing, on or before January 1, 2011. The notification shall include all of the following information:

(1) The entity's name, address, telephone number, and any other relevant contact information.

(2) The specific authority described in Section 10927 pursuant to which the entity qualifies to assume the groundwater monitoring functions.

(3) A map showing the area for which the entity is requesting to perform the groundwater monitoring functions.

(4) A statement that the entity will comply with all of the requirements of this part.

(b) Any entity described in subdivision (c), (d), (e), or (f) of Section 10927 that seeks to assume groundwater monitoring functions in accordance with this part shall notify the department, in writing, by January 1, 2011. The information provided in the notification shall include all of the following:

(1) The entity's name, address, telephone number, and any other relevant contact information.

(2) The specific authority described in Section 10927 pursuant to which the entity qualifies to assume the groundwater monitoring functions.

(3) For entities that seek to qualify pursuant to subdivision (c) or (d) of Section 10927, the notification shall also include a copy of the current groundwater management plan or the groundwater component of the integrated regional water management plan, as appropriate.

(4) For entities that seek to qualify pursuant to subdivision (f) of Section 10927, the notification shall include a statement of intention to meet the requirements of Section 10935.

(5) A map showing the area for which the entity is proposing to perform the groundwater monitoring functions.

(6) A statement that the entity will comply with all of the requirements of this part.

(7) A statement describing the ability and qualifications of the entity to conduct the groundwater monitoring functions required by this part.
(c) The department may request additional information that it deems necessary for the purposes of determining the area that is proposed to be monitored or the qualifications of the entity to perform the groundwater monitoring functions.

10929. (a) (1) The department shall review all notifications received pursuant to Section 10928.

(2) Upon the receipt of a notification pursuant to subdivision (a) of Section 10928, the department shall verify that the notifying entity has the appropriate authority under subdivision (a) or (b) of Section 10927.

(3) Upon the receipt of a notification pursuant to subdivision (b) of Section 10928, the department shall do both of the following:

(A) Verify that each notification is complete.

(B) Assess the qualifications of the notifying party.

(b) If the department has questions about the completeness or accuracy of a notification, or the qualifications of a party, the department shall contact the party to resolve any deficiencies. If the department is unable to resolve the deficiencies, the department shall notify the party in writing that the notification will not be considered further until the deficiencies are corrected.

(c) If the department determines that more than one party seeks to become the monitoring entity for the same portion of a basin or subbasin, the department shall consult with the interested parties to determine which party will perform the monitoring functions. In determining which party will perform the monitoring functions under this part, the department shall follow the order in which entities are identified in Section 10927.

(d) The department shall advise each party on the status of its notification within three months of receiving the notification.

10930. Upon completion of each review pursuant to Section 10929, the department shall do both of the following if it determines that a party will perform monitoring functions under this part:

(a) Notify the party in writing that it is a monitoring entity and the specific portion of the basin or subbasin for which it shall assume groundwater monitoring functions.

(b) Post on the department's Internet Web site information that identifies the monitoring entity and the portion of the basin or subbasin for which the monitoring entity will be responsible.

10931. (a) The department shall work cooperatively with each monitoring entity to determine the manner in which groundwater elevation information should be reported to the department pursuant to this part. In determining what information should be reported to the department, the department shall defer to existing monitoring programs if those programs result in information that demonstrates seasonal and long-term trends in groundwater elevations. The department shall collaborate with the State Department of Public Health to ensure that the information reported to the department will not result in the inappropriate disclosure of the physical address or geographical location of drinking water sources, storage facilities, pumping operational data, or treatment facilities.

(b) (1) For the purposes of this part, the department may recommend improvements to an existing monitoring program, including recommendations for additional monitoring wells.

(2) The department may not require additional monitoring wells unless funds are provided for that purpose.

10932. Monitoring entities shall commence monitoring and reporting groundwater elevations pursuant to this part on or before January 1, 2012.

10933. (a) On or before January 1, 2012, the department shall commence to identify the extent of monitoring of groundwater elevations that is being undertaken within each basin and subbasin.

(b) The department shall prioritize groundwater basins and subbasins for the purpose of implementing this section. In prioritizing the basins and subbasins, the department shall, to the extent data are available, consider all of the following:

(1) The population overlying the basin or subbasin.

(2) The rate of current and projected growth of the population overlying the basin or subbasin.

(3) The number of public supply wells that draw from the basin or subbasin.

(4) The total number of wells that draw from the basin or subbasin.

(5) The irrigated acreage overlying the basin or subbasin.

(6) The degree to which persons overlying the basin or subbasin rely on groundwater as their primary source of water.

(7) Any documented impacts on the groundwater within the basin or subbasin, including overdraft, subsidence, saline intrusion, and other water quality degradation.

(8) Any other information determined to be relevant by the department.

(c) If the department determines that all or part of a basin or subbasin is not being monitored pursuant to this part, the department shall do all of the following:

(1) Attempt to contact all well owners within the area not being monitored.

(2) Determine if there is an interest in establishing any of the following:

(A) A groundwater management plan pursuant to Part 2.75 (commencing with Section 10750).

(B) An integrated regional water management plan pursuant to Part 2.2 (commencing with Section 10530) that includes a groundwater management component that complies with the requirements of Section 10753.7.

(C) A voluntary groundwater monitoring association pursuant to Section 10935.

(d) If the department determines that there is sufficient interest in establishing a plan or association described in paragraph (2) of subdivision (c), or if the county agrees to perform the groundwater monitoring functions in accordance with this part, the department shall work cooperatively with the interested parties to comply with the requirements of this part within two years.

(e) If the department determines, with regard to a basin or subbasin, that there is insufficient interest in establishing a plan or association described in paragraph (2) of subdivision (c), and if the county decides not to perform the groundwater monitoring and reporting functions of this part, the department shall do all of the following:

(1) Identify any existing monitoring wells that overlie the basin or subbasin that are owned or operated by the department or any other state or federal agency.

(2) Determine whether the monitoring wells identified pursuant to paragraph (1) provide sufficient information to demonstrate seasonal and long-term trends in groundwater elevations.

(3) If the department determines that the monitoring wells identified pursuant to paragraph (1) provide sufficient information to demonstrate seasonal and long-term trends in groundwater elevations, the department shall not perform groundwater monitoring functions pursuant to Section 10934.

(4) If the department determines that the monitoring wells identified pursuant to paragraph (1) provide insufficient information to demonstrate seasonal and long-term trends in groundwater elevations, and the State Mining and Geology Board concurs with

that determination, the department shall perform groundwater monitoring functions pursuant to Section 10934.[1]

10933.5. (a) Consistent with Section 10933, the department shall perform the groundwater monitoring functions for those portions of a basin or subbasin for which no monitoring entity has agreed to perform the groundwater monitoring functions.

(b) Upon determining that it is required to perform groundwater monitoring functions, the department shall notify both of the following entities that it is forming the groundwater monitoring district:

(1) Each well owner within the affected area.

(2) Each county that contains all or a part of the affected area.

(c) The department shall not assess a fee or charge to recover the costs for carrying out its power and duties under this part.

(d) The department may establish regulations to implement this section.

10933.7. (a) If the department is required to perform groundwater monitoring functions pursuant to Section 10933.5, the county and the entities described in subdivisions (a) to (d), inclusive, of Section 10927 shall not be eligible for a water grant or loan awarded or administered by the state.

(b) Notwithstanding subdivision (a), the department shall determine that an entity described in subdivision (a) is eligible for a water grant or loan under the circumstances described in subdivision (a) if the entity has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

10934. (a) For purposes of this part, neither any entity described in Section 10927, nor the department, shall have the authority to do either of the following:

(1) To enter private property without the consent of the property owner.

[1] The reference in Section 10933(e)(4) to Section 10934 has been amended by Stats. 2010, Ch. 328, sec. 237 (S.B. 1330). The new reference will be to Section 10933.5.

(2) To require a private property owner to submit groundwater monitoring information to the entity.

(b) This section does not apply to a county or an entity described in subdivisions (a) to (d), inclusive, of Section 10927 that assumed responsibility for monitoring and reporting groundwater elevations prior to the effective date of this part.

10935. (a) A voluntary cooperative groundwater monitoring association may be formed for the purposes of monitoring groundwater elevations in accordance with this part. The association may be established by contract, a joint powers agreement, a memorandum of agreement, or other form of agreement deemed acceptable by the department.

(b) Upon notification to the department by one or more entities that seek to form a voluntary cooperative groundwater monitoring association, the department shall work cooperatively with the interested parties to facilitate the formation of the association.

(c) The contract or agreement shall include all of the following:

(1) The names of the participants.

(2) The boundaries of the area covered by the agreement.

(3) The name or names of the parties responsible for meeting the requirements of this part.

(4) The method of recovering the costs associated with meeting the requirements of this part.

(5) Other provisions that may be required by the department.

10936. Costs incurred by the department pursuant to this chapter may be funded from unallocated bond revenues pursuant to paragraph (12) of subdivision (a) of Section 75027 of the Public Resources Code, to the extent those funds are available for those purposes.

SEC. 2. Section 12924 of the Water Code is repealed.

SEC. 3. Section 12924 is added to the Water Code, to read:

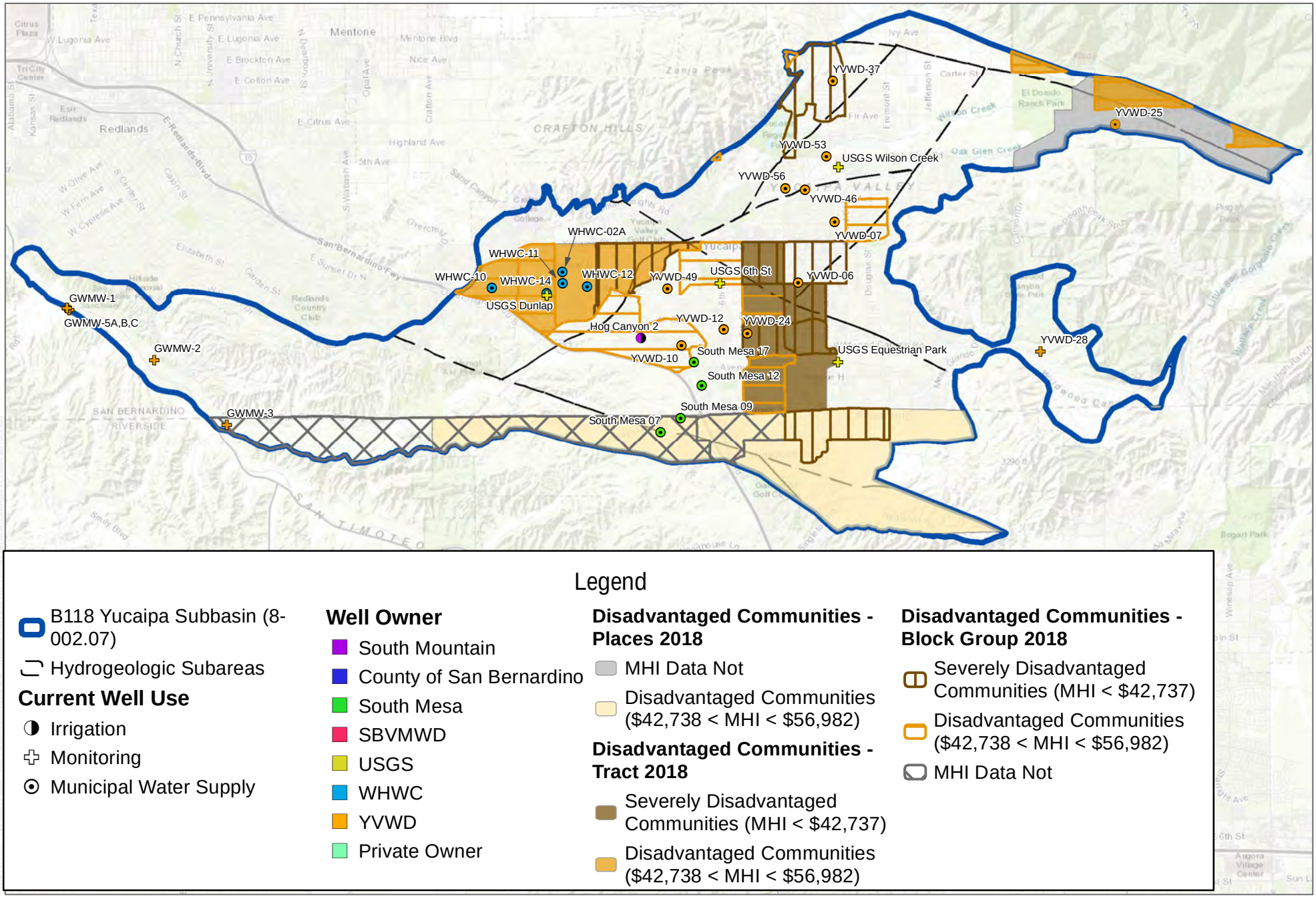
12924. (a) The department, in conjunction with other public agencies, shall conduct an investigation of the state's groundwater basins. The department shall identify the state's groundwater basins on the basis of geological and hydrological conditions and consideration of political boundary lines whenever practical. The department shall also investigate existing general patterns of groundwater pumping and groundwater recharge within those basins to the extent necessary to identify basins that are subject to critical conditions of overdraft.

(b) The department shall report its findings to the Governor and the Legislature not later than January 1, 2012, and thereafter in years ending in 5 or 0.

SEC. 4. This act shall take effect only if Senate Bill 1 and Senate Bill 7 of the 2009–10 Seventh Extraordinary Session of the Legislature are enacted and become effective.

Appendix 3-C

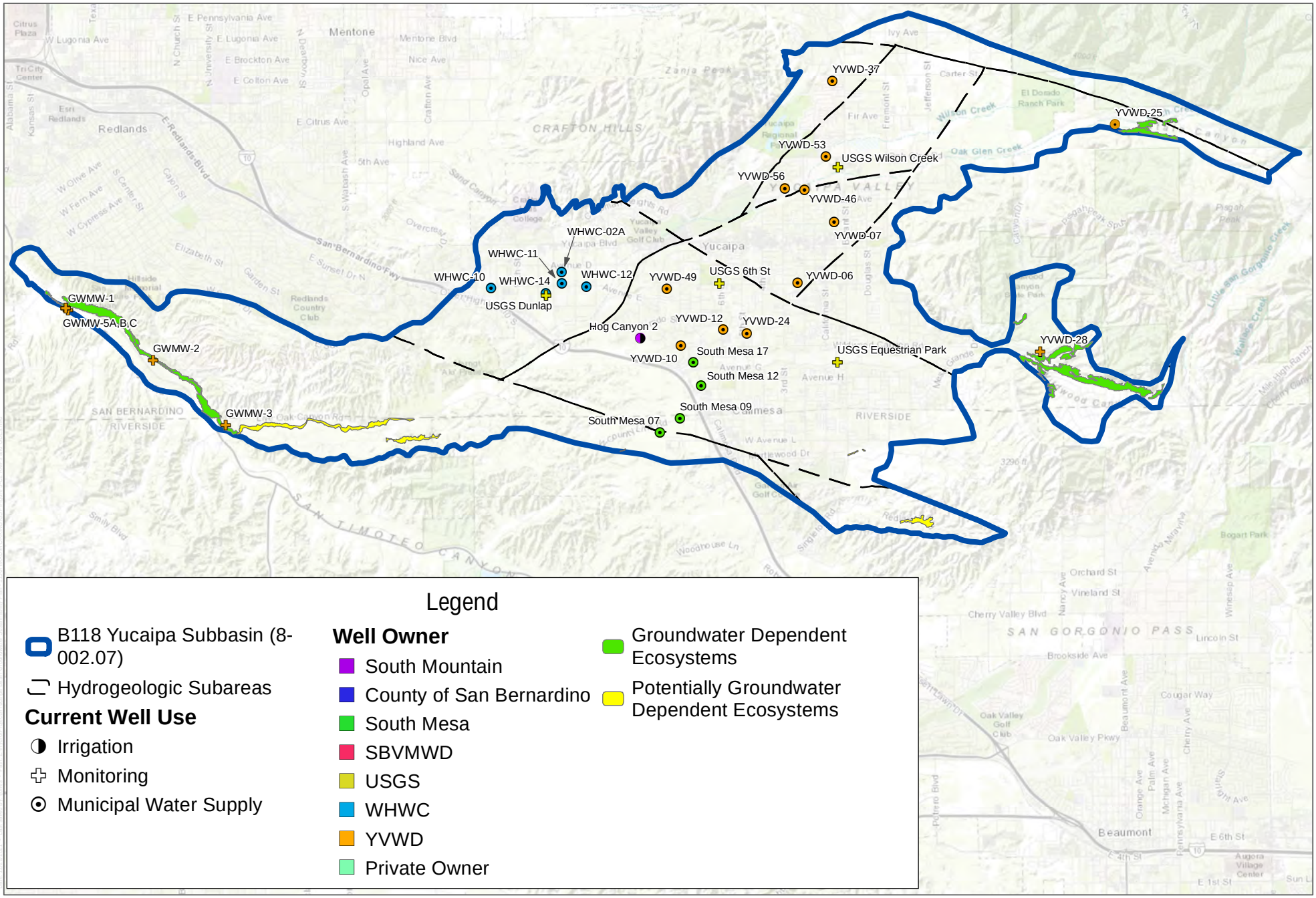
Representative Monitoring Points, Disadvantaged Communities, and Groundwater Dependent Ecosystems



SOURCE: SBVMWD, YVWD, WHWC, SMWC, City of Redlands, USGS

FIGURE 3-C1

Representative Monitoring Points, Disadvantaged, and Severely Disadvantaged Communities in the Plan Area



SOURCE: SBVMWD, YVWD, WHWC, SMWC, City of Redlands, USGS

DUDEK

0 0.5 1 Miles

FIGURE 3-C2

Representative Monitoring Points and Groundwater Dependent Ecosystems in the Plan Area

Yucaipa Subbasin Groundwater Sustainability Plan

Appendix 5-A

Resolutions by Yucaipa GSA Member Agencies to Adopt the GSP

Resolution No. 2021-01

by

Western Heights Water Company

RESOLUTION NO. 2021-01

RESOLUTION OF THE BOARD OF DIRECTORS OF WESTERN HEIGHTS WATER COMPANY, AS A MEMBER OF THE YUCAIPA GROUNDWATER SUSTAINABILITY AGENCY TO ADOPT THE GROUNDWATER SUSTAINABILITY PLAN FOR THE YUCAIPA SUBBASIN (BASIN NO. 8-002.07)

December 17, 2021

WHEREAS, on September 16, 2014, Governor Jerry Brown signed into law Senate Bills 1168 and 1319, and Assembly Bill 1739, collectively known as the Sustainable Groundwater Management Act ("SGMA"), codified in certain provisions of the California Government Code, including commencing with Section 65350.5, and codified in Part 2.74 of Division 6 of the California Water Code, commencing with Section 10720, and amending other provisions of the California Government Code and California Water Code; and,

WHEREAS, SGMA went into effect on January 1, 2015; and,

WHEREAS, various clarifying amendments to SGMA were signed into law in 2015, including Senate Bills 13 and 226, and Assembly Bills 617 and 939, which were codified in part in California Water Code Section 10723.6(a), authorizing a combination of local agencies to form a Groundwater Sustainability Agency ("GSA") pursuant to a joint powers agreement, a memorandum of agreement, or other legal agreement; and, California Water Code Section 10723.6(b), authorizing water corporations regulated by the California Public Utilities Commission and mutual water companies to participate in a GSA through a memorandum of agreement or other legal agreement; and,

WHEREAS, the legislative intent and effect of SGMA, as set forth in California Water Code Section 10720.1, includes the following: (1) to provide for the sustainable management of groundwater basins; (2) to enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X Water of the California Constitution, and to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater; (3) to establish minimum standards for sustainable groundwater management; (4) to provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater; (5) to avoid or minimize subsidence; (6) to improve data collection and understanding about groundwater; (7) to increase groundwater storage and remove impediments to recharge; (8) to manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner; and (9) to provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of SGMA; and,

WHEREAS, SGMA affords GSAs specific powers to manage groundwater in addition to existing legal authorities, which powers may be used to provide the maximum degree of local control and flexibility consistent with the sustainability goals of SGMA; and,

WHEREAS, SGMA includes several un-codified findings by the California Legislature, including the determination that the people of the state have a primary interest in the protection, management, and reasonable beneficial use of the water resources of the state, both surface and underground, and that the integrated management of the state's water resources is essential to meeting its water management goals; and,

WHEREAS, the Yucaipa Subbasin ("SUBBASIN") is identified by the California Department of Water Resources Bulletin 118 as Sub-basin No. 8-002.07 of the Upper Santa Ana Valley Groundwater Basin, and is designated by the California Department of Water Resources ("DWR") as a high-priority basin; and,

WHEREAS, California Water Code Section 10720.7 requires the SUBBASIN, as a high-priority basin that is not designated by DWR as being subject to critical conditions of overdraft, to be managed by a Groundwater Sustainability Plan ("GSP") by January 31, 2022; and,

WHEREAS, South Mesa Water Company ("SOUTH MESA"), South Mountain Water Company ("SOUTH MOUNTAIN"), Western Heights Water Company ("WHWC") and Yucaipa Valley Water District ("YVWD"), herein collectively referred to as the "WATER PURVEYORS"; and the City of Calimesa ("CALIMESA"), the City of Redlands ("REDLANDS") and the City of Yucaipa ("YUCAIPA"), herein collectively referred to as the MUNICIPALITIES"; and the San Bernardino Valley Municipal Water District ("SBVMWD") and the San Gorgonio Pass Water Agency ("SGPWA"), herein collectively referred to as the "REGIONALS", entered into a Memorandum of Agreement ("MOA") in June 2017 to form a GSA called the Yucaipa Groundwater Sustainability Agency ("YUCAIPA GSA"), and,

WHEREAS, each of the above-described entities is individually referred to as a "PARTY" and are collectively referred to as the "PARTIES". SOUTH MESA, SOUTH MOUNTAIN and WHWC are collectively referred to as the "MUTUALS"; and, the PARTIES other than the MUTUALS are collectively referred to as the "LOCAL AGENCIES," and,

WHEREAS, The County of Riverside ("RIVERSIDE") and the County of San Bernardino ("SAN BERNARDINO"), collectively referred to as the "COUNTIES," are stakeholders but not PARTIES in the YUCAIPA GSA, and,

WHEREAS, CALIMESA submitted a written Notice of Withdrawal dated November 19, 2018 and the Yucaipa GSA subsequently acknowledged the withdrawal of CALIMESA from the Yucaipa GSA at the January 23, 2019 YUCAIPA GSA Board meeting, and,

WHEREAS, the LOCAL AGENCIES have water supply, water management, and/or land use responsibilities for their respective jurisdictional areas overlying the SUBBASIN and are local agencies as defined by SGMA in California Water Code Section 10721(n), and thus each is authorized by SGMA to form a GSA; and,

WHEREAS, the LOCAL AGENCIES' individually have jurisdictional and/or service areas within and their collective jurisdictional areas and/or service areas that cover the entirety of the SUBBASIN, with no gaps in coverage; and,

WHEREAS, the WATER PURVEYORS, including the MUTUALS, produce groundwater and provide water service within the SUBBASIN; and,

WHEREAS, the REGIONALS are State Water Contractors, and have the rights and duties of such, including for the delivery of State Water Project Water within the SUBBASIN; and,

WHEREAS, the PARTIES have worked with local stakeholders and interested parties in the SUBBASIN that are not PARTIES in YUCAIPA GSA to carry out the policy, purposes, and requirements of SGMA in the SUBBASIN; and,

WHEREAS, the YUCAIPA GSA has developed a GSP for the SUBBASIN as required by SGMA; and,

WHEREAS, the YUCAIPA GSA has provided the public notices required by Water Code section 10727.8, including a Public Outreach and Engagement Plan, informing the public on how to participate in the development of the GSP; and,

WHEREAS, the YUCAIPA GSA has held numerous public meetings where elements of the GSP for the SUBBASIN have been presented and discussed, and where the general public has been provided the opportunity to comment on the various elements of the GSP; and,

WHEREAS, due to the COVID-19 pandemic and Executive Order N-29-20 that suspended the requirement to hold public meetings at physical locations, the YUCAIPA GSA held online public meetings and provided details in the public notices informing the public how to participate in the online meetings; and,

WHEREAS, the YUCAIPA GSA has received written public comments on the various elements of the GSP, which have been reviewed and commented on, where and as appropriate, as part of the GSP; and,

WHEREAS, the YUCAIPA GSA announced a community engagement meeting (i.e., public hearing) for November 16, 2021, as required by Water Code section 10728.4 for the purposes of considering public comments before adopting a GSP for the SUBBASIN; and,

WHEREAS, the GSP for the Subbasin contains all the elements required by Water Code sections 10727.2 and 10727.4; and,

WHEREAS, after its filing with DWR, the GSP for the Subbasin will be subject to a further public review period, and will undergo review by DWR for a period not exceeding two years; and,

WHEREAS, the GSP for the SUBBASIN will be subject to further updating during the DWR review period, and periodically thereafter via annual reports due every April 1 and evaluation reports at least every 5 years or when the GSP is amended; and,

WHEREAS, it is now necessary and appropriate for the Board of Directors to consider the adoption of the GSP for the sustainable management of the SUBBASIN, and authorizes the adoption of the GSP for the sustainable management of the SUBBASIN and directs the YUCAIPA GSA to file the GSP with DWR no later than the date required by SGMA; NOW, THEREFORE,

BE IT RESOLVED, by the Board of Directors of Western Heights Water Company, as follows:

1. The above Recitals are true and correct.
2. The GSP for the SUBBASIN is approved.
3. The Western Heights Water Company hereby authorizes the adoption of the GSP for the SUBBASIN and directs the YUCAIPA GSA to file the GSP with DWR no later than January 31, 2022, as required by SGMA.
4. The General Manager and Agency Counsel are hereby authorized and directed to take such other and further actions as may be necessary or appropriate to implement the intent and purposes of this resolution.

PASSED AND ADOPTED on this 17th day of December, 2021, by the following vote, to-wit: 5-0.

IN WITNESS WHEREOF the undersigned, acting on behalf of and at the direction of the Board of Directors, has executed this Resolution as of the date set forth above:

By: _____
Name: Debbie Patrick
Title: Secretary/Clerk

Resolution No. 2021-70

by

Yucaipa Valley Water District

RESOLUTION NO. 2021-70

RESOLUTION OF THE BOARD OF DIRECTORS OF THE YUCAIPA VALLEY WATER DISTRICT AS A MEMBER OF THE YUCAIPA GROUNDWATER SUSTAINABILITY AGENCY TO ADOPT THE GROUNDWATER SUSTAINABILITY PLAN FOR THE YUCAIPA SUBBASIN (BASIN NO. 8-002.07)

WHEREAS, on September 16, 2014, Governor Jerry Brown signed into law Senate Bills 1168 and 1319, and Assembly Bill 1739, collectively known as the Sustainable Groundwater Management Act ("SGMA"), codified in certain provisions of the California Government Code, including commencing with Section 65350.5, and codified in Part 2.74 of Division 6 of the California Water Code, commencing with Section 10720, and amending other provisions of the California Government Code and California Water Code; and,

WHEREAS, SGMA went into effect on January 1, 2015; and,

WHEREAS, various clarifying amendments to SGMA were signed into law in 2015, including Senate Bills 13 and 226, and Assembly Bills 617 and 939, which were codified in part in California Water Code Section 10723.6(a), authorizing a combination of local agencies to form a Groundwater Sustainability Agency ("GSA") pursuant to a joint powers agreement, a memorandum of agreement, or other legal agreement; and, California Water Code Section 10723.6(b), authorizing water corporations regulated by the California Public Utilities Commission and mutual water companies to participate in a GSA through a memorandum of agreement or other legal agreement; and,

WHEREAS, the legislative intent and effect of SGMA, as set forth in California Water Code Section 10720.1, includes the following: (1) to provide for the sustainable management of groundwater basins; (2) to enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X Water of the California Constitution, and to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater; (3) to establish minimum standards for sustainable groundwater management; (4) to provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater; (5) to avoid or minimize subsidence; (6) to improve data collection and understanding about groundwater; (7) to increase groundwater storage and remove impediments to recharge; (8) to manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner; and (9) to provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of SGMA; and,

WHEREAS, SGMA affords GSAs specific powers to manage groundwater in addition to existing legal authorities, which powers may be used to provide the maximum degree of local control and flexibility consistent with the sustainability goals of SGMA; and,

WHEREAS, SGMA includes several un-codified findings by the California Legislature, including the determination that the people of the state have a primary interest in the protection, management, and reasonable beneficial use of the water resources of the state, both surface and underground, and that the integrated management of the state's water resources is essential to meeting its water management goals; and,

WHEREAS, the Yucaipa Subbasin ("SUBBASIN") is identified by the California Department of Water Resources Bulletin 118 as Sub-basin No. 8-002.07 of the Upper Santa Ana Valley Groundwater Basin, and is designated by the California Department of Water Resources ("DWR") as a high-priority basin; and,

WHEREAS, California Water Code Section 10720.7 requires the SUBBASIN, as a high-priority basin that is not designated by DWR as being subject to critical conditions of overdraft, to be managed by a Groundwater Sustainability Plan ("GSP") by January 31, 2022; and,

WHEREAS, South Mesa Water Company ("SOUTH MESA"), South Mountain Water Company ("SOUTH MOUNTAIN"), Western Heights Water Company ("WHWC") and Yucaipa Valley Water District ("YVWD"), herein collectively referred to as the "WATER PURVEYORS"; and the City of Calimesa ("CALIMESA"), the City of Redlands ("REDLANDS") and the City of Yucaipa ("YUCAIPA"), herein collectively referred to as the MUNICIPALITIES"; and the San Bernardino Valley Municipal Water District ("SBVMWD") and the San Gorgonio Pass Water Agency ("SGPWA"), herein collectively referred to as the "REGIONALS", entered into a Memorandum of Agreement ("MOA") in June 2017 to form a GSA called the Yucaipa Groundwater Sustainability Agency ("YUCAIPA GSA"), and,

WHEREAS, each of the above-described entities is individually referred to as a "PARTY" and are collectively referred to as the "PARTIES". SOUTH MESA, SOUTH MOUNTAIN and WHWC are collectively referred to as the "MUTUALS"; and, the PARTIES other than the MUTUALS are collectively referred to as the "LOCAL AGENCIES," and,

WHEREAS, The County of Riverside ("RIVERSIDE") and the County of San Bernardino ("SAN BERNARDINO"), collectively referred to as the "COUNTIES," are stakeholders but not PARTIES in the YUCAIPA GSA, and,

WHEREAS, CALIMESA submitted a written Notice of Withdrawal dated November 19, 2018 and the Yucaipa GSA subsequently acknowledged the withdrawal of CALIMESA from the Yucaipa GSA at the January 23, 2019 YUCAIPA GSA Board meeting, and,

WHEREAS, the LOCAL AGENCIES have water supply, water management, and/or land use responsibilities for their respective jurisdictional areas overlying the SUBBASIN and are local agencies as defined by SGMA in California Water Code Section 10721(n), and thus each is authorized by SGMA to form a GSA; and,

WHEREAS, the LOCAL AGENCIES' individually have jurisdictional and/or service areas within and their collective jurisdictional areas and/or service areas that cover the entirety of the SUBBASIN, with no gaps in coverage; and,

WHEREAS, the WATER PURVEYORS, including the MUTUALS, produce groundwater and provide water service within the SUBBASIN; and,

WHEREAS, the REGIONALS are State Water Contractors, and have the rights and duties of such, including for the delivery of State Water Project Water within the SUBBASIN; and,

WHEREAS, the PARTIES have worked with local stakeholders and interested parties in the SUBBASIN that are not PARTIES in YUCAIPA GSA to carry out the policy, purposes, and requirements of SGMA in the SUBBASIN; and,

WHEREAS, the YUCAIPA GSA has developed a GSP for the SUBBASIN as required by SGMA; and,

WHEREAS, the YUCAIPA GSA has provided the public notices required by Water Code section 10727.8, including a Public Outreach and Engagement Plan, informing the public on how to participate in the development of the GSP; and,

WHEREAS, the YUCAIPA GSA has held numerous public meetings where elements of the GSP for the SUBBASIN have been presented and discussed, and where the general public has been provided the opportunity to comment on the various elements of the GSP; and,

WHEREAS, due to the COVID-19 pandemic and Executive Order N-29-20 that suspended the requirement to hold public meetings at physical locations, the YUCAIPA GSA held online public meetings and provided details in the public notices informing the public how to participate in the online meetings; and,

WHEREAS, the YUCAIPA GSA has received written public comments on the various elements of the GSP, which have been reviewed and commented on, where and as appropriate, as part of the GSP; and,

WHEREAS, the YUCAIPA GSA conducted a community engagement meeting (i.e., public hearing) for November 16, 2021, as required by Water Code section 10728.4 for the purposes of considering public comments before adopting a GSP for the SUBBASIN; and,

WHEREAS, the GSP for the Subbasin contains all the elements required by Water Code sections 10727.2 and 10727.4; and,

WHEREAS, after its filing with DWR, the GSP for the Subbasin will be subject to a further public review period, and will undergo review by DWR for a period not exceeding two years; and,

WHEREAS, the GSP for the SUBBASIN will be subject to further updating during the DWR review period, and periodically thereafter via annual reports due every April 1 and evaluation reports at least every 5 years or when the GSP is amended; and,

WHEREAS, it is now necessary and appropriate for the Board of Directors to consider the adoption of the GSP for the sustainable management of the SUBBASIN, and authorizes the adoption of the GSP for the sustainable management of the SUBBASIN and directs the YUCAIPA GSA to file the GSP with DWR no later than the date required by SGMA; NOW, THEREFORE,

NOW, THEREFORE, the Board of Directors of the Yucaipa Valley Water District hereby RESOLVE, DETERMINE, and ORDER as follows:

Section 1 The above Recitals are true and correct.

Section 2 The GSP for the SUBBASIN is approved.

Section 3 The Yucaipa Valley Water District hereby authorizes the adoption of the GSP for the SUBBASIN and directs the YUCAIPA GSA to file the GSP with DWR no later than January 31, 2022, as required by SGMA.

Section 4 The General Manager and Legal Counsel are hereby authorized and directed to take such other and further actions as may be necessary or appropriate to implement the intent and purposes of this resolution.

PASSED, APPROVED and ADOPTED this 21st day of December 2021.

YUCAIPA VALLEY WATER DISTRICT

Chris Mann, President Board of Directors

ATTEST:

Joseph B. Zoba, General Manager

Resolution No. 1142

by

San Bernardino Valley Municipal Water District

RESOLUTION NO. 1142

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT AS A MEMBER OF THE YUCAIPA SUSTAINABILITY GROUNDWATER MANAGEMENT AGENCY TO ADOPT THE GROUNDWATER SUSTAINABILITY PLAN FOR THE YUCAIPA SUBBASIN (BASIN NO. 8-002.07)

WHEREAS, on September 16, 2014, Governor Jerry Brown signed into law Senate Bills 1168 and 1319, and Assembly Bill 1739, collectively known as the Sustainable Groundwater Management Act ("SGMA"), codified in certain provisions of the California Government Code, including commencing with Section 65350.5, and codified in Part 2.74 of Division 6 of the California Water Code, commencing with Section 10720, and amending other provisions of the California Government Code and California Water Code; and,

WHEREAS, SGMA went into effect on January 1, 2015; and,

WHEREAS, various clarifying amendments to SGMA were signed into law in 2015, including Senate Bills 13 and 226, and Assembly Bills 617 and 939, which were codified in part in California Water Code Section 10723.6(a), authorizing a combination of local agencies to form a Groundwater Sustainability Agency ("GSA") pursuant to a joint powers agreement, a memorandum of agreement, or other legal agreement; and, California Water Code Section 10723.6(b), authorizing water corporations regulated by the California Public Utilities Commission and mutual water companies to participate in a GSA through a memorandum of agreement or other legal agreement; and,

WHEREAS, the legislative intent and effect of SGMA, as set forth in California Water Code Section 10720.1, includes the following: (1) to provide for the sustainable management of groundwater basins; (2) to enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X Water of the California Constitution, and to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater; (3) to establish minimum standards for sustainable groundwater management; (4) to provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater; (5) to avoid or minimize subsidence; (6) to improve data collection and understanding about groundwater; (7) to increase groundwater storage and remove impediments to recharge; (8) to manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner; and (9) to provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of SGMA; and,

WHEREAS, SGMA affords GSAs specific powers to manage groundwater in addition to existing legal authorities, which powers may be used to provide the maximum degree of local control and flexibility consistent with the sustainability goals of SGMA; and,

WHEREAS, SGMA includes several un-codified findings by the California Legislature, including the determination that the people of the state have a primary interest in the

protection, management, and reasonable beneficial use of the water resources of the state, both surface and underground, and that the integrated management of the state's water resources is essential to meeting its water management goals; and,

WHEREAS, the Yucaipa Subbasin (“SUBBASIN”) is identified by the California Department of Water Resources Bulletin 118 as Sub-basin No. 8-002.07 of the Upper Santa Ana Valley Groundwater Basin, and is designated by the California Department of Water Resources (“DWR”) as a high-priority basin; and,

WHEREAS, California Water Code Section 10720.7 requires the SUBBASIN, as a high-priority basin that is not designated by DWR as being subject to critical conditions of overdraft, to be managed by a Groundwater Sustainability Plan ("GSP") by January 31, 2022; and,

WHEREAS, South Mesa Water Company ("SOUTH MESA"), South Mountain Water Company ("SOUTH MOUNTAIN"), Western Heights Water Company ("WHWC") and Yucaipa Valley Water District ("YVWD"), herein collectively referred to as the “WATER PURVEYORS"; and the City of Calimesa (“CALIMESA”), the City of Redlands ("REDLANDS") and the City of Yucaipa ("YUCAIPA"), herein collectively referred to as the MUNICIPALITIES"; and the San Bernardino Valley Municipal Water District ("SBVMWD") and the San Gorgonio Pass Water Agency ("SGPWA"), herein collectively referred to as the "REGIONALS”, entered into a Memorandum of Agreement (“MOA”) in June 2017 to form a GSA called the Yucaipa Sustainability Groundwater Management Agency (“YUCAIPA-SGMA”), and,

WHEREAS, each of the above-described entities is individually referred to as a "PARTY" and are collectively referred to as the "PARTIES". SOUTH MESA, SOUTH MOUNTAIN and WHWC are collectively referred to as the "MUTUALS"; and, the PARTIES other than the MUTUALS are collectively referred to as the "LOCAL AGENCIES,” and,

WHEREAS, The County of Riverside ("RIVERSIDE") and the County of San Bernardino ("SAN BERNARDINO"), collectively referred to as the "COUNTIES," are stakeholders but not PARTIES in the YUCAIPA-SGMA, and,

WHEREAS, CALIMESA submitted a written Notice of Withdrawal dated November 19, 2018 and the Yucaipa-SGMA subsequently acknowledged the withdrawal of CALIMESA from the Yucaipa-SGMA at the January 23, 2019 YUCAIPA-SGMA Board meeting, and,

WHEREAS, the LOCAL AGENCIES have water supply, water management, and/or land use responsibilities for their respective jurisdictional areas overlying the SUBBASIN and are local agencies as defined by SGMA in California Water Code Section 10721(n), and thus each is authorized by SGMA to form a GSA; and,

WHEREAS, the LOCAL AGENCIES' individually have jurisdictional and/or service areas within and their collective jurisdictional areas and/or service areas that cover the entirety of the SUBBASIN, with no gaps in coverage; and,

WHEREAS, the WATER PURVEYORS, including the MUTUALS, produce

groundwater and provide water service within the SUBBASIN; and,

WHEREAS, the REGIONALS are State Water Contractors, and have the rights and duties of such, including for the delivery of State Water Project Water within the SUBBASIN; and,

WHEREAS, the PARTIES have worked with local stakeholders and interested parties in the SUBBASIN that are not PARTIES in YUCAIPA-SGMA to carry out the policy, purposes, and requirements of SGMA in the SUBBASIN; and,

WHEREAS, the YUCAIPA-SGMA has developed a GSP for the SUBBASIN as required by SGMA; and,

WHEREAS, the YUCAIPA-SGMA has provided the public notices required by Water Code section 10727.8, including a Public Outreach and Engagement Plan, informing the public on how to participate in the development of the GSP; and,

WHEREAS, the YUCAIPA-SGMA has held numerous public meetings where elements of the GSP for the SUBBASIN have been presented and discussed, and where the general public has been provided the opportunity to comment on the various elements of the GSP; and,

WHEREAS, due to the COVID-19 pandemic and Executive Order N-29-20 that suspended the requirement to hold public meetings at physical locations, the YUCAIPA-SGMA held online public meetings and provided details in the public notices informing the public how to participate in the online meetings; and,

WHEREAS, the YUCAIPA-SGMA has received written public comments on the various elements of the GSP, which have been reviewed and commented on, where and as appropriate, as part of the GSP; and,

WHEREAS, the YUCAIPA-SGMA announced a community engagement meeting (i.e., public hearing) for November 16, 2021, as required by Water Code section 10728.4 for the purposes of considering public comments before adopting a GSP for the SUBBASIN; and,

WHEREAS, the GSP for the Subbasin contains all the elements required by Water Code sections 10727.2 and 10727.4; and,

WHEREAS, after its filing with DWR, the GSP for the Subbasin will be subject to a further public review period, and will undergo review by DWR for a period not exceeding two years; and,

WHEREAS, the GSP for the SUBBASIN will be subject to further updating during the DWR review period, and periodically thereafter via annual reports due every April 1 and evaluation reports at least every 5 years or when the GSP is amended; and,

WHEREAS, it is now necessary and appropriate for the Board of Directors to consider the adoption of the GSP for the sustainable management of the SUBBASIN, and

authorizes the adoption of the GSP for the sustainable management of the SUBBASIN and directs the YUCAIPA-SGMA to file the GSP with DWR no later than the date required by SGMA; NOW, THEREFORE,

NOW THEREFORE BE IT RESOLVED, by the Board of Directors of the San Bernardino Valley Municipal Water District as follows:

1. The above Recitals are true and correct.

2. The GSP for the SUBBASIN is approved.

3. The San Bernardino Valley Municipal Water District hereby authorizes the adoption of the GSP for the SUBBASIN and directs the YUCAIPA-SGMA to file the GSP with DWR no later than January 31, 2022, as required by SGMA.

4. The General Manager and Agency Counsel are hereby authorized and directed to take such other and further actions as may be necessary or appropriate to implement the intent and purposes of this resolution.

ADOPTED this 18th day of January 2022.
AYES: 5
NOES: 0
ABSENT: 0
ABSTAINED: 0

Paul Kielhold

Paul R. Kielhold, President

ATTEST:

Heather P. Dyer

Heather P. Dyer, Secretary

Resolution

by

South Mesa Water Company

RESOLUTION OF THE BOARD OF DIRECTORS OF SOUTH MESA WATER COMPANY AS A MEMBER OF THE YUCAIPA GROUNDWATER SUSTAINABILITY AGENCY TO APPROVE THE GROUNDWATER SUSTAINABILITY PLAN FOR THE YUCAIPA SUBBASIN (BASIN NO. 8-002.07)

WHEREAS, on September 16, 2014, Governor Jerry Brown signed into law Senate Bills 1168 and 1319, and Assembly Bill 1739, collectively known as the Sustainable Groundwater Management Act ("SGMA"), codified in certain provisions of the California Government Code, including commencing with Section 65350.5, and codified in Part 2.74 of Division 6 of the California Water Code, commencing with Section 10720, and amending other provisions of the California Government Code and California Water Code; and,

WHEREAS, SGMA went into effect on January 1, 2015; and,

WHEREAS, various clarifying amendments to SGMA were signed into law in 2015, including Senate Bills 13 and 226, and Assembly Bills 617 and 939, which were codified in part in California Water Code Section 10723.6(a), authorizing a combination of local agencies to form a Groundwater Sustainability Agency ("GSA") pursuant to a joint powers agreement, a memorandum of agreement, or other legal agreement; and, California Water Code Section 10723.6(b), authorizing water corporations regulated by the California Public Utilities Commission and mutual water companies to participate in a GSA through a memorandum of agreement or other legal agreement; and,

WHEREAS, the legislative intent and effect of SGMA, as set forth in California Water Code Section 10720.1, includes the following: (1) to provide for the sustainable management of groundwater basins; (2) to enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X Water of the California Constitution, and to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater; (3) to establish minimum standards for sustainable groundwater management; (4) to provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater; (5) to avoid or minimize subsidence; (6) to improve data collection and understanding about groundwater; (7) to increase groundwater storage and remove impediments to recharge; (8) to manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner; and (9) to provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of SGMA; and,

WHEREAS, SGMA affords GSAs specific powers to manage groundwater in addition to existing legal authorities, which powers may be used to provide the maximum degree of local control and flexibility consistent with the sustainability goals of SGMA; and,

WHEREAS, SGMA includes several un-codified findings by the California Legislature, including the determination that the people of the state have a primary interest in the protection, management, and reasonable beneficial use of the water resources of the state, both surface and underground, and that the integrated management of the state's water resources is essential to meeting its water management goals; and

WHEREAS, the Yucaipa Subbasin (“SUBBASIN”) is identified by the California Department of Water Resources Bulletin 118 as Sub-basin No. 8-002.07 of the Upper Santa Ana Valley Groundwater Basin, and is designated by the California Department of Water Resources (“DWR”) as a high-priority basin; and,

WHEREAS, California Water Code Section 10720.7 requires the SUBBASIN, as a high-priority basin that is not designated by DWR as being subject to critical conditions of overdraft, to be managed by a Groundwater Sustainability Plan ("GSP") by January 31, 2022; and,

WHEREAS, South Mesa Water Company ("SOUTH MESA"), South Mountain Water Company ("SOUTH MOUNTAIN"), Western Heights Water Company ("WHWC") and Yucaipa Valley Water District ("YVWD"), herein collectively referred to as the “WATER PURVEYORS"; and the City of Calimesa (“CALIMESA”), the City of Redlands ("REDLANDS") and the City of Yucaipa ("YUCAIPA"), herein collectively referred to as the MUNICIPALITIES"; and the San Bernardino Valley Municipal Water District ("SBVMWD") and the San Gorgonio Pass Water Agency ("SGPWA"), herein collectively referred to as the "REGIONALS”, entered into a Memorandum of Agreement (“MOA”) in June 2017 to form a GSA called the Yucaipa Groundwater Sustainability Agency (“YUCAIPA GSA”), and,

WHEREAS, each of the above-described entities is individually referred to as a "PARTY" and are collectively referred to as the "PARTIES". SOUTH MESA, SOUTH MOUNTAIN and WHWC are collectively referred to as the "MUTUALS"; and, the PARTIES other than the MUTUALS are collectively referred to as the "LOCAL AGENCIES,” and,

WHEREAS, The County of Riverside ("RIVERSIDE") and the County of San Bernardino ("SAN BERNARDINO"), collectively referred to as the "COUNTIES," are stakeholders but not PARTIES in the YUCAIPA GSA, and,

WHEREAS, CALIMESA submitted a written Notice of Withdrawal dated November 19, 2018 and the Yucaipa GSA subsequently acknowledged the withdrawal of CALIMESA from the Yucaipa GSA at the January 23, 2019 YUCAIPA GSA Board meeting, and,

WHEREAS, the LOCAL AGENCIES have water supply, water management, and/or land use responsibilities for their respective jurisdictional areas overlying the SUBBASIN and are local agencies as defined by SGMA in California Water Code Section 10721(n), and thus each is authorized by SGMA to form a GSA; and,

WHEREAS, the LOCAL AGENCIES' individually have jurisdictional and/or service areas within and their collective jurisdictional areas and/or service areas that cover the entirety of the SUBBASIN, with no gaps in coverage; and,

WHEREAS, the WATER PURVEYORS, including the MUTUALS, produce groundwater and provide water service within the SUBBASIN, and it is the PARTIES’ shared intent to provide for management-level participation by the MUTUALS in the GSA as set forth in the MOA; and,

WHEREAS, the REGIONALS are State Water Contractors, and have the rights and duties of such, including for the delivery of State Water Project Water within the SUBBASIN; and

WHEREAS, the PARTIES have worked with local stakeholders and interested parties in the SUBBASIN that are not PARTIES in YUCAIPA GSA to carry out the policy, purposes, and requirements of SGMA in the SUBBASIN; and,

WHEREAS, the YUCAIPA GSA has developed a GSP for the SUBBASIN as required by SGMA; and,

WHEREAS, the YUCAIPA GSA has provided the public notices required by Water Code section 10727.8, including a Public Outreach and Engagement Plan, informing the public on how to participate in the development of the GSP; and,

WHEREAS, the YUCAIPA GSA has held numerous public meetings where elements of the GSP for the SUBBASIN have been presented and discussed, and where the general public has been provided the opportunity to comment on the various elements of the GSP; and,

WHEREAS, due to the COVID-19 pandemic and Executive Order N-29-20 that suspended the requirement to hold public meetings at physical locations, the YUCAIPA GSA held online public meetings and provided details in the public notices informing the public how to participate in the online meetings; and,

WHEREAS, the YUCAIPA GSA has received written public comments on the various elements of the GSP, which have been reviewed and commented on, where and as appropriate, as part of the GSP; and,

WHEREAS, the YUCAIPA GSA announced and held a community engagement meeting (i.e., public hearing) for November 16, 2021, as required by Water Code section 10728.4 for the purposes of considering public comments before adopting a GSP for the SUBBASIN; and,

WHEREAS, the SOUTH MESA Board of Directors has had the opportunity to review the most current version of the GSP; and,

WHEREAS, the GSP for the Subbasin contains all the elements required by Water Code sections 10727.2 and 10727.4; and,

WHEREAS, pursuant to Water Code section 10720.5, neither the Yucaipa GSA nor the GSP determines water rights, which may instead be determined in an adjudication action in a court of law;

WHEREAS, after its filing with DWR, the GSP for the Subbasin will be subject to a further public review period, and will undergo review by DWR for a period not exceeding two years; and,

WHEREAS, the GSP for the SUBBASIN may be subject to further updating during the DWR review period, and periodically thereafter via annual reports and five-year update reports to DWR; and,

WHEREAS, it is now necessary and appropriate for the Board of Directors of SOUTH MESA WATER COMPANY to consider and approve the GSP, to authorize its Yucaipa GSA designated representative to vote to approve and adopt the GSP and to file the GSP with DWR no later than the date required by SGMA.

NOW, THEREFORE BE IT RESOLVED, by the Board of Directors of **SOUTH MESA WATER COMPANY**, as follows:

1. The above Recitals are true and correct and incorporated herein by this reference.

2. South Mesa Water Company does hereby approve the Final GSP for the Yucaipa Subbasin, as presented with minor, non-substantive revisions to the GSP approved by its Yucaipa GSA designated representative between today's date and the date the GSP is submitted to DWR.

3. South Mesa Water Company does hereby authorize its Yucaipa GSA designated representative to vote to formally approve and adopt the Final GSP for the Yucaipa Subbasin on behalf of South Mesa Water Company at the upcoming meeting of the Yucaipa GSA that is expected to take place on or about January 26, 2022.

4. South Mesa's Yucaipa GSA designated representative and Legal Counsel are hereby authorized and directed to take such other and further actions as may be necessary or appropriate to implement the intent and purposes of this resolution.

PASSED AND ADOPTED, this 12th day of January 2022.

George Jorritsma, President

Attest:

Secretary, Board of Directors

Resolution No. 2022-01

by

South Mountain Water Company

RESOLUTION NO. 2022-01

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SOUTH MOUNTAIN WATER COMPANY AS A MEMBER OF THE YUCAIPA GROUNDWATER SUSTAINABILITY AGENCY TO ADOPT THE GROUNDWATER SUSTAINABILITY PLAN FOR THE YUCAIPA SUBBASIN (BASIN NO. 8-002.07)

WHEREAS, on September 16, 2014, Governor Jerry Brown signed into law Senate Bills 1168 and 1319, and Assembly Bill 1739, collectively known as the Sustainable Groundwater Management Act ("SGMA"), codified in certain provisions of the California Government Code, including commencing with Section 65350.5, and codified in Part 2.74 of Division 6 of the California Water Code, commencing with Section 10720, and amending other provisions of the California Government Code and California Water Code; and,

WHEREAS, SGMA went into effect on January 1, 2015; and,

WHEREAS, various clarifying amendments to SGMA were signed into law in 2015, including Senate Bills 13 and 226, and Assembly Bills 617 and 939, which were codified in part in California Water Code Section 10723.6(a), authorizing a combination of local agencies to form a Groundwater Sustainability Agency ("GSA") pursuant to a joint powers agreement, a memorandum of agreement, or other legal agreement; and, California Water Code Section 10723.6(b), authorizing water corporations regulated by the California Public Utilities Commission and mutual water companies to participate in a GSA through a memorandum of agreement or other legal agreement; and,

WHEREAS, the legislative intent and effect of SGMA, as set forth in California Water Code Section 10720.1, includes the following: (1) to provide for the sustainable management of groundwater basins; (2) to enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X Water of the California Constitution, and to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater; (3) to establish minimum standards for sustainable groundwater management; (4) to provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater; (5) to avoid or minimize subsidence; (6) to improve data collection and understanding about groundwater; (7) to increase groundwater storage and remove impediments to recharge; (8) to manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner; and (9) to provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of SGMA; and,

WHEREAS, SGMA affords GSAs specific powers to manage groundwater in addition to existing legal authorities, which powers may be used to provide the maximum degree of local control and flexibility consistent with the sustainability goals of SGMA; and,

WHEREAS, SGMA includes several un-codified findings by the California Legislature,

including the determination that the people of the state have a primary interest in the protection, management, and reasonable beneficial use of the water resources of the state, both surface and underground, and that the integrated management of the state's water resources is essential to meeting its water management goals; and,

WHEREAS, the Yucaipa Subbasin ("SUBBASIN") is identified by the California Department of Water Resources Bulletin 118 as Sub-basin No. 8-002.07 of the Upper Santa Ana Valley Groundwater Basin, and is designated by the California Department of Water Resources ("DWR") as a high-priority basin; and,

WHEREAS, California Water Code Section 10720.7 requires the SUBBASIN, as a high-priority basin that is not designated by DWR as being subject to critical conditions of overdraft, to be managed by a Groundwater Sustainability Plan ("GSP") by January 31, 2022; and,

WHEREAS, South Mesa Water Company ("SOUTH MESA"), South Mountain Water Company ("SOUTH MOUNTAIN"), Western Heights Water Company ("WHWC") and Yucaipa Valley Water District ("YVWD"), herein collectively referred to as the "WATER PURVEYORS"; and the City of Calimesa ("CALIMESA"), the City of Redlands ("REDLANDS") and the City of Yucaipa ("YUCAIPA"), herein collectively referred to as the MUNICIPALITIES"; and the San Bernardino Valley Municipal Water District ("SBVMWD") and the San Gorgonio Pass Water Agency ("SGPWA"), herein collectively referred to as the "REGIONALS", entered into a Memorandum of Agreement ("MOA") in June 2017 to form a GSA called the Yucaipa Groundwater Sustainability Agency ("YUCAIPA GSA"), and,

WHEREAS, each of the above-described entities is individually referred to as a "PARTY" and are collectively referred to as the "PARTIES". SOUTH MESA, SOUTH MOUNTAIN and WHWC are collectively referred to as the "MUTUALS"; and, the PARTIES other than the MUTUALS are collectively referred to as the "LOCAL AGENCIES," and,

WHEREAS, The County of Riverside ("RIVERSIDE") and the County of San Bernardino ("SAN BERNARDINO"), collectively referred to as the "COUNTIES," are stakeholders but not PARTIES in the YUCAIPA GSA, and,

WHEREAS, CALIMESA submitted a written Notice of Withdrawal dated November 19, 2018 and the Yucaipa GSA subsequently acknowledged the withdrawal of CALIMESA from the Yucaipa GSA at the January 23, 2019 YUCAIPA GSA Board meeting, and,

WHEREAS, the LOCAL AGENCIES have water supply, water management, and/or land use responsibilities for their respective jurisdictional areas overlying the SUBBASIN and are local agencies as defined by SGMA in California Water Code Section 10721(n), and thus each is authorized by SGMA to form a GSA; and,

WHEREAS, the LOCAL AGENCIES' individually have jurisdictional and/or service areas within and their collective jurisdictional areas and/or service areas that cover the entirety of the SUBBASIN, with no gaps in coverage; and,

WHEREAS, the WATER PURVEYORS, including the MUTUALS, produce

groundwater and provide water service within the SUBBASIN; and,

WHEREAS, the REGIONALS are State Water Contractors, and have the rights and duties of such, including for the delivery of State Water Project Water within the SUBBASIN; and,

WHEREAS, the PARTIES have worked with local stakeholders and interested parties in the SUBBASIN that are not PARTIES in YUCAIPA GSA to carry out the policy, purposes, and requirements of SGMA in the SUBBASIN; and,

WHEREAS, the YUCAIPA GSA has developed a GSP for the SUBBASIN as required by SGMA; and,

WHEREAS, the YUCAIPA GSA has provided the public notices required by Water Code section 10727.8, including a Public Outreach and Engagement Plan, informing the public on how to participate in the development of the GSP; and,

WHEREAS, the YUCAIPA GSA has held numerous public meetings where elements of the GSP for the SUBBASIN have been presented and discussed, and where the general public has been provided the opportunity to comment on the various elements of the GSP; and,

WHEREAS, due to the COVID-19 pandemic and Executive Order N-29-20 that suspended the requirement to hold public meetings at physical locations, the YUCAIPA GSA held online public meetings and provided details in the public notices informing the public how to participate in the online meetings; and,

WHEREAS, the YUCAIPA GSA has received written public comments on the various elements of the GSP, which have been reviewed and commented on, where and as appropriate, as part of the GSP; and,

WHEREAS, the YUCAIPA GSA announced a community engagement meeting (i.e., public hearing) for November 16, 2021, as required by Water Code section 10728.4 for the purposes of considering public comments before adopting a GSP for the SUBBASIN; and,

WHEREAS, the GSP for the Subbasin contains all the elements required by Water Code sections 10727.2 and 10727.4; and,

WHEREAS, after its filing with DWR, the GSP for the Subbasin will be subject to a further public review period, and will undergo review by DWR for a period not exceeding two years; and,

WHEREAS, the GSP for the SUBBASIN will be subject to further updating during the DWR review period, and periodically thereafter via annual reports due every April 1 and evaluation reports at least every 5 years or when the GSP is amended; and,

WHEREAS, it is now necessary and appropriate for the Board of Directors to consider the adoption of the GSP for the sustainable management of the SUBBASIN, and authorizes the adoption of the GSP for the sustainable management of the SUBBASIN and directs the YUCAIPA GSA to file the GSP with DWR no later than the date required by SGMA; NOW, THEREFORE,

BE IT RESOLVED, by the Board of Directors of the South Mountain Water Company, as follows:

1. The above Recitals are true and correct.
2. The GSP for the SUBBASIN is approved.
3. The South Mountain Water Company hereby authorizes the adoption of the GSP for the SUBBASIN and directs the YUCAIPA GSA to file the GSP with DWR no later than January 31, 2022, as required by SGMA.
4. The General Manager and Counsel are hereby authorized and directed to take such other and further actions as may be necessary or appropriate to implement the intent and purposes of this resolution.

BE IT FURTHER RESOLVED, by the Board of Directors of the South Mountain Water Company:

5. That the Yucaipa Groundwater Management Agency reconsider the apportionment of the annual costs associated with the GSP, and;
6. That the Yucaipa Groundwater Management Agency consider apportioning said costs based on a fair distribution stemming from the amount of water extracted by each member.

PASSED AND ADOPTED on this 26th day of January 2022, by the following vote, to-wit:

Director Moore: Aye
Director Riordan: Aye
Director Jeffries: Absent
Director Bingaman: Aye
Director Pierce: Absent

ADOPTED, SIGNED AND APPROVED this 26th day of January, 2022.

Rollie Moore, President

ATTEST:

Kristy Hoover, Secretary

Resolution No. 2022-02

by

San Gorgonio Pass Water Agency

RESOLUTION NO. 2022-02

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN GORGONIO PASS WATER AGENCY AS A MEMBER OF THE YUCAIPA GROUNDWATER SUSTAINABILITY AGENCY TO ADOPT THE GROUNDWATER SUSTAINABILITY PLAN FOR THE YUCAIPA SUBBASIN (BASIN NO. 8-002.07)

WHEREAS, on September 16, 2014, Governor Jerry Brown signed into law Senate Bills 1168 and 1319, and Assembly Bill 1739, collectively known as the Sustainable Groundwater Management Act ("SGMA"), codified in certain provisions of the California Government Code, including commencing with Section 65350.5, and codified in Part 2.74 of Division 6 of the California Water Code, commencing with Section 10720, and amending other provisions of the California Government Code and California Water Code; and,

WHEREAS, SGMA went into effect on January 1, 2015; and,

WHEREAS, various clarifying amendments to SGMA were signed into law in 2015, including Senate Bills 13 and 226, and Assembly Bills 617 and 939, which were codified in part in California Water Code Section 10723.6(a), authorizing a combination of local agencies to form a Groundwater Sustainability Agency ("GSA") pursuant to a joint powers agreement, a memorandum of agreement, or other legal agreement; and, California Water Code Section 10723.6(b), authorizing water corporations regulated by the California Public Utilities Commission and mutual water companies to participate in a GSA through a memorandum of agreement or other legal agreement; and,

WHEREAS, the legislative intent and effect of SGMA, as set forth in California Water Code Section 10720.1, includes the following: (1) to provide for the sustainable management of groundwater basins; (2) to enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X of the California Constitution, and to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater; (3) to establish minimum standards for sustainable groundwater management; (4) to provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater; (5) to avoid or minimize subsidence; (6) to improve data collection and understanding about groundwater; (7) to increase groundwater storage and remove impediments to recharge; (8) to manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner; and (9) to provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of SGMA; and,

WHEREAS, SGMA affords GSAs specific powers to manage groundwater in addition to existing legal authorities, which powers may be used to provide the maximum degree of local control and flexibility consistent with the sustainability goals of SGMA; and,

WHEREAS, SGMA includes several un-codified findings by the California Legislature, including the determination that the people of the state have a primary interest in the protection, management, and reasonable beneficial use of the water resources of the state, both surface and underground, and that the integrated management of the state's water resources is essential to meeting its water management goals; and,

WHEREAS, the Yucaipa Subbasin ("SUBBASIN") is identified by the California Department of Water Resources Bulletin 118 as Sub-basin No. 8-002.07 of the Upper Santa Ana Valley Groundwater Basin, and is designated by the California Department of Water Resources ("DWR") as a high-priority basin and not subject to critical conditions of overdraft; and,

WHEREAS, California Water Code Section 10720.7 requires the SUBBASIN, as a high-priority basin that is not designated by DWR as being subject to critical conditions of overdraft, to be managed by a Groundwater Sustainability Plan ("GSP") by January 31, 2022; and,

WHEREAS, South Mesa Water Company ("SOUTH MESA"), South Mountain Water Company ("SOUTH MOUNTAIN"), Western Heights Water Company ("WHWC") and Yucaipa Valley Water District ("YVWD"), herein collectively referred to as the "WATER PURVEYORS"; and the City of Calimesa ("CALIMESA"), the City of Redlands ("REDLANDS") and the City of Yucaipa ("YUCAIPA"), herein collectively referred to as the MUNICIPALITIES"; and the San Bernardino Valley Municipal Water District ("SBVMWD") and the San Gorgonio Pass Water Agency ("SGPWA"), herein collectively referred to as the "REGIONALS", entered into a Memorandum of Agreement ("MOA") in June 2017 to form a GSA called the Yucaipa Groundwater Sustainability Agency ("YUCAIPA GSA"), and,

WHEREAS, each of the above-described entities is individually referred to as a "PARTY" and are collectively referred to as the "PARTIES". SOUTH MESA, SOUTH MOUNTAIN and WHWC are collectively referred to as the "MUTUALS"; and, the PARTIES other than the MUTUALS are collectively referred to as the "LOCAL AGENCIES," and,

WHEREAS, The County of Riverside ("RIVERSIDE") and the County of San Bernardino ("SAN BERNARDINO"), collectively referred to as the "COUNTIES," are stakeholders but not PARTIES in the YUCAIPA GSA, and,

WHEREAS, CALIMESA submitted a written Notice of Withdrawal dated November 19, 2018 and the Yucaipa GSA subsequently acknowledged the withdrawal of CALIMESA from the Yucaipa GSA at the January 23, 2019 YUCAIPA GSA Board meeting, and,

WHEREAS, the LOCAL AGENCIES have water supply, water management, and/or land use responsibilities for their respective jurisdictional areas overlying the SUBBASIN and are local agencies as defined by SGMA in California Water Code Section 10721(n), and thus each is authorized by SGMA to form a GSA; and,

WHEREAS, the LOCAL AGENCIES' individually have jurisdictional and/or service areas within and their collective jurisdictional areas and/or service areas that cover the entirety of the SUBBASIN, with no gaps in coverage; and,

WHEREAS, the WATER PURVEYORS, including the MUTUALS, produce groundwater and provide water service within the SUBBASIN; and,

WHEREAS, the REGIONALS are State Water Contractors, and have the rights and duties of such, including for the delivery of State Water Project Water within the SUBBASIN; and,

WHEREAS, the PARTIES have worked with local stakeholders and interested parties in the SUBBASIN that are not PARTIES in YUCAIPA GSA to carry out the policy, purposes, and requirements of SGMA in the SUBBASIN; and,

WHEREAS, the YUCAIPA GSA has developed a GSP for the SUBBASIN as required by SGMA; and,

WHEREAS, the YUCAIPA GSA has provided the public notices required by Water Code section 10727.8, including a Public Outreach and Engagement Plan, informing the public on how to participate in the development of the GSP; and,

WHEREAS, the YUCAIPA GSA has held numerous public meetings where elements of the GSP for the SUBBASIN have been presented and discussed, and where the general public has been provided the opportunity to comment on the various elements of the GSP; and,

WHEREAS, due to the COVID-19 pandemic and Executive Order N-29-20 that suspended the requirement to hold public meetings at physical locations, the YUCAIPA GSA held online public meetings and provided details in the public notices informing the public how to participate in the online meetings; and,

WHEREAS, the YUCAIPA GSA has received written public comments on the various elements of the GSP, which have been reviewed and commented on, where and as appropriate, as part of the GSP; and,

WHEREAS, the YUCAIPA GSA announced a community engagement meeting (i.e., public hearing) for November 16, 2021, as required by Water Code section 10728.4 for the purposes of considering public comments before adopting a GSP for the SUBBASIN; and,

WHEREAS, the SGPWA Board of Directors has had the opportunity to review the most current version of the GSP; and

WHEREAS, the GSP for the Subbasin contains all the elements required by Water Code sections 10727.2 and 10727.4; and,

WHEREAS, after its filing with DWR, the GSP for the Subbasin will be subject to review by DWR for a period not exceeding two years; and,

WHEREAS, it is now necessary and appropriate for the Board of Directors of the SGPWA to consider the adoption of the GSP for the sustainable management of the SUBBASIN, and authorize the adoption of the GSP for the sustainable management of the SUBBASIN and directs its Representative on the YUCAIPA GSA board to vote to approve and authorize the filing of the GSP with DWR no later than the date required by SGMA;

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the San Gorgonio Pass Water Agency, as follows:

1. The above Recitals are true and correct and incorporated herein by this reference.
2. The San Gorgonio Pass Water Agency does hereby approve and adopt the Final Groundwater Sustainability Plan for the Yucaipa Subbasin, as presented or with minor, non-substantive revisions to the GSP approved by its Representative between today's date and the date the GSP is submitted to DWR.
3. The San Gorgonio Pass Water Agency does hereby authorize its Representative to vote to

formally approve the Final Yucaipa Subbasin GSP on behalf of the SGPWA at the upcoming meeting of the Yucaipa GSA expected to take place on or about January 26, 2022.

4. This Resolution shall take effect immediately upon adoption.

PASSED AND ADOPTED by the Board of Directors of the San Gorgonio Pass Water Agency, this 10th day of January, 2022, by the following vote:

AYES: Directors Ball, Duncan, Letulle, Valdivia, Ybarra, Lehtonen, and President Smith
NAYS:
ABSENT:
ABSTAIN:

Board President

Resolution No. 2022-03

by

City of Yucaipa

RESOLUTION NO. 2022-03

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF YUCAIPA, STATE OF CALIFORNIA, AS A MEMBER OF THE YUCAIPA GROUNDWATER SUSTAINABILITY AGENCY TO ADOPT THE GROUNDWATER SUSTAINABILITY PLAN FOR THE YUCAIPA SUBBASIN (BASIN NO. 8-002.07)

WHEREAS, on September 16, 2014, Governor Jerry Brown signed into law Senate Bills 1168 and 1319, and Assembly Bill 1739, collectively known as the Sustainable Groundwater Management Act ("SGMA"), codified in certain provisions of the California Government Code, including commencing with Section 65350.5, and codified in Part 2.74 of Division 6 of the California Water Code, commencing with Section 10720, and amending other provisions of the California Government Code and California Water Code; and,

WHEREAS, SGMA went into effect on January 1, 2015; and,

WHEREAS, various clarifying amendments to SGMA were signed into law in 2015, including Senate Bills 13 and 226, and Assembly Bills 617 and 939, which were codified in part in California Water Code Section 10723.6(a), authorizing a combination of local agencies to form a Groundwater Sustainability Agency ("GSA") pursuant to a joint powers agreement, a memorandum of agreement, or other legal agreement; and, California Water Code Section 10723.6(b), authorizing water corporations regulated by the California Public Utilities Commission and mutual water companies to participate in a GSA through a memorandum of agreement or other legal agreement; and,

WHEREAS, the legislative intent and effect of SGMA, as set forth in California Water Code Section 10720.1, includes the following: (1) to provide for the sustainable management of groundwater basins; (2) to enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X Water of the California Constitution, and to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater; (3) to establish minimum standards for sustainable groundwater management; (4) to provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater; (5) to avoid or minimize subsidence; (6) to improve data collection and understanding about groundwater; (7) to increase groundwater storage and remove impediments to recharge; (8) to manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner; and (9) to provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of SGMA; and,

WHEREAS, SGMA affords GSAs specific powers to manage groundwater in addition to existing legal authorities, which powers may be used to provide the maximum degree of local control and flexibility consistent with the sustainability goals of SGMA; and,

WHEREAS, SGMA includes several un-codified findings by the California Legislature,

including the determination that the people of the state have a primary interest in the protection, management, and reasonable beneficial use of the water resources of the state, both surface and underground, and that the integrated management of the state's water resources is essential to meeting its water management goals; and,

WHEREAS, the Yucaipa Subbasin ("SUBBASIN") is identified by the California Department of Water Resources Bulletin 118 as Sub-basin No. 8-002.07 of the Upper Santa Ana Valley Groundwater Basin, and is designated by the California Department of Water Resources ("DWR") as a high-priority basin; and,

WHEREAS, California Water Code Section 10720.7 requires the SUBBASIN, as a high-priority basin that is not designated by DWR as being subject to critical conditions of overdraft, to be managed by a Groundwater Sustainability Plan ("GSP") by January 31, 2022; and,

WHEREAS, South Mesa Water Company ("SOUTH MESA"), South Mountain Water Company ("SOUTH MOUNTAIN"), Western Heights Water Company ("WHWC") and Yucaipa Valley Water District ("YVWD"), herein collectively referred to as the "WATER PURVEYORS"; and the City of Calimesa ("CALIMESA"), the City of Redlands ("REDLANDS") and the City of Yucaipa ("YUCAIPA"), herein collectively referred to as the MUNICIPALITIES"; and the San Bernardino Valley Municipal Water District ("SBVMWD") and the San Gorgonio Pass Water Agency ("SGPWA"), herein collectively referred to as the "REGIONALS", entered into a Memorandum of Agreement ("MOA") in June 2017 to form a GSA called the Yucaipa Groundwater Sustainability Agency ("YUCAIPA GSA"), and,

WHEREAS, each of the above-described entities is individually referred to as a "PARTY" and are collectively referred to as the "PARTIES". SOUTH MESA, SOUTH MOUNTAIN and WHWC are collectively referred to as the "MUTUALS"; and, the PARTIES other than the MUTUALS are collectively referred to as the "LOCAL AGENCIES," and,

WHEREAS, The County of Riverside ("RIVERSIDE") and the County of San Bernardino ("SAN BERNARDINO"), collectively referred to as the "COUNTIES," are stakeholders but not PARTIES in the YUCAIPA GSA, and,

WHEREAS, CALIMESA submitted a written Notice of Withdrawal dated November 19, 2018 and the Yucaipa GSA subsequently acknowledged the withdrawal of CALIMESA from the Yucaipa GSA at the January 23, 2019 YUCAIPA GSA Board meeting, and,

WHEREAS, the LOCAL AGENCIES have water supply, water management, and/or land use responsibilities for their respective jurisdictional areas overlying the SUBBASIN and are local agencies as defined by SGMA in California Water Code Section 10721(n), and thus each is authorized by SGMA to form a GSA; and,

WHEREAS, the LOCAL AGENCIES' individually have jurisdictional and/or service areas within and their collective jurisdictional areas and/or service areas that cover the entirety of the SUBBASIN, with no gaps in coverage; and,

WHEREAS, the WATER PURVEYORS, including the MUTUALS, produce

groundwater and provide water service within the SUBBASIN; and,

WHEREAS, the REGIONALS are State Water Contractors, and have the rights and duties of such, including for the delivery of State Water Project Water within the SUBBASIN; and,

WHEREAS, the PARTIES have worked with local stakeholders and interested parties in the SUBBASIN that are not PARTIES in YUCAIPA GSA to carry out the policy, purposes, and requirements of SGMA in the SUBBASIN; and,

WHEREAS, the YUCAIPA GSA has developed a GSP for the SUBBASIN as required by SGMA; and,

WHEREAS, the YUCAIPA GSA has provided the public notices required by Water Code section 10727.8, including a Public Outreach and Engagement Plan, informing the public on how to participate in the development of the GSP; and,

WHEREAS, the YUCAIPA GSA has held numerous public meetings where elements of the GSP for the SUBBASIN have been presented and discussed, and where the general public has been provided the opportunity to comment on the various elements of the GSP; and,

WHEREAS, due to the COVID-19 pandemic and Executive Order N-29-20 that suspended the requirement to hold public meetings at physical locations, the YUCAIPA GSA held online public meetings and provided details in the public notices informing the public how to participate in the online meetings; and,

WHEREAS, the YUCAIPA GSA has received written public comments on the various elements of the GSP, which have been reviewed and commented on, where and as appropriate, as part of the GSP; and,

WHEREAS, the YUCAIPA GSA announced a community engagement meeting (i.e., public hearing) for November 16, 2021, as required by Water Code section 10728.4 for the purposes of considering public comments before adopting a GSP for the SUBBASIN; and,

WHEREAS, the GSP for the Subbasin contains all the elements required by Water Code sections 10727.2 and 10727.4; and,

WHEREAS, after its filing with DWR, the GSP for the Subbasin will be subject to a further public review period, and will undergo review by DWR for a period not exceeding two years; and,

WHEREAS, the GSP for the SUBBASIN will be subject to further updating during the DWR review period, and periodically thereafter via annual reports due every April 1 and evaluation reports at least every 5 years or when the GSP is amended; and,

WHEREAS, it is now necessary and appropriate for the City Council of the City of

Yucaipa to consider the adoption of the GSP for the sustainable management of the SUBBASIN, and authorizes the adoption of the YSGSP for the sustainable management of the SUBBASIN and directs the YUCAIPA GSA to file the GSP with DWR no later than the date required by SGMA; NOW, THEREFORE,

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF YUCAIPA HEREBY FINDS, DETERMINES, ORDERS AND RESOLVES AS FOLLOWS:

1. The above Recitals are true and correct findings of the Yucaipa City Council.

2. The Yucaipa Subbasin Groundwater Sustainability Plan is approved.

3. The City of Yucaipa hereby authorizes the adoption of the YSGSP for the SUBBASIN and directs the YUCAIPA GSA to file the YSGSP with DWR no later than January 31, 2022, as required by SGMA.

4. The City Manager (or his designee) is hereby authorized and directed to take such other and further actions as may be necessary or appropriate to implement the intent and purposes of this resolution.

PASSED, APPROVED AND ADOPTED on this 10th day of January 2022.

DAVID AVILA, MAYOR

ATTEST:

CITY CLERK

Resolution No. 8290

by

City of Redlands

RESOLUTION NO. 8290

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS AS A MEMBER OF THE YUCAIPA GROUNDWATER SUSTAINABILITY AGENCY TO ADOPT THE GROUNDWATER SUSTAINABILITY PLAN FOR THE YUCAIPA SUBBASIN (BASIN NO. 8-002.07)

WHEREAS, on September 16, 2014, Governor Jerry Brown signed into law Senate Bills 1168 and 1319, and Assembly Bill 1739, collectively known as the Sustainable Groundwater Management Act ("SGMA"), codified in certain provisions of the California Government Code, including commencing with Section 65350.5, and codified in Part 2.74 of Division 6 of the California Water Code, commencing with Section 10720, and amending other provisions of the California Government Code and California Water Code; and

WHEREAS, SGMA went into effect on January 1, 2015; and

WHEREAS, various clarifying amendments to SGMA were signed into law in 2015, including Senate Bills 13 and 226, and Assembly Bills 617 and 939, which were codified in part in California Water Code Section 10723.6(a), authorizing a combination of local agencies to form a Groundwater Sustainability Agency ("GSA") pursuant to a joint powers agreement, a memorandum of agreement, or other legal agreement; and, California Water Code Section 10723.6(b), authorizing water corporations regulated by the California Public Utilities Commission and mutual water companies to participate in a GSA through a memorandum of agreement or other legal agreement; and

WHEREAS, the legislative intent and effect of SGMA, as set forth in California Water Code Section 10720.1, includes the following: (1) to provide for the sustainable management of groundwater basins; (2) to enhance local management of groundwater consistent with rights to use or store groundwater and Section 2 of Article X Water of the California Constitution, and to preserve the security of water rights in the state to the greatest extent possible consistent with the sustainable management of groundwater; (3) to establish minimum standards for sustainable groundwater management; (4) to provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater; (5) to avoid or minimize subsidence; (6) to improve data collection and understanding about groundwater; (7) to increase groundwater storage and remove impediments to recharge; (8) to manage groundwater basins through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner; and (9) to provide a more efficient and cost-effective groundwater adjudication process that protects water rights, ensures due process, prevents unnecessary delay, and furthers the objectives of SGMA; and

WHEREAS, SGMA affords GSAs specific powers to manage groundwater in addition to existing legal authorities, which powers may be used to provide the maximum degree of local control and flexibility consistent with the sustainability goals of SGMA; and

WHEREAS, SGMA includes several un-codified findings by the California Legislature,

including the determination that the people of the state have a primary interest in the protection, management, and reasonable beneficial use of the water resources of the state, both surface and underground, and that the integrated management of the state's water resources is essential to meeting its water management goals; and

WHEREAS, the Yucaipa Subbasin ("SUBBASIN") is identified by the California Department of Water Resources Bulletin 118 as Sub-basin No. 8-002.07 of the Upper Santa Ana Valley Groundwater Basin, and is designated by the California Department of Water Resources ("DWR") as a high-priority basin; and

WHEREAS, California Water Code Section 10720.7 requires the SUBBASIN, as a high-priority basin that is not designated by DWR as being subject to critical conditions of overdraft, to be managed by a Groundwater Sustainability Plan ("GSP") by January 31, 2022; and

WHEREAS, South Mesa Water Company ("SOUTH MESA"), South Mountain Water Company ("SOUTH MOUNTAIN"), Western Heights Water Company ("WHWC") and Yucaipa Valley Water District ("YVWD"), herein collectively referred to as the "WATER PURVEYORS"; and the City of Calimesa ("CALIMESA"), the City of Redlands ("REDLANDS") and the City of Yucaipa ("YUCAIPA"), herein collectively referred to as the MUNICIPALITIES"; and the San Bernardino Valley Municipal Water District ("SBVMWD") and the San Gorgonio Pass Water Agency ("SGPWA"), herein collectively referred to as the "REGIONALS", entered into a Memorandum of Agreement ("MOA") in June 2017 to form a GSA called the Yucaipa Groundwater Sustainability Agency ("YUCAIPA GSA"); and

WHEREAS, each of the above-described entities is individually referred to as a "PARTY" and are collectively referred to as the "PARTIES". SOUTH MESA, SOUTH MOUNTAIN and WHWC are collectively referred to as the "MUTUALS"; and, the PARTIES other than the MUTUALS are collectively referred to as the "LOCAL AGENCIES;" and

WHEREAS, The County of Riverside ("RIVERSIDE") and the County of San Bernardino ("SAN BERNARDINO"), collectively referred to as the "COUNTIES," are stakeholders but not PARTIES in the YUCAIPA GSA; and

WHEREAS, CALIMESA submitted a written Notice of Withdrawal dated November 19, 2018 and the Yucaipa GSA subsequently acknowledged the withdrawal of CALIMESA from the Yucaipa GSA at the January 23, 2019 YUCAIPA GSA Board meeting; and

WHEREAS, the LOCAL AGENCIES have water supply, water management, and/or land use responsibilities for their respective jurisdictional areas overlying the SUBBASIN and are local agencies as defined by SGMA in California Water Code Section 10721(n), and thus each is authorized by SGMA to form a GSA; and

WHEREAS, the LOCAL AGENCIES' individually have jurisdictional and/or service areas within and their collective jurisdictional areas and/or service areas that cover the entirety of the SUBBASIN, with no gaps in coverage; and

WHEREAS, the WATER PURVEYORS, including the MUTUALS, produce

groundwater and provide water service within the SUBBASIN; and

WHEREAS, the REGIONALS are State Water Contractors, and have the rights and duties of such, including for the delivery of State Water Project Water within the SUBBASIN; and

WHEREAS, the PARTIES have worked with local stakeholders and interested parties in the SUBBASIN that are not PARTIES in YUCAIPA GSA to carry out the policy, purposes, and requirements of SGMA in the SUBBASIN; and

WHEREAS, the YUCAIPA GSA has developed a GSP for the SUBBASIN as required by SGMA; and

WHEREAS, the YUCAIPA GSA has provided the public notices required by California Water Code section 10727.8, including a Public Outreach and Engagement Plan, informing the public on how to participate in the development of the GSP; and

WHEREAS, the YUCAIPA GSA has held numerous public meetings where elements of the GSP for the SUBBASIN have been presented and discussed, and where the general public has been provided the opportunity to comment on the various elements of the GSP; and

WHEREAS, due to the COVID-19 pandemic and Executive Order N-29-20 that suspended the requirement to hold public meetings at physical locations, the YUCAIPA GSA held online public meetings and provided details in the public notices informing the public how to participate in the online meetings; and

WHEREAS, the YUCAIPA GSA has received written public comments on the various elements of the GSP, which have been reviewed and commented on, where and as appropriate, as part of the GSP; and

WHEREAS, the YUCAIPA GSA announced a community engagement meeting (i.e., public hearing) for November 16, 2021, as required by California Water Code section 10728.4 for the purposes of considering public comments before adopting a GSP for the SUBBASIN; and

WHEREAS, the GSP for the SUBBASIN contains all the elements required by California Water Code sections 10727.2 and 10727.4; and

WHEREAS, after its filing with DWR, the GSP for the SUBBASIN will be subject to a further public review period, and will undergo review by DWR for a period not exceeding two years; and

WHEREAS, the GSP for the SUBBASIN will be subject to further updating during the DWR review period, and periodically thereafter via annual reports due every April 1 and evaluation reports at least every 5 years or when the GSP is amended; and

WHEREAS, it is now necessary and appropriate for the City Council to consider the

adoption of the GSP for the sustainable management of the SUBBASIN, and authorizes the adoption of the GSP for the sustainable management of the SUBBASIN and directs the YUCAIPA GSA to file the GSP with DWR no later than the date required by SGMA;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

Section 1. The above Recitals are true and correct.

Section 2. The GSP for the SUBBASIN is approved.

Section 3. The City Council of the City of Redlands hereby authorizes the adoption of the GSP for the SUBBASIN and directs the YUCAIPA GSA to file the GSP with the DWR no later than January 31, 2022, as required by SGMA.

Section 4. The City Manager and City Attorney are hereby authorized and directed to take such other and further actions as may be necessary or appropriate to implement the intent and purposes of this resolution.

ADOPTED, SIGNED AND APPROVED this 18th day of January, 2022.

Paul T. Barich, Mayor

ATTEST:

Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, hereby certify that the foregoing resolution was duly adopted by the City Council at a regular meeting thereof held on the 18th day of January, 2022

AYES: Councilmembers Tejeda, Davis, Guzman-Lowery, Gallagher; Mayor Barich
NOES: None
ABSENT: None
ABSTAINED: None

Jeanne Donaldson, City Clerk