



**REGULAR MEETING AGENDA
OF THE
ARVIN CITY COUNCIL / SUCCESSOR AGENCY TO THE
ARVIN COMMUNITY REDEVELOPMENT AGENCY / ARVIN HOUSING
AUTHORITY / ARVIN PUBLIC FINANCING AUTHORITY**

**TUESDAY MAY 14, 2019 5:30p.m.
CITY HALL COUNCIL CHAMBERS
200 CAMPUS DRIVE, ARVIN**

CALL TO ORDER

Mayor Jose Gurrola

PLEDGE OF ALLEGIANCE

INVOCATION

ROLL CALL

Jose Gurrola	Mayor
Jazmin Robles	Mayor Pro Tem
Gabriela Martinez	Councilmember
Olivia Trujillo	Councilmember
Mark S. Franetovich	Councilmember

STAFF

Richard Breckinridge	City Manager
Shannon Chaffin	City Attorney – Aleshire & Wynder
Jeff Jones	Finance Director
Scot Kimble	Chief of Police
Adam Ojeda	City Engineer
Cecilia Vela	City Clerk

PUBLIC COMMENTS:

The meetings of the City Council and all municipal entities, commissions, and boards (“the City”) are open to the public. At regularly scheduled meetings, members of the public may address the City on any item listed on the agenda, or on any non-listed matter over which the City has jurisdiction. At special or emergency meetings, members of the public may only address the City on items listed on the agenda. The City may request speakers to designate a spokesperson to provide public input on behalf of a group, based on the number of people requesting to speak and the business of the City.

In accordance with the Brown Act, all matters to be acted on by the City must be posted at least 72 hours prior to the City meeting. In cases of an emergency, or when a subject matter needs immediate action or comes to the attention of the City subsequent to the agenda being posted, upon making certain findings, the City may act on an item that was not on the posted agenda.

AGENDA STAFF REPORTS AND HANDOUTS:

Staff reports and other disclosable public records related to open session agenda items are available at City Hall, 200 Campus Drive, Arvin, CA 93203 during regular business hours.

CONDUCT IN THE CITY COUNCIL CHAMBERS:

Rules of Decorum for the Public

Members of the audience shall not engage in disorderly or boisterous conduct, including the utterance of loud, threatening or abusive language, clapping, whistling, stamping of feet or other acts which disturb, disrupt, impede or otherwise render the orderly conduct of the City meeting infeasible. A member of the audience engaging in any such conduct shall, at the discretion of the presiding officer or a majority of the City, be subject to ejection from the meeting per Gov. Code Sect. 54954.3(c).

Removal from the Council Chambers

Any person who commits the following acts in respect to a meeting of the City shall be removed from the Council Chambers per Gov. Code Sect. 54954.3(c).

- (a) Disorderly, contemptuous or insolent behavior toward the City or any member thereof, tending to interrupt the due and orderly course of said meeting;
- (b) A breach of the peace, boisterous conduct or violent disturbance, tending to interrupt the due and orderly course of said meeting;
- (c) Disobedience of any lawful order of the Mayor, which shall include an order to be seated or to refrain from addressing the City; and
- (d) Any other unlawful interference with the due and orderly course of said meeting.

AMERICANS with DISABILITIES ACT:

In compliance with the ADA, if you need special assistance to participate in a City meeting or other services offered by the City, please contact the City Clerk’s office, (661) 854-3134. Notification of at least 48 hours prior to the meeting or time when services are needed will assist the City staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting or service.

1. Approval of Agenda as To Form.

Motion _____ Second _____ Vote _____

Roll Call: CM Martinez ___ CM Trujillo ___ CM Franetovich ___ MPT Robles ___ Mayor Gurrola ___

2. CLOSED SESSION ITEM(S)

- A. Conference with Legal Counsel: Anticipated Litigation (Pursuant to Government Code § 54956.9(d)(2))
One Potential Case
- B. Conference with Legal Counsel: Anticipated Litigation (Pursuant to Government Code § 54956.9(d)(4))
Two Potential Cases
- C. Conference with Legal Counsel – Existing Litigation (Pursuant to Government Code § 54956.9(d)(1))
Citizens for a Better Arvin v. City of Arvin and City Council (Real Party In Interest: Petro Lud, Inc.)
Kern County Superior Court Case No. BCV-18-102949-KCT
- D. Conference with Labor Negotiators (Pursuant to Government Code §54957.6)
City Negotiator: Pawan Gill, Director of Administrative Services
Organizations: Arvin Police Officers Association (APOA) and Service Employees International Union (SEIU) Local 521

3. PUBLIC COMMENTS

(This is the opportunity for the public to address the City Council on any matter on the agenda or any item of interest to the public that is within the subject matter jurisdiction of the City Council.)

4. PRESENTATION(S)

- A. Arvin BC Campus Community Forum
Norma Rojas-Mora, Director of Communications & Community Relations

5. CONSENT AGENDA ITEM(S)

- A. Approval of Demand Register(s) of April 20, 2019 – May 09, 2019.
- B. Approval of Payroll Register(s) of May 03, 2019.
- C. Approval of the Minutes of the Regular Meeting(s) of April 23, 2019.
- D. Approval of Proclamation Proclaiming May 2019 as Bike Month in Arvin.

- E. Approval of A Resolution of the City Council of the City of Arvin In Support of the Safe and Affordable Drinking Water Fund Proposal -- Including Governor Newsom's Budget Trailer Bill Proposal, SB 200 (Monning), and AB 217 (Garcia) -- Which Would Establish A New State Safe and Affordable Drinking Water Fund to Support Short and Long-Term Drinking Water Solutions and Programs, such as to Support Operations and Maintenance Funding for Drinking Water Treatment and Address Other Critical Drinking Water Needs.
- F. Approval of A Resolution of the City Council of the City of Arvin Authorizing Submittal of Application to the Institute for Local Government's Recognition Program, The Beacon Program; and Authorizing Related Action.
- G. Approval of Appointment of Cesar Moreno to the Arvin Planning Commission. (Councilmember Franetovich)
- H. A Resolution of the City Council of the City of Arvin Recognizing the Competitive Bidding Process of the City of Visalia, and Authorizing the City Manager to Execute An Agreement with Proterra for the Purchase of Three Electric Buses and Charging Stations; and Authorizing Related Action.

Staff recommends approval of the Consent Agenda.

Motion _____ Second _____ Vote _____

Roll Call: CM Martinez ___ CM Trujillo ___ CM Franetovich ___ MPT Robles ___ Mayor Gurrola ___

6. PUBLIC HEARING ITEM(S)

- A. A Resolution of the City Council of the City of Arvin Amending the City of Arvin General Plan to Include A Arvin Water Resources Element. (Greg Collins, Collins & Schoettler Planning Consultants)

Staff recommends to open the hearing, allow for public testimony, close the hearing, and approve the Resolution including the adoption an Exemption pursuant to the California Environmental Quality Act Guidelines, Section 15061(b)(3).

Motion _____ Second _____ Vote _____

Roll Call: CM Martinez ___ CM Trujillo ___ CM Franetovich ___ MPT Robles ___ Mayor Gurrola ___

7. ACTION ITEM(S)

- A. Consideration and Approval of A Resolution of the City Council of the City of Arvin Acknowledging the Review, Receipt and Filing of the Annual Statement of Investment Policy. (Finance Director)

Staff recommends approval of the Resolution.

Motion _____ Second _____ Vote _____

Roll Call: CM Martinez ___ CM Trujillo ___ CM Franetovich ___ MPT Robles ___ Mayor Gurrola ___

8. BUDGET WORKSHOP FY 2019-2020 – CAPITAL PROJECTS (Finance Director)

9. STAFF REPORTS

10. COUNCIL MEMBER COMMENTS

11. ADJOURNMENT

I hereby certify under penalty of perjury under the laws of the State of California that the foregoing agenda was posted on the Arvin City Council Chambers Bulletin Board not less than 72 hours prior to the meeting. Dated May 09, 2019.

A handwritten signature in blue ink, appearing to read "Cecilia Vela", written over a horizontal line.

Cecilia Vela, City Clerk



BAKERSFIELD COLLEGE

ARVIN INFORMATION MEETING

Expanding Educational Access in Arvin

Tuesday, May 21, 2019

5:00 p.m. - 6:30 p.m.

Arvin High School Auditorium
900 Varsity Road

- Updates on Early College Partnership
- Arvin Campus Report





BAKERSFIELD COLLEGE

JUNTA INFORMATIVA ARVIN

Expandiendo el Acceso Educativo en Arvin

Martes, 21 de Mayo del 2019

5:00 p.m. - 6:30 p.m.

Auditorio de Arvin High School

900 Varsity Road

- Ultimas noticias tocantes el consorcio de Colegio Adelantado (Early College)
- Reporte de Arvin Campus



EARLY ▶▶ COLLEGE

Extending Guided Pathways through
Dual & Concurrent Enrollment Opportunities

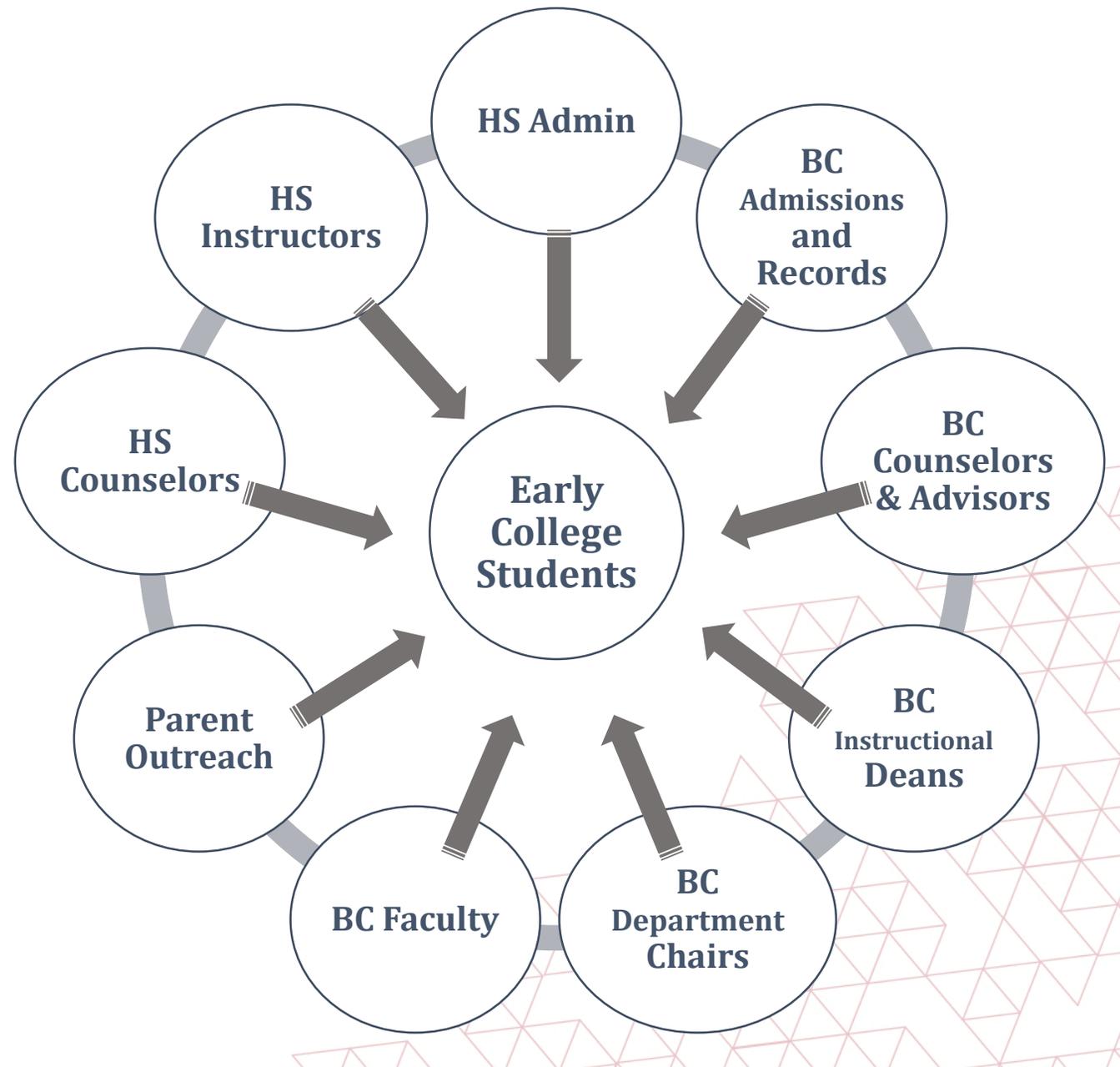


Presentation to the Arvin City Council | May 14, 2019

BC AND ARVIN HIGH PARTNERSHIP

- Early College
- Adult Education
- Closer Access to Courses for the Community

Partners Matter!



WHAT IS EARLY COLLEGE?

Early College packages college course opportunities for high school students into pathways that begin in the 9th grade, allowing cohorts of students the opportunity to **earn associate degrees and/or certificates by the time they walk across the stage at their high school graduation.**

Early College refers to the opportunity for students to take the courses while they are in high school.

TYPES OF EARLY COLLEGE OPPORTUNITIES

DUAL ENROLLMENT

Dual Enrollment courses are taught **during the regular high school day** at the high school and usually, though not always, by the high school instructor.

CONCURRENT ENROLLMENT

Concurrent Enrollment courses are Bakersfield College courses taken outside of the regular high school day, either on the high school campus or at one of the Bakersfield College campuses.

ARTICULATED ENROLLMENT

Articulated Courses are Career and Technical Education courses taught at the high school where the curriculum has been reviewed and approved by the Bakersfield College faculty.

WHAT CAN STUDENTS ACCOMPLISH AT ARVIN HIGH?

- Communication Studies
Associate Degree for Transfer
Pathway
- General Education Pathway
- Agriculture Pathway
- Automotive Technology
Pathway
- Business Administration
Pathway
- Construction Pathway
- Manufacturing Pathway
- Vocational Nursing Pathway

COURSES FOR COMMUNITY



Evening Courses and Adult Education bring access to college education for all ages of the community.

Adult Education Enrollment Event

May 16th from 3-7pm

June 13th from 3-7pm

Arvin High School Library

MEASURE J



A BETTER BC
Funded By Measure **J**

BC Satellite
campus across
from Arvin High.

ARVIN INFORMATION MEETING

Expanding Educational Access in Arvin

Tuesday, May 21, 2019

5:00 p.m. - 6:30 p.m.

Arvin High School Auditorium

900 Varsity Road

- Updates on Early College Partnership
 - Arvin Campus Report

WANT TO KNOW MORE?



www.bakersfieldcollege.edu/earlycollege

Edit List of Invoices - Summary

5.A.a

DEMAND LIST 04.22.19

Date: 04/23/2019

Time: 5:03 pm

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City of Arvin

Ref. No.	Vendor Name	Invoice No.	Posting Date	PO Number	Invoice Date	Invoice Description	Invoice Amount
49118	ADVANCED PLUMBING	207933D	04/22/2019		11/07/2018	PLUMBING SVC. - VET'S HALL	336.96
						Vendor Total:	<u>336.96</u>
49119	AFLAC	237344	04/22/2019		04/11/2019	AFLAC SVC. APRIL 2019	305.82
						Vendor Total:	<u>305.82</u>
49120	ALESHIRE & WYNDER, LLP		04/22/2019		04/22/2019	LEGAL SVC. FEB. 2019	17,852.66
						Vendor Total:	<u>17,852.66</u>
49121	AMERICAN BUSINESS MACHINES	446734	04/23/2019		04/23/2019	TONER-CITY HALL	8.00
						Vendor Total:	<u>8.00</u>
49122	ARVIN POLICE OFFICERS		04/23/2019		04/23/2019	APOA UNION DUES 4.5.19-4.19.19	520.00
						Vendor Total:	<u>520.00</u>
49155	BANK OF AMERICA - CC		04/23/2019		04/18/2019	CC TRANSACTIONS 3.25.19	1,186.09
						Vendor Total:	<u>1,186.09</u>
49154	BANK OF AMERICA - SVC CHGS		04/23/2019		04/15/2019	BOFA SERVICES CHARGES MAR.:	502.84
						Vendor Total:	<u>502.84</u>
49123	CENTRAL CALIF. ASSOC. PUBLIC		04/23/2019		04/23/2019	COA UNION DUES 4.19.19	728.43
						Vendor Total:	<u>728.43</u>
49125	CHIEF SUPPLY CORPORATION	171480	04/23/2019		04/05/2019	SPOTLIGHT REPLACEMENT-POLI	482.49
						Vendor Total:	<u>482.49</u>
49126	CITY OF RIDGECREST		04/23/2019		04/23/2019	KCAC MEETING 4.29.19	190.00
						Vendor Total:	<u>190.00</u>
49127	CLARK PEST CONTROL	30253	04/23/2019		04/23/2019	CONTRACT SVC. PIGEONS-TRAN	375.00
						Vendor Total:	<u>375.00</u>
49128	CLEAN CUT LANDSCAPE MANAGEMENT	1879	04/23/2019		03/31/2019	LANDSCPAE MAINTENANCE LLMI	2,680.00
49129	CLEAN CUT LANDSCAPE MANAGEMENT	1880	04/23/2019		03/31/2019	LANDSCPAE MAINTENANCE LLMI	645.00
						Vendor Total:	<u>3,325.00</u>
49130	COMPLETE HARDWARE STORE & MORE	249984	04/23/2019		04/03/2019	REPAIRS-DIGIORGIO	12.96
						Vendor Total:	<u>12.96</u>
49143	CONCENTRA-OCCUPATIONAL HEALTH	64103527	04/23/2019		04/11/2019	RANDOM TESTING-TRANSIT DEP	103.00
						Vendor Total:	<u>103.00</u>
49131	COPOWER	823981	04/23/2019		04/08/2019	CHIRO SVC. MAY 2019	169.16

Attachment: Demand Register April 20, 2019 to May 09, 2019 (Demand Register(s) of April 20, 2019 - May 09, 2019)

Edit List of Invoices - Summary

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Date: 04/23/2019

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Ref. No.	Vendor Name	Invoice No.	Posting Date	PO Number	Invoice Date	Invoice Description	Invoice Amount
						Vendor Total:	169.16
49132	CORELOGIC SOLUTIONS, LLC	81953514	04/23/2019		03/31/2019	METROSCAN SVC. MARCH 2019	137.50
						Vendor Total:	137.50
49124	CSJVRMA	RMA-2019-0214	04/23/2019		03/15/2019	2018-2019 LIABILITY PROGRAM	107,849.00
						Vendor Total:	107,849.00
49133	DEPARTMENT OF JUSTICE	364541	04/23/2019		04/04/2019	FINGERPRINT SVC. MARCH 2019	833.00
						Vendor Total:	833.00
49134	DEWALT CORPORTATION	1086802	04/23/2019		02/22/2019	ENGINEERING SVC.	13,142.25
49135	DEWALT CORPORTATION	1086933	04/23/2019		04/01/2019	ENGINEERING/SURVEYING SVC.	350.00
						Vendor Total:	13,492.25
49136	DIAMOND TECHNOLOGIES, INC	24593584	04/23/2019		04/08/2019	DELL POWEREDGE SERVER	1,404.92
						Vendor Total:	1,404.92
49137	ELECTIONS OFFICE	RES.#2018-48	04/23/2019		04/03/2019	GENERAL ELECTION 11.6.18	5,540.50
						Vendor Total:	5,540.50
49138	FEDEX	6-526-34728	04/23/2019		04/19/2019	FEDEX SVC. MAR-APR. 2019	609.15
						Vendor Total:	609.15
49139	GENERAL OFFICE	14237	04/23/2019		04/02/2019	METER READING MARCH 2019	571.96
						Vendor Total:	571.96
49140	KERN COUNTY	1160-01225	04/23/2019		04/04/2019	CJIS SVC. JAN-MAR 2019	210.00
						Vendor Total:	210.00
49142	FERNANDO LOPEZ	INTERPRETER SVC. MAY-JULY 2019	04/23/2019		04/17/2019	INTERPRETER SVC. MAY-JULY 20	800.00
						Vendor Total:	800.00
49141	MARIA LOPEZ	REFUND RECEIPT#32160	04/23/2019		04/23/2019	REFUND REIMBURSEMENT	60.00
						Vendor Total:	60.00
49144	PG & E	ELECTRIC SVC. 3.14.19-4.14.19	04/23/2019		04/15/2019	ELECTRIC SVC. 3.14.19-4.14.19	12,980.26
						Vendor Total:	12,980.26
49145	PROVOST & PRITCHARD	72747	04/23/2019		04/09/2019	REVISION 2018 MUNICIPAL SVC.	2,000.00
						Vendor Total:	2,000.00
49147	QUAD KNOPF, INC	97958	04/23/2019		03/18/2019	BEAR MTN. BLVD/DERBY HSIP	168.00
						Vendor Total:	168.00

Attachment: Demand Register April 20, 2019 to May 09, 2019 (Demand Register(s) of April 20, 2019 - May 09, 2019)

Edit List of Invoices - Summary

DEMAND LIST 04.22.19

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City of Arvin

Ref. No.	Vendor Name	Invoice No.	Posting Date	PO Number	Invoice Date	Invoice Description	Invoice Amount
49148	SINTRA GROUP	2019134	04/23/2019		04/19/2019	BACKGROUND INVESTIGATION	5,906.25
						Vendor Total:	5,906.25
49146	SOUTH VALLEY ELECTRICAL	3858	04/23/2019		04/09/2019	ELECTRICAL SVC. SMOTHERMON	898.92
						Vendor Total:	898.92
49149	VANTAGE POINT TRANSFER AGENTS	457KCONTRIBUTIONS/LOAN 4.19.19	04/23/2019		04/23/2019	457KCONTRIBUTIONS/LOAN 4.19.	159.96
						Vendor Total:	159.96
49150	VEOLIA WATER NA - MAINT-NOTE	90188276	04/23/2019		03/08/2019	O&M WASTEWATER SVC. FEB. 20	131,755.98
49151	VEOLIA WATER NA - MAINT-NOTE	90192417	04/23/2019		04/11/2019	O&M WASTEWATER SVC. MAR. 20	142,594.25
						Vendor Total:	274,350.23
49153	WELLS FARGO LEASE PMTS	5006067908	04/23/2019		03/21/2019	A#603-0138128-000 POLICE DEPT	367.72
						Vendor Total:	367.72
49152	WESTERN ALLIANCE BANK-LN PMT	A#04500161025-61026 5.1.19	04/23/2019		03/29/2019	WASTEWATER TREATMENT PLAN	172,562.88
						Vendor Total:	172,562.88
Grand Total:							627,000.91
Less Credit Memos:							0.00
Net Total:							627,000.91
Less Hand Check Total:							1,688.93
Outstanding Invoice Total:							625,311.98
Total Invoices: 38							

Attachment: Demand Register April 20, 2019 to May 09, 2019 (Demand Register(s) of April 20, 2019 - May 09, 2019)

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Date: 05/02/2019

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City of Arvin

Ref. No.	Vendor Name	Invoice No.	Posting Date	PO Number	Invoice Date	Invoice Description	Invoice Amount
49156	ADVANCED PLUMBING		05/01/2019		04/04/2019	PLUMBING SVC.-DIGIORGIO-BOX	
		209003					336.96
49157	ADVANCED PLUMBING		05/01/2019		04/08/2019	PLUMBING SVC.-DIGIORGIO-BOX	
		209022					1,500.00
						Vendor Total:	1,836.96
49158	AMERICA'S BEST PLUMBING		05/01/2019		04/17/2019	PLUMBING SVC. SMOTHERMON F	
		41719					1,250.00
						Vendor Total:	1,250.00
49159	AT&T		05/01/2019		04/01/2019	A#9391060015 SVC. MARCH 2019	
		000012837858					188.06
49160	AT&T		05/01/2019		04/01/2019	A#9391059040 SVC. MARCH 2019	
		000012837627					271.20
						Vendor Total:	459.26
49161	BLUE SHIELD OF CALIFORNIA		05/01/2019		04/15/2019	MEDICAL INSURANCE MAY 2019	
		191050069435					15,820.79
						Vendor Total:	15,820.79
49162	C & T AUTOMOTIVE, INC		05/01/2019		05/01/2019	MAINTENANCE FLEET #315	
		900026286					452.17
						Vendor Total:	452.17
49163	CLARK PEST CONTROL		05/01/2019		04/10/2019	PEST CONTROL SVC APRIL 2019	
		PEST CONTROL SVC 4/19 COMM.SVC					100.00
49164	CLARK PEST CONTROL		05/01/2019		04/10/2019	PEST CONTROL SVC APRIL 2019	
		PEST CONTROL SVC 4/19 VETS					80.00
49165	CLARK PEST CONTROL		05/01/2019		04/10/2019	PEST CONTROL SVC 4/19 TRANS	
		PEST CONTROL SVC 4/19 TRANSIT					130.00
						Vendor Total:	310.00
49166	COLLINS & SCHOETTLER		05/01/2019		04/22/2019	ARVIN WATER RESOURCES ELEM	
		MILESTONE 4 4.22.19					8,000.00
						Vendor Total:	8,000.00
49167	COMPLETE HARDWARE STORE & MORE		05/01/2019		04/23/2019	SUPPLIES UNIT#304	
		253116					21.10
49168	COMPLETE HARDWARE STORE & MORE		05/01/2019		04/24/2019	LIGHT POLE-PARK	
		253334					8.65
						Vendor Total:	29.75
49169	RITA CORRAL		05/01/2019		05/01/2019	AIRBRAKES TRAINING 5.4.19	
		AIRBRAKES TRAINING 5.4.19					75.00
						Vendor Total:	75.00
49170	DAVE BANG ASSOCIATES, INC.		05/01/2019		04/03/2019	SUPPLIES-SMOTHERMON PARK	
		46611					1,439.52
						Vendor Total:	1,439.52
49171	GUARDIAN		05/01/2019		05/01/2019	BUNDLE INSURANCE APRIL 2019	
		GROUP ID: 00473727 04.22.19					6,632.79
						Vendor Total:	6,632.79
49173	J.P. COOKE CO.		05/01/2019		04/30/2019	DOG LICENSE TAG	
		560484					123.34
						Vendor Total:	123.34
49172	JONES, JEFF		05/01/2019		05/01/2019	CSJMRMA MEETING 3.27.19	
		CSJMRMA MEETING 3.27.19					168.84

Attachment: Demand Register April 20, 2019 to May 09, 2019 (Demand Register(s) of April 20, 2019 - May 09, 2019)

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Ref. No.	Vendor Name	Invoice No.	Posting Date	PO Number	Invoice Date	Invoice Description	Invoice Amount
						Vendor Total:	168.84
49174	KERN RIVER POWER EQUIPMENT INC	90643	05/01/2019		04/11/2019	IGNITION SWITCH-MOWER#4	81.78
49175	KERN RIVER POWER EQUIPMENT INC	91058	05/01/2019		04/23/2019	REPAIRS-MOWER#2	582.04
49176	KERN RIVER POWER EQUIPMENT INC	91059	05/01/2019		04/23/2019	LAWN TOOLS	111.56
						Vendor Total:	775.38
49177	MOBILE AG & INDUSTRIAL SUPPLY	98948	05/01/2019		05/01/2019	STREET SWEEPER ENGINE	1,734.82
						Vendor Total:	1,734.82
49178	MOUNTAINSIDE DISPOSAL	536585	05/01/2019		04/10/2019	BIN RENT/Y/YD FL SVC. MAR.2019	66.94
49179	MOUNTAINSIDE DISPOSAL		05/01/2019		05/01/2019	PROPERTY TAXES 4.18.19	288,835.65
						Vendor Total:	288,902.59
49180	PG & E	A#9307046200-2	05/01/2019		05/01/2019	A#9307046200-2 5.10.19	1,147.69
49181	PG & E	A#7368140966-7	05/01/2019		04/24/2019	A#7368140966-7 4.24.19	9.86
49182	PG & E	A#5422632722-6	05/01/2019		04/22/2019	A#5422632722-6 4.22.19	10.51
49183	PG & E	A#9853233499-6	05/01/2019		04/22/2019	A#9853233499-6 4.22.19	20.51
						Vendor Total:	1,188.57
49184	PUBLIC WORKS COUNTY OF KERN	ACCT#01-ARV	05/01/2019		05/01/2019	MUNI&STSW SVC. JAN. 2019	2,338.20
49185	PUBLIC WORKS COUNTY OF KERN	ACCT#01-ARV	05/01/2019		04/08/2019	MUNI&STSW SVC. MAR. 2019	453.50
						Vendor Total:	2,791.70
49190	SO. CAL. GAS CO.	A#07111833724	05/01/2019		04/29/2019	A#07111833724 4.29.19	24.91
49191	SO. CAL. GAS CO.	A#05631670006	05/01/2019		04/29/2019	A#05631670006 4.29.19	48.26
49192	SO. CAL. GAS CO.	A#05631667143	05/01/2019		04/29/2019	A#05631667143 4.29.19	38.71
49193	SO. CAL. GAS CO.	A#08571665762	05/01/2019		04/29/2019	A#08571665762 4.29.19	31.28
49194	SO. CAL. GAS CO.	A#10271662008	05/01/2019		04/29/2019	A#10271662008 4.29.19	51.44
						Vendor Total:	194.60
49186	SOUTH VALLEY ELECTRICAL	3863	05/01/2019		04/23/2019	ELECTRICAL SVC. SMOTHERMON	889.72
49187	SOUTH VALLEY ELECTRICAL	3866	05/01/2019		04/23/2019	ELECTRICAL SVC. SMOTHERMON	675.00
						Vendor Total:	1,564.72
49188	TRUJILLO, OLIVIA		05/01/2019		04/23/2019	LEAGUE OF CA. CITIES 4.24.19	60.50
						Vendor Total:	60.50
49189	ZEE MEDICAL SERVICE	34-216591	05/01/2019		04/19/2019	FIRST AID SUPPLIES-PUBLIC WO	39.40
						Vendor Total:	39.40

Attachment: Demand Register April 20, 2019 to May 09, 2019 (Demand Register(s) of April 20, 2019 - May 09, 2019)

Edit List of Invoices - Summary

DEMAND LIST 04.30.19

5.A.a

Date: 05/02/2019

Time: 10:34 am

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City of Arvin

Ref. No.	Vendor Name	Invoice No.	Posting Date	PONumber	Invoice Date	Invoice Description	Invoice Amount
Grand Total:							333,850.70
Less Credit Memos:							0.00
Net Total:							333,850.70
Less Hand Check Total:							0.00
Outstanding Invoice Total:							333,850.70
Total Invoices: 39							

Attachment: Demand Register April 20, 2019 to May 09, 2019 (Demand Register(s) of April 20, 2019 – May 09, 2019)

Edit List of Invoices - Summary

5.A.a

DEMAND LIST 05/07/2019

Date: 05/08/2019

Time: 8:07 am

Page: 1

City of Arvin

Ref. No.	Vendor Name	Invoice No.	Posting Date	PO Number	Invoice Date	Invoice Description	Invoice Amount
49195	ADVANCE AIR DUCT CLEANING	1456	05/07/2019		05/07/2019	CLEAN/SANITIZED CITY HALL	595.00
						Vendor Total:	595.00
49253	AIRGAS WEST	9961872398	05/07/2019		04/30/2019	RENT CYL IND LARGE ACETYLEN	70.35
						Vendor Total:	70.35
49252	ALLSTATE	CASE#91936	05/07/2019		04/29/2019	POST TAX APRIL 2019	217.43
		04/19				Vendor Total:	217.43
49197	ALTA PLANNING AND DESIGN	00-2018-272-5	05/07/2019		04/25/2019	CALTRANS-SRTS PLAN	2,733.86
						Vendor Total:	2,733.86
49198	ARVIN COMM SERVICES DIST		05/07/2019		05/07/2019	COA SVC. 03.21.19-04.22.19	7,560.51
		CITY OF ARVIN 3.21.19-4.22.19				Vendor Total:	7,560.51
49199	AT&T MOBILITY	287251442687X04282019	05/07/2019		05/07/2019	SVC. 05.23.19-04.22.19	94.38
						Vendor Total:	94.38
49200	AT&T	000012902927	05/07/2019		04/13/2019	CALNET 3 A#9391033189	360.70
49201	AT&T	000012904690	05/07/2019		04/13/2019	CALNET 3 A#9391056024	528.59
						Vendor Total:	889.29
49231	BAKERSFIELD CALIFORNIAN	1ARV05 2714655	05/07/2019		04/30/2019	PUBLIC NOTICE APRIL 2019	2,161.72
						Vendor Total:	2,161.72
49227	BANK OF AMERICA-LAIFI		05/07/2019		05/02/2019	BOFA TRANSFER TO LAIFI 5.2.19	2,000,000.00
		TRANSFER FUNDS FROM BOFA-LAIF				Vendor Total:	2,000,000.00
49202	BLACKBURN OIL COMPANY LLC		05/07/2019		05/07/2019	FUEL USAGE REPORT APRIL 2019	10,481.15
		FUEL USAGE REPORT APRIL 2019				Vendor Total:	10,481.15
49203	BRIAN HANEY		05/07/2019		04/23/2019	INVESTIGATIVE CONSULTING 3/1	933.80
		INVESTIGATIVE CONSULTING 3/19				Vendor Total:	933.80
49204	BROADLUX, INC	BR911732-57	05/07/2019		05/01/2019	O&M SERVICES MAY 2019	252.50
						Vendor Total:	252.50
49205	BSK ASSOCIATES	E1801301B	05/07/2019		05/07/2019	APN#189-340-27 SVC. OCT. 2018	452.55
						Vendor Total:	452.55
49206	CENTRAL CALIF. ASSOC. PUBLIC		05/07/2019		05/07/2019	COA UNION DUES 5.3.19	728.43
		COA UNION DUES 5.3.19				Vendor Total:	728.43
49207	CITY OF WASCO		05/07/2019		04/29/2019	KC ASSOCIATION OF CITIES	25.00
		OLIVIA TRUJILLO 1.28.19					

Attachment: Demand Register April 20, 2019 to May 09, 2019 (Demand Register(s) of April 20, 2019 - May 09, 2019)

Edit List of Invoices - Summary

5.A.a

DEMAND LIST 05/07/2019

Date: 05/08/2019

Time: 8:07 am

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City of Arvin

Ref. No.	Vendor Name	Invoice No.	Posting Date	PONumber	Invoice Date	Invoice Description	Invoice Amount
49208	CITY OF WASCO		05/07/2019		04/29/2019	KC ASSOCIATION OF CITIES	
		CM BRECKINRIDGE 1.28.19					25.00
						Vendor Total:	50.00
49209	CLARK PEST CONTROL		05/07/2019		05/07/2019	PEST CONTROL 05.01.19-TRANSIT	
49210	CLARK PEST CONTROL		05/07/2019		05/07/2019	PEST CONTROL VET'S HALL 4.30	
49211	CLARK PEST CONTROL		05/07/2019		05/07/2019	PEST CONTROL COMM.SVC. 4.30	
							100.00
						Vendor Total:	252.00
49212	CLEAN CUT LANDSCAPE MANAGEMENT		05/07/2019		04/30/2019	LANDSCPAE MAINTENANCE LLMI	
		1921					2,680.00
49213	CLEAN CUT LANDSCAPE MANAGEMENT		05/07/2019		04/30/2019	LANDSCPAE MAINTENANCE LLMI	
		1922					645.00
						Vendor Total:	3,325.00
49214	COMMUNICATION ENTERPRISES		05/07/2019		05/07/2019	LTR 450 PAMPA DISPATCH-TRANS	
		1098711					135.00
49215	COMMUNICATION ENTERPRISES		05/07/2019		05/07/2019	LTR 450 PAMPA DISPATCH-PW	
		1098712					165.00
						Vendor Total:	300.00
49216	DIAMOND TECHNOLOGIES, INC		05/07/2019		04/30/2019	AGREEMENT OFFICE 365	
		24072					365.00
49217	DIAMOND TECHNOLOGIES, INC		05/07/2019		05/07/2019	AGREEMENT SECURECENTRIC	
		24071					1,900.00
						Vendor Total:	2,265.00
49218	GOLDEN EMPIRE FLEET SERVICE		05/07/2019		05/01/2019	MAINTENANCE FLEET#207	
		54548					647.39
						Vendor Total:	647.39
49219	GRANICUS		05/07/2019		05/07/2019	IQM2-AGENDA & MINUES 4.28-5.2	
		111996					561.00
						Vendor Total:	561.00
49220	JTS TRUCKING REPAIR		05/07/2019		05/07/2019	MAINTENANCE SUPPLIES	
		234948					116.01
49221	JTS TRUCKING REPAIR		05/07/2019		04/15/2019	MAINTENANCE FLEET#209	
		234663					2,153.72
49222	JTS TRUCKING REPAIR		05/07/2019		04/23/2019	MAINTENANCE FLEET#207	
		235179					103.80
49223	JTS TRUCKING REPAIR		05/07/2019		04/25/2019	MAINTENANCE FLEET#209	
		235348					449.87
49224	JTS TRUCKING REPAIR		05/07/2019		05/07/2019	MAINTENANCE FLEET#205	
		235381					709.35
49225	JTS TRUCKING REPAIR		05/07/2019		05/02/2019	MAINTENANCE FLEET#209	
		235772					342.03
						Vendor Total:	3,874.78
49226	KERN TROPHIES		05/07/2019		04/19/2019	PLAQUE-CITY MANAGER	
		64919					103.16
						Vendor Total:	103.16
49228	MOUNTAINSIDE DISPOSAL		05/07/2019		05/07/2019	LANDFILL 05.01.19	
							162.12
						Vendor Total:	162.12
49229	PG & E		05/07/2019		05/07/2019	A#9307046200-2 4.30.19	
		A#9307046200-2 4.30.19					19.71

Attachment: Demand Register April 20, 2019 to May 09, 2019 (Demand Register(s) of April 20, 2019 - May 09, 2019)

Edit List of Invoices - Summary

DEMAND LIST 05/07/2019

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Date: 05/08/2019

Time: 8:07 am

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City of Arvin

Ref. No.	Vendor Name	Invoice No.	Posting Date	PO Number	Invoice Date	Invoice Description	Invoice Amount
						Vendor Total:	19.71
49230	PITNEY BOWES		05/07/2019		04/29/2019	LEASING CHARGES 4.29.19	
		3103106903					252.84
						Vendor Total:	252.84
49232	SPARKLE TEXTILE RENTAL SERVICE		05/07/2019		05/07/2019	UNIFORM SVC. APRIL 2019	
		UNIFORM SVC. APRIL 2019					1,249.86
						Vendor Total:	1,249.86
49233	SPECTRUM BUSINESS		05/07/2019		05/07/2019	SVC. 04.29.19-05.28.19	
		069794801043019					104.33
						Vendor Total:	104.33
49234	STAPLES BUSINESS ADVANTAGE		05/07/2019		04/10/2019	OFFICE SUPPLIES-TRANSIT	
		7216780331-0-1					128.02
49235	STAPLES BUSINESS ADVANTAGE		05/07/2019		04/10/2019	OFFICE SUPPLIES-TRANSIT	
		7216780331-0-3					77.91
49236	STAPLES BUSINESS ADVANTAGE		05/07/2019		03/25/2019	OFFICE SUPPLIES-CITY HALL	
		7215781663-0-1					63.33
49237	STAPLES BUSINESS ADVANTAGE		05/07/2019		03/28/2019	OFFICE SUPPLIES-CITY HALL	
		7215839635-0-1					35.82
49238	STAPLES BUSINESS ADVANTAGE		05/07/2019		03/26/2019	OFFICE SUPPLIES-CITY HALL	
		7215839635-0-2					47.62
49239	STAPLES BUSINESS ADVANTAGE		05/07/2019		04/02/2019	OFFICE SUPPLIES-CITY HALL	
		7216235007-0-1					117.39
49240	STAPLES BUSINESS ADVANTAGE		05/07/2019		04/09/2019	OFFICE SUPPLIES-CITY HALL	
		7216235007-0-2					14.05
49241	STAPLES BUSINESS ADVANTAGE		05/07/2019		04/10/2019	OFFICE SUPPLIES-TRANSIT	
		7216787065-0-1					78.55
49242	STAPLES BUSINESS ADVANTAGE		05/07/2019		04/03/2019	OFFICE SUPPLIES-TRANSIT	
		7216385968-0-1					86.46
						Vendor Total:	649.15
49243	SUPPLYWORKS		05/07/2019		04/30/2019	COA CLEANING SUPPLIES	
		489952234					1,706.76
						Vendor Total:	1,706.76
49244	TEL-TEC SECURITY SYSTEMS		05/07/2019		05/01/2019	ADOBE COMPLEX-FIRE MONITOF	
		661025					55.00
						Vendor Total:	55.00
49245	VANTAGE POINT TRANSFER AGENTS		05/07/2019		05/07/2019	457K LOAN/CONTRIBUTIONS 5.3.19	
		457K LOAN/CONTRIBUTIONS 5.3.19					159.96
						Vendor Total:	159.96
49246	VEOLIA WATER NA - MAINT-NOTE		05/07/2019		05/07/2019	OPERATION & MAINTENANCE	
		90195463					127,621.25
						Vendor Total:	127,621.25
49247	WRIGHT NATIONL FLOOD INSURANCE		05/07/2019		03/30/2019	141 N A ST. 5/25/19-5/25/20	
		PN 04 1150917165 06 5.25.19					2,260.00
49248	WRIGHT NATIONL FLOOD INSURANCE		05/07/2019		03/30/2019	141 N A ST.OFC 1	
		PN 04 1150917163 06 5.25.19					1,908.00
49249	WRIGHT NATIONL FLOOD INSURANCE		05/07/2019		03/30/2019	141 N A ST OFC 2	
		PN 04 1150917164 06 5.25.19					1,908.00
49250	WRIGHT NATIONL FLOOD INSURANCE		05/07/2019		03/30/2019	414 4TH AVE 5/25/19-5/25/20	
		PN 04 1150917162 06 5.25.19					1,666.00
						Vendor Total:	7,742.00
49251	ZEE MEDICAL SERVICE		05/07/2019		04/18/2019	FIRST AID-POLICE DEPT.	
		34-216589					28.85

Attachment: Demand Register April 20, 2019 to May 09, 2019 (Demand Register(s) of April 20, 2019 - May 09, 2019)

Edit List of Invoices - Summary

DEMAND LIST 05/07/2019

5.A.a

Date: 05/08/2019

Time: 8:07 am

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City of Arvin

Ref. No.	Vendor Name	Invoice No.	Posting Date	PONumber	Invoice Date	Invoice Description	Invoice Amount
Vendor Total:							28.85

Total Invoices: 58

Grand Total:	2,178,301.13
Less Credit Memos:	0.00
Net Total:	2,178,301.13
Less Hand Check Total:	2,000,000.00
Outstanding Invoice Total:	178,301.13

Attachment: Demand Register April 20, 2019 to May 09, 2019 (Demand Register(s) of April 20, 2019 – May 09, 2019)

EARNINGS REPORT

5.B.a

Emp. Code Desc.: CITY OF ARVIN
 From 05/03/2019 to 05/03/20
 City of Arvin

PAYROLL 05-03-19

Date: 5/9/2019
 Time: 10:06:49

Employee Name	Employee ID	15X	1X	1XFTO	25X	2X	3X	ADJ	ADLCO	Oth
		ADMLV	ADPAY	ALLOW	BERV	BNFT1	COMP	CTO	CTYWK	Toi
		DEGRE	DIFFL	FH	FTO	HLPER	HOL	HP1X	INSUR	
		JURY	LONG	MILIT	MISC	PBD	PBD3	PBDCO	PDADL	
		PERE	PERS	PHALW	POST	PTO	REG	RETOT	RETRO	
		SCKCO	SEVR	SHOEA	SICK	SRO	SSWEP	STDBY	STLMT	
		TRAIN	TUPGR	UACL	UAPEP	UNADV	URCL	URPEP	VAC	
		VACCO	VACTO	WRKCO						
Grand Total:	Employee Count: 53	0.00	10,757.72	0.00	0.00	1,493.92	0.00	0.00	12,997.16	0.0
		0.00	0.00	200.00	0.00	740.83	0.00	1,237.59	928.00	139,490.6
		300.02	191.10	721.68	0.00	0.00	0.00	0.00	1,619.16	
		0.00	2,352.84	0.00	0.00	0.00	199.04	191.84	4,066.40	
		0.00	0.00	300.00	637.47	0.00	88,654.94	0.00	0.00	
		0.00	0.00	0.00	5,801.20	0.00	365.22	0.00	0.00	
		0.00	108.22	0.00	0.00	90.78	0.00	0.00	2,264.94	
		0.00	0.00	3,270.62						

COST REPORT

Emp. Code Desc.: CITY OF ARVIN
 From 05/03/2019 to 05/03/20
 City of Arvin

PAYROLL 05-03-19

Date: 5/9/2019
 Time: 10:07:07

Employee Name	Employee ID	PER3E	FUTA	MC	MC1	PER1E	PER2D	PER2E	PER2M	Oth
		PERS3	PER5E	PER6E	PER9E	PERCP	PERS	PERS1	PERS2	Toi
		SUTA	PERS4	PERS5	PERS6	PERS8	PERS9	SS	SS1	
Grand Total:	Employee Count: 53	0.00	0.00	1,527.79	793.74	0.00	1,246.62	0.00	968.45	0.0
		1,511.46	119.59	0.00	0.00	0.00	0.00	0.00	2,240.65	24,942.1
		2,829.53	0.00	0.00	2,190.52	1,468.27	0.00	6,415.84	3,629.70	
		0.00								

Attachment: Payroll Register of May 03, 2019 (Payroll Register(s) of May 03, 2019)

REGULAR MEETING MINUTES

ARVIN CITY COUNCIL / SUCCESSOR AGENCY TO THE ARVIN COMMUNITY REDEVELOPMENT AGENCY / ARVIN HOUSING AUTHORITY / ARVIN PUBLIC FINANCING AUTHORITY

APRIL 23, 2019

CALL TO ORDER @ 5:30PM

PLEDGE OF ALLEGIANCE

INVOCATION

ROLL CALL: CM Martinez and CM Trujillo absent. All others present.

1. Approval of Agenda as To Form.

Motion to approve the Agenda.

Motion MPT Robles Second Mayor Gurrola Vote 3-0

2. CLOSED SESSION ITEM(S)

- A.** Conference with Legal Counsel: Anticipated Litigation (Pursuant to Government Code § 54956.9(d)(2) One Potential Case
- B.** Conference with Legal Counsel: Anticipated Litigation (Pursuant to Government Code § 54956.9(d)(4) One Potential Case

CLOSED SESSION REPORT BY CITY ATTORNEY:

No reportable action.

3. PUBLIC COMMENTS

(This is the opportunity for the public to address the City Council on any matter on the agenda or any item of interest to the public that is within the subject matter jurisdiction of the City Council.)

4. PRESENTATION(S)

- A.** Awards for the 2019 Keep California Beautiful K-12 Recycling Challenge – Arvin Union School District, Arvin High School, and Grimmway Academy. Ray Scott, Mountainside Disposal

5. ACTION ITEM(S)

- A.** Consideration and Acceptance of Annual Financial Audit for the Period Ending June 30, 2018. (Finance Director)

Staff recommends to accept and file the following reports:

1. Independent Auditors' Report and Basic Financial Statements for the Year Ended June 30, 2018.
2. Report on Internal Control Over Financial Reporting and On Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards for the Year Ended June 30, 2018.

Motion to accept and file the following reports:

1. **Independent Auditors' Report and Basic Financial Statements for the Year Ended June 30, 2018.**
2. **Report on Internal Control Over Financial Reporting and On Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards for the Year Ended June 30, 2018.**

Motion CM Franetovich Second MPT Robles Vote 3-0

- B. Input from City Council Regarding the Allocation of Veolia's Annual Community Contribution Groups and Clubs for Calendar Year 2019. (Finance Director)**

Staff recommends that the City Council consider and approve the allocation of Veolia's annual community contribution for calendar year 2019.

Motion to approve the donation distribution and allocation of Veolia Funds to the following groups/clubs:

- \$1,787 Dolores Huerta Foundations, Youth & Family Civic Engagement Initiative - Bike Arvin
- \$1,787 The Arts Council of Kern – Arvin Seniors Sewing Circle
- \$1,500 Arvin Boxing Club & Youth Center
- \$1,787 Arvin High School – Girls Soccer
- \$1,787 Arvin High School – Future Farmers of America (FFA)
- \$1,787 Arvin High School – Health Occupational Students of America (HOSA)
- \$1,787 Arvin High School – Inspiration Club for Special Ed Students

Motion Mayor Gurrola Second MPT Robles Vote 3-0

6. CONSENT AGENDA ITEM(S)

- A. Approval of Demand Register(s) of April 10, 2019 – April 19, 2019.
- B. Approval of Payroll Register(s) of April 19, 2019.
- C. Approval of the Minutes of the Regular Meeting(s) of March 26, 2019 and April 09, 2019.
- D. Approval to Participate in the Used Oil Payment Program Managed by the County of Kern for the Fiscal Year 2019-2020.
- E. Approval of the County of Kern Operational Area Disaster Response Mutual Aid Agreement between the County of Kern and the Cities of Arvin, Bakersfield,

California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco.

Agreement No. 2019-09

- F. Approval of A Resolution of the City Council of the City of Arvin An Agreement for a Ford F 350 Animal Control Truck Between the City of Arvin and Jim Burke Ford.

Resolution No. 2019-32

Agreement No. 2019-10

- G. Approval of A Resolution of the City Council of the City of Arvin Consenting to the Submittal of A Grant Application and Application Documents to the Federal Transit Administration 5311 Program; and Authorizing Related Actions.

Resolution No. 2019-33

- H. Approval of A Resolution of the City Council of the City of Arvin Consenting to the Submittal of A Grant Application and Application Documents to the Federal Transit Administration 5339 Program; and Authorizing Related Actions.

Resolution No. 2019-34

- I. Adoption of New Senior Planner Job Description and Related Salary Step Schedule Update.
- J. Approval of A Resolution of the City Council of the City of Arvin Adopting the Public Notice and Grievance Procedure as Required Under the Americans With Disability Act.

Resolution No. 2019-35

- K. Approval of a Lease Agreement Between the City of Arvin and the California Rural Legal Assistance Inc. for Adobe Plaza Complex, 141 North A Street, Arvin, Suites C, D, & E.

Agreement No. 2019-11

Staff recommends approval of the Consent Agenda.

Motion to approve Consent Agenda Items 6A – 6K with addition to item 6K to approve the Lease Agreement as to the material items and authorize the City Manager to execute the Agreement after legal review as to form by the City Attorney.

Motion Mayor Gurrola Second CM Franetovich Vote 3-0

7. PUBLIC HEARING ITEM(S)

- A. A Resolution of the City Council of the City of Arvin Redeclaring Intention to Annex Taco Bell and Associated Parcels and Arvin Palace Into Landscaping and Lighting Maintenance District No. 1 and to Levy and Collect Assessments within Landscaping and Lighting Maintenance District No. 1 Commencing Fiscal Year 2019-2020 Pursuant to the Landscaping and Lighting Act of 1972 for Maintenance and Servicing of Lighting and Landscaping and Setting the

Time and Place of the Hearing on Proposed Annexation and the Proposed Levy and Collection of Assessments. (City Engineer)

Staff recommends to open the hearing, allow for public testimony, close the hearing, and approve the Resolution.

Hearing opened.

No testimony received from the public.

Hearing closed.

Motion to approve the Resolution.

Motion MPT Robles Second Mayor Gurrola Vote 3-0

Resolution No. 2019-36

B. A Resolution of the City Council of the City of Arvin Redeclaring Intention to Levy and Collect Assessments Within Landscaping and Lighting Maintenance District No. 2 Commencing Fiscal Year 2019-2020 Pursuant to the Landscaping and Lighting Act of 1972, Part 2 of Division 15 of the California Streets and Highways Code, and Appointing A Time and Place for Hearing Objections Thereto. (City Engineer)

Staff recommends to open the hearing, allow for public testimony, close the hearing, and approve the Resolution.

Hearing opened.

No testimony received from the public.

Hearing closed.

Motion to approve the Resolution.

Motion Mayor Gurrola Second CM Franetovich Vote 3-0

Resolution No. 2019-37

8. BUDGET WORKSHOP FISCAL YEAR 2019-2020 (Finance Director)

9. STAFF REPORTS

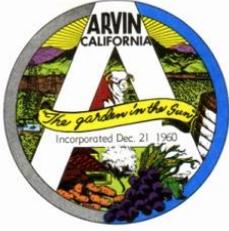
A. Monthly Financial Report – March 2019 (Finance Director)

10. COUNCIL MEMBER COMMENTS

11. ADJOURNED @ 6:54PM

Respectfully submitted,

Cecilia Vela, City Clerk



PROCLAMATION

BIKE MONTH May 2019

Whereas, the bicycle is an economical, healthy, convenient, and environmentally sound form of transportation and an excellent tool for recreation and enjoyment of Arvin's scenic beauty; and

Whereas, throughout the month of May, the residents of Arvin and its visitors will experience the joys of bicycling through educational programs, races, commuting events, charity events, or by simply getting out and going for a ride; and

Whereas, Arvin's roads and access to trails and natural assets attracts bicyclists each year, providing economic health, transportation, tourism, and scenic benefits;

Whereas, creating a bicycling-friendly community has been shown to improve citizens' health, well-being, and quality of life, growing the economy of Arvin, attracting tourism dollars, improving traffic safety, supporting student learning outcomes, and reducing pollution, congestion, and wear and tear on our streets and roads; and

Whereas, Bike Arvin, Bike Bakersfield, the League of American Bicyclists, schools, parks and recreation departments, police departments, public health districts, hospitals, companies and civic groups will be promoting bicycling during the month of May 2019; and

Whereas, these groups are also promoting bicycle tourism year-round to attract more visitors to enjoy our local restaurants, hotels, retail establishments, and cultural and scenic attractions; and

Whereas, these groups are also promoting greater public awareness of bicycle operation and safety education in an effort to reduce collisions, injuries, and fatalities and improve health and safety for everyone on the road; and

Now therefore, We, the City Council of the City of Arvin, California, do hereby proclaim

May 2019 as Bike Month in Arvin,

and we urge all residents to join us in this special observance.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the City of Arvin to be affixed this 14th day of May 2019.

Jose Gurrola, Mayor
City of Arvin

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ARVIN IN SUPPORT OF THE SAFE AND AFFORDABLE DRINKING WATER FUND PROPOSAL -- INCLUDING GOVERNOR NEWSOM'S BUDGET TRAILER BILL PROPOSAL, SB 200 (MONNING), AND AB 217 (GARCIA) -- WHICH WOULD ESTABLISH A NEW STATE SAFE AND AFFORDABLE DRINKING WATER FUND TO SUPPORT SHORT AND LONG-TERM DRINKING WATER SOLUTIONS AND PROGRAMS, SUCH AS TO SUPPORT OPERATIONS AND MAINTENANCE FUNDING FOR DRINKING WATER TREATMENT AND ADDRESS OTHER CRITICAL DRINKING WATER NEEDS.

WHEREAS, all Californians have a human right to safe and affordable drinking water for drinking, cooking and sanitation purposes; and

WHEREAS, drinking water safety and affordability issues affect California communities across the state; and

WHEREAS, the City Council of the City of Arvin recognizes the adverse health risks associated with lack of safe and affordable drinking water to its constituents, with children and the elderly being particularly at risk; and

WHEREAS, for years, the State Water Resources Control Board and other policymakers have called for the creation of a sustainable funding source to support safe and affordable drinking water programs, including to ensure public water systems can afford to operate and maintain drinking water treatment systems to address contaminated drinking water; and

WHEREAS, the lack of a reliable funding source for operations and maintenance drinking water treatment costs has meant many communities are either unable to afford the cost of drinking water treatment, or are forced to pass on burdensome drinking water costs to constituents who may then struggle to be able to afford their drinking water;

NOW, THEREFORE, BE IT HEREBY RESOLVED by the City Council of the City of Arvin as follows:

1. The City Council of the City of Arvin affirms its support for a new Safe and Affordable Drinking Water Fund -- including Governor Newsom's budget trailer bill proposal, SB 200 and AB 217 -- that would provide both short term and long term programs and solutions for safe and affordable drinking water, including to help subsidize the high cost of operations and maintenance drinking water treatment costs.

I HEREBY CERTIFY that the foregoing resolution was passed and adopted by the City Council of the City of Arvin at a Regular Meeting thereof held on the 14th day of May, 2019 by the following vote:

ATTEST

CECILIA VELA, City Clerk

CITY OF ARVIN

By: _____
JOSE GURROLA, Mayor

APPROVED AS TO FORM:

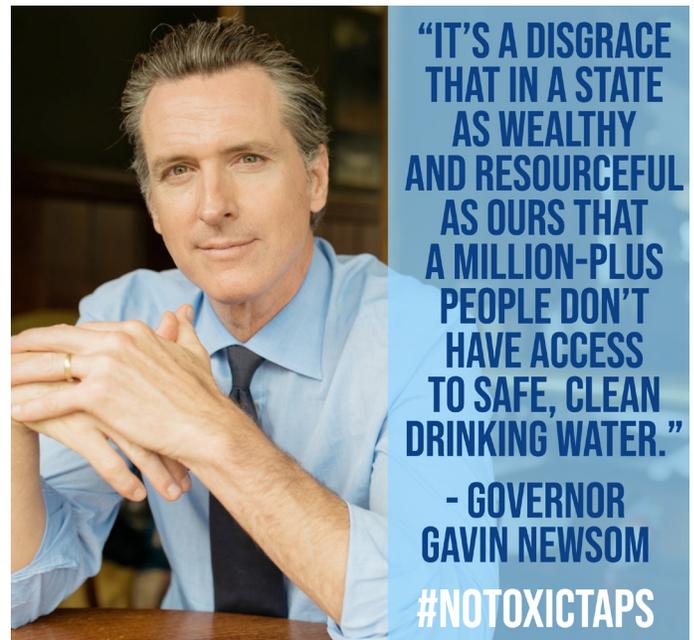
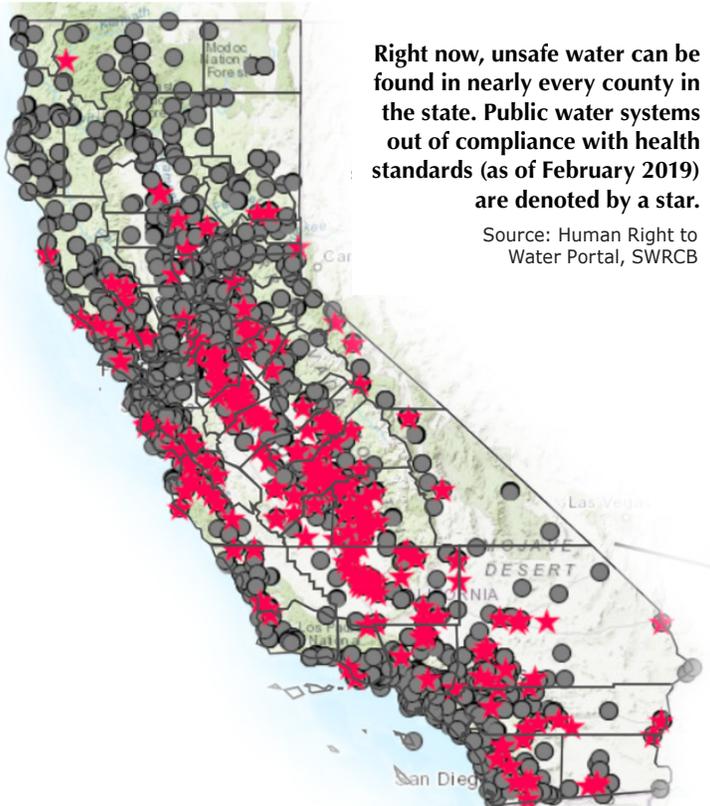
By: _____
SHANNON L. CHAFFIN, City Attorney
Aleshire & Wynder, LLP

I, _____, City Clerk of the City of Arvin, California, DO HEREBY CERTIFY that the foregoing is a true and accurate copy of the Resolution passed and adopted by the City Council of the City of Arvin on the date and by the vote indicated herein.

Growing Momentum for Safe and Affordable Drinking Water Fund

Gov. Newsom's budget proposal, SB 200 (Monning), AB 217 (E. Garcia) respond to needs of impacted communities through new safe drinking water fee

Each year, one million Californians are exposed to unsafe drinking water. Approximately 300 water systems – spanning every region of the state – fail to meet safe water standards. Contaminated water is a public health disaster – putting Californians at risk for cancer, birth defects, heart disease, diabetes and infant mortality.



Low-income communities and communities of color are disproportionately harmed by unsafe, unaffordable drinking water. For example, "low-income Latino residents are likely affected the most" by nitrate-contaminated drinking water in Valley communities, according to a UC Berkeley study. Schools impacted by unsafe drinking water have higher percentages of Latino students and socioeconomically disadvantaged students.

Unsafe Water Comes with High Costs for Californians Already Struggling to Make Ends Meet

According to a recent UC Davis study, disadvantaged communities often “pay a triple penalty” to obtain safe water: not only do they face health risks, their bills for toxic water tend to be higher, and they have to buy expensive bottled water to drink, cook and bathe.

In 2012, California became the first state in the nation to legislatively recognize the human right to water. The state declared, “every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.” Since then, too little progress has been made to deliver safe water to both urban and rural communities across California. Children in the Bay Area, Los Angeles, San Diego and other communities are drinking lead-contaminated water in their school cafeterias and drinking fountains.

Protect California Communities with a Safe Drinking Water Fee

Governor Newsom’s 2019 budget proposal, SB 200 and AB 217 reflect growing consensus that delivering safe water in California requires a small but sustainable fee to invest in new infrastructure, replace old infrastructure, provide emergency water supplies and support water treatment.

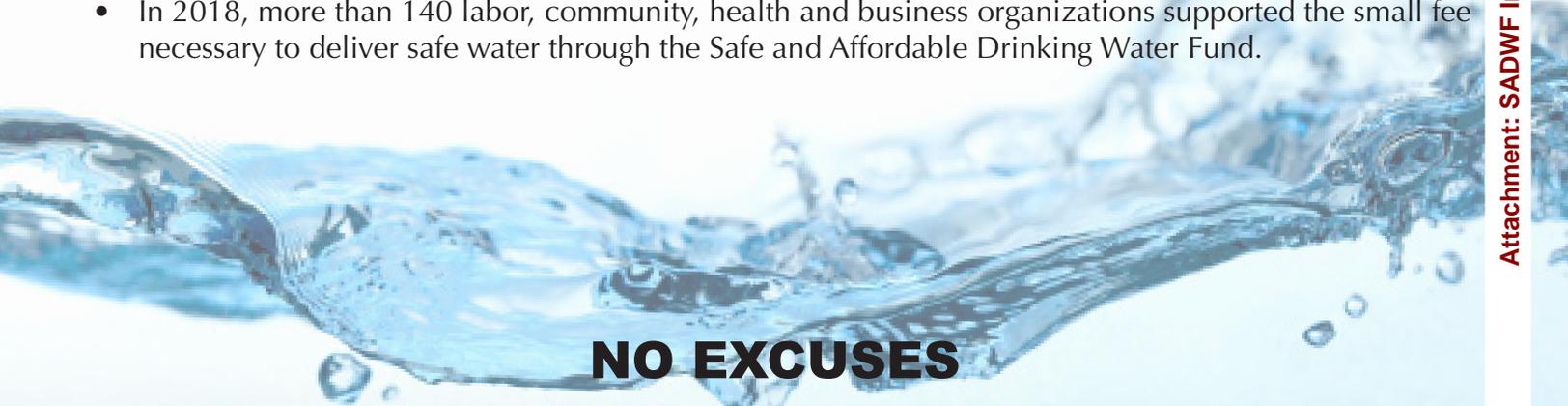
A Safe and Affordable Drinking Water Fund means keeping the promise of Safe Water for All Californians. For household water users, the fee amounts to less than the cost of a bottle of water—a dollar each month, with exemptions for low-income Californians. Yet it is enough to close the funding gap that keeps safe drinking water from homes and schools.

Keeping the Promise of Safe Water for Impacted Communities Requires Ongoing Investment

Without a sustainable source of funding, California simply can’t maintain safe, affordable water systems to serve our most vulnerable communities up and down the state. If California fails to provide ongoing water system maintenance, communities of color and low-income neighborhoods face continual risk from unsafe water, particularly those reliant on domestic wells and small water systems.

Strong, Broad Support for a Safe, Affordable Drinking Water Fund

- More than two-thirds of California voters (69%) said they would be willing to pay as much as an additional one dollar per month on their water bill to fix unsafe levels of contamination (2017 survey).
- In 2018, more than 140 labor, community, health and business organizations supported the small fee necessary to deliver safe water through the Safe and Affordable Drinking Water Fund.



NO EXCUSES

Governor Newsom called lack of access to safe, affordable water a “disgrace,” and promised he has “no interest in everybody making excuses” instead of working to deliver safe, affordable water. With the leadership of the Governor and Legislators, 2019 is the year to deliver on the promise of safe, affordable water for all.



CITY OF ARVIN

Agenda Report

Meeting Date: May 14, 2019

TO: City Council

FROM: Pawan Gill, Director of Administrative Services
R. Jerry Breckinridge, Interim City Manager

SUBJECT: **A Resolution of the City Council of the City of Arvin Authorizing the Submittal of an Application to the Institute for Local Government's Recognition Program, The Beacon Program; and Authorizing Related Action**

Background:

The Beacon Program is an established program of the Institute for Local Government, the non-profit training and education affiliate of the League of California Cities, the California State Association of Counties and the California Special Districts Association.

The Beacon Program provides a framework for cities and counties to implement and share best practices that create healthier, more efficient, sustainable communities. The program honors voluntary efforts by cities and counties to save energy, reduce greenhouse gas emissions and adopt policies and programs that promote sustainability.

Beacon Program participants receive valuable support and encouragement from the Institute for Local Government and its non-profit and utility partners. The team helps local governments apply sustainability best practices and collect and organize data to advance participants' achievements within the program's five areas of accomplishment. Within each area, the participant can earn Beacon Spotlight Awards based on level of achievement. To win a full Beacon Award, participants are required to demonstrate achievements in all five areas.

SPOTLIGHT AWARD AREAS OF ACCOMPLISHMENT	SILVER LEVEL	GOLD LEVEL	PLATINUM LEVEL
Agency GHG Reductions	5% Reduction	10% Reduction	20% Reduction
Community GHG Reductions			
Agency Energy Savings			
Natural Gas Savings			
Sustainability Best Practice Activities	1 in each of 10 categories	3 in each of 10 categories	6 in each of 10 categories
FULL BEACON AWARD	Silver Level Beacon Award	Gold Level Beacon Award	Platinum Level Beacon Award

In addition to award recognition, participants receive monthly communications about innovative practices and/or funding opportunities, access to peer-to-peer networking opportunities and invitations to highlight sustainability leadership.

In order to participate in the Beacon Program, cities and counties must complete a simple application and do the following:

- Adopt a resolution by the governing body committing the agency to participate in the program;
- Designate a lead staff person as a point of contact;
- Seek to implement energy efficiency or sustainability programs, policies or procedures that achieve measurable greenhouse gas reductions and promote energy conservation activities in the community.

The Beacon Program is funded by the California utility customers and administered by Pacific Gas and Electric Company, San Diego Gas and Electric Company, Southern California Edison and Southern California Gas Company, under the auspices of the California Public Utilities Commission. Additional detailed information about the program can be found at www.ca-ilg.org/BeaconAward.

Recommendation:

Staff recommends the City Council adopt the Resolution.

Fiscal Impact:

Staff has determined the submission of the application has no fiscal impact.

Attachments:

Resolution of the City Council of the City of Arvin Authorizing the Submittal of an Application to the Institute for Local Government’s Recognition Program, The Beacon Program; and Authorizing Related Action

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ARVIN AUTHORIZING THE SUBMITTAL OF AN APPLICATION TO THE INSTITUTE FOR LOCAL GOVERNMENT’S RECOGNITION PROGRAM, THE BEACON PROGRAM; AND AUTHORIZING RELATED ACTION

WHEREAS, the City of Arvin is undertaking policies, programs and activities to reduce greenhouse gas emissions, save energy and promote sustainability; and

WHEREAS, these policies, programs and activities conserve natural resources, save energy and money, and promote sustainable land use and transportation planning in the community; and

WHEREAS, the City of Arvin is leading by example by adopting innovative sustainability programs and policies, including working with community residents, business groups and others; and

WHEREAS, the City of Arvin wishes to expand these activities, share its experiences with other communities, and be recognized for its accomplishments; and

WHEREAS, the Beacon Program is a voluntary program of the Institute for Local Government, the non-profit research and education affiliate of the League of California Cities and the California State Association of Counties;

WHEREAS, the Beacon Program recognizes and celebrates achievements of cities and counties that reduce greenhouse gas emissions and save energy; and

WHEREAS, participating in the Beacon Program is an opportunity for the City of Arvin to learn about best practices.

NOW, THEREFORE, BE IT RESOLVED THAT THE CITY COUNCIL OF THE CITY OF ARVIN AS FOLLOWS:

Section 1: The City of Arvin agrees to participate in the Beacon Program. The City Manager or his designee, is hereby authorized to submit all required documents to the Institute for Local Governments recognition program, the Beacon Program.

Section 2: The City Manager, or his designee, is hereby authorized and empowered to execute in the name of the City of Arvin all program documents including, but not limited to, applications, agreements, amendments necessary to submit to the Beacon program, subject to approval as to legal form by the City Attorney.

Section 3: The City of Arvin will work towards achieving Beacon Spotlight Awards levels in its journey to be a more sustainable city.

Attachment: Resolution to Submit to ILG Beacon Program (Reso Approving Application to Beacon Program)

I HEREBY CERTIFY that the foregoing resolution was passed and adopted by the City Council of the City of Arvin at a regular meeting thereof held on the 15th day of May 2019 by the following vote:

AYES: _____

NOES: _____

ABSTAIN: _____

ABSENT: _____

ATTEST

CECILIA VELA, City Clerk

CITY OF ARVIN

By: _____
JOSE GURROLA, Mayor

APPROVED AS TO FORM:

By: _____
SHANNON L. CHAFFIN, City Attorney
Aleshire & Wynder, LLP

I, _____, City Clerk of the City of Arvin, California, **DO HEREBY CERTIFY** that the foregoing is a true and accurate copy of the Resolution passed and adopted by the City Council of the City of Arvin on the date and by the vote indicated herein.



CITY OF ARVIN
Staff Report

Meeting Date: May 14, 2019

TO:	City Council
FROM:	Jeff Jones, Finance Director Jerry Breckinridge, City Manager
SUBJECT:	A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ARVIN RECOGNIZING THE COMPETITIVE BIDDING PROCESS OF THE CITY OF VISALIA, AND AUTHORIZING THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH PROTERRA FOR THE PURCHASE OF THREE ELECTRIC BUSES AND CHARGING STATIONS; AND AUTHORIZING RELATED ACTION

BACKGROUND:

The City of Arvin was awarded a grant for Electric Buses, Equipment and Charging Stations by the FTA in the amount of \$ 2.29 Million Dollars.

The City determined that the City of Visalia completed a competitive bidding process for electric buses and charging stations, which was substantially similar to the City's competitive bidding process, found at Arvin Municipal Code Section 3.08.090. Visalia's competitive bidding process resulted in an agreement with Proterra for the purchase of electric buses and charging stations at the same or better price offered to the City.

Therefore, Staff has determined that it need not conduct the competitive bidding process, based on an exception to the process found at Arvin Municipal Code Section 3.08.090(B)(5), which exempts the purchase from the competitive bidding process if a substantially similar process is conducted by a government agency resulting in the same or similar price.

Staff now recommends that the City Council adopt a Resolution allowing for the exception to the competitive bidding process, and authorizing the agreement with Proterra for the purchase of Electric Buses and Charging stations.

FINANCIAL IMPACT:

Staff has determined that the grant award is reimbursable and has incrementally budgeted the

Low No award into the FY2019-2020 budget.

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ARVIN RECOGNIZING THE COMPETITIVE BIDDING PROCESS OF THE CITY OF VISALIA, AND AUTHORIZING THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH PROTERRA FOR THE PURCHASE OF THREE ELECTRIC BUSES AND CHARGING STATIONS; AND AUTHORIZING RELATED ACTION

WHEREAS, the City Council of the City of Arvin has approved the acceptance of a grant award from the 2018 Federal Transit Administration (FTA) 5339 Program; and

WHEREAS, Chapter 3.08 of the Arvin Municipal Code contains rules and regulations regarding the procurement of professional services; and

WHEREAS, Section 3.08.090 generally requires that the procurement of professional services in excess of \$ 30,000 shall be subject to a formal public bidding process; and

WHEREAS, Section 3.08.090(B)(5) allows for an exception to the formal public bidding process when the City determines that a federal, state, county, city or special district government agency has conducted a substantially similar process, and the equipment is provided to the City at the same or better price, and

WHEREAS, the Federal Register Volume 80, No. 80 published April 25, 2018 (pages 18120-18126) for the FTA Fiscal Year 2018 Competitive Funding Opportunity; Low or No Emissions Grant Program (“Federal Register”) states that “an eligible recipient may submit an application in partnership with other entities that intend to participate in the implementation of the project, including but not limited to specific vehicle manufactures, equipment vendors, or project consultants”, and

WHEREAS, the City of Arvin determined that the City of Visalia (“Visalia”) conducted a competitive bidding process substantially similar to Chapter 3.08.095 of the Arvin Municipal Code, which resulted in the purchase of certain electric busses and charging stations and

WHEREAS, based on the Visalia competitive bidding process, submitted its grant application naming Proterra as the vehicle manufacturer partnership for the electric buses and charging stations, and

WHEREAS, the City of Arvin was awarded the FTA Fiscal Year 2018 Competitive Funding Opportunity; Low or No Emissions Grant, and

WHEREAS, based on the exception to the public bidding process found in Section 3.08.070(B)(5) of the Arvin Municipal Code, the City need not conduct the competitive bidding

process for the purchase of electric buses and charging stations from Proterra, and

WHEREAS, the City now desires to enter into an agreement with Proterra, matching the agreement deriving from Visalia's competitive bidding process, to fulfill its grant award partnership for the purchase of electric buses and electric charging stations pursuant to the awarded grant.

NOW THEREFORE BE IT RESOLVED, by the City Council of Arvin as follows:

1. The above recitals are true and correct; and
2. The City Council finds that Visalia's conducted a competitive bidding process substantially similar to the competitive bidding process required by Arvin Municipal Code Section 3.08.070, which resulted in the purchase of equipment at the same or better price as offered to the City of Arvin; and
3. The City Council hereby authorizes the City Manager to enter into an agreement with Proterra in the amount of \$ 3,018,312 for the purchase of three 35' Electric Buses, three Charging Stations, diagnostic equipment, and spare parts in compensation for buses, bus equipment and services as may be approved by the City Manager, subject to approval as to legal form by the City Attorney.
4. This Resolution shall be effective immediately.

//////

I HEREBY CERTIFY that the foregoing resolution was passed and adopted by the City Council of the City of Arvin at a Regular Meeting thereof held on the 14th day of May, 2019 by the following vote:

ATTEST

CECILIA VELA, City Clerk

CITY OF ARVIN

By: _____
JOSE GURROLA, Mayor

APPROVED AS TO FORM:

By: _____
SHANNON L. CHAFFIN, City Attorney
Aleshire & Wynder, LLP

I, _____, City Clerk of the City of Arvin, California, DO HEREBY CERTIFY that the foregoing is a true and accurate copy of the Resolution passed and adopted by the City Council of the City of Arvin on the date and by the vote indicated herein.

PROTERRA FORM SALE CONTRACT

Contract No.

CITY OF ARVIN AND

PROTERRA INC

**Purchase and Sale of Three (3) 35 Foot Battery
Electric Buses and Three (3) Associated
Charging Stations**

Attachment: Protterra-Arvin Contract v2_dti (3 Protterra Buses)

Contract No. P2018-01

Battery Electric Buses
Version No.1 Dated 5/6/19

This Contract Agreement (hereinafter referred to as "Contract" or "Agreement") is made and entered into effective as of the date executed in full (May 6, 2019) by Arvin, located at 200 Campus Drive. Arvin, CA 93203 and Proterra Inc, a Delaware corporation, with its principal place of business 1 Whitlee Court, Greenville, SC 29607 ("Contractor") for the manufacture and delivery of three (3) Foot Proterra Catalyst Battery Electric Buses (hereinafter "Buses"), and five (5) Depot charger(s) ("Depot Charger"), or generically hereinafter "Charging Stations(s)". Arvin and the Contractor are sometimes individually referred to as "Party" and collectively as "Parties."

SEC. 1 CONTRACT DOCUMENTS

A. The Contract consists of the following which are incorporated herein by reference as appropriate:

- 1. General Contractual Provisions contained herein.
- 2. Bus Technical Specifications set forth as Attachment 1 hereto.
- 3. Charging Station Technical Specifications set forth as Attachment 2 hereto.
- 4. Option Tracker and Customer Templates set forth as Attachment 3 hereto
- 5. Warranty Provisions and spare parts as set forth as Attachment 4 hereto.

B. In case of any conflict among these documents where the Parties' intended resolution is not clear, the order of precedence shall be in the same order set forth in paragraph A above.

SEC. 2 TERM OF CONTRACT

Arvin and the Contractor agree that the Term of this Contract shall be for five (5) years commencing on the later of the Effective Date or the date of the Notice to Proceed (as defined below) unless otherwise extended by written amendment mutually agreed by Arvin and Contractor. Notwithstanding the foregoing, or anything to the contrary contained herein, in no event shall the Effective Date be deemed to have occurred, and none of the obligations of Arvin or Contractor under this Contract shall be deemed to have accrued, until Arvin has issued to Contractor a written notice to proceed under this Contract ("Notice to Proceed"). In the event no such notice is delivered on or before May 6, 2019, this Contract shall be deemed null and void and of no further force and effect.

SEC. 3 PAYMENT

A. Arvin shall pay and the Contractor shall accept:

- 1. Nine hundred and forty-three thousand, five hundred and ninety-two Dollars (\$943,592.00) per Bus ("Bus Unit Price"), for a total of two million, eight hundred and thirty thousand, seven hundred and seventy-six Dollars (\$2,830,776) for all three (3) Buses initially purchased under this Agreement;
- 2. Forty-two thousand, five hundred Dollars (\$42,500) per Depot Charging Station ("Depot Charger Unit Price") for a total of one hundred twenty-seven thousand, five hundred Dollars (\$127,500) for the three (3) Depot Charging Stations purchased under this agreement.

3. Seven thousand Dollars (\$7,000) for one diagnostic tool and laptop purchased under this agreement.
4. Fifty-three thousand and thirty-six Dollars (\$53,036) for recommended spare parts.

for a total contract price of three million, eighteen thousand, three hundred and twelve Dollars (\$3,018,312) **BUT SPECIFICALLY EXCLUDING SALES TAX** ("Contract Price"). It is understood and agreed by Arvin and the Contractor that Arvin will be responsible for the remittance of sales tax, if any, directly to the State of California or any other state.

B. The Parties agree that the Contractor will submit an invoice to Arvin for payment of Contract Price, and Arvin will make payments of Contract Price, on the following schedule:

1. Bus Payments: Arvin shall make progress payments on a per-Bus basis in accordance with the below provisions:
 - a. 50% payment of the Bus Unit Price when Bus is accepted by Arvin at Contractor's facility in accordance with the provisions of this Contract.
 - b. 50% payment of the Bus Unit Price when Bus is delivered and accepted by Arvin at Arvin's facility in accordance with the provisions of this Contract.
2. Depot Charger Payment: Arvin agrees that it will make a 75% payment upon receipt of the Depot Chargers and make a 25% payment upon completion of the Depot Charger Installation in accordance with the provisions of this Contract.
3. Diagnostic Tool and Laptop Payment: Arvin agrees that it will make a 100% payment upon receipt of the diagnostic tool and laptop in accordance with the provisions of this Contract.
4. Recommended Spare Parts: Arvin agrees that it will make a 100% payment upon receipt of the recommended spare parts in accordance with the provisions of this Contract.
5. Arvin shall make all payments to Contractor no later than thirty (30) calendar days of receipt of an invoice from Contractor.

C. Arvin shall be charged and shall make payments for spare parts and/or equipment at the unit prices itemized in the price schedule to be delivered by Contractor within fifteen (15) calendar days after the delivery and acceptance of said spare parts and/or equipment and receipt of a proper invoice. Arvin shall also be responsible for and pay any sales tax associated with the purchase of any such spare parts and/or equipment. All items must be procured using an approved City of Arvin purchase order.

D. The Contractor may charge interest for late payment if payment is delayed after the payment due dates set forth in this Section 3. Interest will be charged at a rate not to exceed the prime rate of interest published by The Wall Street Journal plus 3% commencing with the date

such payment was due.

E. Unless otherwise provided in this Contract, the Contractor shall pay all federal, state and local taxes, and duties applicable to and assessable against any work, goods, services, processes and operations incidental to or involved in the Contract, excluding sales taxes associated with the sale of the items set forth herein to Arvin (i.e., for the avoidance of doubt, Arvin shall pay any and all sales taxes associated with or resulting from purchases pursuant to this Contract).

SEC. 4 OPTIONS

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SEC. 5 ADDITIONAL EQUIPMENT, SERVICES AND DELIVERABLES

The Parties recognize that additional services and equipment are necessary for Arvin to fully implement the Buses and Charging Stations supplied by the Contractor under the terms of this Agreement, which are set forth below as either being included in, or excluded from the Contract Price.

Included in the Contract Price:

1. Extended Warranty, Complete Bus: 5 Years / 250,000 Miles;
2. Enhanced Energy Storage System Warranty: 12 years / Unlimited miles (80% Capacity Guarantee for 12 years)
3. Driver, Maintenance and Repair and Parts Manuals, in quantities/formatting provided pursuant to Section 14 herein

Additional Charge/Not Included in the Contract Price:

1. Training beyond that agreed in Section 14 of this Contract
2. Printed documentation beyond that agreed in/supplied pursuant to Section 14 in this Contract
3. Civil Design, Installation and Management of Charging Stations except as set forth on Attachment 2
4. Additional Driver, Maintenance and Repair and Parts Manuals not provided pursuant to Section 14 herein

SEC. 6 PRE-PRODUCTION MEETING

A. A formal pre-production meeting shall be held to review the technical specifications and related Contract provisions and to discuss actual and potential open items.

B. The Contractor and Arvin agree that the pre-production meeting will be held at either Arvin's chosen location or Contractor's facility in City of Industry, California, as mutually determined between Arvin and Contractor. Contractor shall provide a formal production schedule at this meeting which, upon mutual acceptance by the Parties, shall be automatically incorporated by reference into this Agreement. The Parties shall make commercially reasonable efforts to resolve all the issues/questions raised at this pre-production meeting within six (6) weeks after the date of the meeting.

Sec. 7 FINAL BUS DESIGN

In the course of bus design and production, Contractor shall request bus option and design input from Arvin. Arvin shall give input on bus option and design within a reasonable timeframe. Contractor and Arvin shall both agree on final bus option and design package.

After agreeing on final bus option and design, Contractor's Engineering Department will design bus to required specifications. Arvin shall review design and, once satisfied, approve "Final Bus Design". Contractor commits to build bus to Final Bus Design and specifications. Arvin commits to accept buses built to Final Bus Design. If Arvin, after agreeing to final bus design, makes material changes to final bus design, Arvin acknowledges that Proterra, in its sole discretion, retains recourse to pursue any of the following actions, as described below, in the "Late Changes" Clause. Contractor shall solely determine whether changes are "material." Additionally, Arvin agrees to inspect buses with solely the "Final Bus Design" as the standard for inspection.

"Final Bus Design" is comprised of Proterra's Option Tracker (ATTACHMENT 3) and Arvin's Technical Specification (if any such specification exists; ATTACHMENT 1). Any changes to Arvin's Technical Specification, agreed to by both parties and incorporated into the "Final Bus Design," shall supersede the Technical Specification.

SEC. 8 BUS DELIVERY SCHEDULE AND ACCEPTANCE PROCEDURES

A. Delivery of Buses shall be determined by signed receipt of Arvin's designated agent(s), at point of delivery and may be preceded by a cursory inspection of the Bus. Delivery location for the Buses is Arvin's bus yard located at 200 Campus Drive, Arvin, CA 93203.

B. Hours of delivery shall be between 8:30 AM to 3:00 PM local time, Monday through Friday except holidays.

C. Prior to Arvin's final acceptance of each Bus, each Bus shall undergo Arvin's reasonable tests prior to Arvin's final acceptance of each Bus. Each Bus will be deemed accepted by Arvin only when the Contractor has complied in all material respects with the "Final Bus Design" set forth in Proterra's Option Tracker (ATTACHMENT 3) and Arvin's Technical Specification (if and such specification exists ATTACHMENT 1) to this Agreement. Acceptance will not be completed until the Contractor has made all reasonably requested repairs to the Bus in accordance with Section 12 of this Contract. Arvin agrees and acknowledges that it must make its determination on acceptance or non-acceptance no later than twelve (12) calendar days following receipt of each Bus under this Contract or the Bus shall be deemed accepted, and that in the event of any non-acceptance, Arvin shall provide Contractor a reasonably detailed description of the reasons for non-acceptance. Arvin shall not be able to reject or not accept a Bus after such twelve (12) calendar day period. Notwithstanding the foregoing, placement of any non-accepted Bus into service shall, notwithstanding anything to the contrary in this Agreement, be deemed acceptance of such Bus.

D. The Contractor's pre-delivery tests and inspections of all Buses shall be performed at or near the Contractor's California plant/facility, and they shall be witnessed by Arvin's inspector(s). Any such tests and inspections performed at or near Contractor's California

plant/facility shall be made using the same criteria as set forth above in Subsection (D), and if Arvin inspects and accepts a Bus at or near Contractor’s plant/facility, and such Bus has not materially changed when it has been delivered and received by Arvin as compared to when such Bus was inspected and accepted at or near Contractor’s plant/facility, then Arvin shall not and may not then reject such delivered and received Bus. No post-delivery test/inspection shall apply criteria that are different from the criteria applied in any pre-delivery test/inspection.

SEC. 9 OH CHARGING STATION DELIVERY SCHEDULE AND ACCEPTANCE PROCEDURES

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SEC. 10 END OF LIFE BATTERY REPLACEMENT

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SEC. 11 TITLE

The Contractor shall provide reasonably adequate documents for registering the Bus in the State of California to Arvin at the time of delivery. Risk of loss on any Bus remains with the Contractor until delivery to Arvin, at which point risk of loss passes to Arvin.

SEC. 12 REPAIRS OF BUSES AND CHARGING STATIONS AFTER NON-ACCEPTANCE

A. After non-acceptance of a Bus the Contractor must take commercially reasonable efforts to complete work within fifteen (15) business days after receiving notification from Arvin of failure of acceptance tests. In the event a repair shall take longer than fifteen (15) business days, Contractor shall have such reasonable time as is necessary to complete the repair so long as Contractor commences to resolve the repair issue within such fifteen (15) business day period. Arvin shall make the Bus available to complete repairs timely with the Contractor’s repair schedule.

B. The Contractor shall provide all spare parts, tools, and space required to complete the repairs. Arvin agrees that for the first thirty (30) day period following non-acceptance, Contractor shall have the right to perform repairs at Arvin’s facilities, provided that following such thirty (30) day period if the non-accepted item is not corrected then, at Arvin’s option, the Contractor may be required to remove the non-accepted item from Arvin's facilities while repairs are being effected. If the non-accepted item is removed from Arvin's facilities, repair procedures must be pursued by the Contractor's representatives.

SEC. 13 ENGINEER/SERVICE REPRESENTATIVES

The Contractor shall provide a field service representative(s) available on request to assist Arvin's staff in the solution of engineering or design problems that may arise during the acceptance and warranty periods.

SEC. 14 DOCUMENTS AND TRAINING

A. The Contractor shall supply training documents to Arvin in Contractor's customary format and as reasonably determined by Contractor. The Contractor agrees to provide driver and maintenance training. In connection with such training, Arvin agrees to provide Contractor reasonable access to Arvin's data and information, and Arvin shall have access to its own custom web portal, which contains the latest versions of all applicable manuals, videos, guidelines and other training materials. Contractor recommends that Arvin obtain high voltage safety training for its employees and that Arvin develops its own high voltage safety rules and guidelines; however, any such training, rules and guidelines will not be provided by the Contractor.

B. Contractor shall own all data produced by the Buses/vehicle and the Charging Station/charging system. Contractor reserves the right to present data to third parties without the prior consent of Arvin. Contractor agrees to provide any data that may be reasonably required to satisfy the requirements of any grants or other sources of funding used to purchase the Buses by Arvin at an interval of no more frequently than once per month.

C. The Contractor shall train Arvin to do all warranty work with the exception of work on the batteries. Arvin Labor Rates for any work chargeable to the contractor is based on the hourly wage rate of an Arvin Senior Field Service Technician, plus 62% fringes plus 125% overhead. The wage rate, and therefore the warranty labor rate, are subject to adjustment once each year.

SEC. 15 TOOLS AND EQUIPMENT

The Contractor shall provide Arvin with a comprehensive list of all of the tools, equipment, software, specialized diagnostic tools, and/or related equipment for the service, repair and overhaul of the complete Bus, all major sub-systems of the Bus, and the Charging Stations. Proprietary software and computer hardware necessary to repair, service and/or diagnose all systems of the Bus and the Charging Stations shall be made reasonably available to Arvin when required to repair the Bus, its systems, or the Charging Stations at no cost to Arvin per Section 5 above.

SEC. 16 PARTS AVAILABILITY GUARANTEE

A. Contractor hereby agrees to make available the spare parts and equipment as set forth in the Option Tracker.

B. Unless otherwise agreed, all units and components procured under this Contract, whether provided by suppliers or manufactured by the Contractor, shall be duplicates in design, manufacture, and installation to assure interchangeability among Buses in this procurement. This interchangeability shall extend to the individual components as well as to their locations in the Buses.

C. EXCEPT FOR ANY SUCH WARRANTIES THAT CONTRACTOR MAY EXPRESSLY AND SPECIFICALLY PROVIDE, ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, INFRINGEMENT, OR ANY WARRANTIES BASED UPON SAMPLES, MODELS, OR SPECIFICATIONS, ARE EXPRESSLY DISCLAIMED.

SEC. 17 MATERIALS/ACCESSORIES RESPONSIBILITIES

The Contractor shall be responsible for all materials and workmanship in the construction of the Buses and Charging Stations and all accessories used, whether the same are manufactured by the Contractor or purchased from supplier and as subject to the Warranty provisions set forth in Attachment 4 to this Agreement. This provision excludes fare boxes, radios, and any equipment supplied by Arvin, except insofar as such equipment is damaged by the failure of a part or component for which the Contractor is responsible, or except insofar as the damage to such equipment is solely caused by the Contractor during the manufacture of the Buses and/or Charging Stations.

SEC. 18 REPRESENTATIVES AND NOTICE

A. Arvin’s Representative. Arvin hereby designates Jerry Breckinridge, to act as its representative for the performance of this Agreement (“Arvin’s Representative”). Arvin’s Representative shall have the power to act on behalf of Arvin for all purposes under this Agreement.

B. Contractor’s Representative. Contractor hereby designates Jack Schulte as its Project Manager, to act as its representative to oversee the performance of this Agreement (“Contractor’s Representative”). Contractor’s Representative shall have full authority to represent and act on behalf of the Contractor for all purposes under this Agreement. Contractor agrees that its representative will be on site, as needed, during the period of design, construction and installation of the Charging Station. Contractor further agrees that if its representative named above is not physically on site at any time, it will designate an individual employed by its construction contractor to act as its representative. Such designation will be provided in writing to Arvin’s representative.

C. Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

Contractor: Jack Schulte
Customer Program Manager
Proterra Inc
383 Cheryl Lane
City of Industry, CA 91789
Phone (313) 618-7193

with a copy to: Eric McCarthy
Vice President Government Relations & General Counsel
Proterra Inc
1 Whitlee Court
Greenville, SC 29607
Phone (864) 438-0000
Fax (864) 281-1894

Arvin: Jerry Breckinridge, City Manager
City of Arvin
200 Campus Drive
Arvin, CA 93203
(661) 854-3134

Any notices required by this Agreement shall be deemed received on (a) the day of delivery if delivered by hand (including overnight courier service) during receiving Party's regular business hours or by facsimile before or during receiving Party's regular business hours; or (b) on the third business day following deposit in the United States mail, postage prepaid, to the addresses set forth below, or to such other addresses as the Parties may, from time to time, designate in writing pursuant to the provisions of this Section. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

SEC. 19 ACCOUNTING RECORDS AND AUDIT ADJUSTMENTS

The Contractor shall maintain accurate records with respect to all costs and expenses incurred under this Agreement. The Contractor agrees that the United States Department of Transportation and Arvin, or any of their duly authorized representatives, shall, for the purpose of audit and examination, and to the extent required by law, be permitted to inspect all work, materials, payrolls, and other data and records, and to audit, during normal business hours with reasonable advanced notice, the books, records, and accounts relating to the performance of the Contract; provided that Contractor shall have the right to maintain and protect the confidentiality of any information so provided. Further, Contractor agrees to maintain all required records for at least three (3) years after Arvin has made final payment and all other pending matters are closed.

SEC. 20 CHANGE ORDERS AND SPECIFICATION REVISIONS

Unless there are changes mandated by applicable law, the Parties recognize that no changes to the Bus to be delivered by the Contractor to Arvin can be made without a written Change Order executed by Arvin's Representative and accepted by Contractor's Representative.

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SEC. 21 LATE CHANGES

This Agreement represents and contains specific configurations and specifications agreed upon between Proterra and Arvin. Notwithstanding anything to the contrary contained herein, for any and all proposed changes, no matter how material or immaterial, requested by Arvin after the date hereof that are outside of or different from the configurations and/or specifications agreed upon between the parties hereto as of the date hereof, Proterra reserves and shall have the right to, in its sole and absolute discretion, pursue any of the following:

- A) Propose price increases for the changed configurations and/or specifications, which price increases are subject to Arvin's prior approval, which approval shall not be unreasonably withheld or delayed;
- B) Propose, subject to Arvin's prior approval (which approval shall not be unreasonably withheld or delayed), an alternative build slot and/or delays in delivery/shipment to account for delays resulting from the requested changed configurations and/or specifications;
- C) Reject some or all of the requested changes to, among other things, preserve a build slot(s) and delivery timeframe; and/or
- D) Any other solution proposed by Proterra, subject to Arvin's prior approval, which approval shall not be unreasonably withheld or delayed.

Notwithstanding anything to the contrary contained herein, Arvin acknowledges and agrees that any of the above rights, if/when exercised by Proterra (including any delivery/shipment delays and/or alternative build slots and including any outright rejection of any requested changes) shall not (1) be a breach of this Agreement, (2) affect or toll any warranties provided by Proterra, (3) result in or cause any penalties, damages (including liquidated damages), claims or liabilities to Proterra, (4) give Arvin any termination right, (5) affect or change payment terms (including any progress payments) and/or (6) give Arvin the right to reject any shipment or fail any inspection. In addition, notwithstanding anything to the contrary contained herein, Proterra may, in its sole and absolute discretion, utilize subcontractors to implement any requested changes that Proterra may agree to.

SEC. 22 DISPUTES

A. General. Any dispute between the Contractor and Arvin relating to the implementation or administration of the Contract shall be resolved in accordance with this Section.

B. Resolution. The Parties shall first attempt to resolve the dispute informally in meetings or communications among the Contractor's Representative and Arvin's Representative. If the dispute remains unresolved fifteen (15) days after it first arises, the Contractor may request that Arvin's Representative issue a recommended decision on the matter in dispute. Arvin's Representative shall issue the recommended decision in writing and provide a copy to the Contractor. If Contract does not, in its sole discretion, accept Arvin's recommended decision and the dispute remains unresolved, either party may seek resolution through non-binding mediation, and failing agreement after mediation judicial resolution of the dispute in the Kern County Court of the State of California.

SEC. 23 MINOR CHANGES

Arvin acknowledges and agrees that there could be minor changes and/or minor delivery and timeline revisions. Accordingly, Arvin and Proterra agree to reasonably cooperate in good faith regarding any such minor changes and slight timeline revisions.

SEC. 24 TERMINATION

A. Termination for Convenience

a. Action by Arvin

The performance of work under the Contract may be terminated by Arvin in accordance with this Section in whole, or from time to time in part, with at least sixty (60) days prior written notice to Contractor. Any such termination shall be effected by delivery to the Contractor of a notice of termination specifying the extent to which performance of the professional services under the Contract is terminated and the date upon which such termination becomes effective; provided that such termination effective date shall be no earlier than sixty (60) days after receipt of such termination notice by Contractor.

b. Responsibility of Contractor

Upon receipt of a notice of termination, and except as otherwise directed by Arvin, the Contractor shall, to the extent possible, (1) stop work under the Contract on the date and to the extent specified in the notice of termination; (2) place no further orders or subcontracts for materials, services, or facilities, except as may be necessary for completion of such portion of the work under the Contract as is not terminated; (3) to the extent possible, terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the notice of termination; (4) transfer title to Arvin and deliver in the manner, at the times, and to the extent, if any, directed by Arvin, non-proprietary supplies, equipment, and other material produced as a part of, or acquired in connection with the performance of, the work terminated, and any information and other property which, if the Contract had been completed, would have been required to be furnished to Arvin provided that Arvin reimburses Contractor for all related costs and expenses; and (5) complete any such part of the work as shall not have been terminated by the notice of termination. Payments by Arvin to the Contractor shall be made by the effective date of termination, including with respect to the portion of any completed work and related costs and expenses so terminated. Except as otherwise provided, settlement of claims by the Contractor under this termination Section shall be in accordance with the provisions set forth in 48 C.F.R. Part 49, as amended from time to time.

B. Termination by Mutual Agreement.

The Contract may be terminated by mutual agreement of the Parties. Such termination shall be effective in accordance with a written agreement by the Parties. Any other act of

termination shall be in accordance with the termination by convenience or default provisions contained in Sections 24.A. and C., respectively.

C. Termination for Default

a. Action by Arvin

Subject to the provisions of subparagraph c. below, Arvin may terminate the whole or any part of the Contract in any one of the following circumstances:

- (1) If the Contractor fails to provide any material services required under this Contract; or
- (2) If the Contractor fails to perform any of the material provisions of the Contract in accordance in all material respects with its terms.

b. Contractor Liability

In the event that Arvin terminates the Contract in whole or in part as provided in this Subsection (C), Arvin may procure, upon such terms and in such manner as Arvin may deem appropriate and at Arvin's cost and expense, supplies or services similar to those so terminated. The Contractor shall continue the performance of the Contract to the extent not terminated under the provisions of this Section.

c. Cure by Contractor

If Arvin determines that an event of default under this Section 24 has occurred, it shall immediately notify the Contractor in writing and provide the Contractor with thirty (30) days in which to cure such default; provided that if it would reasonably take longer to cure such default, Contractor shall commence the cure during such thirty (30) day period and take commercially reasonable efforts to cure as soon as reasonably practicable thereafter. If the Contractor fails to cure within such time frame, Arvin may declare that Contractor to be in default and terminate the Contract in whole or in part.

d. Claims

Except as otherwise provided, settlement of claims by the Contractor under this Section shall be in accordance to the provisions set forth in 48 C.F.R. Part 49, as amended from time to time.

e. Default by Arvin

Except to the extent solely caused by a default of Contractor, in the event that Arvin breaches this Contract, and such breach, if and only if curable, is not cured within thirty (30) days following written notice from

Contractor (or such longer period as is reasonably necessary to cure if such cure may not reasonably be effected in such thirty (30) day period, provided Arvin diligently prosecutes such cure to completion at all times), Contractor shall have the right to terminate this Contract by written notice delivered by Contractor to Arvin at which time Arvin shall reimburse Contractor for all reasonable costs and expenses incurred by Contractor in connection with this Contract, including, at Contractor's option, payment of the difference between the purchase price under this Contract and the actual price paid to Contractor to sell the Buses and Charging Station(s) to another customer. For the avoidance of doubt, failure to make any payment by Arvin is a breach that would require cure within thirty (30) days.

SEC. 25 RESPONSIBILITIES OF CONTRACTOR AND ARVIN

A. Compliance with Law. The Contractor and Arvin shall give all notices and comply with all Federal, state, and local laws, ordinances, rules, regulations, and orders of any public authority bearing on the performance of the Contract, including, but not limited to, the laws referred to in these provisions of the Contract. If the Contract documents are at variance therewith in any respect, any necessary changes shall be incorporated by appropriate modification. Upon reasonable request by the other Party, the requested Party shall furnish the other Party with certificates of compliance with all such laws, orders, and regulations.

B. Independent Contractor. All services shall be performed by Contractor or by a third-party under Contractor's supervision. Arvin retains Contractor on an independent contractor basis and not as an employee. Contractor retains the right to perform similar or different services for, and sell similar products to, others during the term of this Agreement. Any additional personnel performing the Services under this Agreement on behalf of Contractor shall also not be employees of Arvin and shall be under Contractor's direction.

SEC. 26 FORCE MAJEURE

The Contractor shall not be liable for any failure to perform if acceptable evidence has been submitted to Arvin that failure to perform the Contract was due to causes beyond the control of the Contractor. Examples of such causes include acts of God, civil disturbances, unanticipated work stoppages, strikes, lockouts, labor disputes, national emergencies, acts of government, acts of public enemy, storms, casualties, fires, riots, hurricanes, tornadoes, wars, floods or other cause of similar or dissimilar nature beyond Contractor's control.

SEC. 27 CONFLICT OF INTEREST

No officer, member or employee of Arvin and no members of its governing body, and no other public official of the governing body of the locality in which the project is situated and being carried out who exercise any functions or responsibility in the review and approval of the undertaking or carrying out of this project, shall participate in any decision relating to this Agreement which affects his or her personal interest or have any personal or pecuniary interest, direct or indirect, in this Agreement or the proceeds thereof.

SEC. 28 INDEMNIFICATION, INSURANCE & LIABILITY

A. Indemnification

The Contractor shall indemnify and hold harmless the City, its officials and employees, from any loss, damage, cost, claim, liability, action and judgments of any kind brought or asserted against, or incurred by, the City of Arvin to the extent that the same arise out of or are caused by (a) any failure of the Contractor or its employees, officers or directors to comply with any material term of this Contract, (b) any negligence, gross negligence or intentional or willful conduct or fraud of Contractor or its employees, officers or directors, (c) any third party claim for personal injury, death, or tangible property damage or any other losses or damages sustained by any person or entity to the extent resulting from the gross negligence or intentional or willful conduct or fraud of Contractor or its employees, officers or directors, and (d) any act or omission by Contractor, its employees, officers or directors, but not to the extent arising out of or are caused by any act or omission of the City or its officials and employees.

Arvin agrees that it shall be responsible for the negligent, willful and wrongful acts or omissions of its employees, officers, directors, agents and representatives. In addition, Arvin agrees that it shall be responsible for any use of the goods either (a) in combination with apparatus, devices or other products/goods not supplied by Contractor, or (b) in a manner for which the goods were neither designated nor contemplated.

Arvin shall indemnify and save harmless the Contractor, its officials and employees, from all losses, damages, costs, expenses, liability, claims, actions, and judgments of any kind brought or asserted against, or incurred by, the Contractor, to the extent that the same arise out of or are caused by (a) any failure of Arvin or its employees, officers or directors to comply with any material term of this Contract, (b) any negligence, gross negligence or intentional or willful conduct or fraud of Arvin or its employees, officers or directors, (c) any third party claim for personal injury, death, or tangible property damage or any other losses or damages sustained by any person or entity to the extent resulting from the gross negligence or intentional or willful conduct or fraud of Arvin or its employees, officers or directors, and (d) any act or omission of Arvin, or by the employees, officers or directors of Arvin, but not to the extent arising out of or are caused by any act or omission of the Contractor or its employees, officers, directors, agents or representatives.

B. Insurance.

Prior to commencing work, the Contractor shall procure and maintain at Contractor's own cost and expense for the duration of the Agreement, the following insurance against claims for injuries to person(s) or damages to property which may arise from, or in connection with, the performance of the work or services hereunder by the Contractor or its employees. Contractor shall maintain limits no less than:

- (1) Commercial General/Umbrella Liability Insurance - \$1,000,000 limit per occurrence for property damage and bodily injury. The service provider should indicate in its proposal whether the coverage is provided on a claims-made or on an occurrence basis.
- (2) Business Automobile/Umbrella Liability Insurance - \$1,000,000 limit per accident for

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property damage and personal injury.

(3) Workers' Compensation and Employers'/Umbrella Liability Insurance -- Workers' Compensation coverage with benefits and monetary limits as set forth in South Carolina law. This policy shall include Employers'/Umbrella Liability coverage for \$1,000,000 per accident.

(4) Other Insurance Provisions:

a. Commercial General Liability and Automobile Liability Coverage

Arvin shall be covered as additional insured's.

b. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by Arvin. At the option of Arvin, the insurer shall reduce or eliminate such deductibles or self-insured retentions with respect to Arvin.

c. Acceptability of Insurers

Insurance is to be placed with South Carolina admitted insurers rated B+X or better by A.M. Best's rating service.

d. Verification of Coverage

Upon written request from Arvin, Contractor shall furnish Arvin with certificates of insurance and with original endorsements affecting coverage required by this clause.

C. Liability.

IN NO EVENT WILL CONTRACTOR BE LIABLE TO ARVIN FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES, OR FOR LOSS OF PROFITS OR REVENUE, WHETHER IN AN ACTION IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE.

CONTRACTOR'S CUMULATIVE LIABILITY UNDER THIS CONTRACT WILL NOT EXCEED \$2 MILLION.

SEC. 29 INTERPRETATION, JURISDICTION, AND VENUE

This Contract shall be subject to, governed by, and construed and interpreted solely according to the laws of the State of California. The Contractor and Arvin hereby consent and submit to the jurisdiction of the appropriate courts of Kern County or of the United States having jurisdiction in Kern County for adjudication of any suit or cause of action arising under or in connection with the Contract documents, or the performance of this Contract, and agree that any such suit or cause of action may be brought in any such court.

SEC. 30 NO FEDERAL GOVERNMENT OBLIGATIONS

Although this Contract is funded with Federal funds, absent the Federal Government's express written consent, the Federal Government shall not be subject to any obligations or liabilities to the Contractor, or any other person other than Arvin in connection with the performance of this Contract.

SEC. 31 INTERESTS OF MEMBERS OF, OR DELEGATES TO, CONGRESS

In accordance with 18 U.S.C. Section 431, no member of, or delegate to, the Congress of the United States shall be admitted to any share or part of the Contract or to any benefit arising therefrom.

SEC. 32 FALSE OR FRAUDULENT STATEMENTS AND CLAIMS

By executing this Contract, the Contractor acknowledges that if it makes a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose penalties under the program Fraud Civil Remedies Act of 1986.

SEC. 33 DEBARMENT/SUSPENSION STATUS

The Contractor shall provide Arvin with a certification addressing its debarment and suspension status, if any, and that of its principals. The Contractor shall promptly inform Arvin of any change in the suspension or debarment status of the Contractor or its principals during the term of the Contract.

SEC. 34 AMERICANS WITH DISABILITIES ACT

The Contractor shall ensure that the Buses manufactured and delivered under the terms of this Contract meet, in all material respects, the applicable Accessibility Guidelines for Transportation Vehicles set out in 49 C.F.R. Part 38.

SEC. 35 BUY AMERICA

The Contractor shall comply with the applicable Buy America requirements set forth in 49 U.S.C. 5323(j) and the applicable regulations in 49 C.F.R. Part 661, as amended.

SEC. 36 CARGO PREFERENCE

The Contractor agrees:

A. Whenever shipping any equipment, materials or commodities pursuant to this Contract, to utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, but only if and to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

B. To furnish within twenty (20) business days following the date of loading for shipments originating within the United States, or within forty (40) business days following the date of loading for shipment originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph A. above to Arvin (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, 400 Seventh Street, S.W., Washington, D.C. 20590, marked with appropriate identification of the

project.

SEC. 37 FLY AMERICA

The Contractor agrees that if this Contract may involve the international transportation of goods, equipment, or personnel by air, the Contractor will use U.S.-flag air carriers, only if and to the extent service by these carriers is available at fair and reasonable rates. (49 U.S.C. 40018 and 4 C.F.R. Part 52).

SEC. 38 RECYCLED PRODUCTS

The Contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 C.F.R. Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 C.F.R. Part 247.

SEC. 39 ENVIRONMENTAL REQUIREMENTS

The Contractor agrees to comply in all material respects with all Federal, State and local environmental and resource conservation requirements that apply to the construction activities under the terms of this Contract. The Contractor shall report any violation of standards, orders or regulations issued under the Clean Air Act (42 U.S.C. 7401 et seq.) or the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.) resulting from any activity of the Contractor in connection with the performance of the Contract to FTA and to the appropriate U.S. EPA Regional Office. The Contractor shall be responsible for the disposal of hazardous materials, in accordance with applicable Federal, state and local laws and regulations.

SEC. 40 ENERGY EFFICIENCY

The Contractor shall recognize the mandatory standards and policies relating to energy efficiency that are contained in the State Energy Conservation Plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6321 et seq.).

SEC. 41 NONDISCRIMINATION

In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability.

SEC. 42 EQUAL EMPLOYMENT OPPORTUNITY

The following equal employment opportunity requirements apply to the Contract:

A. Race, Color, Creed, National Origin, Sex. In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the

Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

B. Age. In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. §§ 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age.

C. Disabilities. In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities.

SEC. 43 DISADVANTAGED BUSINESS ENTERPRISE

The Contractor agrees to comply with the Disadvantaged Business Enterprise requirements set forth in 49 C.F.R. 26.49.

SEC. 44 PRE-AWARD AND POST-DELIVERY AUDIT REQUIREMENTS

The Contractor agrees to comply with 49 U.S.C. § 5323(l) and FTA's implementing regulation at 49 C.F.R. Part 663 and to submit the following certifications:

A. The Contractor shall complete and submit a declaration certifying either compliance or noncompliance with Buy America. If the Contractor certifies compliance with Buy America, it shall submit documentation which lists: 1) component and subcomponent parts of the rolling stock to be purchased, identified by manufacturer of the parts, their country of origin and costs on a percentage basis; and 2) the location of the final assembly point for the rolling stock, including a description of the activities that will take place at the final assembly point and the cost of final assembly on a percentage basis.

B. The Contractor shall submit evidence that it will be capable of meeting the specifications.

C. The Contractor shall submit: 1) manufacturer's FMVSS self-certification sticker information that the vehicle complies with relevant FMVSS; or 2) manufacturer's certified statement that the contracted Buses will not be subject to FMVSS regulations.

SEC. 45 BUS TESTING

The Contractor agrees to comply with 49 U.S.C. § 5323(c) and FTA's implementing regulation at 49 CFR Part 665 and shall perform the following if applicable:

- A. If the bus being procured under this Contract is a new bus model or a bus produced with a major change in components or configuration, the Contractor shall provide a copy of the final test report to Arvin prior to Arvin's final acceptance of the first bus.
- B. If the Contractor releases a report under paragraph A above, it shall provide notice to the operator of the testing facility that the report is available to the public.
- C. If the Contractor represents that the vehicle was previously tested, the vehicle being sold should have substantially the same configuration and major components as the vehicle in the test report, which must be provided to Arvin prior to Arvin's final acceptance of the first vehicle. If the configuration or components are not identical, the Contractor shall provide a description of the change and the Contractor's basis for concluding that it is not a major change requiring additional testing.
- D. If the Contractor represents that the vehicle is "grandfathered" (has been used in mass transit service in the United States before October 1, 1988, and is currently being produced without a major change in configuration or components), the Contractor shall provide the name and address of the recipient of such a vehicle and the details of that vehicle's configuration and major components.

SEC. 46 FEDERAL MOTOR VEHICLE SAFETY STANDARDS

The Contractor shall comply with the Federal Motor Vehicle Safety Standards (FMVSS) and Regulations (49 C.F.R. Part 571) issued by the National Highway Traffic Safety Administration, which require motor vehicle manufacturers to conform to and certify compliance with the FMVSS requirements. These Regulations establish crashworthiness and crash avoidance standards for various types of vehicles, including buses.

SEC. 47 INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION TERMS AND CONDITIONS

- A. The Contractor recognizes that this Contract includes, in part, certain terms and conditions required by the Federal Transit Administration, whether or not expressly set forth in this Contract. All contractual provisions required by the Federal Transit Administration, as set forth in FTA Circular 4220.1 (current version as of the Effective Date of this Contract) are hereby incorporated by reference. If any of the provisions of this Contract are contrary to the Federal Transit Administration's mandated terms and conditions, such Federal Transit Administration's terms and conditions shall be deemed to control.
- B. The Contractor shall not knowingly or willingly perform any act, fail to perform any act, or refuse to comply with any requests of Arvin which would cause Arvin to be in violation of the Federal Transit Administration terms and conditions.

SEC. 48 TAX AND CARBON CREDITS

A. In the event that the Contractor is entitled to Federal or State tax credits, rebates or refunds conditioned on the sale of battery electric buses or charging stations to a public agency, the Contractor shall not be required to rebate such amounts to Arvin when the Contractor takes the credit and/or realizes the refund or rebate.

B. In the event that the sale/purchase of a Bus may generate credits or other benefits associated with reductions in carbon emissions, exhaust or emissions banking or other credits, refunds, rebates or incentives of any kind as a result of environmental attributes associated with the deployment of battery electric buses or use of charging stations, such incentives, refunds, rebates or credits shall be owned and attributable solely by the Contractor.

SEC. 49 LACK OF FUNDS

If any of the material amounts due under this Contract constitute federal funds (such as formula funds or grants managed by the U.S. Department of Transportation), the entering into of this Contract by Arvin is subject to its receipt of such material funds to carry out the provisions of this Contract.

SEC. 50 ASSIGNMENT OR TRANSFER

Except for the rights of money due to Contractor pursuant to this Contract, Contractor shall not assign, hypothecate, or transfer this Agreement or any interest herein to any other party without the prior written consent of Arvin, which consent shall not be unreasonably withheld or delayed. Such consent of Arvin shall not be required in the event of any transfer or assignment in connection with any merger, acquisition (whether stock or asset) or other change of control involving Contractor. Arvin shall not assign, hypothecate, or transfer this Agreement or any interest herein to any other party without the prior written consent of Contractor, which consent shall not be unreasonably withheld or delayed. Any assignment, transfer or hypothecation other than in accordance with the terms of this Section 47 shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

SEC. 51 INTELLECTUAL PROPERTY & CONFIDENTIAL INFORMATION

A. Intellectual Property. Arvin and Contractor acknowledge that Arvin is a transit agency and not a manufacturer of buses or charging stations and therefore has no interest in ownership of any rights in, to, or arising out of: (i) any patents; (ii) inventions, discoveries (whether patentable or not in any country), invention disclosures, improvements, trade secrets, proprietary information, know-how, technology, technical data and other intellectual property; (iii) copyrights, copyright registrations, mask works, mask work registrations, and applications therefor in the United States, and anywhere in the world, and all other rights corresponding thereto throughout the world; and (iv) any other proprietary rights ((i) through (iv) hereof

collectively, the "Intellectual Property") in or to the technology associated with the charging stations and vehicles/buses that are the subject of this Agreement. As such, Arvin and Contractor agree that Contractor shall own any Intellectual Property developed in connection

Attachment: Proterra-Arvin Contract v2_dti (3 Proterra Buses)

with the buses and charging stations purchased through this Agreement, including, without limitation, any performance and other Bus data developed and any alterations or modifications to the charging stations or buses purchased under this Agreement whether made or developed by Arvin or any other party (the “Developed Technology”). Arvin hereby assigns and agrees to assign to Contractor, all right, title and interest in the Developed Technology (including all intellectual property rights therein) and the Intellectual Property. Arvin shall, to the fullest extent, protect proprietary information, trade secrets and confidential commercial and financial information provided by the Contractor. Arvin will provide immediate notice in writing to the Contractor of the existence of any claim that the goods furnished hereunder violate or infringe upon another third party’s rights, and Arvin shall reasonably cooperate with Contractor in connection with any such claim. Arvin also agrees that it shall not, and shall not allow any third party to, directly or indirectly reverse engineer the Bus or otherwise obtain, share or use any confidential information of Contractor, including, without limitation, any control or other software of Contractor provided with either the Bus or Charging Station.

B. Confidential Information. During the performance under this Contract, it may be necessary for either party (the “Discloser”) to make confidential information available to the other party (the “Recipient”). The Recipient agrees to use all such information solely for the performance under this Contract and to hold all such information in confidence and not to disclose the same to any third party without the prior written consent of the Discloser. Likewise, the Recipient agrees that information developed in connection with the performance of this Contract shall be used solely for the performance under this Contract, and shall be held in confidence not disclosed to any third party without the prior written consent of the Discloser. Arvin shall employ sound business practices no less diligent than those used for Arvin’s own confidential information to protect the confidence of all licensed technology, software, documentation, drawings, schematics, manuals, data and other information and material provided by the Contractor pursuant to this Contract.

C. Survival. This Section shall survive termination or expiration of this Contract.

SEC. 52 MARKETING

Contractor and Arvin shall work together to promote the unique nature of the deployment of the Buses and Charging Stations under this Contract. However, the Parties shall mutually agree to the content of any press release related to the substance, performance or existence of this Contract and the purchase or use of Buses and Charging Stations hereunder. Arvin hereby gives Contractor, and Contractor gives Arvin, the right to use images of the Buses and Charging Stations under this Contract in any manner desired by the Parties, subject to each party’s prior written consent, not to be unreasonably withheld.

SEC. 53 COMPLIANCE WITH FEDERAL LOBBYING POLICY

Customers, including Arvin, who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR Part 20, “New Restrictions on Lobbying.” Each tier certifies to the tier above that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any Agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal Contract, grant or any other award covered

by 31 USC 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-federal funds with respect to that federal Contract, grant or award covered by 31 USC 1352. Such disclosures are forwarded from tier to tier up to the recipient.

SEC. 54 WHISTLEBLOWER PROTECTION

Section 1553 of Division A, Title XV of the American Recovery and Reinvestment Act of 2009, P.L. 111-5, provides protections for certain individuals who make specified disclosures relating to Recovery Act funds.

A. An employee of any non-Federal employer receiving covered funds may not be discharged, demoted or otherwise discriminated against as a reprisal for disclosing, including a disclosure made in the ordinary course of an employee's duties, to the Board, an inspector general, the Comptroller General, a member of Congress, a state or federal regulatory or law enforcement agency, a person with supervisory authority over the employee (or such other person working for the employer who has the authority to investigate, discover or terminate misconduct), a court or grand jury, the head of a Federal agency or his/her/their representatives, information that the employee reasonably believes is evidence of:

- 1) gross mismanagement of an agency contract or grant relating to covered funds;
- 2) a gross waste of covered funds;
- 3) a substantial and specific danger to public health or safety related to the implementation or use of covered funds;
- 4) an abuse of authority related to the implementation or use of covered funds; or
- 5) a violation of law, rule or regulation related to an agency contract (including the competition for or negotiation of a contract) or grant, awarded or issued relating to covered funds.

B. To be protected, the disclosure must be made by the employee to the Recovery Accountability and Transparency Board, an Inspector General, the Comptroller General, a member of Congress, a state or federal regulatory or law enforcement agency, a person with supervisory authority over the employee, a court or grand jury, or the head of a federal agency or his/her/their representatives.

SEC. 55 IRON, STEEL AND MANUFACTURING

A. Required Use of American Iron, Steel, and Manufactured Goods--Section 1605 of the American Recovery and Reinvestment Act of 2009.

1) This award term and condition implements Section 1605 of the American Recovery and Reinvestment Act of 2009 (Recovery Act) (Pub. L. 111-5), by requiring that all iron, steel and manufactured goods used in the project are produced in the United States except as provided in paragraph 2 CFR 176.140 (b)(3) and 2 CFR 176.140 (b)(4). This requirement does not apply to the material listed by the Federal Government under 2 CFR 176.140(b)(2).

2) A prospective applicant requesting a determination regarding the inapplicability of section 1605 of the American Recovery and Reinvestment Act of 2009 (Pub. L. 111-5) (Recovery Act) should submit the request to the U.S. Federal Transit Administrator in time to

allow a determination before submission of applications or proposals. The prospective applicant shall include the information and applicable supporting data required by paragraphs 2 CFR 176.140(c) and (d) in the request. If an applicant has not requested a determination regarding the inapplicability of 1605 of the Recovery Act before submitting its application or proposal, or has not received a response to a previous request, the applicant shall include the information and supporting data in the application or proposal.

SEC. 56 CLEAN AIR AND CLEAN WATER

The Contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. The Contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 et seq. The Contractor shall report each violation to Arvin and understands and agrees that Arvin will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

SEC. 57 FEDERAL CHANGES

Contractor shall at all times comply with all applicable FTA regulations, policies, procedures, and directives.

SEC. 58 PRIVACY

To the extent that Contractor administers any system of records on behalf of the Federal Government, Contractor agrees to comply with the information restrictions and other applicable requirements of the Privacy Act of 1974, as amended, 5 U.S.C. Sect. 552, (the Privacy Act). Contractor shall obtain the express consent of the Department and the Federal Government before the Contractor operates a system of records on behalf of the Federal Government.

SEC. 59 GENERAL PROVISIONS

A. Construction; References; Captions. Since the Parties or their agents have participated fully in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Unless and except otherwise set forth herein, any term referencing time, days or period for performance shall be deemed calendar days and not business days. All references to Arvin include its elected officials, officers, agents, volunteers and independent contractors who serve as Arvin officers, officials, or staff except as otherwise specified in this Agreement. The captions of the various sections and paragraphs herein are for convenience and ease of reference only, and do not define, limit, augment or describe the scope, content or intent of this Agreement.

B. Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

C. Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel or otherwise. The failure of Arvin or the Contractor to enforce one or more of the terms or conditions of this Contract or to exercise any of its rights or privileges, or the waiver

by one Party of any breach of such terms or conditions, shall not be construed as thereafter waiving any such terms, conditions, rights, or privileges, and the same shall continue and remain in force and effect as if no waiver had occurred.

D. No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

E. Cooperation: Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Agreement.

F. Invalidity; Severability. If any portion of this Agreement is declared as invalid, illegal or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

G. Authority to Enter Agreement. Contractor has all requisite power and authority to conduct its business and to execute, deliver and perform this Agreement. Arvin has all requisite power and authority to conduct its business and to execute, deliver and perform this Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right and authority to make this Agreement and bind each respective Party.

H. Entire Agreement. This Agreement contains the entire agreement of the Parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may not be amended, nor any provision or breach hereof waived, except in a writing signed by the Parties which expressly refers to this Agreement.

I. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which taken together shall constitute one and the same agreement. Delivery of an executed counterpart of this Agreement by facsimile or other electronic means shall have the same force and effect as the delivery of an original executed counterpart of this Agreement.

J. Rules of Construction. The singular shall include the plural and vice versa, and any gender shall include any other gender as the text shall indicate. All references to "including" shall mean "including, without limitation."

[Signatures continued on next page]

IN WITNESS WHEREOF, the Parties hereto have caused these presents to be duly executed with all the formalities required by law.

Proterra Inc

Attest: _____

By: _____

Name and Address:

Printed Name: _____

Title: _____

Dated: _____

[_____]

Attest: _____

By: _____

Name and Address:

Printed Name: _____

Title: _____

Dated: _____

Attachment: Proterra-Arvin Contract v2_dti (3 Proterra Buses)

PROTERRA FORM SALE CONTRACT

Contract No. P2018-01

CITY OF VISALIA

AND

PROTERRA INC

**Purchase and Sale of Three (3) 40 Foot Battery
Electric Buses and Four (4) Associated
Charging Stations**

Attachment: Protterra-Visalia contract (3 Protterra Buses)

This Contract Agreement (hereinafter referred to as "Contract" or "Agreement") is made and entered into effective as of the date executed in full (April 16, 2018) by Visalia, located at 425 E. Oak Ave., Ste. 301, Visalia, CA 93291 and Proterra Inc, a Delaware corporation, with its principal place of business 1 Whitlee Court, Greenville, SC 29607 ("Contractor") for the manufacture and delivery of three (3) Foot Proterra Catalyst Battery Electric Buses (hereinafter "Buses"), and five (5) Depot charger(s) ("Depot Charger"), or generically hereinafter "Charging Stations(s)". Visalia and the Contractor are sometimes individually referred to as "Party" and collectively as "Parties."

SEC. 1 CONTRACT DOCUMENTS

A. The Contract consists of the following which are incorporated herein by reference as appropriate:

- 1. General Contractual Provisions contained herein.
- 2. Bus Technical Specifications set forth as Attachment 1 hereto.
- 3. Charging Station Technical Specifications set forth as Attachment 2 hereto.
- 4. Option Tracker and Customer Templates set forth as Attachment 3 hereto
- 5. Warranty Provisions and spare parts as set forth as Attachment 4 hereto.

B. In case of any conflict among these documents where the Parties' intended resolution is not clear, the order of precedence shall be in the same order set forth in paragraph A above.

SEC. 2 TERM OF CONTRACT

Visalia and the Contractor agree that the Term of this Contract shall be for five (5) years commencing on the later of the Effective Date or the date of the Notice to Proceed (as defined below) unless otherwise extended by written amendment mutually agreed by Visalia and Contractor. Notwithstanding the foregoing, or anything to the contrary contained herein, in no event shall the Effective Date be deemed to have occurred, and none of the obligations of Visalia or Contractor under this Contract shall be deemed to have accrued, until Visalia has issued to Contractor a written notice to proceed under this Contract ("Notice to Proceed"). In the event no such notice is delivered on or before April 30, 2018, this Contract shall be deemed null and void and of no further force and effect.

SEC. 3 PAYMENT

A. Visalia shall pay and the Contractor shall accept:

- 1. Eight hundred and twenty-five thousand, five hundred and ninety Dollars (\$825,590.00) per Bus ("Bus Unit Price"), for a total of two million, four hundred and seventy-six thousand, seven hundred and seventy Dollars (\$2,476,770) for all three (3) Buses initially purchased under this Agreement;
- 2. Fifty thousand Dollars (\$50,000) per Depot Charging Station ("Depot Charger Unit Price") for a total of two hundred thousand Dollars (\$200,000) for the four (4)

Charging Stations initially purchased under this Agreement;

for a total contract price of two million, six hundred and seventy-six thousand, seven hundred and seventy Dollars (\$2,676,770) **BUT SPECIFICALLY EXCLUDING SALES TAX** ("Contract Price"). It is understood and agreed by Visalia and the Contractor that Visalia will be responsible for the remittance of sales tax, if any, directly to the State of California or any other state.

B. The Parties agree that the Contractor will submit an invoice to Visalia for payment of Contract Price, and Visalia will make payments of Contract Price, on the following schedule:

1. Bus Payments: Visalia shall make progress payments on a per-Bus basis in accordance with the below provisions:
 - a. 50% payment of the Bus Unit Price when Bus is accepted by Visalia at Contractor's facility in accordance with the provisions of this Contract.
 - b. 50% payment of the Bus Unit Price when Bus is delivered and accepted by Visalia at Visalia's facility in accordance with the provisions of this Contract.
2. Depot Charger Payment. Visalia agrees that it will make a 75% payment upon receipt of the Depot Chargers and make a 25% payment upon completion of the Depot Charger Installation in accordance with the provisions of this Contract.
3. Unless otherwise set forth herein, Visalia shall make all payments to Contractor no later than thirty (30) calendar days of receipt of an invoice from Contractor.

C. All payments due under this Contract in excess of Twenty-Five Thousand Dollars (\$25,000) shall be made by wire unless otherwise mutually agreed in writing to Proterra Inc pursuant to the following wiring instructions:

Silicon Valley Bank (SVB)
 Pasadena, CA 91185-3747
 ABA Number: 121140399
 Beneficiary Account Number: 3300812516
 Beneficiary Name: Proterra Inc
 Beneficiary Address: 1 Whitlee Ct., Greenville, SC 29607

D. Visalia shall be charged and shall make payments for spare parts and/or equipment at the unit prices itemized in the price schedule to be delivered by Contractor within fifteen (15) calendar days after the delivery and acceptance of said spare parts and/or equipment and receipt of a proper invoice. Visalia shall also be responsible for and pay any sales tax associated with the purchase of any such spare parts and/or equipment.

E. The Contractor may charge interest for late payment if payment is delayed after the payment due dates set forth in this Section 3. Interest will be charged at a rate not to exceed the prime rate of interest published by The Wall Street Journal plus 3% commencing with the date such payment was due.

F. Unless otherwise provided in this Contract, the Contractor shall pay all federal, state and local taxes, and duties applicable to and assessable against any work, goods, services, processes and operations incidental to or involved in the Contract, excluding sales taxes associated with the sale of the items set forth herein to Visalia (i.e., for the avoidance of doubt, Visalia shall pay any and all sales taxes associated with or resulting from purchases pursuant to this Contract).

SEC. 4 OPTIONS

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SEC. 5 ADDITIONAL EQUIPMENT, SERVICES AND DELIVERABLES

The Parties recognize that additional services and equipment are necessary for Visalia to fully implement the Buses and Charging Stations supplied by the Contractor under the terms of this Agreement, which are set forth below as either being included in, or excluded from the Contract Price.

Included in the Contract Price:

- 1. Driver, Maintenance and Repair and Parts Manuals, in quantities/formatting provided pursuant to Section 14 herein

Additional Charge/Not Included in the Contract Price:

- 1. Diagnostic laptop, software and tools (Contractor to provide list and charges of tools)
- 2. Spare Parts (Contractor to provide list)
- 3. Training beyond that agreed in Section 14 of this Contract
- 4. Printed documentation beyond that agreed in/supplied pursuant to Section 14 in this Contract
- 5. Civil Design, Installation and Management of Charging Stations except as set forth on Attachment 2
- 6. Additional Driver, Maintenance and Repair and Parts Manuals not provided pursuant to Section 14 herein

SEC. 6 PRE-PRODUCTION MEETING

A. A formal pre-production meeting shall be held to review the technical specifications and related Contract provisions and to discuss actual and potential open items.

B. The Contractor and Visalia agree that the pre-production meeting will be held at either Visalia’s chosen location or Contractor’s facility in City of Industry, California, as mutually determined between Visalia and Contractor. Contractor shall provide a formal production schedule at this meeting which, upon mutual acceptance by the Parties, shall be automatically incorporated by reference into this Agreement. The Parties shall make commercially reasonable efforts to resolve all the issues/questions raised at this pre-production meeting within six (6) weeks after the date of the meeting.

Sec. 7 FINAL BUS DESIGN

In the course of bus design and production, Contractor shall request bus option and design input from Visalia. Visalia shall give input on bus option and design within a reasonable timeframe. Contractor and Visalia shall both agree on final bus option and design package.

After agreeing on final bus option and design, Contractor's Engineering Department will design bus to required specifications. Visalia shall review design and, once satisfied, approve "Final Bus Design". Contractor commits to build bus to Final Bus Design and specifications. Visalia commits to accept buses built to Final Bus Design. If Visalia, after agreeing to final bus design, makes material changes to final bus design, Visalia acknowledges that Proterra, in its sole discretion, retains recourse to pursue any of the following actions, as described below, in the "Late Changes" Clause. Contractor shall solely determine whether changes are "material." Additionally, Visalia agrees to inspect buses with solely the "Final Bus Design" as the standard for inspection.

"Final Bus Design" is comprised of Proterra's Option Tracker (ATTACHMENT 3) and Visalia's Technical Specification (if any such specification exists; ATTACHMENT 1). Any changes to Visalia's Technical Specification, agreed to by both parties and incorporated into the "Final Bus Design," shall supersede the Technical Specification.

SEC. 8 BUS DELIVERY SCHEDULE AND ACCEPTANCE PROCEDURES

A. Delivery of Buses shall be determined by signed receipt of Visalia's designated agent(s), at point of delivery and may be preceded by a cursory inspection of the Bus. Delivery location for the Buses is Visalia's bus yard located at MV Transportation, 525 N. Cain Street, Visalia, CA 93292.

B. Hours of delivery shall be between 8:30 AM to 5:30 PM local time, Monday through Friday except holidays.

C. Prior to Visalia's final acceptance of each Bus, each Bus shall undergo Visalia's reasonable tests prior to Visalia's final acceptance of each Bus. Each Bus will be deemed accepted by Visalia only when the Contractor has complied in all material respects with the "Final Bus Design" set forth in Proterra's Option Tracker (ATTACHMENT 3) and Visalia's Technical Specification (if and such specification exists ATTACHMENT 1) to this Agreement. Acceptance will not be completed until the Contractor has made all reasonably requested repairs to the Bus in accordance with Section 12 of this Contract. Visalia agrees and acknowledges that it must make its determination on acceptance or non-acceptance no later than twelve (12) calendar days following receipt of each Bus under this Contract or the Bus shall be deemed accepted, and that in the event of any non-acceptance, Visalia shall provide Contractor a reasonably detailed description of the reasons for non-acceptance. Visalia shall not be able to reject or not accept a Bus after such twelve (12) calendar day period. Notwithstanding the foregoing, placement of any non-accepted Bus into service shall, notwithstanding anything to the contrary in this Agreement, be deemed acceptance of such Bus.

D. The Contractor's pre-delivery tests and inspections of all Buses shall be performed at or near the Contractor's California plant/facility, and they shall be witnessed by Visalia's

inspector(s). Any such tests and inspections performed at or near Contractor’s California plant/facility shall be made using the same criteria as set forth above in Subsection (D), and if Visalia inspects and accepts a Bus at or near Contractor’s plant/facility, and such Bus has not materially changed when it has been delivered and received by Visalia as compared to when such Bus was inspected and accepted at or near Contractor’s plant/facility, then Visalia shall not and may not then reject such delivered and received Bus. No post-delivery test/inspection shall apply criteria that are different from the criteria applied in any pre-delivery test/inspection.

SEC. 9 OH CHARGING STATION DELIVERY SCHEDULE AND ACCEPTANCE PROCEDURES

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SEC. 10 END OF LIFE BATTERY REPLACEMENT

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SEC. 11 TITLE

The Contractor shall provide reasonably adequate documents for registering the Bus in the State of California to Visalia at the time of delivery. Risk of loss on any Bus remains with the Contractor until delivery to Visalia, at which point risk of loss passes to Visalia.

SEC. 12 REPAIRS OF BUSES AND CHARGING STATIONS AFTER NON-ACCEPTANCE

A. After non-acceptance of a Bus the Contractor must take commercially reasonable efforts to complete work within fifteen (15) business days after receiving notification from Visalia of failure of acceptance tests. In the event a repair shall take longer than fifteen (15) business days, Contractor shall have such reasonable time as is necessary to complete the repair so long as Contractor commences to resolve the repair issue within such fifteen (15) business day period. Visalia shall make the Bus available to complete repairs timely with the Contractor’s repair schedule.

B. The Contractor shall provide all spare parts, tools, and space required to complete the repairs. Visalia agrees that for the first thirty (30) day period following non-acceptance, Contractor shall have the right to perform repairs at Visalia’s facilities, provided that following such thirty (30) day period if the non-accepted item is not corrected then, at Visalia’s option, the Contractor may be required to remove the non-accepted item from Visalia's facilities while repairs are being effected. If the non-accepted item is removed from Visalia's facilities, repair procedures must be pursued by the Contractor's representatives.

SEC. 13 ENGINEER/SERVICE REPRESENTATIVES

The Contractor shall provide a field service representative(s) available on request to assist Visalia's staff in the solution of engineering or design problems that may arise during the acceptance and warranty periods.

SEC. 14 DOCUMENTS AND TRAINING

A. The Contractor shall supply training documents to Visalia in Contractor’s customary format and as reasonably determined by Contractor. The Contractor agrees to provide driver and maintenance training. In connection with such training, Visalia agrees to provide Contractor reasonable access to Visalia’s data and information, and Visalia shall have access to its own custom web portal, which contains the latest versions of all applicable manuals, videos, guidelines and other training materials. Contractor recommends that Visalia obtain high voltage safety training for its employees and that Visalia develops its own high voltage safety rules and guidelines; however, any such training, rules and guidelines will not be provided by the Contractor.

B. Contractor shall own all data produced by the Buses/vehicle and the Charging Station/charging system. Contractor reserves the right to present data to third parties without the prior consent of Visalia. Contractor agrees to provide any data that may be reasonably required to satisfy the requirements of any grants or other sources of funding used to purchase the Buses by Visalia at an interval of no more frequently than once per month.

C. The Contractor shall train Visalia to do all warranty work with the exception of work on the batteries. Visalia Labor Rates for any work chargeable to the contractor is based on the hourly wage rate of a Visalia Senior Field Service Technician, plus 62% fringes plus 125% overhead. The wage rate, and therefore the warranty labor rate, are subject to adjustment once each year.

SEC. 15 TOOLS AND EQUIPMENT

The Contractor shall provide Visalia with a comprehensive list of all of the tools, equipment, software, specialized diagnostic tools, and/or related equipment for the service, repair and overhaul of the complete Bus, all major sub-systems of the Bus, and the Charging Stations. Proprietary software and computer hardware necessary to repair, service and/or diagnose all systems of the Bus and the Charging Stations shall be made reasonably available to Visalia when required to repair the Bus, its systems, or the Charging Stations at no cost to Visalia per Section 5 above.

SEC. 16 PARTS AVAILABILITY GUARANTEE

A. Contractor hereby agrees to make available the spare parts and equipment as set forth in the Option Tracker.

B. Unless otherwise agreed, all units and components procured under this Contract, whether provided by suppliers or manufactured by the Contractor, shall be duplicates in design, manufacture, and installation to assure interchangeability among Buses in this procurement. This interchangeability shall extend to the individual components as well as to their locations in the Buses.

C. EXCEPT FOR ANY SUCH WARRANTIES THAT CONTRACTOR MAY EXPRESSLY AND SPECIFICALLY PROVIDE, ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR

PURPOSE, INFRINGEMENT, OR ANY WARRANTIES BASED UPON SAMPLES, MODELS, OR SPECIFICATIONS, ARE EXPRESSLY DISCLAIMED.

SEC. 17 MATERIALS/ACCESSORIES RESPONSIBILITIES

The Contractor shall be responsible for all materials and workmanship in the construction of the Buses and Charging Stations and all accessories used, whether the same are manufactured by the Contractor or purchased from supplier and as subject to the Warranty provisions set forth in Attachment 4 to this Agreement. This provision excludes fare boxes, radios, and any equipment supplied by Visalia, except insofar as such equipment is damaged by the failure of a part or component for which the Contractor is responsible, or except insofar as the damage to such equipment is solely caused by the Contractor during the manufacture of the Buses and/or Charging Stations.

SEC. 18 REPRESENTATIVES AND NOTICE

A. Visalia’s Representative. Visalia hereby designates Carmen Quevedo, to act as its representative for the performance of this Agreement (“Visalia’s Representative”). Visalia’s Representative shall have the power to act on behalf of Visalia for all purposes under this Agreement.

B. Contractor’s Representative. Contractor hereby designates TJ Nass as its Project Manager, to act as its representative to oversee the performance of this Agreement (“Contractor’s Representative”). Contractor’s Representative shall have full authority to represent and act on behalf of the Contractor for all purposes under this Agreement. Contractor agrees that its representative will be on site, as needed, during the period of design, construction and installation of the Charging Station. Contractor further agrees that if its representative named above is not physically on site at any time, it will designate an individual employed by its construction contractor to act as its representative. Such designation will be provided in writing to Visalia’s representative.

C. Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

Contractor: TJ Nass
Customer Program Manager
Proterra Inc
383 Cheryl Lane
City of Industry, CA 91789
Phone (626) 327-3537

with a copy to: Eric McCarthy
Vice President Government Relations & General Counsel
Proterra Inc
1 Whitlee Court
Greenville, SC 29607

Phone (864) 438-0000
Fax (864) 281-1894

Visalia: Carmen Quevedo
City of Visalia – Transit
425 E. Oak Ave., Ste. 301
Visalia, CA 93291
(559) 713-4592

And with respect to invoices for payment, in addition to the above, also to:

Carmen Quevedo
City of Visalia – Transit
425 E. Oak Ave., Ste. 301
Visalia, CA 93291
(559) 713-4592

Any notices required by this Agreement shall be deemed received on (a) the day of delivery if delivered by hand (including overnight courier service) during receiving Party's regular business hours or by facsimile before or during receiving Party's regular business hours; or (b) on the third business day following deposit in the United States mail, postage prepaid, to the addresses set forth below, or to such other addresses as the Parties may, from time to time, designate in writing pursuant to the provisions of this Section. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

SEC. 19 ACCOUNTING RECORDS AND AUDIT ADJUSTMENTS

The Contractor shall maintain accurate records with respect to all costs and expenses incurred under this Agreement. The Contractor agrees that the United States Department of Transportation and Visalia, or any of their duly authorized representatives, shall, for the purpose of audit and examination, and to the extent required by law, be permitted to inspect all work, materials, payrolls, and other data and records, and to audit, during normal business hours with reasonable advanced notice, the books, records, and accounts relating to the performance of the Contract; provided that Contractor shall have the right to maintain and protect the confidentiality of any information so provided. Further, Contractor agrees to maintain all required records for at least three (3) years after Visalia has made final payment and all other pending matters are closed.

SEC. 20 CHANGE ORDERS AND SPECIFICATION REVISIONS

Unless there are changes mandated by applicable law, the Parties recognize that no changes to the Bus to be delivered by the Contractor to Visalia can be made without a written Change Order executed by Visalia's Representative and accepted by Contractor's Representative.

SEC. 21 LATE CHANGES

This Agreement represents and contains specific configurations and specifications agreed upon between Proterra and Visalia. Notwithstanding anything to the contrary contained herein, for any and all proposed changes, no matter how material or immaterial, requested by Visalia after the date hereof that are outside of or different from the configurations and/or specifications agreed upon between the parties hereto as of the date hereof, Proterra reserves and shall have the right to, in its sole and absolute discretion, pursue any of the following:

- A) Propose price increases for the changed configurations and/or specifications, which price increases are subject to Visalia's prior approval, which approval shall not be unreasonably withheld or delayed;
- B) Propose, subject to Visalia's prior approval (which approval shall not be unreasonably withheld or delayed), an alternative build slot and/or delays in delivery/shipment to account for delays resulting from the requested changed configurations and/or specifications;
- C) Reject some or all of the requested changes to, among other things, preserve a build slot(s) and delivery timeframe; and/or
- D) Any other solution proposed by Proterra, subject to Visalia's prior approval, which approval shall not be unreasonably withheld or delayed.

Notwithstanding anything to the contrary contained herein, Visalia acknowledges and agrees that any of the above rights, if/when exercised by Proterra (including any delivery/shipment delays and/or alternative build slots and including any outright rejection of any requested changes) shall not (1) be a breach of this Agreement, (2) affect or toll any warranties provided by Proterra, (3) result in or cause any penalties, damages (including liquidated damages), claims or liabilities to Proterra, (4) give Visalia any termination right, (5) affect or change payment terms (including any progress payments) and/or (6) give Visalia the right to reject any shipment or fail any inspection. In addition, notwithstanding anything to the contrary contained herein, Proterra may, in its sole and absolute discretion, utilize subcontractors to implement any requested changes that Proterra may agree to.

SEC. 22 DISPUTES

A. General. Any dispute between the Contractor and Visalia relating to the implementation or administration of the Contract shall be resolved in accordance with this Section.

B. Resolution. The Parties shall first attempt to resolve the dispute informally in meetings or communications among the Contractor's Representative and Visalia's Representative. If the dispute remains unresolved fifteen (15) days after it first arises, the Contractor may request that Visalia's Representative issue a recommended decision on the matter in dispute. Visalia's Representative shall issue the recommended decision in writing and provide a copy to the Contractor. If Contract does not, in its sole discretion, accept Visalia's recommended decision and the dispute remains unresolved, either party may seek resolution through non-binding mediation, and failing agreement after mediation judicial resolution of the dispute in the Tulare County Court of the State of California.

SEC. 23 MINOR CHANGES

Visalia acknowledges and agrees that there could be minor changes and/or minor delivery and timeline revisions. Accordingly, Visalia and Proterra agree to reasonably cooperate in good faith regarding any such minor changes and slight timeline revisions.

SEC. 24 TERMINATION

A. Termination for Convenience

a. Action by Visalia

The performance of work under the Contract may be terminated by Visalia in accordance with this Section in whole, or from time to time in part, with at least sixty (60) days prior written notice to Contractor. Any such termination shall be effected by delivery to the Contractor of a notice of termination specifying the extent to which performance of the professional services under the Contract is terminated and the date upon which such termination becomes effective; provided that such termination effective date shall be no earlier than sixty (60) days after receipt of such termination notice by Contractor.

b. Responsibility of Contractor

Upon receipt of a notice of termination, and except as otherwise directed by Visalia, the Contractor shall, to the extent possible, (1) stop work under the Contract on the date and to the extent specified in the notice of termination; (2) place no further orders or subcontracts for materials, services, or facilities, except as may be necessary for completion of such portion of the work under the Contract as is not terminated; (3) to the extent possible, terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the notice of termination; (4) transfer title to Visalia and deliver in the manner, at the times, and to the extent, if any, directed by Visalia, non-proprietary supplies, equipment, and other material produced as a part of, or acquired in connection with the performance of, the work terminated, and any information and other property which, if the Contract had been completed, would have been required to be furnished to Visalia provided that Visalia reimburses Contractor for all related costs and expenses; and (5) complete any such part of the work as shall not have been terminated by the notice of termination. Payments by Visalia to the Contractor shall be made by the effective date of termination, including with respect to the portion of any completed work and related costs and expenses so terminated. Except as otherwise provided, settlement of claims by the Contractor under this termination Section shall be in accordance with the provisions set forth in 48 C.F.R. Part 49, as amended from time to time.

B. Termination by Mutual Agreement.

The Contract may be terminated by mutual agreement of the Parties. Such termination shall be effective in accordance with a written agreement by the Parties. Any other act of

termination shall be in accordance with the termination by convenience or default provisions contained in Sections 24.A. and C., respectively.

C. Termination for Default

a. Action by Visalia

Subject to the provisions of subparagraph c. below, Visalia may terminate the whole or any part of the Contract in any one of the following circumstances:

- (1) If the Contractor fails to provide any material services required under this Contract; or
- (2) If the Contractor fails to perform any of the material provisions of the Contract in accordance in all material respects with its terms.

b. Contractor Liability

In the event that Visalia terminates the Contract in whole or in part as provided in this Subsection (C), Visalia may procure, upon such terms and in such manner as Visalia may deem appropriate and at Visalia's cost and expense, supplies or services similar to those so terminated. The Contractor shall continue the performance of the Contract to the extent not terminated under the provisions of this Section.

c. Cure by Contractor

If Visalia determines that an event of default under this Section 24 has occurred, it shall immediately notify the Contractor in writing and provide the Contractor with thirty (30) days in which to cure such default; provided that if it would reasonably take longer to cure such default, Contractor shall commence the cure during such thirty (30) day period and take commercially reasonable efforts to cure as soon as reasonably practicable thereafter. If the Contractor fails to cure within such time frame, Visalia may declare that Contractor to be in default and terminate the Contract in whole or in part.

d. Claims

Except as otherwise provided, settlement of claims by the Contractor under this Section shall be in accordance to the provisions set forth in 48 C.F.R. Part 49, as amended from time to time.

e. Default by Visalia

Except to the extent solely caused by a default of Contractor, in the event that Visalia breaches this Contract, and such breach, if and only if curable, is not cured within thirty (30) days following written notice from

Contractor (or such longer period as is reasonably necessary to cure if such cure may not reasonably be effected in such thirty (30) day period, provided Visalia diligently prosecutes such cure to completion at all times), Contractor shall have the right to terminate this Contract by written notice delivered by Contractor to Visalia at which time Visalia shall reimburse Contractor for all reasonable costs and expenses incurred by Contractor in connection with this Contract, including, at Contractor's option, payment of the difference between the purchase price under this Contract and the actual price paid to Contractor to sell the Buses and Charging Station(s) to another customer. For the avoidance of doubt, failure to make any payment by Visalia is a breach that would require cure within thirty (30) days.

SEC. 25 RESPONSIBILITIES OF CONTRACTOR AND VISALIA

A. Compliance with Law. The Contractor and Visalia shall give all notices and comply with all Federal, state, and local laws, ordinances, rules, regulations, and orders of any public authority bearing on the performance of the Contract, including, but not limited to, the laws referred to in these provisions of the Contract. If the Contract documents are at variance therewith in any respect, any necessary changes shall be incorporated by appropriate modification. Upon reasonable request by the other Party, the requested Party shall furnish the other Party with certificates of compliance with all such laws, orders, and regulations.

B. Independent Contractor. All services shall be performed by Contractor or by a third party under Contractor's supervision. Visalia retains Contractor on an independent contractor basis and not as an employee. Contractor retains the right to perform similar or different services for, and sell similar products to, others during the term of this Agreement. Any additional personnel performing the Services under this Agreement on behalf of Contractor shall also not be employees of Visalia and shall be under Contractor's direction.

SEC. 26 FORCE MAJEURE

The Contractor shall not be liable for any failure to perform if acceptable evidence has been submitted to Visalia that failure to perform the Contract was due to causes beyond the control of the Contractor. Examples of such causes include acts of God, civil disturbances, unanticipated work stoppages, strikes, lockouts, labor disputes, national emergencies, acts of government, acts of public enemy, storms, casualties, fires, riots, hurricanes, tornadoes, wars, floods or other cause of similar or dissimilar nature beyond Contractor's control.

SEC. 27 CONFLICT OF INTEREST

No officer, member or employee of Visalia and no members of its governing body, and no other public official of the governing body of the locality in which the project is situated and being carried out who exercise any functions or responsibility in the review and approval of the undertaking or carrying out of this project, shall participate in any decision relating to this Agreement which affects his or her personal interest or have any personal or pecuniary interest, direct or indirect, in this Agreement or the proceeds thereof.

SEC. 28 INDEMNIFICATION, INSURANCE & LIABILITY

A. Indemnification

The Contractor shall indemnify and save harmless Visalia, its officials and employees, from all losses, damages, costs, expenses, liability, claims, actions, and judgments of any kind brought or asserted against, or incurred by, Visalia, to the extent that the same arise out of or are caused by any willful act or omission of the Contractor, or by the employees, officers or directors of the Contractor, but not to the extent arising out of or are caused by any act or omission of Visalia or its employees, officers, directors, agents or representatives.

Visalia agrees that it shall be responsible for the negligent, willful and wrongful acts or omissions of its employees, officers, directors, agents and representatives. In addition, Visalia agrees that it shall be responsible for any use of the goods either (a) in combination with apparatus, devices or other products/goods not supplied by Contractor, or (b) in a manner for which the goods were neither designated nor contemplated.

Visalia shall indemnify and save harmless the Contractor, its officials and employees, from all losses, damages, costs, expenses, liability, claims, actions, and judgments of any kind brought or asserted against, or incurred by, the Contractor, to the extent that the same arise out of or are caused by (a) any failure of Visalia or its employees, officers or directors to comply with any material term of this Contract, (b) any negligence, gross negligence or intentional or willful conduct or fraud of Visalia or its employees, officers or directors, (c) any third party claim for personal injury, death, or tangible property damage or any other losses or damages sustained by any person or entity to the extent resulting from the gross negligence or intentional or willful conduct or fraud of Visalia or its employees, officers or directors, and (d) any act or omission of Visalia, or by the employees, officers or directors of Visalia, but not to the extent arising out of or are caused by any act or omission of the Contractor or its employees, officers, directors, agents or representatives.

B. Insurance.

Prior to commencing work, the Contractor shall procure and maintain at Contractor's own cost and expense for the duration of the Agreement, the following insurance against claims for injuries to person(s) or damages to property which may arise from, or in connection with, the performance of the work or services hereunder by the Contractor or its employees. Contractor shall maintain limits no less than:

- (1) Commercial General/Umbrella Liability Insurance - \$1,000,000 limit per occurrence for property damage and bodily injury. The service provider should indicate in its proposal whether the coverage is provided on a claims-made or on an occurrence basis.
- (2) Business Automobile/Umbrella Liability Insurance - \$1,000,000 limit per accident for property damage and personal injury.
- (3) Workers' Compensation and Employers'/Umbrella Liability Insurance -- Workers' Compensation coverage with benefits and monetary limits as set forth in South Carolina law. This policy shall include Employers'/Umbrella Liability coverage for \$1,000,000 per

accident.

(4) Other Insurance Provisions:

a. Commercial General Liability and Automobile Liability Coverage

Visalia shall be covered as additional insured's.

b. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by Visalia. At the option of Visalia, the insurer shall reduce or eliminate such deductibles or self-insured retentions with respect to Visalia.

c. Acceptability of Insurers

Insurance is to be placed with South Carolina admitted insurers rated B+X or better by A.M. Best's rating service.

d. Verification of Coverage

Upon written request from Visalia, Contractor shall furnish Visalia with certificates of insurance and with original endorsements affecting coverage required by this clause.

C. Liability.

IN NO EVENT WILL CONTRACTOR BE LIABLE TO VISALIA FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES, OR FOR LOSS OF PROFITS OR REVENUE, WHETHER IN AN ACTION IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE.

CONTRACTOR'S CUMULATIVE LIABILITY UNDER THIS CONTRACT WILL NOT EXCEED THE LESSER OF \$2 MILLION OR THE AGGREGATE AMOUNT PAID BY VISALIA PURSUANT TO THIS CONTRACT DURING THE SIX (6) MONTH PERIOD PRIOR TO THE EVENT GIVING RISE TO THE CLAIM OR LIABILITY AT ISSUE.

SEC. 29 INTERPRETATION, JURISDICTION, AND VENUE

This Contract shall be subject to, governed by, and construed and interpreted solely according to the laws of the State of California. The Contractor and Visalia hereby consent and submit to the jurisdiction of the appropriate courts of Tulare County or of the United States having jurisdiction in Tulare County for adjudication of any suit or cause of action arising under or in connection with the Contract documents, or the performance of this Contract, and agree that any such suit or cause of action may be brought in any such court.

SEC. 30 NO FEDERAL GOVERNMENT OBLIGATIONS

Although this Contract is funded with Federal funds, absent the Federal Government's express written consent, the Federal Government shall not be subject to any obligations or liabilities to the Contractor, or any other person other than Visalia in connection with the performance of this Contract.

SEC. 31 INTERESTS OF MEMBERS OF, OR DELEGATES TO, CONGRESS

In accordance with 18 U.S.C. Section 431, no member of, or delegate to, the Congress of the United States shall be admitted to any share or part of the Contract or to any benefit arising therefrom.

SEC. 32 FALSE OR FRAUDULENT STATEMENTS AND CLAIMS

By executing this Contract, the Contractor acknowledges that if it makes a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose penalties under the program Fraud Civil Remedies Act of 1986.

SEC. 33 DEBARMENT/SUSPENSION STATUS

The Contractor shall provide Visalia with a certification addressing its debarment and suspension status, if any, and that of its principals. The Contractor shall promptly inform Visalia of any change in the suspension or debarment status of the Contractor or its principals during the term of the Contract.

SEC. 34 AMERICANS WITH DISABILITIES ACT

The Contractor shall ensure that the Buses manufactured and delivered under the terms of this Contract meet, in all material respects, the applicable Accessibility Guidelines for Transportation Vehicles set out in 49 C.F.R. Part 38.

SEC. 35 BUY AMERICA

The Contractor shall comply with the applicable Buy America requirements set forth in 49 U.S.C. 5323(j) and the applicable regulations in 49 C.F.R. Part 661, as amended.

SEC. 36 CARGO PREFERENCE

The Contractor agrees:

A. Whenever shipping any equipment, materials or commodities pursuant to this Contract, to utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, but only if and to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

B. To furnish within twenty (20) business days following the date of loading for shipments originating within the United States, or within forty (40) business days following the date of loading for shipment originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph A. above to Visalia (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, 400 Seventh Street, S.W., Washington, D.C. 20590, marked with appropriate identification of the

project.

SEC. 37 FLY AMERICA

The Contractor agrees that if this Contract may involve the international transportation of goods, equipment, or personnel by air, the Contractor will use U.S.-flag air carriers, only if and to the extent service by these carriers is available at fair and reasonable rates. (49 U.S.C. 40018 and 4 C.F.R. Part 52).

SEC. 38 RECYCLED PRODUCTS

The Contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 C.F.R. Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 C.F.R. Part 247.

SEC. 39 ENVIRONMENTAL REQUIREMENTS

The Contractor agrees to comply in all material respects with all Federal, State and local environmental and resource conservation requirements that apply to the construction activities under the terms of this Contract. The Contractor shall report any violation of standards, orders or regulations issued under the Clean Air Act (42 U.S.C. 7401 et seq.) or the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.) resulting from any activity of the Contractor in connection with the performance of the Contract to FTA and to the appropriate U.S. EPA Regional Office. The Contractor shall be responsible for the disposal of hazardous materials, in accordance with applicable Federal, state and local laws and regulations.

SEC. 40 ENERGY EFFICIENCY

The Contractor shall recognize the mandatory standards and policies relating to energy efficiency that are contained in the State Energy Conservation Plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6321 et seq.).

SEC. 41 NONDISCRIMINATION

In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability.

SEC. 42 EQUAL EMPLOYMENT OPPORTUNITY

The following equal employment opportunity requirements apply to the Contract:

A. Race, Color, Creed, National Origin, Sex. In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the

Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

B. Age. In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. §§ 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age.

C. Disabilities. In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities.

SEC. 43 DISADVANTAGED BUSINESS ENTERPRISE

The Contractor agrees to comply with the Disadvantaged Business Enterprise requirements set forth in 49 C.F.R. 26.49.

SEC. 44 PRE-AWARD AND POST-DELIVERY AUDIT REQUIREMENTS

The Contractor agrees to comply with 49 U.S.C. § 5323(l) and FTA's implementing regulation at 49 C.F.R. Part 663 and to submit the following certifications:

A. The Contractor shall complete and submit a declaration certifying either compliance or noncompliance with Buy America. If the Contractor certifies compliance with Buy America, it shall submit documentation which lists: 1) component and subcomponent parts of the rolling stock to be purchased, identified by manufacturer of the parts, their country of origin and costs on a percentage basis; and 2) the location of the final assembly point for the rolling stock, including a description of the activities that will take place at the final assembly point and the cost of final assembly on a percentage basis.

B. The Contractor shall submit evidence that it will be capable of meeting the specifications.

C. The Contractor shall submit: 1) manufacturer's FMVSS self-certification sticker information that the vehicle complies with relevant FMVSS; or 2) manufacturer's certified statement that the contracted Buses will not be subject to FMVSS regulations.

SEC. 45 BUS TESTING

The Contractor agrees to comply with 49 U.S.C. § 5323(c) and FTA's implementing regulation at 49 CFR Part 665 and shall perform the following if applicable:

- A. If the bus being procured under this Contract is a new bus model or a bus produced with a major change in components or configuration, the Contractor shall provide a copy of the final test report to Visalia prior to Visalia's final acceptance of the first bus.
- B. If the Contractor releases a report under paragraph A above, it shall provide notice to the operator of the testing facility that the report is available to the public.
- C. If the Contractor represents that the vehicle was previously tested, the vehicle being sold should have substantially the same configuration and major components as the vehicle in the test report, which must be provided to Visalia prior to Visalia's final acceptance of the first vehicle. If the configuration or components are not identical, the Contractor shall provide a description of the change and the Contractor's basis for concluding that it is not a major change requiring additional testing.
- D. If the Contractor represents that the vehicle is "grandfathered" (has been used in mass transit service in the United States before October 1, 1988, and is currently being produced without a major change in configuration or components), the Contractor shall provide the name and address of the recipient of such a vehicle and the details of that vehicle's configuration and major components.

SEC. 46 FEDERAL MOTOR VEHICLE SAFETY STANDARDS

The Contractor shall comply with the Federal Motor Vehicle Safety Standards (FMVSS) and Regulations (49 C.F.R. Part 571) issued by the National Highway Traffic Safety Administration, which require motor vehicle manufacturers to conform to and certify compliance with the FMVSS requirements. These Regulations establish crashworthiness and crash avoidance standards for various types of vehicles, including buses.

SEC. 47 INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION TERMS AND CONDITIONS

- A. The Contractor recognizes that this Contract includes, in part, certain terms and conditions required by the Federal Transit Administration, whether or not expressly set forth in this Contract. All contractual provisions required by the Federal Transit Administration, as set forth in FTA Circular 4220.1 (current version as of the Effective Date of this Contract) are hereby incorporated by reference. If any of the provisions of this Contract are contrary to the Federal Transit Administration's mandated terms and conditions, such Federal Transit Administration's terms and conditions shall be deemed to control.

B. The Contractor shall not knowingly or willingly perform any act, fail to perform any act, or refuse to comply with any requests of Visalia which would cause Visalia to be in violation of the Federal Transit Administration terms and conditions.

SEC. 48 TAX AND CARBON CREDITS

A. In the event that the Contractor is entitled to Federal or State tax credits, rebates or refunds conditioned on the sale of battery electric buses or charging stations to a public agency, the Contractor shall not be required to rebate such amounts to Visalia when the Contractor takes the credit and/or realizes the refund or rebate.

B. In the event that the sale/purchase of a Bus may generate credits or other benefits associated with reductions in carbon emissions, exhaust or emissions banking or other credits, refunds, rebates or incentives of any kind as a result of environmental attributes associated with the deployment of battery electric buses or use of charging stations, such incentives, refunds, rebates or credits shall be owned and attributable solely by the Contractor.

SEC. 49 LACK OF FUNDS

If any of the material amounts due under this Contract constitute federal funds (such as formula funds or grants managed by the U.S. Department of Transportation), the entering into of this Contract by Visalia is subject to its receipt of such material funds to carry out the provisions of this Contract.

SEC. 50 ASSIGNMENT OR TRANSFER

Except for the rights of money due to Contractor pursuant to this Contract, Contractor shall not assign, hypothecate, or transfer this Agreement or any interest herein to any other party without the prior written consent of Visalia, which consent shall not be unreasonably withheld or delayed. Such consent of Visalia shall not be required in the event of any transfer or assignment in connection with any merger, acquisition (whether stock or asset) or other change of control involving Contractor. Visalia shall not assign, hypothecate, or transfer this Agreement or any interest herein to any other party without the prior written consent of Contractor, which consent shall not be unreasonably withheld or delayed. Any assignment, transfer or hypothecation other than in accordance with the terms of this Section 47 shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

SEC. 51 INTELLECTUAL PROPERTY & CONFIDENTIAL INFORMATION

A. Intellectual Property. Visalia and Contractor acknowledge that Visalia is a transit agency and not a manufacturer of buses or charging stations and therefore has no interest in ownership of any rights in, to, or arising out of: (i) any patents; (ii) inventions, discoveries (whether patentable or not in any country), invention disclosures, improvements, trade secrets, proprietary information, know-how, technology, technical data and other intellectual property; (iii) copyrights, copyright registrations, mask works, mask work registrations, and applications therefor in the United States, and anywhere in the world, and all other rights corresponding thereto throughout the world; and (iv) any other proprietary rights ((i) through (iv) hereof

collectively, the "Intellectual Property") in or to the technology associated with the charging stations and vehicles/buses that are the subject of this Agreement. As such, Visalia and Contractor agree that Contractor shall own any Intellectual Property developed in connection with the buses and charging stations purchased through this Agreement, including, without limitation, any performance and other Bus data developed and any alterations or modifications to the charging stations or buses purchased under this Agreement whether made or developed by Visalia or any other party (the "Developed Technology"). Visalia hereby assigns and agrees to assign to Contractor, all right, title and interest in the Developed Technology (including all intellectual property rights therein) and the Intellectual Property. Visalia shall, to the fullest extent, protect proprietary information, trade secrets and confidential commercial and financial information provided by the Contractor. Visalia will provide immediate notice in writing to the Contractor of the existence of any claim that the goods furnished hereunder violate or infringe upon another third party's rights, and Visalia shall reasonably cooperate with Contractor in connection with any such claim. Visalia also agrees that it shall not, and shall not allow any third party to, directly or indirectly reverse engineer the Bus or otherwise obtain, share or use any confidential information of Contractor, including, without limitation, any control or other software of Contractor provided with either the Bus or Charging Station.

B. Confidential Information. During the performance under this Contract, it may be necessary for either party (the "Discloser") to make confidential information available to the other party (the "Recipient"). The Recipient agrees to use all such information solely for the performance under this Contract and to hold all such information in confidence and not to disclose the same to any third party without the prior written consent of the Discloser. Likewise, the Recipient agrees that information developed in connection with the performance of this Contract shall be used solely for the performance under this Contract, and shall be held in confidence not disclosed to any third party without the prior written consent of the Discloser. Visalia shall employ sound business practices no less diligent than those used for Visalia's own confidential information to protect the confidence of all licensed technology, software, documentation, drawings, schematics, manuals, data and other information and material provided by the Contractor pursuant to this Contract.

C. Survival. This Section shall survive termination or expiration of this Contract.

SEC. 52 MARKETING

Contractor and Visalia shall work together to promote the unique nature of the deployment of the Buses and Charging Stations under this Contract. However, the Parties shall mutually agree to the content of any press release related to the substance, performance or existence of this Contract and the purchase or use of Buses and Charging Stations hereunder. Visalia hereby gives Contractor, and Contractor gives Visalia, the right to use images of the Buses and Charging Stations under this Contract in any manner desired by the Parties, subject to each party's prior written consent, not to be unreasonably withheld.

SEC. 53 COMPLIANCE WITH FEDERAL LOBBYING POLICY

Customers, including Visalia, who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR Part 20, "New Restrictions on Lobbying." Each tier certifies to the tier above that it will not and has not used federal appropriated funds to pay any person or

organization for influencing or attempting to influence an officer or employee of any Agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal Contract, grant or any other award covered by 31 USC 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-federal funds with respect to that federal Contract, grant or award covered by 31 USC 1352. Such disclosures are forwarded from tier to tier up to the recipient.

SEC. 54 WHISTLEBLOWER PROTECTION

Section 1553 of Division A, Title XV of the American Recovery and Reinvestment Act of 2009, P.L. 111-5, provides protections for certain individuals who make specified disclosures relating to Recovery Act funds.

A. An employee of any non-Federal employer receiving covered funds may not be discharged, demoted or otherwise discriminated against as a reprisal for disclosing, including a disclosure made in the ordinary course of an employee’s duties, to the Board, an inspector general, the Comptroller General, a member of Congress, a state or federal regulatory or law enforcement agency, a person with supervisory authority over the employee (or such other person working for the employer who has the authority to investigate, discover or terminate misconduct), a court or grand jury, the head of a Federal agency or his/her/their representatives, information that the employee reasonably believes is evidence of:

- 1) gross mismanagement of an agency contract or grant relating to covered funds;
- 2) a gross waste of covered funds;
- 3) a substantial and specific danger to public health or safety related to the implementation or use of covered funds;
- 4) an abuse of authority related to the implementation or use of covered funds; or
- 5) a violation of law, rule or regulation related to an agency contract (including the competition for or negotiation of a contract) or grant, awarded or issued relating to covered funds.

B. To be protected, the disclosure must be made by the employee to the Recovery Accountability and Transparency Board, an Inspector General, the Comptroller General, a member of Congress, a state or federal regulatory or law enforcement agency, a person with supervisory authority over the employee, a court or grand jury, or the head of a federal agency or his/her/their representatives.

SEC. 55 IRON, STEEL AND MANUFACTURING

A. Required Use of American Iron, Steel, and Manufactured Goods--Section 1605 of the American Recovery and Reinvestment Act of 2009.

- 1) This award term and condition implements Section 1605 of the American Recovery and Reinvestment Act of 2009 (Recovery Act) (Pub. L. 111-5), by requiring that all iron, steel and manufactured goods used in the project are produced in the United States except as provided in paragraph 2 CFR 176.140 (b)(3) and 2 CFR 176.140 (b)(4). This requirement does not apply to the material listed by the Federal Government under 2 CFR 176.140(b)(2).

2) A prospective applicant requesting a determination regarding the inapplicability of section 1605 of the American Recovery and Reinvestment Act of 2009 (Pub. L. 111-5) (Recovery Act) should submit the request to the U.S. Federal Transit Administrator in time to allow a determination before submission of applications or proposals. The prospective applicant shall include the information and applicable supporting data required by paragraphs 2 CFR 176.140(c) and (d) in the request. If an applicant has not requested a determination regarding the inapplicability of 1605 of the Recovery Act before submitting its application or proposal, or has not received a response to a previous request, the applicant shall include the information and supporting data in the application or proposal.

SEC. 56 CLEAN AIR AND CLEAN WATER

The Contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. The Contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 et seq. The Contractor shall report each violation to Visalia and understands and agrees that Visalia will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

SEC. 57 FEDERAL CHANGES

Contractor shall at all times comply with all applicable FTA regulations, policies, procedures, and directives.

SEC. 58 PRIVACY

To the extent that Contractor administers any system of records on behalf of the Federal Government, Contractor agrees to comply with the information restrictions and other applicable requirements of the Privacy Act of 1974, as amended, 5 U.S.C. Sect. 552, (the Privacy Act). Contractor shall obtain the express consent of the Department and the Federal Government before the Contractor operates a system of records on behalf of the Federal Government.

SEC. 59 GENERAL PROVISIONS

A. Construction; References; Captions. Since the Parties or their agents have participated fully in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Unless and except otherwise set forth herein, any term referencing time, days or period for performance shall be deemed calendar days and not business days. All references to Visalia include its elected officials, officers, agents, volunteers and independent contractors who serve as Visalia officers, officials, or staff except as otherwise specified in this Agreement. The captions of the various sections and paragraphs herein are for convenience and ease of reference only, and do not define, limit, augment or describe the scope, content or intent of this Agreement.

B. Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

C. Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel or otherwise. The failure of Visalia or the Contractor to enforce one or more of the terms or conditions of this Contract or to exercise any of its rights or privileges, or the waiver by one Party of any breach of such terms or conditions, shall not be construed as thereafter waiving any such terms, conditions, rights, or privileges, and the same shall continue and remain in force and effect as if no waiver had occurred.

D. No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

E. Cooperation: Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Agreement.

F. Invalidity; Severability. If any portion of this Agreement is declared as invalid, illegal or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

G. Authority to Enter Agreement. Contractor has all requisite power and authority to conduct its business and to execute, deliver and perform this Agreement. Visalia has all requisite power and authority to conduct its business and to execute, deliver and perform this Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right and authority to make this Agreement and bind each respective Party.

H. Entire Agreement. This Agreement contains the entire agreement of the Parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may not be amended, nor any provision or breach hereof waived, except in a writing signed by the Parties which expressly refers to this Agreement.

I. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which taken together shall constitute one and the same agreement. Delivery of an executed counterpart of this Agreement by facsimile or other electronic means shall have the same force and effect as the delivery of an original executed counterpart of this Agreement.

J. Rules of Construction. The singular shall include the plural and vice versa, and any gender shall include any other gender as the text shall indicate. All references to "including" shall mean "including, without limitation."

[Signatures continued on next page]

IN WITNESS WHEREOF, the Parties hereto have caused these presents to be duly executed with all the formalities required by law.

Proterra Inc

Attest: _____

By: _____

Name and Address:

Printed Name: _____

Title: _____

Dated: _____

[_____]

Attest: _____

By: _____

Name and Address:

Printed Name: _____

Title: _____

Dated: _____

Attachment: Proterra-Visalia contract (3 Proterra Buses)



**CITY OF ARVIN
Staff Report**

Meeting Date: May 14, 2019

TO: City Council

FROM: Greg Collins, Collins & Schoettler Planning Consultants
Jerry Breckinridge, City Manager

SUBJECT: A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ARVIN AMENDING THE CITY OF ARVIN GENERAL PLAN TO INCLUDE A WATER RESOURCES ELEMENT

RECOMMENDATION

Adopt the Resolution to uphold the recommended approval of the Arvin Planning Commission of an optional element to the Arvin General Plan, called the Water Resources Element, including the adoption an Exemption pursuant to the California Environmental Quality Act Guidelines, Section 15061(b)(3), because this Element constitutes a planning study on the topic of water management in Arvin and any future water projects including but not limited to water lines, pumps, and storage facilities; waste water treatment facilities; water treatment facilities; or water storage facilities shall require CEQA compliance on the actual facilities proposed to be constructed.

BACKGROUND

The Arvin Planning Commission held a public hearing on this matter at their March 19, 2019, meeting. The Commission help a public hearing on the Arvin Water Resources Element, accepted information in the staff report and the Power Point presentation and directed questions to the Consultant. Upon the conclusion of the public hearing, the Commission passed a resolution recommending approval of the Arvin Water Resources Element to the Arvin City Council.

The City of Arvin secured a Sustainable Communities Planning Grant from the California Department of Conservation in 2018. This Grant was used by the City to prepare a Water Resources Element, an optional element of the Arvin General Plan. The grant funds were used to research and analyze water issues facing Arvin and the greater San Joaquin Valley. The objective of the Element was to provide a comprehensive and sustainable approach to managing

Arvin's short and long-term water needs. The Consultant coordinated with local stake holders, state water agencies, Veolia and the Arvin CSD in the formulation of the Element's goals, policies and implementation strategies, which is intended to ensure the long-term viability of the ground water system that Arvin depends upon.

The outreach process assisted the Consultant in the formulation of policies that focused on:

- improving drinking water quality, ground water replenishment;
- wastewater treatment and capacity;
- water conservation; and
- storm water management.

DISCUSSION

The Arvin Water Resources Element contains goals, policies, and implementation strategies that focus on a comprehensive and sustainable approach towards managing water resources in the Arvin area. The implementation strategies section of the Element focuses on specific projects, ordinances and funding opportunities that will assist in improving water resources in the community.

This Element begins with the premise that managing the ground water system under Arvin so that it remains in a sustainable state is not only important to the City but also to the larger agricultural community because urban and agricultural uses “drink” from the same ground water system. Arvin's economy and well-being, like most cities in the Valley, is tied to the local agricultural economy. When agriculture suffers due to lack of imported water or falling water tables, Arvin also suffers - higher unemployment rates, reduced property and sales taxes, and higher crime rates.

The issue of water in the Valley is complex, controversial and political. For this reason, the reader is directed to the Appendices of the Element so as to gain a better understanding of the topic of water as it relates to Arvin and the greater San Joaquin Valley.

While it is important to understand the big picture, which provides context, it is at the local level where action is most effective. In the case of the City of Arvin, the City Council sets policy and controls the budget. Staff implements that policy. The combined efforts of clear policy direction and consistent implementation of policy can create powerful and positive change in Arvin.

With the preparation of this Element, and discussion with various stakeholders, the Consultant has learned that there are several major water issues facing Arvin. Those issues include: planning for droughts, water supply, water quality, flood mitigation, the urban heat island, air quality, budget and SGMA (ground water regulations).

After study, two very powerful ideas surfaced. First, many of the solutions to water issues, which is the subject of this Water Resources Element, are also good solutions for mitigating the other Arvin issues listed above. Second, the solutions to these issues and problems, when fully implemented, could save the City money.

Guiding the Consultant's work in the preparation of this Element was the Arvin City Council's vision for the City of Arvin (established on March 28, 2015), which reads as follows:

"Arvin is safe, healthy, vibrant, and economically diverse with a sense of community and where quality of life is valued."

During the Council's work session, a mission statement was also crafted. This mission statement reads as follows:

Our mission is to provide responsive, quality service to our community; maintain an accessible, safe, healthy, environmentally sound and culturally rich city; drive innovative solutions; create a partnership between the community and its government through respectful governance; and do so in an economically sustainable manner.

The management of water in the San Joaquin Valley and specifically in the City of Arvin is very complex, controversial and challenging. For example, the Arvin Community Services District has had to treat its water for arsenic and 1,2,3 TCP (trichloropropane), both of which require costly mitigation treatments, while simultaneously ensuring that the District's system is free of leaks, maintains proper water pressure and allows for future urban growth.

The health, safety and quality of life of residents in Arvin is closely tied to a sustainable and reliable domestic water source that is safe for drinking, bathing and outdoor irrigation. Further, water is important to Arvin's economy because of its close association with agriculture.

In the San Joaquin Valley water comes from two sources: ground water (aquifer) and surface water (imported and native). In the case of Arvin, ground water is its sole source of domestic water. This is the case for most cities in the Valley, however, there are some cities (Avenal, Orange Cove, Fresno and Lindsay) that utilize treated surface water from the California Aqueduct or the Friant-Kern Canal.

The Consultant has focused on water issues specific to Arvin but notes that water strategies tailored for Arvin are transferable to the other 58 cities in the San Joaquin Valley. Further, the Consultant realizes that no city is an "island" and that water management decisions for the San Joaquin Valley, including the Central Valley Water (CVP) Project, the State Water Project (SWP) and the Arvin-Edison Water Storage District (AEWSD) can also have implications for Arvin.

In order for the Consultant to focus on Arvin's water issues, five "Golden Goals" have been established for the city's Water Resources Element.

- 1. The urgency of drought represents a unique opportunity. The status quo is NOT acceptable. Therefore, we will implement new innovative strategies.**
- 2. We will increase City department and inter-agency collaboration moving toward multi-disciplined, multi-benefit and multi-funding project.**
- 3. We will diversify our dependence on sources of water and utilize a fit-for-purpose approach to water use.**
- 4. We will protect our safety, health and quality of life during drought periods and as water resources become scarce.**
- 5. We will create and use tools to foster sustainable water use behavior by the public**

A goal is only as good as its implementation. Working together, the City and the Arvin Community Services District will need to focus on the following implementation strategies.

- 1. Capture storm water by all means possible using multi-benefit designs; and then use that storm water to achieve multiple benefits.**
- 2. Coordinate with Viola to expand and distribute reclaimed waste water to multi-benefit projects including parks and agricultural lands.**
- 3. Require all infrastructure projects to achieve multi benefits and cost efficiencies including: expanding grant funding possibilities and utilization of multiple funding sources.**
- 4. Create an Urban Forest in order to achieve multi-benefits including: stormwater capture, aquifer recharge, storm water peak flow control, urban heat reduction, and mitigation of health issues resulting from dust and air pollution.**

CONCLUSION

To ensure that Arvin effectively implements strategies (watering regulations, infrastructure projects, water management technologies, etc.) that accomplish the above goals, Arvin needs to establish a “team” that will carry the ball in the implementation of the Water Resources Element. Ideally, this team would be composed of the city engineer and city planner; a representative from Veola, the Arvin Community Services District and the Arvin-Edison Water Storage District; and members from the public. This team would be responsible for meeting certain milestones such as water conservation percentages for Arvin households, reduction in storm water runoff, reduction in water usage inside the home and the volume of water recharged into the ground water system after treatment at the waste water treatment plant.

Arvin's efforts in the field of water management and conservation has the potential to become the standard by which other cities in the San Joaquin Valley are measured. Like so many other tasks and objectives facing cities in the Valley today the proof of success is best measured by long-term implementation. This implementation requires a team of individuals that are knowledgeable about water management and are committed to meeting certain milestones or objectives (e.g. ten percent reduction in household water consumption or increase in acre feet of water recharged).

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ARVIN AMENDING THE CITY OF ARVIN GENERAL PLAN TO INCLUDE A WATER RESOURCES ELEMENT

WHEREAS, The City of Arvin secured a Sustainable Communities Planning Grant from the California Department of Conservation in 2018, and

WHEREAS, said Grant was used by the City to prepare a Water Resources Element, an optional element of the Arvin General Plan, and

WHEREAS, said Element begins with the premise that managing the ground water system under Arvin so that it remains in a sustainable state is not only important to the City but also to the larger agricultural community because urban and agricultural uses “drink” from the same ground water system, and

WHEREAS, Arvin’s economy and well-being, like most cities in the Valley, is tied to the local agricultural economy, and when agriculture suffers due to lack of imported water or falling water tables, Arvin also suffers - higher unemployment rates, reduced property and sales taxes, and higher crime rates, and

WHEREAS, grant funds were used to research and analyze water issues facing Arvin and the greater San Joaquin Valley, and

WHEREAS, the objectives of the Element were to provide a comprehensive and sustainable approach to managing Arvin's short and long-term water needs; coordinate with local stake holders, state water agencies, Veola and the Arvin CSD in the formulation of the Element’s goals, policies and implementation strategies; and ensure the long-term viability of the ground water system that Arvin depends upon, and

WHEREAS, the Element fashioned five primary goals that would guide Arvin towards a more sustainable ground water system, which read as follows: (1) The urgency of drought represents a unique opportunity. The status quo is NOT acceptable. Therefore, we will implement new innovative strategies; (2) We will increase City department and inter-agency collaboration moving toward multi-disciplined, multi- benefit and multi-funding project; (3) We will diversify our dependence on sources of water and utilize a fit-for-purpose approach to water use; (4) We will protect our safety, health and quality of life during drought periods and as water resources become scarce; and (5) We will create and use tools to foster sustainable water use behavior by the public; and

WHEREAS, the implementation of the above goals will be achieved by the following strategies, which read as follows: (1) Capture storm water by all means possible using multi-benefit designs; and then use that storm water to achieve multiple benefits; (2) Coordinate with

Viola to expand and distribute reclaimed waste water to multi- benefit projects including parks and agricultural lands; (3) Require all infrastructure projects to achieve multi benefits and cost efficiencies including: expanding grant funding possibilities and utilization of multiple funding sources; and (4) Create an Urban Forest in order to achieve multi benefits including: storm water capture, aquifer recharge, storm water peak flow control, urban heat reduction, and mitigation of health issues resulting from dust and air pollution, and

WHEREAS, the Planning Commission held a public hearing on the Arvin Water Resources Element at their March 19, 2019 meeting, and voted to recommend approval of the Element to the Arvin City Council, and

WHEREAS, adoption of the Arvin Water Resources Element, an optional element to the Arvin General Plan, is exempt from the California Environmental Quality Act Guidelines, pursuant to Section 15061(b)(3), which finds that this Element constitutes a planning study on the topic of water management in Arvin and any future water projects including but not limited to water lines, pumps, and storage facilities; waste water treatment facilities; water treatment facilities; or water storage facilities shall require CEQA compliance on the actual facilities proposed to be constructed, and

WHEREAS, a public hearing notice on this matter was published 10 days prior to the City Council's public hearing on this matter, and

WHEREAS, the City Council reviewed the Water Resources Element, the staff report prepared on said Element and considered public testimony provided on the Water Resources Element, and

WHEREAS, the City Council desires to amend the City of Arvin General Plan to add a Water Resources Element.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Arvin as follows:

1. Pursuant to CEQA Guidelines, section 15061(b)(3), the City Council determines with certainty there is not a possibility that this project may have a significant effect on the environment. This is because the Water Element constitutes a planning study on the topic of water management in Arvin. Any future water projects including but not limited to water lines, pumps, and storage facilities, waste water treatment facilities, water treatment facilities, or water storage facilities, shall require CEQA compliance on the actual facilities proposed to be constructed and their environmental impacts, if any can be assessed. As such, this project is not subject to CEQA.

2. The City Council finds as follows:

a. The Arvin Water Resources Element will effectively guide Arvin's decision-making on matters of water management.

- b. The Arvin Water Resources Element will assist the City in formulating a 5-year capital improvement program for road, storm drainage and water system improvements.
 - c. The adoption of the Arvin Water Resources Element will not have an adverse impact the public health, safety or welfare.
 - d. It is in the public interest to amend the adopted City of Arvin General Plan to add the Water Resources Element.
3. The City Council amends the City of Arvin General Plan to add and include the Water Resources Element, a copy of which is attached to this Resolution.
4. This Resolution shall become effective immediately.

I HEREBY CERTIFY that the foregoing resolution was passed and adopted by the City Council of the City of Arvin at a Regular Meeting thereof held on the 14th day of May, 2019 by the following vote:

ATTEST

CECILIA VELA, City Clerk

CITY OF ARVIN

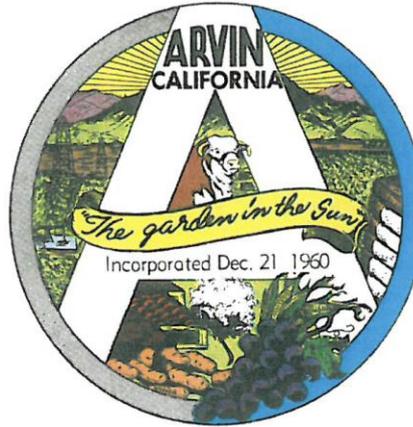
By: _____
JOSE GURROLA, Mayor

APPROVED AS TO FORM:

By: _____
SHANNON L. CHAFFIN, City Attorney
 Aleshire & Wynder, LLP

I, _____, City Clerk of the City of Arvin, California, DO HEREBY CERTIFY that the foregoing is a true and accurate copy of the Resolution passed and adopted by the City Council of the City of Arvin on the date and by the vote indicated herein.

Welcome!



Arvin Water Element
Arvin City Council Meeting

May 14, 2019

Arvin Water Resources Element

CITY COUNCIL RECOMMENDATION

Adoption of Resolution No. _____ upholding the recommended approval of the Planning Commission's adoption of an optional element to the Arvin General Plan, called the Water Resources Element, including a recommendation to adopt an Exemption pursuant to the California Environmental Quality Act Guidelines, Section 15061(b)(3), because this Element constitutes a planning study on the topic of water management in Arvin and any future water projects including but not limited to water lines, pumps, and storage facilities; waste water treatment facilities; water treatment facilities; or water storage facilities shall require CEQA compliance on the actual facilities proposed to be constructed.

Arvin Water Resources Element

BACKGROUND

The City of Arvin secured a Sustainable Communities Planning Grant from the California Department of Conservation in 2018. This Grant was used by the City to prepare a Water Resources Element, an optional element of the Arvin General Plan. The grant funds were used to research and analyze water issues facing Arvin and the greater San Joaquin Valley. The objective of the Element was to provide a comprehensive and sustainable approach to managing Arvin's short and long-term water needs. The Consultant coordinated with local stake holders, state water agencies, Veolia and the Arvin CSD in the formulation of the Element's goals, policies and implementation strategies, which is intended to ensure the long-term viability of the ground water system that Arvin depends upon.

The outreach process assisted the Consultant in the formulation of policies that focused on:

improving drinking water quality, ground water replenishment;
wastewater treatment and capacity;
water conservation; and
storm water management.

Arvin Water Resources Element

- *Issues and Opportunities*
- *State of the art policy and technology*
- *Five Golden Goals – a new approach*
- *Low Impact Development and other great ideas*



Interviews with Advisory Committee revealed key issues and opportunities and information

Issues and Problems:

- Water Quality (arsenic)
- Air Quality
- Flood zones
- Urban heat island





Opportunities

Council Vision and Mission Statement (2015)

“If you don’t know where you are going you might not get there – Yogi Berra”

Vision Statement:

*“Arvin is **safe, healthy**, vibrant and economically diverse with a sense of community and where **quality of life is valued.**”*

Opportunities (cont.)

Mission Statement



“Our mission is to provide responsive, quality service to our community; maintain accessible, safe, healthy, environmentally sound and culturally rich city; drive innovative solutions; create a partnership between community and its government through respectful governance; and do so in an economically sustainable manner.”

“And it never failed that during the dry years the people forgot about the rich years, and during the wet years they lost all memory of the dry years. It was always that way.”

- John Steinbeck – East of Eden

WATER SHORTAGE CONTINGENCY PLANNING

WATER SUPPLY RELIABILITY

Groundwater provides a medium-to-good quality of water to the area. From the time of the creation of the District until the present, and well into the future, groundwater will be the only source of water for the District.

Groundwater Quality

The District's old wells contain arsenic at concentrations over the maximum concentration limit of 10 ug/l (which was changed in 2006 from a maximum concentration limit 50 ug/l). The District applied for and received a grant for studying groundwater conditions in the area around the District. The study involved selection of locations that are thought to have lower concentrations of arsenic, and construction of three test wells to verify that low domestic wells can be drilled that will meet the arsenic standard. In the event that new wells with acceptable water quality cannot be drilled, it is planned to install centralized arsenic treatment to solve the problem.

Drought

It has been previously noted that an extended drought can have an effect on groundwater pumping levels. The District has greatly benefitted from AEWSD's project, which has stabilized groundwater levels in the area. Therefore the District's exposure to effects of drought have been mitigated. However, that is not to say that groundwater levels will not drop due to an extended drought or other impacts reducing importation of surface water – but it is to say that groundwater levels will be much better than they would have been absent AEWSD's program, and the groundwater supply will be sustained – even through an extended period of drought.

5 Golden Goals

Lessons Learned – translated and applied to Arvin

1. When the status quo is NOT acceptable, this presents an opportunity to implement new innovative strategies.
2. Collaborate on multi-disciplinary/multi-benefit projects
3. Diversify dependence on water sources
4. Protect safety, health and quality of life during drought/climate change
5. Foster sustainable water use behavior

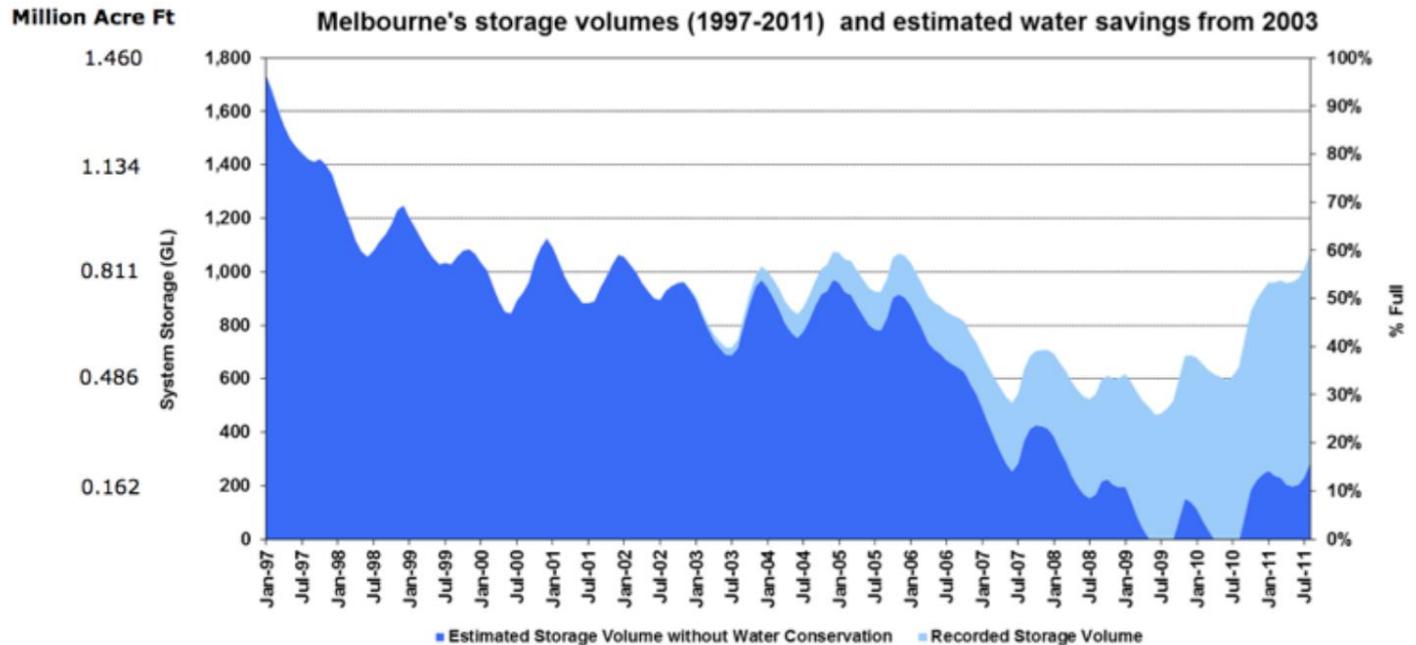
Drought urgency

Lesson 1

Drought urgency represents a unique opportunity to reshape water management and requires smart, swift action (status quo NOT acceptable)

- Melbourne would have run out of water if they did not act early on during the drought.

Figure 3: Melbourne's Water Supply With and Without Water Conservation Measures.v



The percentages shown are based on a storage capacity of 1810.5GL, including Tarago Reservoir.

Potential Policy Changes for Arvin:

Short term:

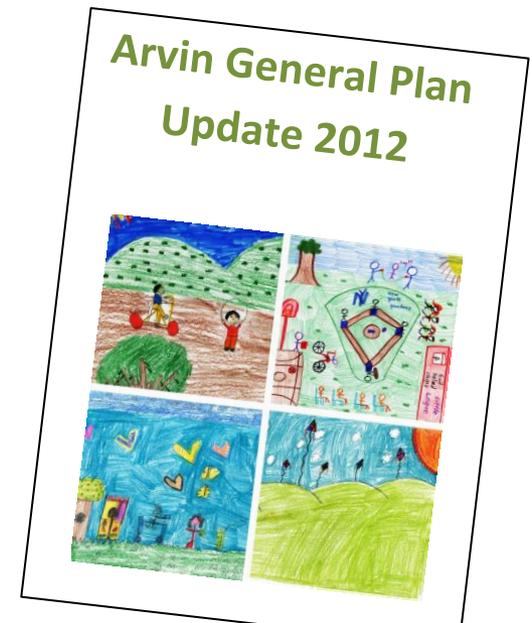
- Water use efficiency (e.g. Building Code)
- Water restrictions phased in (no potable water for landscaping)
- Conservation and sustainable practices

Long Term

- Multi discipline/multi benefit
- Infrastructure Projects:
 - Streets
 - Storm drainage
 - Recycling/wastewater
 - Parks
 - Bike paths
 - Private development

Arvin is projected to grow 30% each decade.

Will double in size in 30 years



Lesson 2

Collaborate using multi discipline/multi benefit projects to create efficiency and water resilience

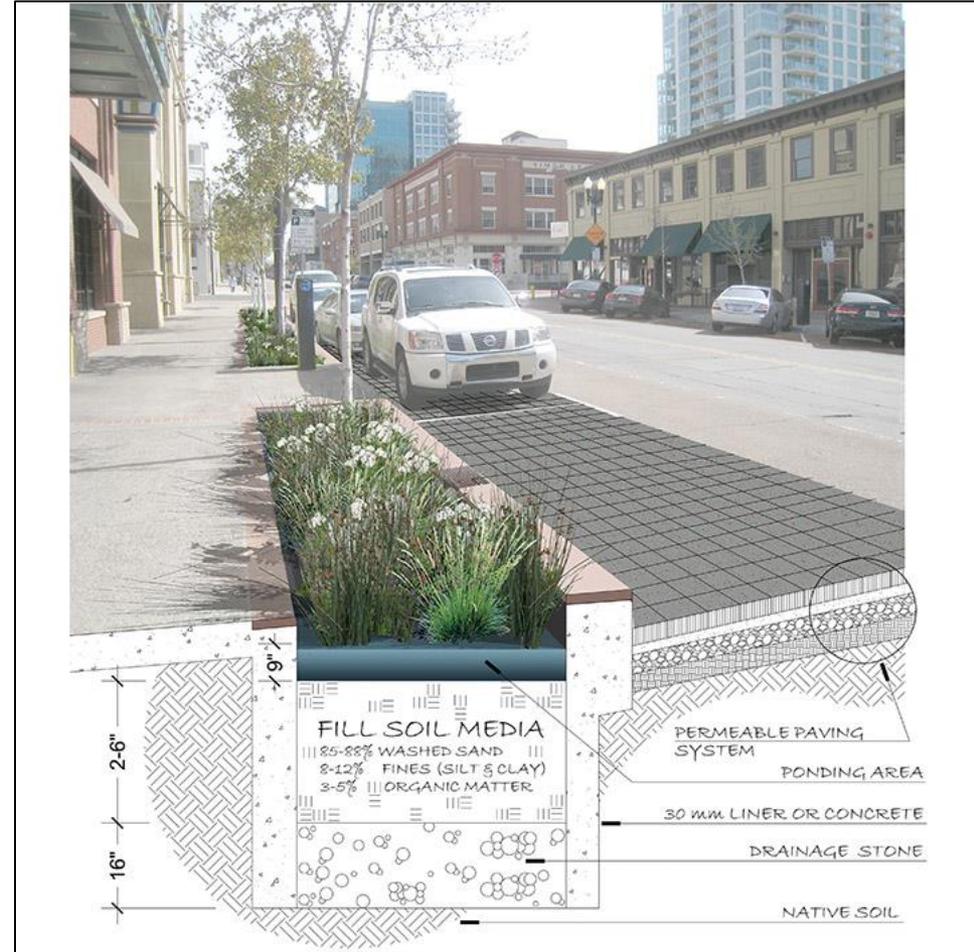
- Plan integrated projects that maximize rainwater, storm water and recycled water resources
- Use Low Impact Development designs
 - Lower cost
 - Address NPDES
 - Recharges Aquifer



Traditional Storm Drain Design



Low Impact Development design



Lesson 3

Diversify water sources to increase water system resiliency.

Diversified solutions were encouraged by statewide performance targets and tight regulation around water quality and public health.

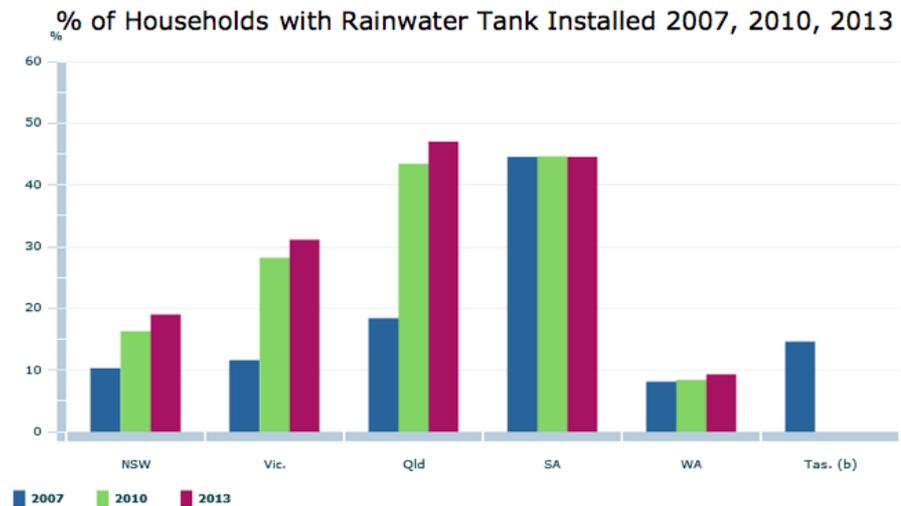
- Rainwater harvesting
- Stormwater capture and use
- Manage aquifer recharge

Diversify, then use “Fit for Purpose” approach

- Potable for drinking
- Manage aquifer recharge for irrigation
- Storm water capture for urban forest
- Rainwater capture for outdoor landscaping

Rainwater harvesting (RWH)

- Severe water restrictions banned potable water for outdoor landscaping
- Public demanded incentives for RWH tanks and equipment (fave agencies mandate to invest in RWH programs)
- End of drought = 50% of Adelaide household and 30% of Melbourne households



Trees as bioswales



Lesson 4

Water scarcity issues are fundamentally tied to public health, safety and quality of life.

- Urban Heat Island
- January 2009 extreme heat events in Melbourne caused 62% mortality increase (980 deaths)
- Water restrictions had greatly reduced public green space and shade and urban heat island was exacerbated.

2004



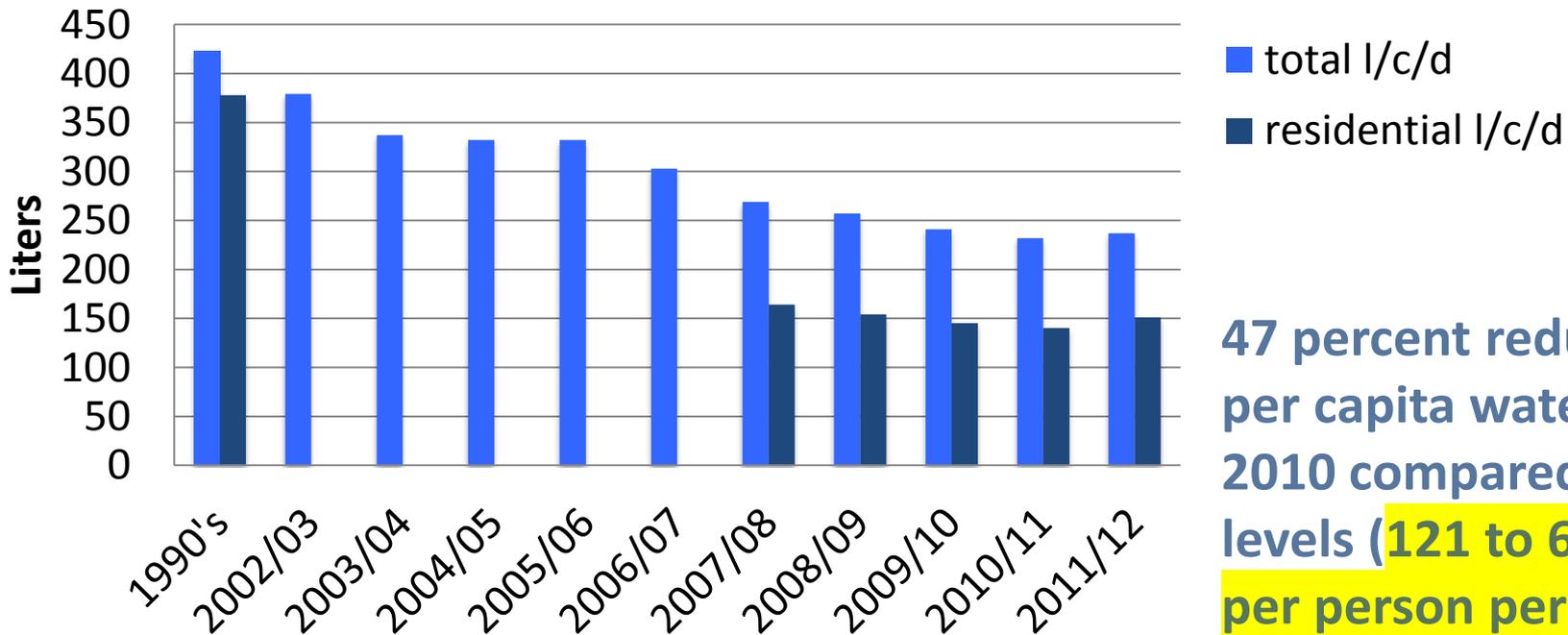
2010



Lesson 5

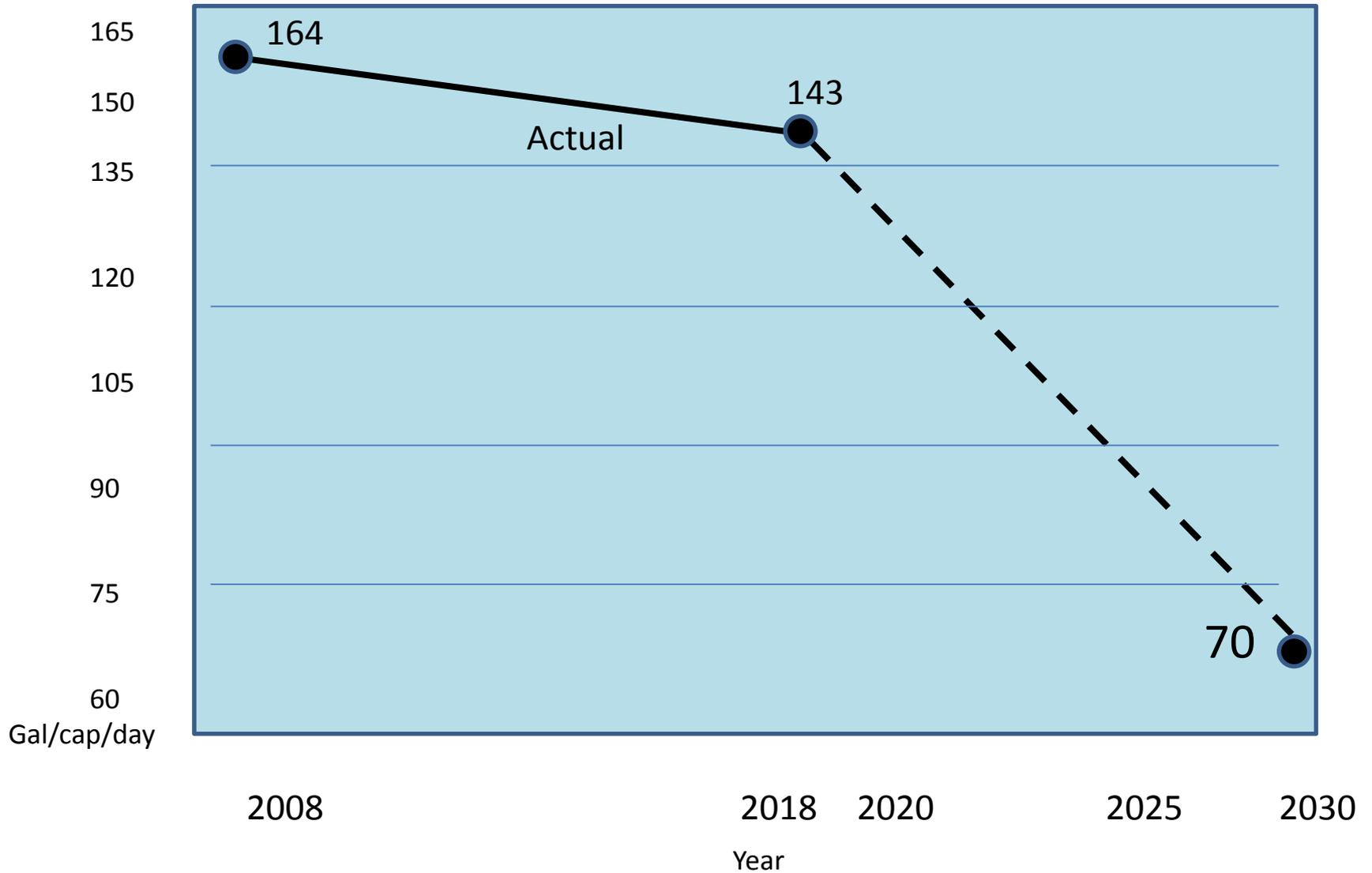
Public behavior change programs around water conservation can be extremely effective

Melbourne Water Use



47 percent reduction in per capita water use in 2010 compared to 1990 levels (121 to 65 gallons per person per day)

Foster Sustainable water behavior in Arvin



Review and Summary

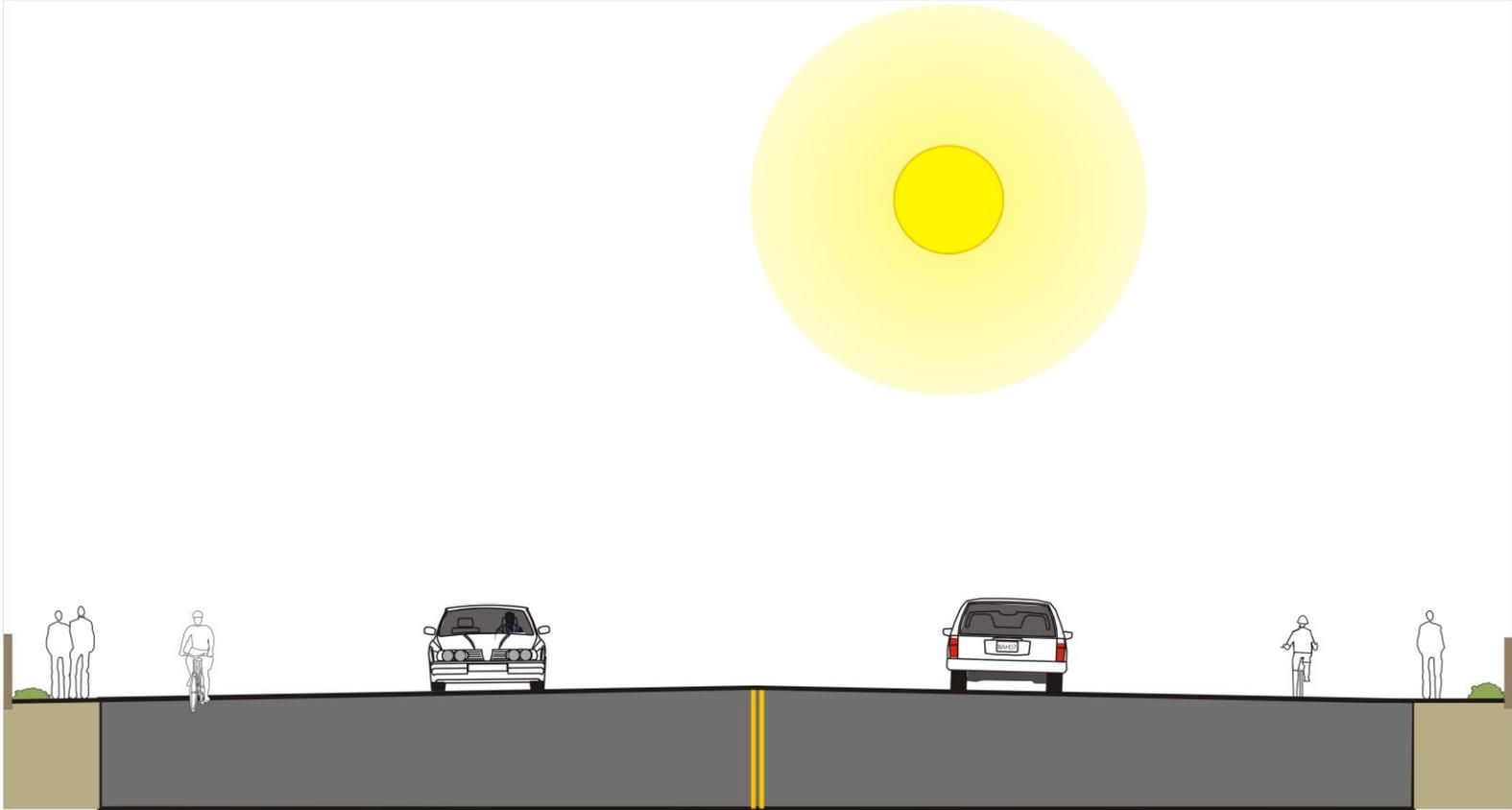


Arvin's 5 Golden Goals

- 1. We will leverage increasing awareness that Arvin's Water Resources issues are critical. The status quo is NOT acceptable; therefore, this reality presents an opportunity to implement new Innovative strategies and policies.***
- 2. We will increase City and interagency collaboration, moving forward toward multi-discipline, multi-benefit and multi funding source design solutions and projects.***
- 3. We will diversify our dependence on sources of water. Rainwater capture, stormwater capture, and use of reclaimed water will be efficiently utilized and "fit for purposes" water use will become a priority concept.***
- 4. We will protect our safety,health and quality of life during drought periods and as future climate change impacts are felt. In particular we will increase our tree canopy and maintain the health of trees at all times.***
- 5. We will create tools to foster sustainable water us behavior by the public.***

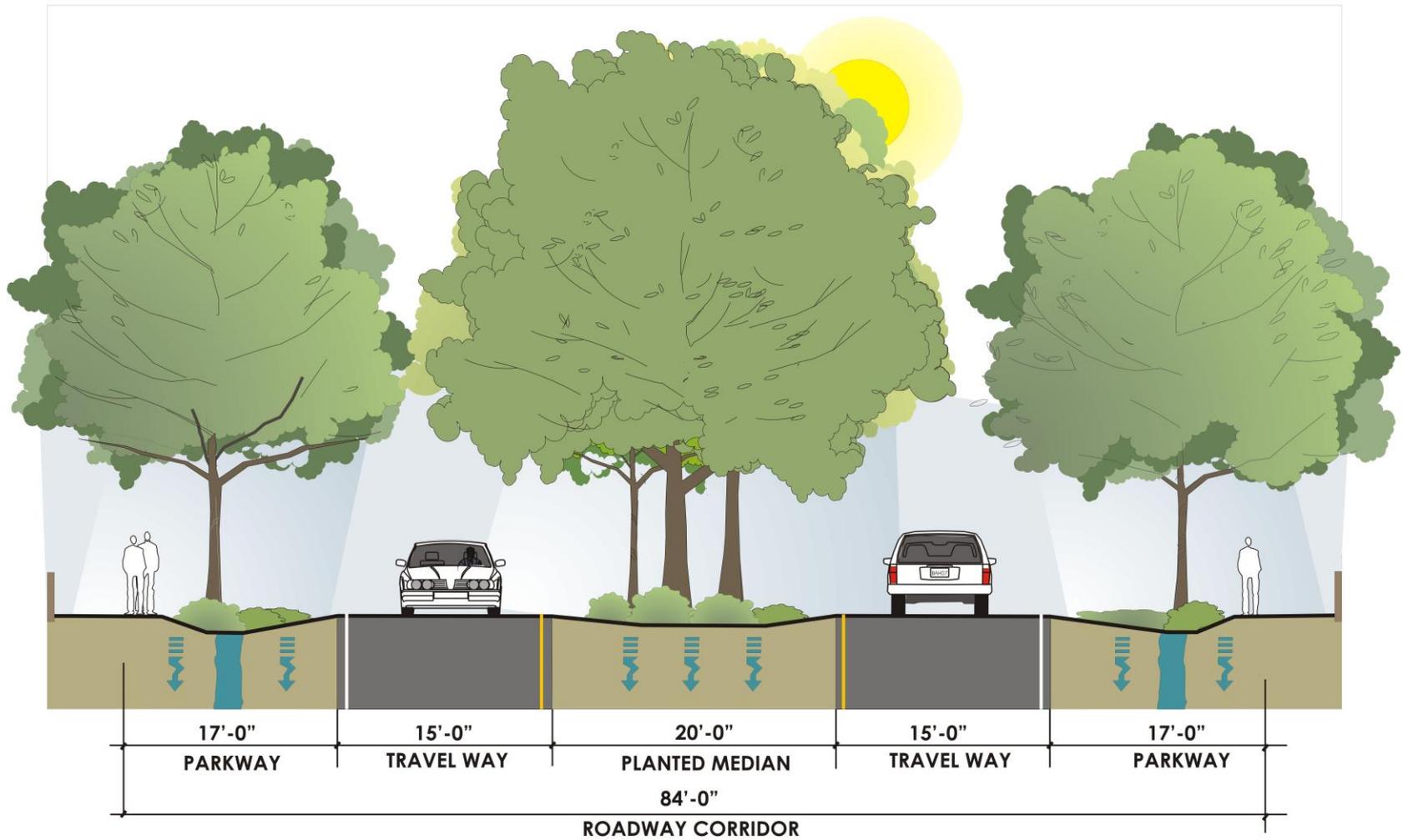
4 Key Implementation Policies

1. Capture storm water by all means possible using multi-benefit designs; and then use that storm water to achieve multiple benefits.
2. Coordinate with Viola to expand and distribute reclaimed waste water to multi benefit projects including parks and roads.
3. Require all infrastructure projects to achieve multi benefits and cost efficiencies including: expanding grant funding possibilities and utilization of multiple funding sources.
4. Create an Urban Forest in order to achieve multi benefits including: storm water capture, aquifer recharge, storm water peak flow control, urban heat reduction, and mitigation of health issues resulting from dust and air pollution.



84'-0"
Paved Travel Way

EXISTING - SYCAMORE ROAD



PROPOSED - SYCAMORE ROAD

COST BENEFITS

	Capital Cost	Maintenance	Trees
Current Sycamore Street cross section (84 feet X one mile)	\$4,434,200.	\$798,336.	N/A
Proposed Sycamore Street cross section purpose" (84 feet X one mile)	\$1,586,400.	\$285,120. irrigation	Grant funding "Fit for
SAVINGS	<u>\$2,840,800.</u>	<u>\$513,216.</u> (\$26,000. per year/mile)	

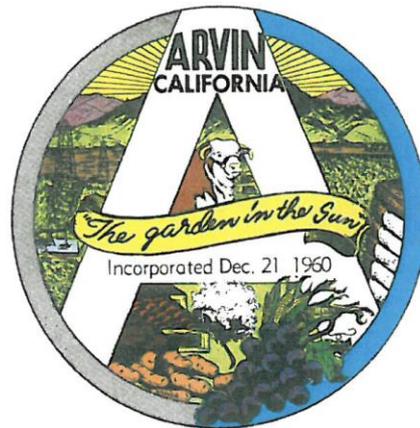
.....

NOTE: An 84 foot by one mile street equals about 10 acres of surface.

	Dust and Air Pollution	Storm Drainage
Current Sycamore Street 84 feet by <u>one mile</u>	<u>10 acre</u> surface area which collects kicks up dust	10 acres of impermeable surface requiring storm drainage system
Proposed Sycamore Street 30 feet paved by one mile	<u>1.3 acre</u> surface area which collects kicks up dust	10 acres of storm water catchment, no or minimal storm drainage

The narrowed streets will slow traffic to safer speeds, and in 10 years the roadway will be beautiful, in 20 years the roadway will inspire.

Questions and comments



Arvin Water Resources Element



Arvin Water Resources Element

And it never failed that during the dry years the people forgot about the rich years, and during the wet years they lost all memory of the dry years. It was always that way.

- East of Eden, John Steinbeck



Prepared for
City of Arvin

Prepared by



Jim Holloway Consulting



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Arvin Water Resources Element
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Executive Summary

California's richest agricultural region is located in the San Joaquin Valley—a region stretching from the confluence of the Sacramento and San Joaquin Rivers (San Joaquin Delta) in the north to the Tehachapi Mountains in the south. The agricultural economy of this region is especially dependent on a ground water system (aquifer) that underlies the Valley, as is the City of Arvin and the other 57 cities in the Valley, which depend upon it for domestic uses.



Figure No. 1: A satellite image of the San Joaquin Valley. Arvin rests at the southern end of the Valley, 10 miles east of State Highway 99.

Arvin, population 21,696, is located at the southern end of the San Joaquin Valley, between State Highway 99 and the southern extension of the Sierra Nevada. Arvin's domestic water is provided by the Arvin Community Services District (ACSD) that secures its water by pumping from the local ground water system. Helping to maintain that ground water system is the Arvin-Edison



Water Storage District (AEWSD), which imports water to the region via the Friant-Kern Canal and the California Aqueduct.

The San Joaquin Valley is a global agricultural powerhouse. Valley farms produce half of California’s total farm output—including most of its fruits, nuts, dairy, vegetables for processing, and livestock feed. These farms are major suppliers to national and international markets.

The Valley’s farms and related manufacturing businesses account for 25 percent of the region’s revenues, 16 percent of its jobs and 89 percent of its annual net water use. In Arvin, 52 percent of its labor force is employed in agriculture. Farming and related businesses are an important economic driver in the Valley, which is now home to more than four million people most of which live in the Valley’s 58 cities.

The Valley faces significant challenges - high rates of unemployment and pockets of extreme rural poverty; public health challenges resulting from unsafe drinking water and poor air quality; and diminishing ground and surface water resources, which have resulted from excessive ground water pumping, climate change, conversion of crop types from field crops to permanent plantings (e.g. citrus, nuts, vines and stone fruit), increasing demand for surface water from urban water users in Southern California and regulatory actions that have reduced exports from the Delta.

The Valley’s latest drought (2012 to 2016) underscored the region’s vulnerability to long-term declines in groundwater reserves. The “drought” has led to increased well pumping costs, dry wells, fallowed land, land subsidence, and the declining reliability of domestic water systems especially for the numerous rural communities that are scattered throughout this region. For example, in East Porterville in Tulare County, which relied on shallow wells for their domestic water, a recent drop in ground water depths led to over 4,000 residents being without water for an extended period of time. If not for the City of Porterville and financial assistance from the State, residents in this unincorporated area would still be without domestic water.

The Valley’s crop growing conditions are favorable so long as water is available to irrigate crops during the long, dry summers. Local water supplies are limited in much of the region, especially in the southern half of the Valley, due to the low precipitation in the winter and spring months and the dependency on imported water from wetter regions to the north.

For many decades, many farms have depended on water imported from the wetter Northern California through the Sacramento–San Joaquin Delta and from the Friant-Kern Canal that derives its water from the San Joaquin River watershed. In many parts of the Valley, water imports have not reduced the long-term reliance on the Valley’s ground water system. In fact, throughout the Valley, ground water pumping by farming and urban interests has exceeded that system’s ability to replenish itself, thereby causing water table levels to drop and land to subside in certain isolated areas. In Arvin, water table levels have remained relatively stable due to the efforts of the Arvin-Edison Water Storage District, which has been an effective importer of surface water via the Friant-Kern Canal.



“Water stress” has been on the rise among farmers and water providers in the San Joaquin Valley. Regulatory actions have reduced Delta water and Millerton Reservoir exports that supply water to Friant contractors like Arvin Edison. In addition, drought, climate change and regulatory actions in the Delta, which serve to protect threatened and endangered marine life in the Delta environs and minimize salt water intrusion, have infused the discussion on water with terms like change, sustainability, collapse, tipping point, and worry.

With so many changes underway, major questions loom about the future of the Valley’s agriculture and the broader consequences for the region’s economy, society, and environment. With the recent defeat of California’s Proposition 3 (an \$8.877 billion bond measure that could have been used for water projects and habitat restoration) in November of 2018, ground water resources in Arvin and the greater Kern County will continue to be under significant pressure. Proposition 3 would have provided funds to “fix” the Friant-Kern Canal south of the Tulare/Kern County line where land under the Canal has subsided which has reduced its capacity to convey water to the Kern County region.

This Element begins with the premise that managing the ground water system under Arvin so that it remains in a sustainable state is not only important to the City but also to the larger agricultural community, because urban and agricultural uses “drink” from the same ground water system. Arvin’s economy and well-being, like most cities in the Valley, is tied to the local agricultural economy. When agriculture suffers due to lack of imported water or falling water tables, Arvin also suffers – higher unemployment rates, reduced property and sales taxes, and higher crime rates. This Element will not solve the Valley’s agriculture/water dilemma, however, there are tools and strategies mentioned in this document that do lay a foundation for potential solutions.

The issue of water in the Valley is complex, controversial and political. In order for the reader to better understand this issue, this report will provide extensive amounts of background material, located in the Appendices, on water so that more informed decisions on the topic can be made going forward.

While it is important to understand the big picture, which provides context, it is at the local level where action is most effective. In the case of the City of Arvin, the City Council sets policy and controls the budget. Staff implements that policy. The combined efforts of clear policy direction and consistent implementation of policy can create powerful and positive change in Arvin.



Arvin Water Resources Element 1: Executive Summary

With the preparation of this Element, and discussion with various stakeholders, the Consultant has learned that there are several major issues facing Arvin related to water management. Those issues include: planning for droughts, water supply, water quality, flood mitigation, urban heat island effects, air quality, budget and SGMA (ground water regulations).

After study, two very powerful ideas surfaced. First, many of the solutions to water issues, which is the subject of this Water Resources Element, are also good solutions for mitigating the other Arvin issues discussed above. Second, the solutions to these issues and problems, when fully implemented, could save hundreds of thousands of dollars for Arvin's general fund.

These issues and ideas are discussed in the chapter titled "Lessons Learned and Arvin". Following that chapter is the actual Water Resources Element, which includes five "Golden Goals", policies and implementation programs which will advance Arvin's Vision and Mission Statement, provide a higher "quality of life" in Arvin, and save hundreds of thousands of dollars for Arvin's general fund (see discussion on page 42).



Introduction

Collins & Schoettler, Planning Consultants, was selected to prepare a Water Resources Element for the City of Arvin. The preparation of this Element began with collaboration with state water agencies, Arvin-Edison Water Storage District (AEWSD), Arvin Community Services District (ACSD), Veola (the private contractor for the management of Arvin's waste water treatment facility) and city contract employees (city planner and engineer). The Consultant also reviewed water literature from early California water history to the Sustainable Groundwater Management Act (SGMA), and from California water law to publications describing how other countries have managed their water resources.

Guiding the Consultant's work in the preparation of this Element was the Arvin City Council's vision for the City of Arvin (established on March 28, 2015), which reads as follows:

"Arvin is safe, healthy, vibrant, and economically diverse with a sense of community and where quality of life is valued."

During the Council's work session, a mission statement was also crafted. This mission statement reads as follows:

Our mission is to provide responsive, quality service to our community; maintain an accessible, safe, healthy, environmentally sound and culturally rich city; drive innovative solutions; create a partnership between the community and its government through respectful governance; and do so in an economically sustainable manner.

The management of water in the San Joaquin Valley and specifically in the City of Arvin is very complex, controversial and challenging. For example, the Arvin Community Services District has had to treat its water for arsenic and 1,2,3 TCP (trichloropropane), both of which require costly mitigation treatments, while simultaneously ensuring that the District's system is free of leaks, maintains proper water pressure and allows for future urban growth.

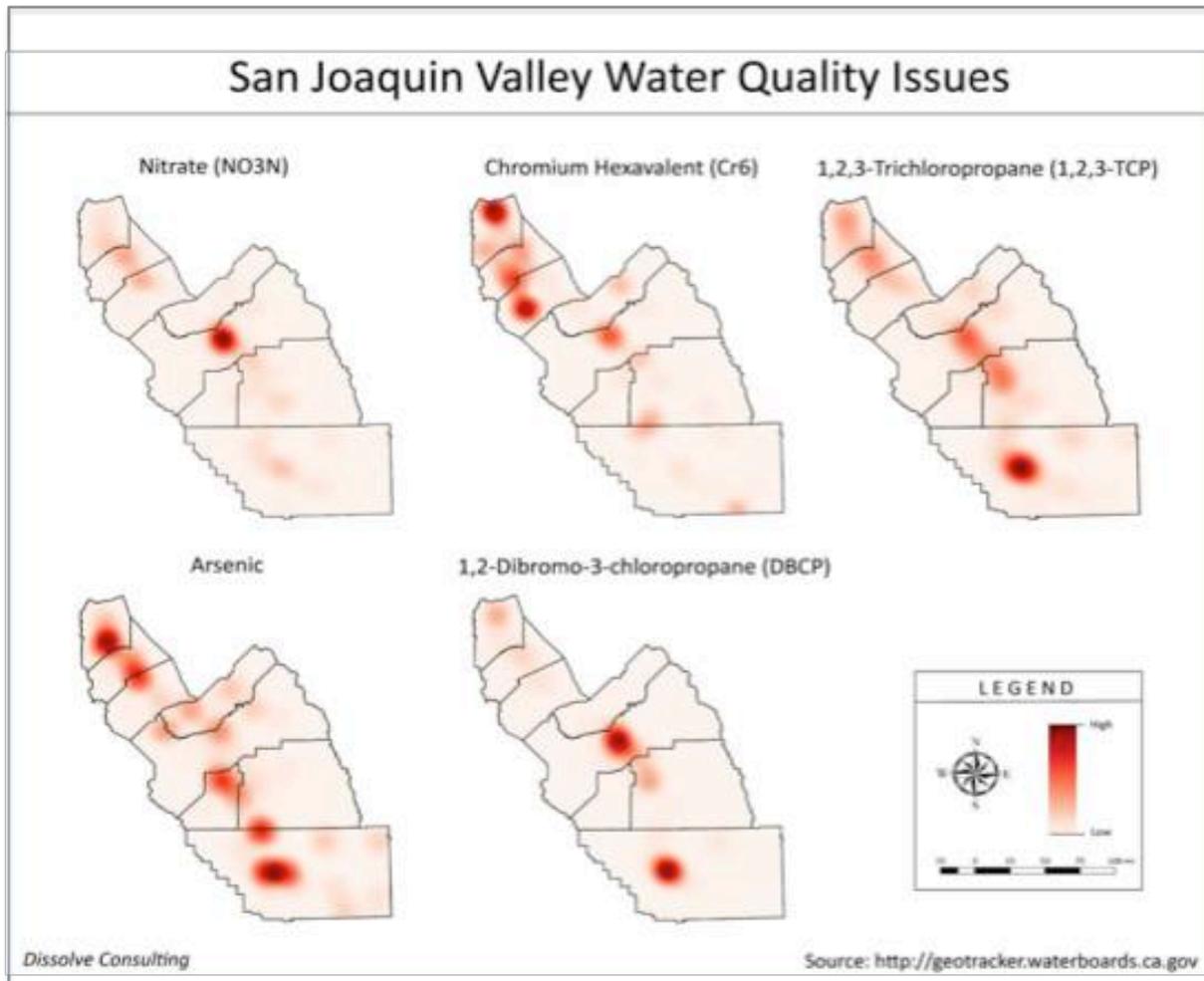


Figure No. 2: Valley cities and communities are subject to numerous contaminants some of which are naturally occurring and some the result of agricultural applications. Often disadvantaged communities (DACs) run into well contamination because their wells are shallow and must be extended deeper to avoid chemical contamination.

The health, safety and quality of life of residents in Arvin is closely tied to a sustainable and reliable domestic water source that is safe for drinking, bathing and outdoor irrigation. Further, water is important to Arvin's economy because of its close association with agriculture.

In the San Joaquin Valley water comes from two sources: ground water (aquifer) and surface water (imported and native). In the case of Arvin, ground water is its sole source of domestic water. This is the case for most cities in the Valley, however, there are some cities (Avenal, Orange Cove, Fresno and Lindsay) that utilize treated surface water from the California Aqueduct or the Friant-Kern Canal.



In the San Joaquin Valley there are a myriad of issues related to water including, quantity, quality, land subsidence, cost, distribution, storage, water rights, environmental quality, and of course, politics. If these issues were not enough, it gets more complicated because the regulation and management of water in the San Joaquin Valley is divided among three federal agencies (Bureau of Reclamation, Army Corps of Engineers, U.S Fish and Wildlife), five State agencies (Department of Water Resources, Water Resources Control Board, Department of Health Services, Department of Food and Agriculture and the Department of Fish and Wildlife), eight counties, 58 cities, and hundreds of smaller water-related entities including irrigation districts, ditch and mutual water companies, private and public water companies, and community services districts.

The Consultant will focus primarily on water issues specific to Arvin but notes that water strategies tailored for Arvin are transferable to the other 58 cities in the San Joaquin Valley. Further, the Consultant realizes that no city is an “island” and that water management decisions for the San Joaquin Valley, including the Central Valley Water (CVP) Project, the State Water Project (SWP) and the Arvin-Edison Water Storage District (AEWSD) can also have implications for Arvin.

Rather than attempting to solve all the water problems in the San Joaquin Valley, the Consultant has focused on the City of Arvin. However, this has not prevented the Consultant from wading into water issues in the greater San Joaquin Valley.

In order for the Consultant to focus on Arvin's water issues, five "Golden Goals" have been established for the city's Water Resources Element.

FIVE GOLDEN GOALS FOR ARVIN'S WATER RESOURCES ELEMENT

1. *When the status quo is NOT acceptable, this presents an opportunity to implement new innovative strategies.*
2. *Collaborate on and utilize multi-disciplinary/multi-benefit strategies on public and private projects*
3. *Diversity dependence on water sources*
4. *Protect safety, health and quality of life during drought/climate change*
5. *Foster sustainable water use behavior by the public*



Water issues for urban and agricultural users are distinctly different but, in some cases, the same - not enough water. Agriculture needs its water during the growing season while urban users need it throughout the year but more during the summer months when outdoor irrigation takes place.

According to the Water Association of Kern County (WAKC), 93 percent (2,294,000 ac. ft.) of the county's water is used for agriculture while urban uses consume the remaining 7 percent (166,000 ac. ft.). The sources of these waters are outlined in Table No. 1. The average annual percent of water from each source is dependent upon yearly weather conditions, which can have extreme ranges - droughts to floods

Table No. 1
Sources of Water in Kern County (average annual)

Kern River	20 percent
SWP (California Aqueduct)	26 percent
CVP (Friant-Kern Canal)	12 percent
local streams	6 percent
<u>ground water</u>	<u>26 percent</u>
TOTAL	100 percent

Source: Water Association of Kern County

Note: The City of Arvin receives all of its domestic water from ground water.

To clarify how urban and agricultural water users are interconnected, a description of Arvin's water system is as follows:

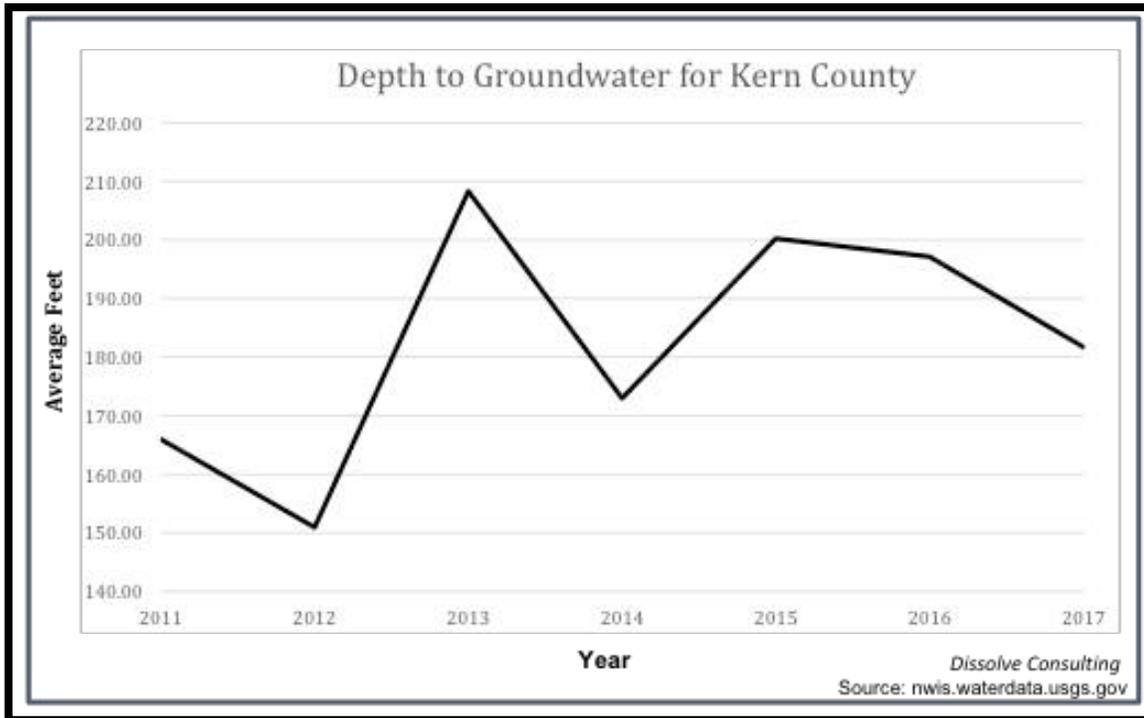
1. The Arvin Community Services District pumps water primarily for domestic use from the ground water system using a series of wells (Note: The District pumped 1,949 acre-feet of water in 2017.) The District has 4,000 connections and serves a population of 22,000 persons.
2. The ground water system under Arvin is managed by the Arvin-Edison Water Storage District for the benefit of its land owners. The District replenishes the ground water system by sinking water in its recharge basins (1,800 acres), which it receives from the CVP as well as in-lieu recharge with CVP water.
3. The Arvin-Edison Water Storage District (in addition to serving farmers in the District) also helps to ensure that the ground water system under Arvin remains in a sustainable condition. The District spreads water in its many basins when there is a "wet" year in the Valley.

In dry years farmers will pump ground water for irrigation because surface water being delivered to the District is limited. The District's system of "recharging in wet years and pumping in the dry years" has allowed Arvin to have an underlying ground water system that has escaped the major drops in ground water depth experienced by other cities throughout the Valley (Note: Between 1966 and 2002, AEWS D has imported 5.7 million acre feet of water from the CVP, and has



recharged approximately 1.6 million acre of water during this time period). Figure No. 2 shows that the water table under Kern County has remained fairly resilient throughout the Drought Years – 2012 to 2016.

Figure No. 3: Depth to Groundwater in Kern County



Even during drought years, the water table under most of Kern County remained stable.

4. The amount of water that AEWS D receives for "recharge" has recently been hampered by subsidence (resulting from over pumping of groundwater) along certain segments of the Friant-Kern Canal. Subsidence reduces the amount of water that can be conveyed to the District by this canal thereby reducing the amount of water it can recharge into the local ground water system, which in turn affects the ground water system under Arvin. Table No. 2 shows that the 858,000 acre-feet of water delivered down the Friant-Kern Canal in 2018 by the CVP could be in jeopardy due to subsidence along the Canal. During the drought years, CVP water deliveries along the Friant-Kern Canal fell from 928,007 acre-feet in 2009 to a low of 124,321 acre-feet in 2014, which was in the middle of California's five-year drought. Figure No. 4 shows areas in the San Joaquin Valley that are experiencing subsidence.

5. Politics (federal and state legislation) and regulatory action can also influence the amount of water diverted from the Delta for the State Water Project and the Central Valley Project. For example, the court ruling, which led to the San Joaquin River Restoration Program, requires a certain volume of water be released down the San Joaquin River. This reduced the amount of water that flowed south along the Friant-Kern Canal and subsequently the amount of water available for irrigation and recharge within the Arvin-Edison Water Storage District.



Table No. 2
Central Valley Water Project Water Deliveries

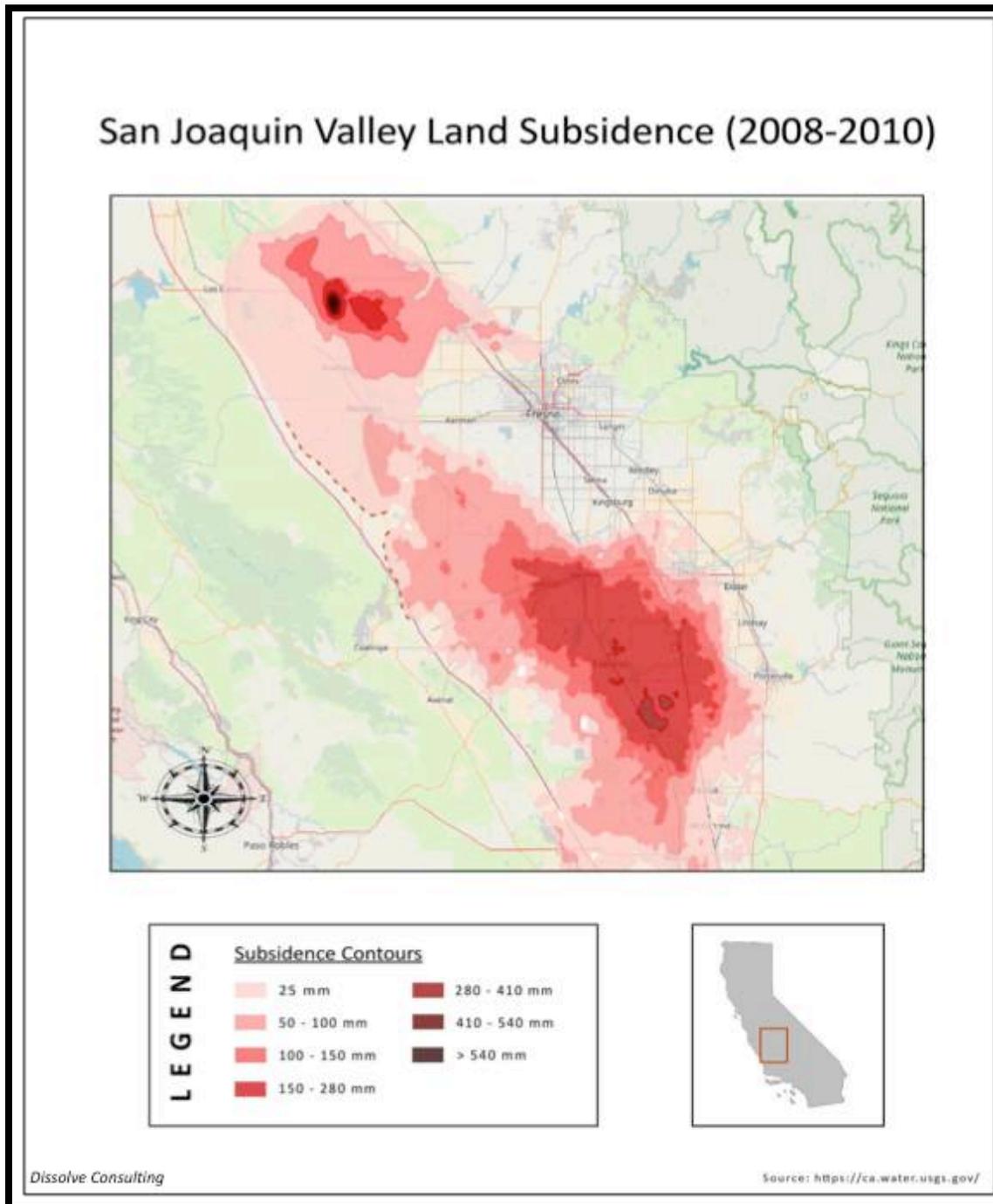
	2009	2014	2016	2018
CVP Total	4,900,789	2,937,198	5,568,511	7,070,216
North Delta	1,974,526	1,298,471	3,049,610	3,049,610
South Delta	1,297,960	968,325	1,335,902	2,237,606
Contra Costa in Delta	100,520	94,075	195,000	170,000
New Meiones East Side	599,776	452,006	0	155,000
East-Side Water Rights	0	0	600,000	600,000
Friant	928,007	124,321	388,000	858,000

Dissolve Consulting Source: <https://www.usbr.gov/mp/cvp-water/>

Source: United States Bureau of Reclamation



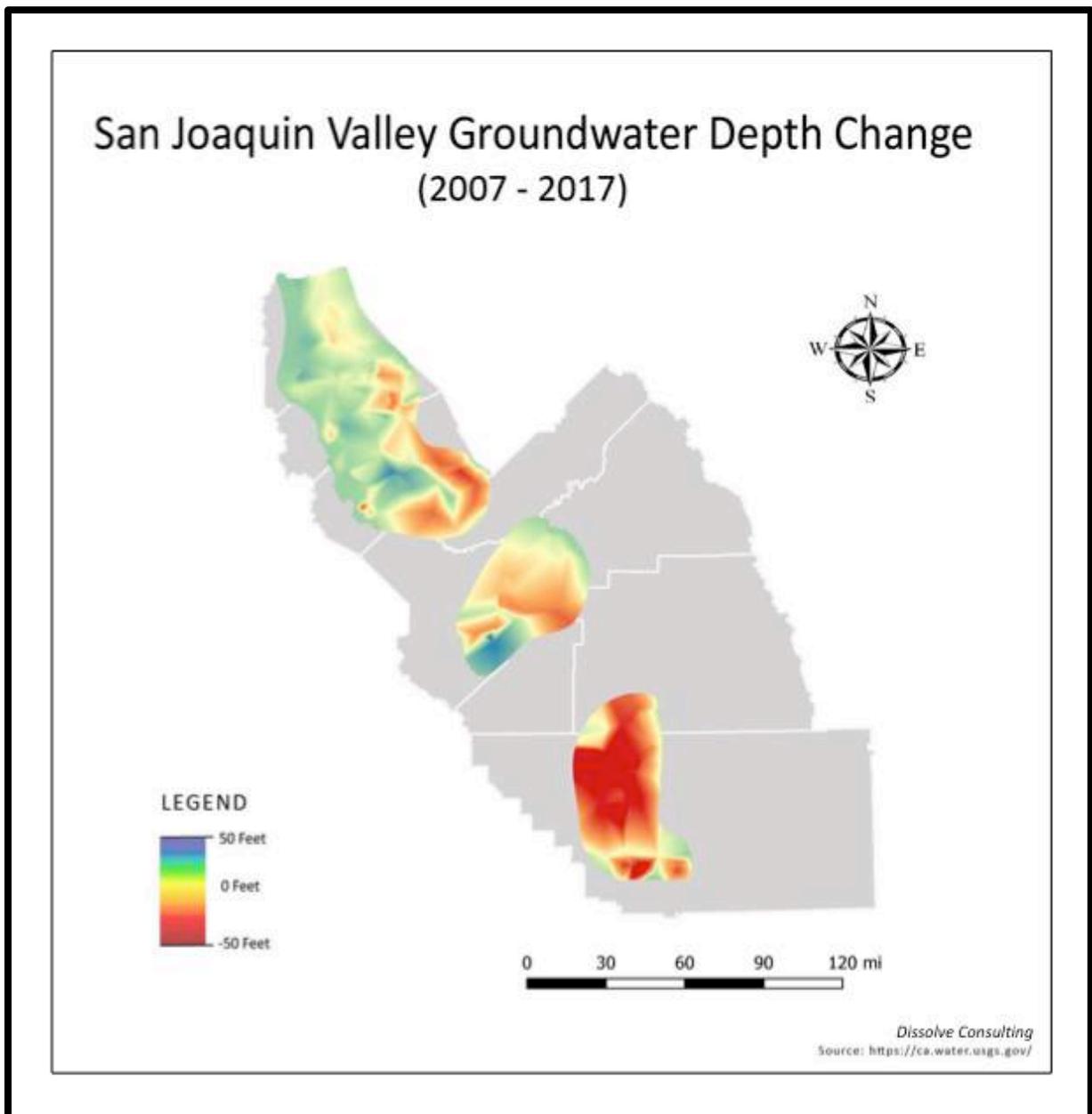
Figure 4: Land Subsidence in the San Joaquin Valley



Land subsidence along the southern reaches of the Friant-Kern Canal and California Aqueduct have reduced water deliveries to Kern County and the Arvin-Edison Water Storage District.



Figure 5: Groundwater Depth Change



Since 2007 and especially between the years of 2012 to 2016, the Valley's extended drought has caused water table depths to drop dramatically, especially in Kern County and southern Tulare County.



This Water Resources Element will provide tools (goals, policies and implementation strategies) for the City of Arvin and the Arvin Community Services District, which will contribute to sustainability and resiliency of the ground water system under Arvin.

Even with the construction of two monumental water projects - SWP (California Aqueduct) and CVP (Friant-Kern and Madera Canals); the construction of five federal reservoirs - Terminus Dam (Lake Kaweah), Friant Dam (Millerton Lake), Pine Flat Dam (Pine Flat Lake), Success Dam (Success Lake) and Isabella Dam (Isabella Lake); and the conservation efforts of hundreds of water agencies throughout the San Joaquin Valley, the Valley continues to suffer from an "overdraft" of its ground water system. These facts indicate that as currently managed, the Valley's ground water system is becoming less and less sustainable and could eventually collapse in the future.

The ground water crisis is not unique to the San Joaquin Valley. Cities in other countries and the American Southwest have had to contend with sinking water tables. These cities and communities have responded to this water crisis by adopting policies and strategies to overcome this crisis. "Lessons learned" from these entities will be incorporated into the Arvin Water Resources Element. It is not necessary to "reinvent the wheel" when other cities and communities have already fashioned reliable and tested water conservation strategies.

The Consultant has reviewed a number of case studies on how other cities and countries have managed their water resources, which not unlike the San Joaquin Valley, can be limited from year to year. Two case studies stood out:

Cities throughout Australia responded to a 12-year drought by embracing a multitude of water conservation strategies that markedly reduced per capita water consumption - Melbourne from 121 gallons per capita per day (gcpd) to 65 gcpd and Adelaide from 87 gcpd to 60 gcpd. These strategies are transferable to the City of Arvin as well as other cities in the San Joaquin Valley and will be discussed later in the next chapter, "Lessons Learned and Arvin."

The second case study focused on the country of Israel. Their water management strategies are more applicable to the larger San Joaquin Valley. In Israel (population: 8,500,000), most of which is arid much like the San Joaquin Valley (population: 4,080,589), their entire history as a country (1948) has been devoted to utilizing their limited water resources efficiently - drip irrigation instead of flood or sprinkler irrigation, selected crops that are not high water users, and treatment of wastewater so that it can be utilized for crop irrigation. Today, Israel leads the world in



irrigation technology, much of which has been embraced by agriculture in the San Joaquin Valley.

Unlike the Valley, however, Israel formed a national system to manage the country's water resources, called the Israel Water Authority. This Authority promotes a national system that embraces redundancy and overlapping water supplies. The Authority promotes water conservation innovation, construction of desalinization plants, fixing leaky infrastructure, and formation of new companies that focus on irrigation and related technologies (e.g. Netafim). By contrast, the hundreds of water providers in the San Joaquin Valley have their own board, manager and set of policies.

The adoption of water-conserving irrigation technology in the San Joaquin Valley is evident in Table No. 3, which shows the trend from 1991 to 2010 regarding irrigation methods in the San Joaquin Valley. The Consultant suspects that the trend towards more water efficient irrigation methods have continued through 2018, especially given impending Sustainable Groundwater Management Act (SGMA) requirements.

For example, in the case of irrigation of almond orchards, micro sprinkler systems that are connected to satellite data are being used to manage irrigation water as compared to the traditional furrow irrigation approach. Today almonds require about 4 acre-feet of water per acre for irrigation but with more sophisticated satellite data, sprinkler design, and time management this irrigation requirement could be reduced.

Table No. 3 Trends in Irrigation Methods in the San Joaquin Valley, 1991-2010

Irrigation Method	1991 (percent of acres)	2010 (percent of acres)
gravity (furrow/flood)	67 percent	43 percent
sprinkler	17 percent	15 percent
drip, micro sprinkler	15 percent	39 percent
<u>subsurface</u>	<u><0.1</u>	<u>3 percent</u>
Total	100 percent	100 percent

Source: DWR, California Water Plan Update 2013, Volume 3, Agricultural Water Use Efficiency.

According to the State Department of Water Resources (DWR), drip and micro-sprinkler irrigation systems are reported to have the highest irrigation efficiency (87.5 to 90.0 percent) when compared to furrow and gravity systems, (67.5 to 75.0 percent). In other words, improved irrigation technologies in the San Joaquin Valley should continue to mirror irrigation methods long used in Israel.

Lessons learned from Australian cities can be implemented by Arvin and other cities in the San Joaquin Valley. On a larger agricultural scale, Israel provides water conservation and irrigation strategies that are transferrable to San Joaquin Valley agriculture. These two water users, urban and agriculture, draw water from the same source - the Valley's ground water system. Therefore, they both benefit from a long-term water conservation strategy.



The Arvin Community Services District (ACSD), in collaboration with the City of Arvin, Veola and the Arvin-Edison Water Storage District, will be the primary beneficiaries of enhanced water conservation strategies recommended in this Element.

ACSD (the provider of domestic water to the City of Arvin) prepared their first Urban Water Management Plan in 2015. The State Water Resources Control Board, Division of Drinking Water, requires this Plan for all utilities that provide drinking water to the public. The Plan is designed to describe the District's water system; document the system's demands, supplies, and reliability; and detail for District residents the contingency plans for water shortages, contamination and water system deficiencies (e.g. leaky pipes; lack of backup generators, poor producing wells, and lack of pressure).

Table No. 4 below shows the District's water production and delivery statistics for the years 2001 to 2010 and 2017. Recently provided data from the District for 2017 shows that production and delivery numbers dropped to 1,949 acre-feet and 1,771 acre-feet, respectively, from higher acre-foot figures for 2010. According to the District, the differences between production and delivery may be due to two factors: pipe breaks and differences in the accuracy of the pump station metering and the individual service meters.

Table No. 4: ACSD Water Production and Deliveries

Historic			
Year	Number of Connections	Water Production (Acre-Feet)	Water Deliveries (Acre-Feet)
2001	2,624	2,578 afy	2,144
2002	2,758	2,686	2,256
2003	2,829	2,848	2,304
2004	2,892	2,885	2,302
2005	2,996	2,748	2,282
2006	3,194	3,010	2,501
2007	3,390	3,176	2,381
2008	3,448	2,903	2,398
2009	3,497	3,188	2,501
2010	3,446	2,946	2,299
2017	4,000	1,949	1,771

Source: Arvin Community Services District

Arvin's population in 2018 was 21,696 up 1.1 percent from 2017 (21,312). Since 2010, Arvin's population has been growing at an average annual rate of 1.3 percent. This is significantly slower than the decade from 2000 to 2010 when Arvin grew at an average annual rate of 4.9 percent.



Table No. 5 Arvin Population

	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2018</u>
Population	12,956	16,095	19,270	20,113	21,696

U.S. Census and State Department of Finance

While the population in Arvin increased 1.3 percent on average since 2010 (see Table No. 5), the District's totals for water production and delivery has decreased by 4.8 percent and 3.3 percent annually, respectively. The water production/delivery decrease could be attributable to a number of related factors including, a more water conservation-minded population, the Green Building Code and/or higher water rates, causing a reduction in consumption.

The best metric for accessing water conservation strategies is the gallons per capita per day (gpcd) figure. In 2013, Arvin's residents were consuming 152 gpcd. By 2018 that figure had dropped to 95 gpcd. In Arvin and the San Joaquin Valley, the month-to-month gallons per capita per day can range dramatically. In Arvin for example, during the winter months the water consumption is 45 gpcd (February); in the summer months when outdoor watering occurs this figure rockets to 106 gpcd (July) - a 135 percent increase!

**Table No. 6
Residential Water Consumption by Cities in San Joaquin Valley**

<u>City</u>	<u>2013</u>	<u>2017</u>
Arvin	152 gpcd	95 gpcd
Bakersfield	264	235
Bakersfield (Cal Water)	239	201
Clovis	246	205
Delano	114	84
Fresno	215	177
Hanford	140	82
Kingsburg	401	246
Madera	155	113
Merced	308	207
Modesto	249	184
Porterville	190	150
Shafter	187	156
Stockton	116	93
Tulare	201	182
Visalia	208	177

Source: State Water Board



The State Water Resources Control Board implemented conservation strategies for the entire State starting in July, 2014. The Board started a monitoring program for California's 361 water suppliers that provided domestic water to 93.5 percent of of the State's population. Water usage was documented by city and by hydrologic region. From May 2013 to May 2018, statewide water savings reached 20.2 percent.

The San Joaquin Valley exceeded statewide urban water conservation efforts during the years 2015 to 2018. It is important to note that the San Joaquin Valley, composed of the San Joaquin River and Tulare Lake basins, experienced significant groundwater overdraft conditions during this period of conservation. One could surmise that Valley residents responded to the State's call for heightened water conservation efforts due to their knowledge of the overdraft condition.

Table No. 7
Water Conservation by Percent in the San Joaquin Valley

Hydrologic Region	Year			
	2015	2016	2017	2018
San Joaquin River Basin	34.9 %	34.3 %	24.4 %	23.4 %
Tulare Lake Basin	31.5	31.1	23.1	18.3
Statewide	29 %	28.1 %	19.9 %	20.2 %

Note: Conservation measurements were documented during the month of May for each year. The above water conservation figures are based on a baseline figure for each basin as of May, 2014.

Source: State Water Board

Table No. 8
Water Consumption by Hydrologic Region

Hydrologic Region	Year				
	2013	2015	2016	2017	2018
San Joaquin River Basin	186	127	138	143	152
Tulare Lake Basin	220	155	167	182	184
Statewide	134 gcpd	98	105	111	109

Note: gcpd = gallons per capita per day

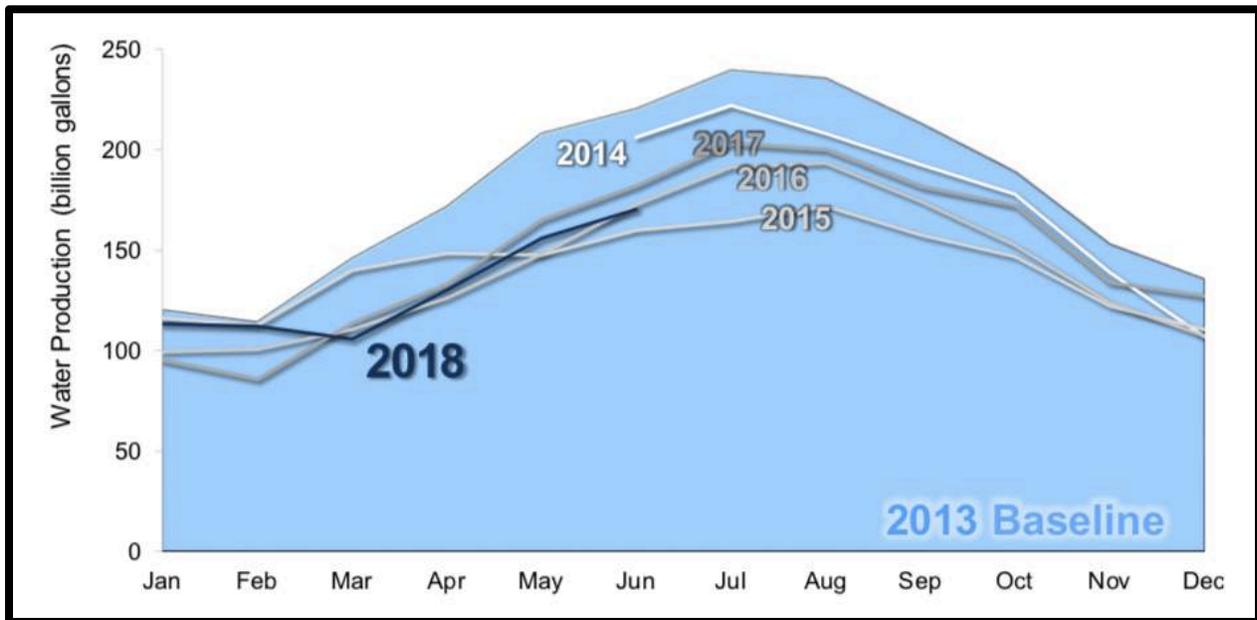
Source: State Water Board

Although the Valley responded well to the State's call for water conservation, it is apparent from Table No. 8 above that residents in the Valley typically exceeded the State as a whole in terms of gallons per capita per day (gcpd) water consumption.



Statewide water savings reached 16.8 percent in June 2018 (105,376 acre-feet, or 34.3 billion gallons) compared to June 2013 potable water production for the 360 suppliers reporting in both periods. The graph below shows the statewide urban potable water production from June 2014 through June 2018. For the 360 suppliers reporting for June 2018 (representing 93.4 percent of population served by urban water suppliers), the potable water production was 170.4 billion gallons (see Figure No. 6). The statewide water production in June 2013, for all 409 urban water suppliers, was 220.3 billion gallons.

Figure No. 6:
Water production for 360 statewide water producers by water production over time.



Source: State Water Board

Because the San Joaquin Valley has an arid environment (Note: by definition it is a desert) it would make sense that per capita water consumption should mirror the climatic conditions that Valley residents live under. In other words, Valley residents should have water consumption rates similar to other cities located in arid regions like the Southwest. For example, in 2015 Flagstaff consumed 116 gcpd; Tucson, 80 gcpd; Albuquerque, 127 gcpd; Sante Fe, 95 gcpd; and Phoenix, 108 gcpd. However, avoid emulating the champion of water guzzling cities (but not unexpected), Las Vegas at 219 gcpd.

If Valley cities were to consume water similar to cities in the Southwest such as Phoenix, Flagstaff, Tucson or Sante Fe, or equal the California average of 94.4 gcpd, the stress on the San Joaquin Valley's ground water system would be diminished. Obviously however, it is only major water conservation in the agricultural sector that will reverse the trend of overdrafting of the Valley's groundwater system, especially when one notes that water use statistics for Kern County show agriculture consuming 2,294,000 acre-feet annually while urban use was a proverbial "drop in the bucket" at 166,000 acre-feet annually. However, the existential threat to Arvin is overdraft of the



aquifer directly below the city.

Eighty-four percent of the Arvin Community Service District's water delivery was devoted to residential uses, 10 percent towards commercial/institutional uses and the balance for industrial users and open space (schools, parks, etc.).

The District receives its water from six wells that have well depths that range from 730 feet to 1080 feet. The recent static water table at the District's well sites range from 360 to 480 feet. The District's older wells are contaminated with arsenic, exceeding a concentration of 10 ug/l. Over time the District intends to replace the older wells that have arsenic contamination with newer wells that will produce water that complies with the State's Safe Drinking Water Standards. As a safety backup, the District could employ a centralized arsenic treatment system at each well site.

In addition to the District having to contend with arsenic contamination it also had to cope with two recent droughts: 1987-1992 and 2012-2016. While water tables around the Valley sank during these time periods, Arvin's ground water levels remained stable. However, this did not prevent the District from implementing various water conservation measures - from education and voluntary measures to mandatory measures that ceased all lawn watering.

The District has explored a number of strategies that could be implemented to reduce water demand, including plumbing retrofits, water meters, rebate programs for high-efficiency washing machines and education programs. These measures and others will be discussed in upcoming chapters.



Lessons Learned and Arvin

This Chapter discusses local state-of-the-art water policies that could make Arvin a “model” for long-term progressive water management in the Valley. As a backdrop to Arvin’s interest in leading Valley cities towards a more sustainable water management model, the Consultant has analyzed Australia’s historic 12-year drought, called the “Big Dry”, and has determined that there are numerous lessons to be learned from Australia’s response to the “Big Dry” many of which, are applicable to Arvin and other cities in the San Joaquin Valley.

The Consultant also learned from interviews with members of the Water Resources Element Advisory Committee that there were several overriding environmental issues and problems that Arvin faces that are water related including:

- long-term water supply dependability;
- water quality, especially related to problems with arsenic and 1,2,3 TCP;
- air quality, given Arvin has some of the worst air quality in the San Joaquin Valley;
- water infrastructure (e.g. pumps, back-up systems, water lines and water meters);
- urban heat island effects; and
- flooding because most of Arvin is in a designated flood zone.



Figure No. 7 shows a flood condition in Arvin. Most of Arvin is in a designated flood zone. Ineffective storm water management can aggravate local flooding conditions.



Water supply reliability was and is the key impetus for development of this Water Resources Element. The Arvin-Edison Water Storage District (AEWSD) has stated:

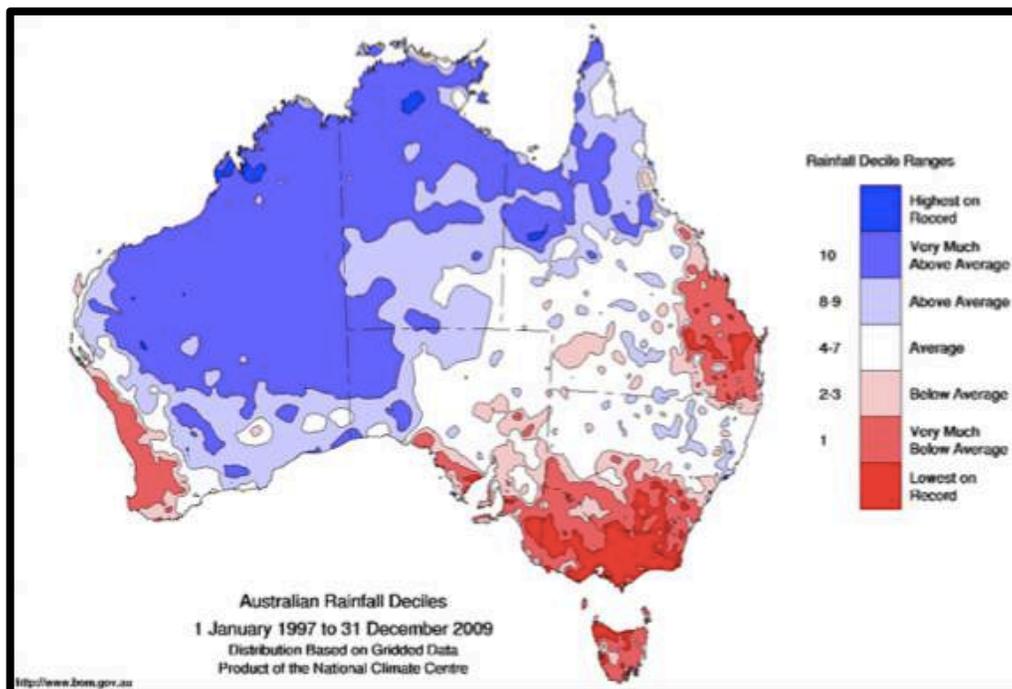
"Groundwater provides a medium-to-good quality of water to the area. From the time of the creation of the district until the present, and well into the future, groundwater will be the only source of water for the district."

Arvin's water supplier, Arvin Community Services District, has noted that an extended drought can have an adverse effect on groundwater pumping levels. The District has benefited from the AEWSD's ground water management efforts, which has stabilized ground water levels in the Arvin area. For the time being, the District's exposure to the effects of drought have been mitigated. However, that is not to say that groundwater levels will not drop due to an extended drought or other actions reducing importation of surface water.

If the overriding water issue in Arvin and the San Joaquin Valley is making contingency plans for drought then the question becomes, what can we learn from other cities or countries who have experienced an extended drought? California's most recent drought extended for five years from 2012 to 2016 (Note: an earlier drought lasted from 1987 to 1992 but the granddaddy of all modern droughts in the Valley lasted from 1928 to 1934). Australia recently experienced a 12-year drought lasting from 1997 to 2010.

The "1997 to 2010 Drought" was Australia's greatest rainfall deficit on record. The Drought produced changes to the way Australia managed its water and created a political atmosphere that was supportive of investment, innovation in the field of water conservation and reforms in water law.

Figure No. 8: Rainfall in Australia during the Great Drought from 1997 to 2010.





A contingent from the Los Angeles Public Works Department and the nonprofit organization, Tree People, travelled to Australia to learn about the Drought and what lessons could be learned from Australia's experience. As a result of that visit a booklet was published entitled Transferring Lessons from Australia's Millennial Drought to California: Accelerating Adaptation to Drought Flood and Heat.

As noted above, several of Arvin's key environmental issues related to water include drought, flood, and heat. Rather than trying to reinvent the wheel, the Australian document, and others, were studied by the Consultants. Many of the ideas and policies that are contained in the Arvin Water Resources Element were adapted from the Australian document while other documents including, Stormwater to Street Trees: Engineering Urban Forest for Stormwater Management, were also influential.

The study group from Los Angeles noted that there were "Five Golden Goals" that were learned from the Australia experience. Those "lessons learned" are translated and applied to Arvin as follows:

1. When the status quo is NOT acceptable, this presents an opportunity to implement new innovative strategies.
2. Always collaborate on multidisciplinary / multi-benefit projects
3. Diversify dependence on water sources
4. Protect safety, health and quality of life during drought / climate change
5. Foster sustainable water use behavior by the public

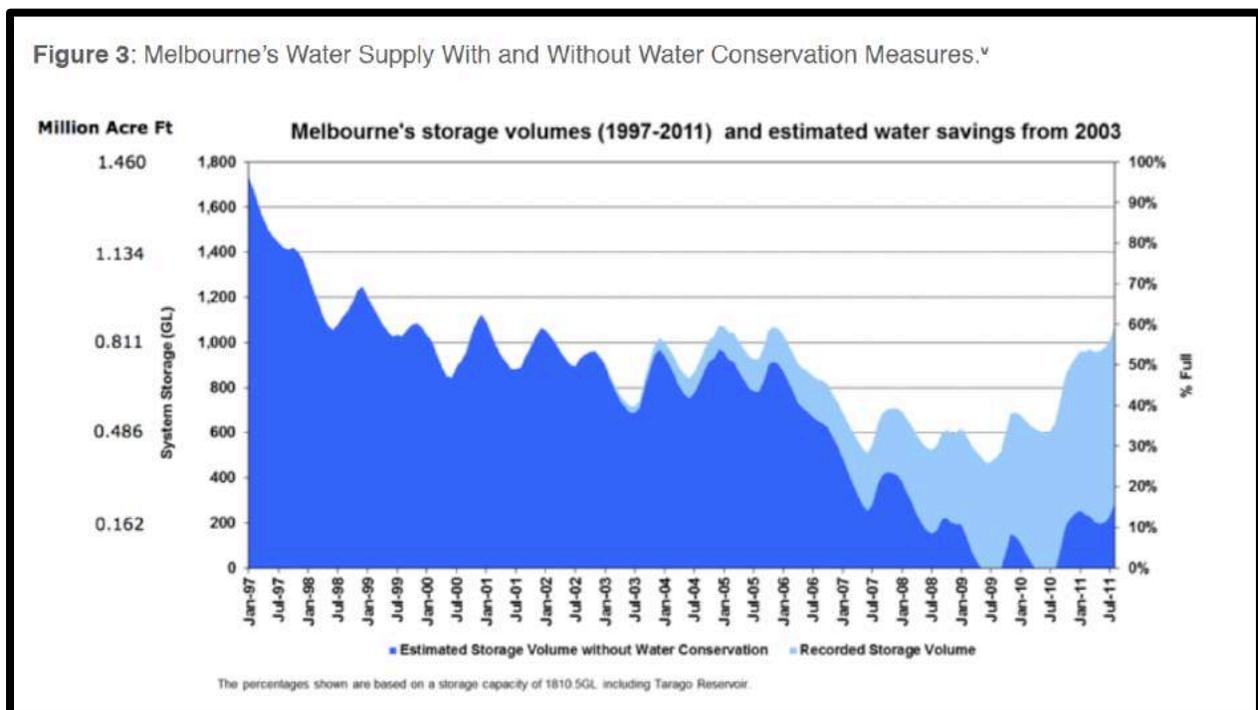


LESSON 1.

Drought urgency represents a unique opportunity to reshape water management and requires smart, swift action (the status quo is NOT acceptable).

Melbourne would have run out of water if they had not acted early on during the Drought. Figure No. 9 below vividly shows that without aggressive water conservation measures Melbourne would have been potentially destined for a “collapse” in terms of public health, the local economy and environmental resources.

Figure No. 9: Melbourne’s water supply with and without water conservation measures.



The study group found that public and political will was receptive to significant changes in water policy during the Drought. For example, the Victorian and South Australian governments implemented the following:

- water use **efficiency** through code amendments and other policy adjustments;
- tiered water pricing doubling the price of water;
- water restrictions (e.g. no use of potable water for ornamental domestic landscaping); and
- aggressive targets for water conservation; wastewater reuse; and stormwater capture and reuse.



While these are not necessarily appropriate recommendations for Arvin, it does show that public policy could be open to dramatic change in times of drought. Some potential policy changes for Arvin and the Arvin Community Services District might be:

SHORT TERM

- Continue to fully implement current Green Building Code requirements, which stress water use efficiency and energy use efficiency.
- Continue to promote conservation and sustainable water use practices.

LONG TERM

Require a multi-discipline / multi-benefit approach for all private projects and public infrastructure projects including streets, storm drainage, wastewater recycling and parks. Two approaches that Arvin and other Valley cities could implement include:

1. Establish stormwater catch, keep and reuse policies to:
 - reduce flood water impacts
 - irrigate public landscaping, which will reduce urban heat
 - recharge the local aquifer
2. Establish policies to develop an urban forest, which will:
 - reduce peak flood quantity flows (Q)
 - capture run off to recharge the local aquifer
 - reduce the urban heat island effect
 - improve Arvin's "quality of life"



LESSON 2.

Collaborate using multi-discipline/multi-benefit projects to create efficiency and water resilience

- Plan integrated projects that maximize the efficient use of rainwater, stormwater and recycled water resources.
- Use multi-discipline/multi benefit designs, which lower cost and helps to recharge the aquifer.
- Design projects to reduce urban heat and reduce peak storm runoff.

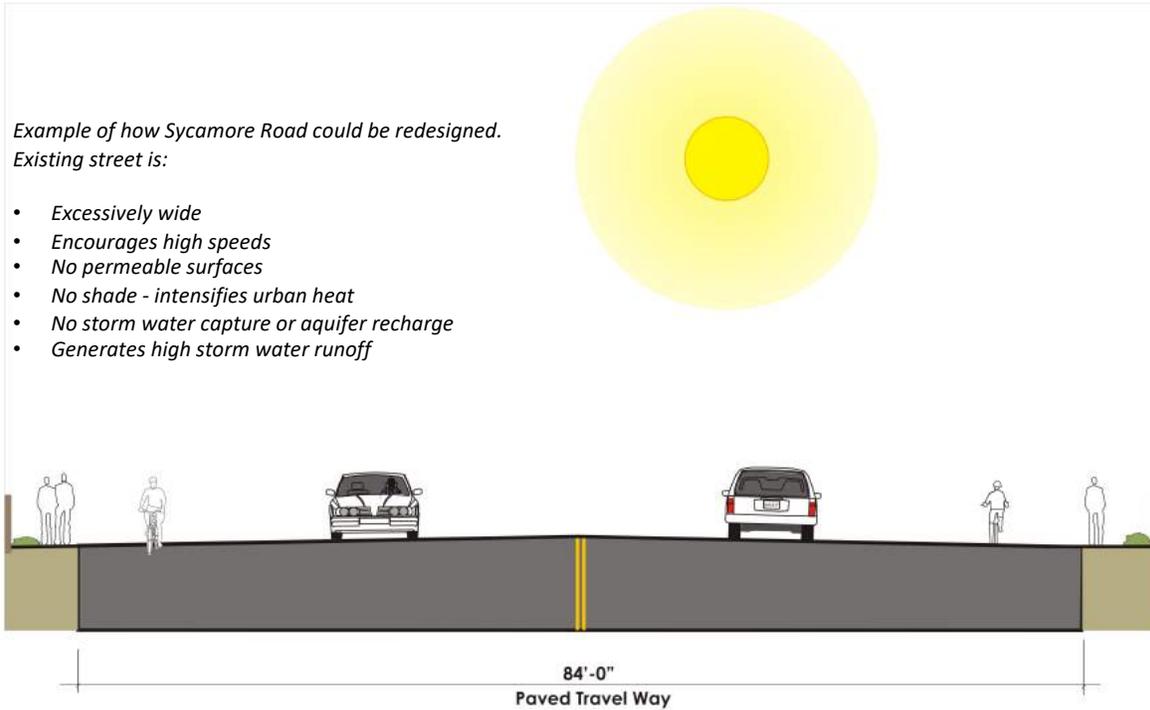
(Note: The City of Los Angeles has already adopted policies requiring multi-benefit/ multi-discipline planning approaches for all public street construction and reconstruction. Besides this approach being beneficial from many environmental standpoints, this approach saves money).

Figure No. 10: Sycamore Road looking west





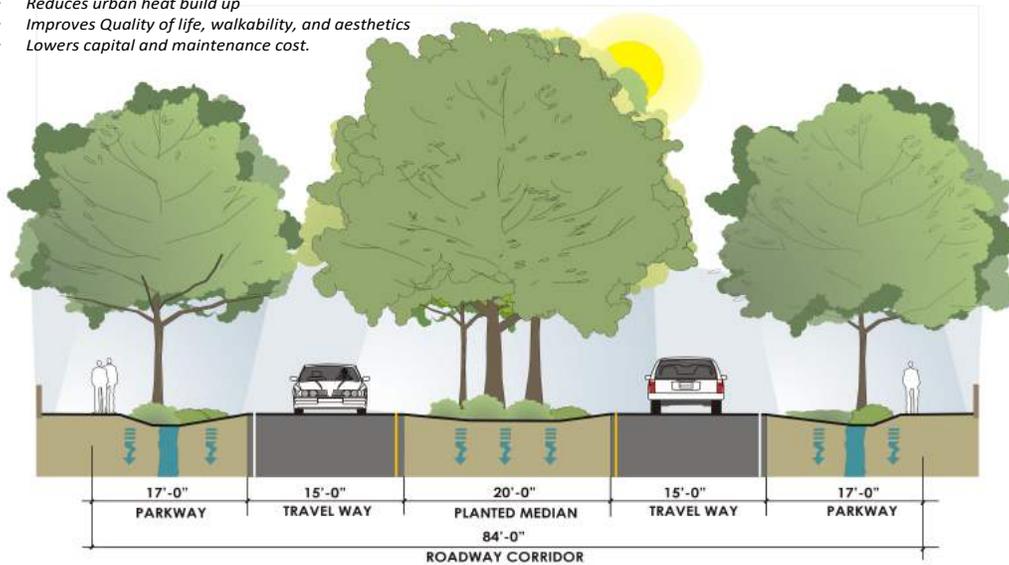
Figure 11: Example of how Sycamore Road could be redesigned



EXISTING - SYCAMORE ROAD

Multi-benefit design:

- Narrower street reduces traffic speeds
- Reduces or eliminates storm water runoff, high Q
- Recharges aquifer
- Reduces urban heat build up
- Improves Quality of life, walkability, and aesthetics
- Lowers capital and maintenance cost.



PROPOSED - SYCAMORE ROAD



LESSON 3.

Diversify water sources to increase water system resiliency

Diversified solutions were encouraged by the Australian government. Performance targets and tight regulation regarding water quality were centered around the priority of maintaining public health. Rather than relying solely on pumping from local aquifers for all water requirements, use of alternative water sources was encouraged including:

- rainwater harvesting,
- stormwater capture and reuse, and
- managed aquifer recharge.

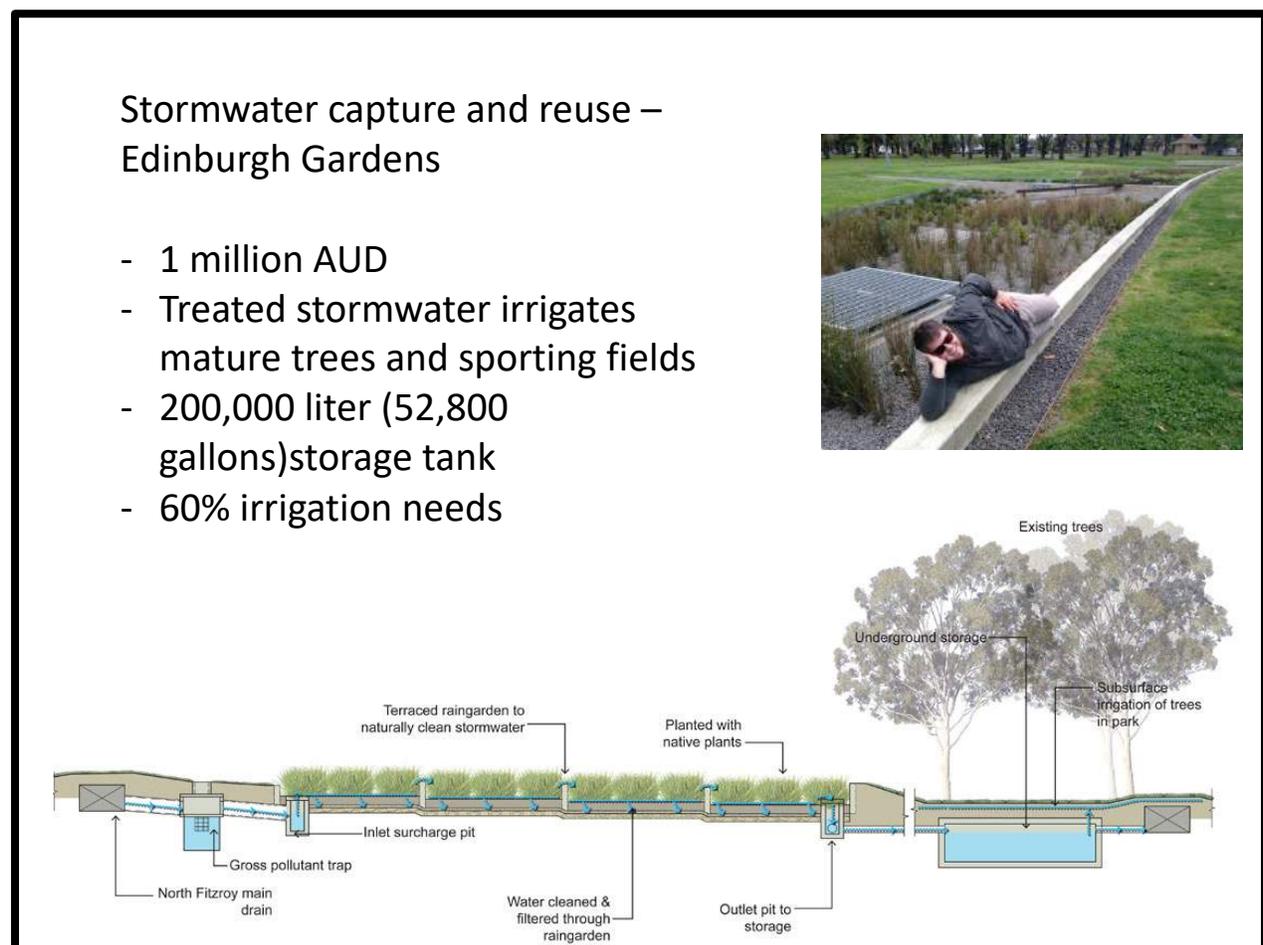


Figure No. 12 illustrates a mechanism for capturing stormwater runoff and providing irrigation for open space features. This capture system also integrates a treatment mechanism whereby certain contaminants are removed from the stormwater runoff.



Rainwater harvesting (RWH)

- Severe water restrictions banned potable water for outdoor landscaping
- Public demanded incentives for RWH tanks and equipment (fave agencies mandate to invest in RWH programs)
- End of drought = 50% of Adelaide household and 30% of Melbourne households

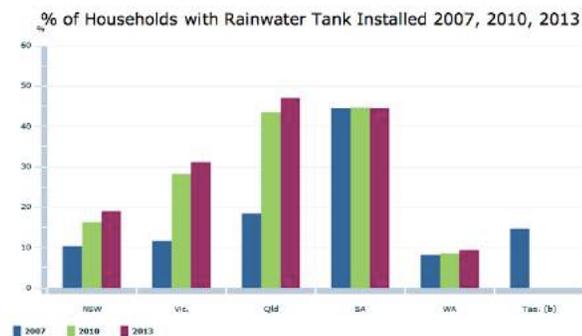


Figure No. 13 shows how rainwater harvesting can be employed in urban settings. This mechanism can reduce the demand for water for outdoor irrigation.

Once diversified water sources were identified and developed the concept of "fit for purpose" was utilized. For example:

- potable water was used only for drinking water and domestic uses;
- water destined for managed aquifer recharge, imported surface water or reclaimed wastewater, was also used for irrigating the urban forest;
- captured stormwater was used to irrigate the urban forest and then used to recharge the aquifer; and
- rainwater harvesting was used for outdoor landscaping, irrigation of the Urban Forest and local aquifer recharge.



Towards the end of the Drought some Australian cities had up to 50 percent of their homes using rainwater harvesting systems. Stormwater capture and storage was used to provide 60 percent of irrigation needs for mature trees and sporting fields.

Taken all together, the diversified alternative water source approach, and “Fit for Purpose” concepts reduced pressure on local aquifers. Pumping and energy cost were also decreased.

LESSON 4

Water scarcity issues are fundamentally tied to public health, safety and quality of life

During the Australian Drought the urban heat island effects became critical. By January 2009, extreme heat events in Melbourne caused a 62 percent increase in mortality rates (980 heat-related deaths). Water restrictions had reduced public green space and shade and urban temperatures were consequently increasing. In particular, failure to take care of trees and tree canopies proved to be a fatal mistake.

While water restrictions were imperative on a city-wide scale, Melbourne learned the critical lesson that special attention must be paid to keeping public green spaces green even during severe droughts. In particular keeping trees healthy during the droughts was essential. There were a number of techniques and strategies that were used to save water but still provide sufficient water to maintain healthy trees.

As a result of “lessons learned” in Australia, strategies were adopted to cool the city's ambient temperature by 4° C, which is about 7 degrees Fahrenheit.

The adopted strategy was to double the city's tree canopy; increase water percolation, greenspace, and stormwater harvesting; and reduce ambient temperatures. By adopting these strategies, the City of Melbourne expected to achieve cooling of the city by 4 degrees Celsius during extreme heat events.

After studying the lessons learned from Australia, and through its experience with California's four-year drought, the City of Los Angeles has now adopted similar policies and targets for cooling the city and mitigating urban heat impacts.

Policies regarding how Arvin should address urban heat impacts are recommended in the Water Resources Element. Water scarcity in Arvin, and the San Joaquin Valley, has implications for public safety and health, and Arvin's “quality of life.”

Keeping trees, and in particular public trees, healthy during times of drought has numerous benefits. Fire safety is improved when trees are healthy. Health issues related to airborne pollution and clean air is related to the size of the city's tree canopy and the health of the trees. Quality of life is improved when the tree canopies provide shade, relief from heat and beautification of the city.



The obvious policy implication is that Arvin should adopt strategies to increase the city's tree canopy. Several policies and implementation programs are recommended in the Water Resources Element that implement this strategy.

LESSON 5

Public Behavior change programs, centered around water conservation efforts, can be extremely effective.

The City of Melbourne, from 1990 to 2010, reduced their per capita water consumption by 47% - 121 gallons per person per day to 65 gallons per person per day.

Arvin has also been fairly successful in reducing its gallons per person per day consumption. In 2008, consumption was about 164 gallons per person per day. By 2013 consumption was down to 143 gallons per person today and by 2018 consumption was at about 95 gallons per person per day.

In both the case of the Australian cities and in Arvin this dramatic decrease in per capita water consumption was fueled by marketing, public education, and the public's awareness of the drought.

In addition to the issues of local water management there was also concern about Arvin's budget. Budgetary concerns included one-time capital expenses involving street and storm drainage projects as well as ongoing annual operating expenses associated with streets, storm drainage basins, sewer lines and lift stations. The City Council and staff will be pleased to see that implementation of the policies in the Water Resources Element will save a significant amount of general fund money for both capital expenses and annual operating expenses.

These same budgetary concerns also rest with the Arvin Community Service District. They must focus on the task of providing domestic water to Arvin's population of over 20,000. Water quantity and quality are the primary focus of the District but water line leaks, water pressure, and backup power also occupies the District's personnel.

Learning from the experiences of Australian cities and cities in the Southwest, and through local experiences following the drought, the following five Golden Goals for Arvin's Water Resources Element will serve as the foundation for a successful water management strategy. These goals and their accompanying policies and implementation strategies will be discussed in the following chapter, Goals, Policies and Implementation Strategies.



Goals, Policies and Implementation Strategies

GOAL 1

We will leverage increasing awareness that Arvin's Water Resource issues are critical. The status quo is NOT acceptable; therefore, this reality presents an opportunity to implement new Innovative strategies and policies.

GOAL 2

We will increase City and interagency collaboration, moving toward multi-discipline, multi-benefit and multi funding source design solutions and projects.

GOAL 3

We will diversify our dependence on sources of water. Rainwater capture, stormwater capture, and use of reclaimed water will be efficiently utilized and "fit for purposes" water use will become a priority concept.

GOAL 4

We will protect our safety, health and quality of life during drought periods and as future climate change impacts are felt. In particular we will increase our tree canopy and maintain the health of our trees at all times.

GOAL 5

We will create tools to foster sustainable water use behavior by the public



Goals, Policies and Implementation Strategies

For Arvin to have a meaningful, long-term water management program, the City along with the Arvin Community Services District will need a game plan, one that be translated into effective water conservation while also improving the Arvin's "quality of life".

Goal 1

The urgency of drought represents a unique opportunity. The status quo is NOT acceptable. Therefore, we will implement new innovative strategies.

1.1 The next General Plan update shall integrate and incorporate the goals, policies and implementation measures of the Arvin Water Resources Element into the General Plan.

1.2 As municipal codes, ordinances and development standards are updated, the goals and policies of the Arvin Water Resources Element shall be considered and implemented as appropriate. Water rates, water use regulations, water conservation requirements and Green Building Codes should be updated with the goals of water conservation and fit-for-purpose approaches in mind.

1.3 The City shall improve and emphasize catchment of storm water and rainwater.

1.4 The City shall develop an urban forest, which will reduce ambient temperatures, sequester carbon dioxide, and reduce storm water runoff while simultaneously improving the city's aesthetics.

1.5 The Zoning Ordinance shall be amended to include design guidelines and development standards for all districts that facilitate urban development. Design guidelines shall involve architectural guidelines that promote water conservation while development standards could regulate the amount of lawn area per single-family residential unit.

Arvin is entirely within FEMA's 100-year floodplain; it is often subjected to poor air quality; it suffers from extreme summer temperatures; and it depends entirely on an underlying aquifer for its domestic water requirements. Given these challenging conditions, it makes sense to tackle these issues using a Multi-Disciplined/Multi-Benefit Team (MDMBT) that will implement the following:

- The City of Arvin shall seek to "catch and retain" all storm water and rainfall, which should be used for irrigation and ground water recharge.
- The City of Arvin shall aggressively establish an urban forest throughout the community using urban storm water runoff and reclaimed water for irrigation whenever possible. This forest will cool the community, enhance its appearance, reduce peak storm water runoff flows, and slow traffic when the forest is part of the streetscape.



Goal 2

We will increase City department and inter-agency collaboration moving toward multi-disciplined, multi-benefit and multi-funding project.

2.1 City departments and utility districts includes Planning and Building, Engineering, Parks, Building, Veola and Arvin Community Services District (ACSD) functions will form a Multi-Disciplined, Multi-Benefit Team (MDMBT) to review all public projects. The MDMBT will be responsible for public project designs that will most effectively create multi-benefits for every public project, especially street construction and street reconstruction and parks. Photos and schematics of streets that have or could be reconstructed using a multi-benefit and multi-funding approach. This policy will produce multi-benefits that will protect against floods, replenish local water supplies through ground water infiltration and improve the “quality of life” in Arvin.

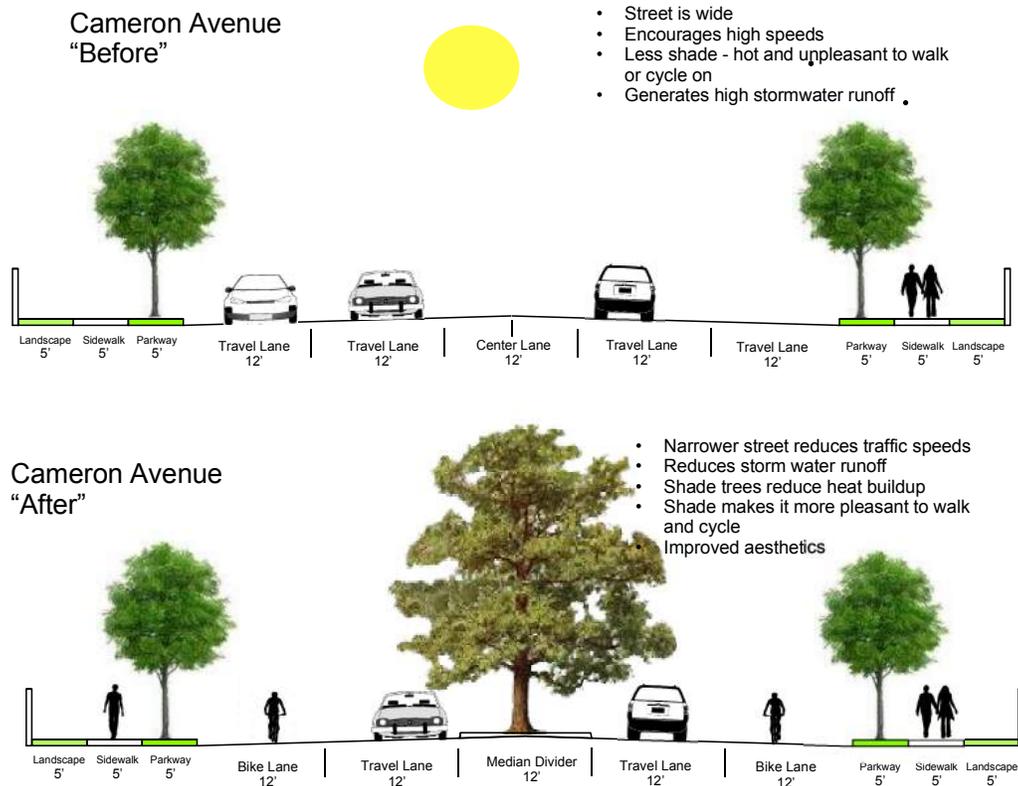


Figure No. 14: Above is an example of an overly wide street in Visalia, but every city in the Valley has one or more, which could be redesigned to incorporate a tree-line median. This median would slow traffic, catch and retain storm water, reduce the ambient temperature in adjacent neighborhoods and finally reduce the amount of storm water runoff being generated by this roadway. Note: Retrofit designs should plan for trees that will grow to 20' to 30' canopies (see Appendix E for recommendations). Existing street camber should flow to the new parkway or median swales to maximize storm water capture.



Figure 15: This photo in Visalia illustrates the benefits of tree-lined medians and parkways along a major street. The medians and parkways absorb rainwater, which recharges the groundwater system; they reduce storm water runoff; they reduce traffic speed by narrowing the street width and the trees reduce the ambient temperature, making for a cooler neighborhood during the summer months. Note: Tree canopies on this street are 20 to 30 feet wide.



*Figure No. 16: During periods of intense precipitation tree-lined medians and parkways reduce storm water runoff. This median in Visalia is lined with Valley Oaks (*Quercus lobata*). The exposed soil and the leaves of the tree catch and hold rainfall, thereby reducing the volume of runoff entering the city's storm water system; the narrow street reduces traffic speeds; and the shade reduces ambient temperatures in the local neighborhood.*



2.1.1 For a construction or reconstruction project on a street segment with low to moderate flooding, the City will analyze the storm water infiltration feasibility of the location based upon its soil permeability, groundwater levels, slope, and contamination. Staff will determine if storm water should be captured and kept on site using Best Management Practices (BMP) Tool Box 1 (see below), or captured, treated and released, based upon BMP Tool Box 2 (see below). Capture treat and release options will only be utilized if catch-and-keep is infeasible. The performance goal will be to catch and keep, at a minimum, a 10-year/5-day storm runoff event.

Best Management Practices Tool Box:

Tool Box 1- Catch and Keep

- Curb/ Parkway retrofits
- infiltration trenches
- infiltration galleries
- dry wells
- bioinfiltration/bioretenion without under drains cisterns other storage BMPs
- trees

Tool Box 2 - Catch, treat and release

- Curb/ Parkway retrofits
- Bioretention with underdrain treatment Train of BMPs with biofiltration prioritized
- Trees
- Bioswales

2.1.2 For a street segment with severe flooding, the City will first conduct a storm drain analysis prior to construction or reconstruction and then proceed with the storm water infiltration feasibility analysis described in 2.1.1 above (catch and keep or catch treat and release). The analysis shall include the ability of upstream capture to reduce flooding impacts. When construction begins the performance objective of capturing and keeping for use will be based on a runoff volume of a 10-year/5-day storm event.

2.1.3 For street resurfacing projects the MDMBT will collaborate on opportunities to implement Best Management Practices (BMP) such as bioswales, curb/parkway retrofits, and tree plantings that could be implemented, either in conjunction with the street resurfacing project or as an independent parallel project using a separate contract or grants. The MDMBT shall assess the ability of Arvin to maintain improvements in perpetuity (*See the MBRP Case Study of Sycamore Street for further discussion*).

2.1.4 The MDMBT should use the techniques and concepts contained in the United States Environmental Protection Agency EPA “[Stormwater to Street Trees; Engineering Urban Forest for Stormwater Management](#)” as a guideline for implementing use of trees as BMPs described in Tool Box 1 & 2, discussed in 2.1.1 above.



Designing tree plantings to accommodate the largest trees possible will increase its storm water utility function as well as providing significant shade value.

Source: Storm water to Street Trees: Engineering Urban Forests for Storm Water Management

2.2 The MDMBT will review private projects with water-conserving solutions in mind. The MDMBT and private developer will collaborate to achieve Low Impact Development (LID) projects that take advantage of investments that goes into site work, including storm water management systems, grading, curbs, catch basins, streets, sidewalks, and landscaping. Where appropriate, special districts such as Arvin's Lighting and Landscaping Districts shall be utilized, or projects shall be incorporated into existing districts to ensure sufficient funding is available after the developer completes the project.

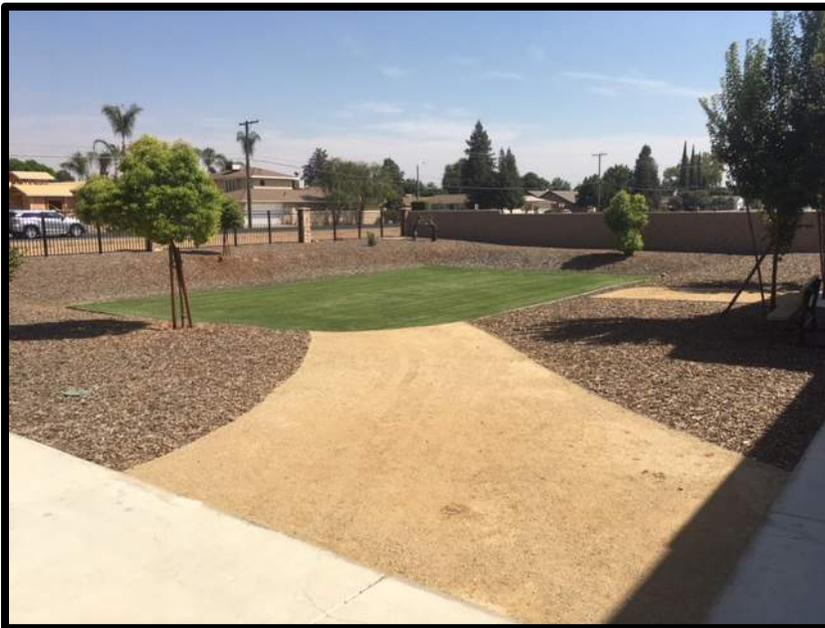


Figure No. 17: Storm water management for residential projects should be incorporated on-site where possible. This multi-family project in Exeter includes a dual-purpose storm retention pond - a playground during the non-rainy season and a catch and hold basin during the winter months.



Figure No. 18: This landscaping design was integrated into the design of a multi-family project in Exeter. It retains rainwater on-site as well as introducing a number of landscaping features, including mulch, drought-tolerant plants and cobblestones. This feature could have been further improved with the addition of large trees, which would capture some of the precipitation as well as cooling this area of the residential development.

2.2.1 Use natural systems and work with natural site characteristics to maintain hydrologic functions and process, rather than attempting to mitigate impacts. For example, avoid the disturbance and grading of natural vegetated areas to significantly reduce the need for stormwater control and to increase groundwater recharge.

2.2.2 Minimize clearing and grading by clustering building sites.

2.2.3 Reduce road widths and shared-use driveways.

2.2.4 Use permeable paving and other permeable surface treatments. Amend the zoning code to require 15-20 percent permeable surfaces, depending upon type of use.

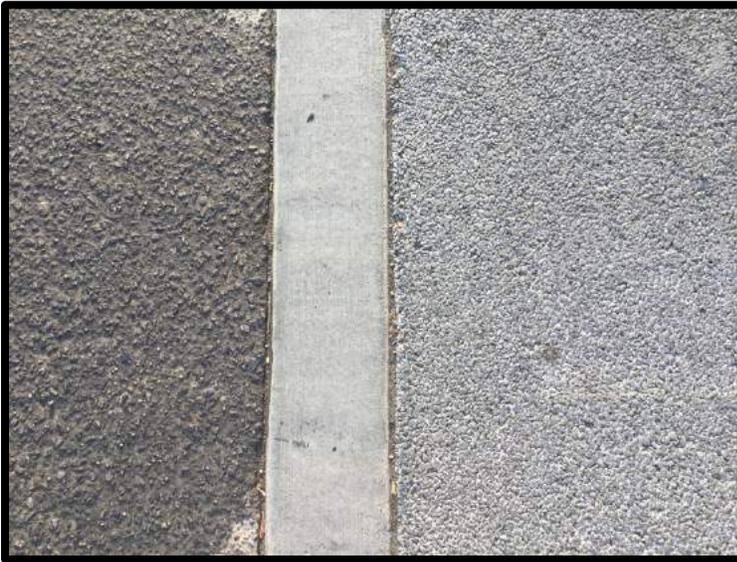


Figure No. 19: Permeable pavement (on right) can reduce storm water runoff from an urban site. This type of pavement installed in downtown parking lots in Visalia increases ground water recharge as well as reducing the cost of storm water improvements.



Figure No. 20: This reconstructed street in Kingsburg was very effective in saving mature trees while keeping the street narrow and providing shaded sidewalks. This street is 5 to 10 degrees cooler in the summer when compared to nearby streets that lack street trees.



2.2.5 Treat stormwater close to the source. This approach will remove pollutants, allow ground water infiltration, and slow down the rate of runoff.

2.2.6 Trees should be watered and maintained using grey water. Designs noted in the EPA document “Stormwater to Street Trees”, and the Los Angeles Beautification Team document “Trees as Bioswales” should be used as guidelines for developing designs that will provide fit-for-purpose water for trees.

2.2.7 Use, for example, vegetated swales rather than conventional curbs and catch basins to provide better water quality treatment, ground water infiltration, site appearance and urban heat relief. All designs must consider capital and long-term maintenance cost, soil types and slope (*See MBRP (Multi-Benefit Road Plan) discussion*).

2.2.8 Use rooftop runoff to irrigate vegetated areas thereby lowering water bills and reducing storm water runoff.

2.2.9. Create multi-functional and multi-benefit landscape designs. Multi-function landscape designs might include storm water management components that provide: filtration treatment, ground water infiltration, open space and habitat, storm water for future irrigation use, reduced urban heat island effects, and enhanced aesthetics.

Trees are typically not considered part of gray or green stormwater management systems; they are generally and falsely, considered to be for landscaping value only. Planting a tree for just landscaping is not taking advantage of the stormwater utility benefits and other environmental advantages it provides.

Source: Stormwater to Street Trees; Engineering Urban Forest for Stormwater Management.



Figure No.21: This park/pond in Visalia doubles as useable open space most of the year but when storms hit the area it serves as a catch basin for storm water runoff that is generated from adjacent urban uses. This runoff percolates into the ground and helps recharge the ground water system.



Figure No. 22: Storm water basins do not have to be sterile, unattractive land use features. This basin in Visalia also serves as a wildlife preserve. Bird life at this basin is the highest of any site in the city.



- 2.2.10 Use native and drought-resistant plants to reduce demand for irrigation water, pesticides and fertilizers.
- 2.2.11 Consider long-term maintenance and sustainability when designing public and private projects that have a landscaping and irrigation component.
- 2.2.12 Provide information to residents and management companies on how to manage native and drought resistant vegetation. Educate about how to perform various maintenance tasks such as removal of sediments from swales.
- 2.2.13 Educate and provide a means to maintain healthy trees in times of drought (e.g. use of mulch, drip irrigation, water bladders, etc.)

Multi-benefit design often qualifies for multiple funding sources for capital costs. Long-term maintenance cost is often equal to or less than single purpose designs.

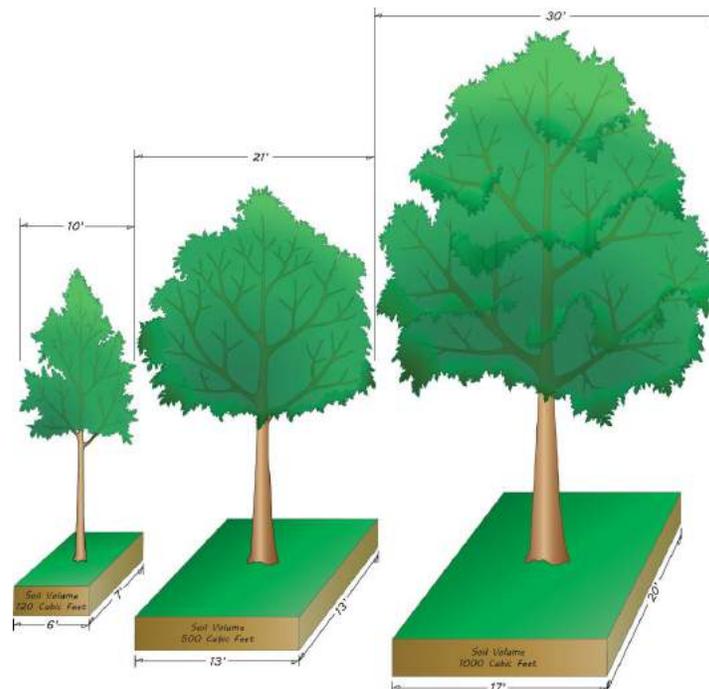


Figure No. 23: Relationship between tree growth and soil volume. Tree growth is limited by soil volume. To grow big trees, large amounts of uncompacted soil are needed. For a mature tree with a canopy of approximately 30 feet, 1,000 cubic feet of soil is needed.

Illustration from Casey Trees, 2008.



Figure No. 24: Sycamore Road is currently one mile long and has a right-of-way width of 104 feet and a curb to curb width of 84 feet. These photos show Sycamore Street looking east and west. The paving is in poor condition and in need of reconstruction, which makes it a candidate for using MDMBT strategies.



MDMBP (Multi-Discipline/Multi-Benefit Plan) for Case Study for Sycamore Road

If Arvin used a MDMBP for the reconstruction of Sycamore Street consistent with Figure 25, many benefits will be realized by the City.

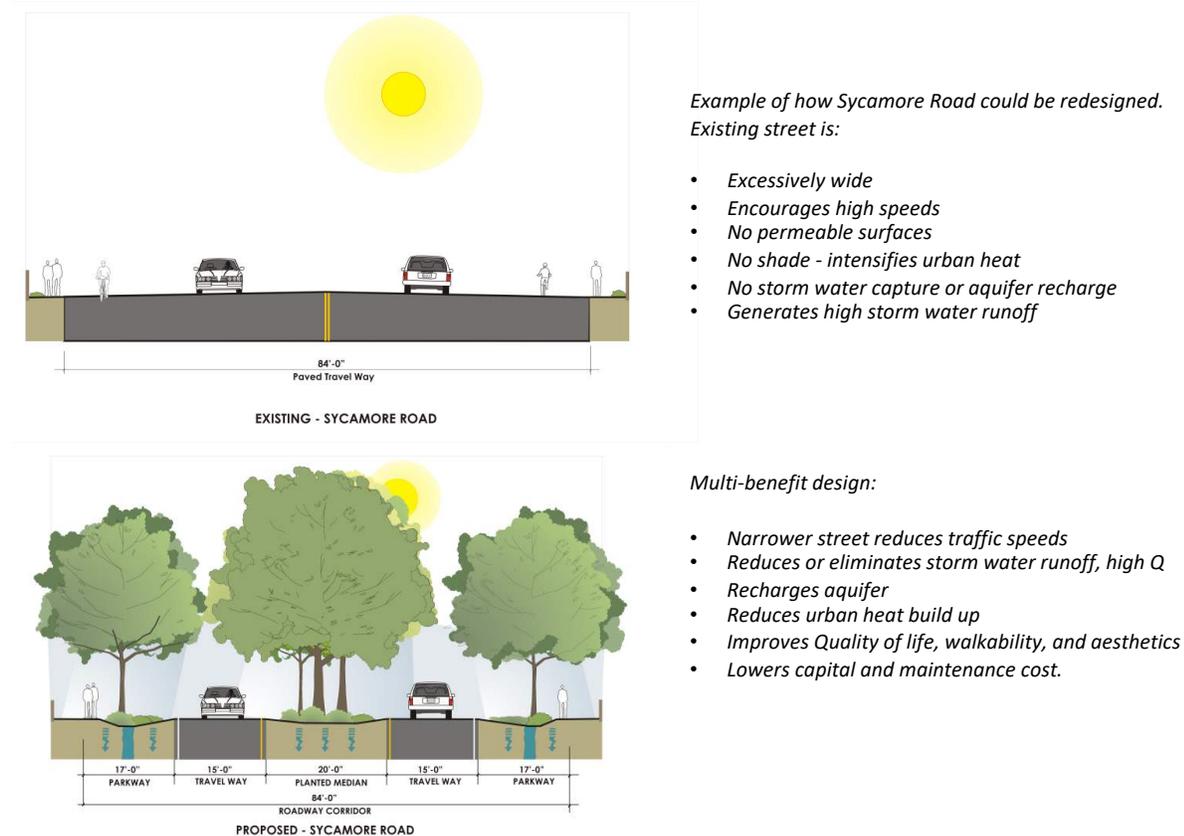


Figure No. 25: After the reconstruction of Sycamore Road using MDMB strategies (Case Study), this major north/south roadway in Arvin will reduce less storm water runoff, it will be a safer roadway because traffic speeds will be reduced and it will be cooler and more aesthetically pleasing.

COST BENEFITS

Public Works Engineers have a formula that indicates maintenance cost for roadways range from \$2.00 per square foot for slurry seal, to \$10.00 per square foot for total reconstruction. In the case of Sycamore Street total reconstruction will be required at a cost of \$10.00 per square foot. Sycamore Street is 84 feet wide. A mile of reconstruction will cost \$4,434,200.

Traffic volumes on Sycamore Road could easily be accommodated by two, 15-foot wide travel lanes, with a total pavement surface width of only 30 feet. Reconstruction of a 30-foot wide



pavement surface would cost about **\$1,586,400** per mile. So, a MDMBP for Sycamore Road would save about **\$2,840,800** dollars per mile of the city's Capital Improvement Program.

Parkways 17 feet wide and a median 20 feet wide could be created, with two 15 foot wide traffic lanes. Initially the parkways/median areas could be treated with mulch. As grant funding becomes available, trees and trails could be installed. Grants for trees and trails are much more common and available than street paving grants. The parkway and median areas will support very large mature trees, (see Figure 23 for discussion).

MAINTENANCE BENEFITS

Maintenance for streets cost about a \$1.80 per square foot over 20 years. The difference between maintaining an 84-foot asphalt street (\$798,336 per mile) compared to a 30-foot wide asphalt surface (\$285,120 per mile) is \$513,216. per mile or about \$26,000 per year per mile! Scheduled maintenance for streets should occur every 5 to 7 years. Tree trimming maintenance schedules typically occur every 15 years. However, experts point out: *"The wide median and parkways will allow trees and shrubs ample room to grow. Allow trees to reach full canopy height and width for full benefit of the tree's natural form, resistance to pests, overall health and growth. No pruning is needed unless branches are damaged, broken, or diseased."* Brian Hannegan, Landscape Architect, RRM Design group.

The numbers above indicate considerable money can be saved if a Multi-benefit design approach is taken. See Appendix E for Tree recommendations.

trimming maintenance schedules typically occur every 10 years. These numbers indicate that a MDMBP would save considerable capital and maintenance costs.

DUST AND EROSION BENEFITS

Erosion from the parkways will not be a problem because they can be constructed as swales. Drainage from the pavement services will flow downhill into the swales capturing water for recharge (see Figure No. 12 for an example of a swale adjacent to roadway).

Dust collects on flat smooth surfaces like roadways. As vehicles pass the dust is kicked up and pollutes the air. By reducing the roadway width from 84 feet to 30 feet much less roadway surface is available for dust collection. Trees in the parkways can capture much of the dust once the trees become mature.

STORM DRAINAGE BENEFITS

The 84-foot wide Sycamore Road contains 443,520 square feet of pavement (about 10 acres). When it rains, these 10 acres of paved surface generates a high volume of storm water runoff (measured as "Q" by civil engineers), which typically flows to the city's storm water system. This requires a storm drainage system that has significant capital and annual maintenance costs. However, if the street is reduced to a 30-foot wide roadway and the runoff flows into an adjacent 27-foot wide swale, located on each side of the roadway, the 10 acres of street area will



effectively catch much of the storm water that runs off the roadway. This catchment of stormwater will reduce or even eliminate the need for a separate storm water system. More detailed engineering studies based upon soil permeability, topography and other factors will determine a more precise cost-benefit for this example.

OTHER BENEFITS

The large parkways will support large trees that will reduce urban heat and provide shade for the vehicle travel lanes as well as shaded sidewalks. The narrowed street widths will help slow traffic to safer speeds and in 10 years, the roadway will be beautiful, in 20 years the roadway will inspire.

Goal 3

We will diversify our dependence on sources of water and utilize a fit-for-purpose approach to water use

3.1. Veolia, the wastewater treatment plant operator for the city of Arvin, working in collaboration with the Arvin Community Services District will develop a comprehensive regulatory framework that covers all water use and reuse options. Specific guidelines will include general guidelines for recycled water use, on-site reuse (rain harvest, gray water etc.), recycled water distribution policy (purple pipe development), rainwater harvesting uses and managed aquifer recharge using recycled water and stormwater.

Permitted Recycling Uses for Different Levels of Waste Water Treatment

Recycling Use	Current			Design Disinfected Tertiary
	UnDisinfected Secondary	Disinfected Secondary 2.3	Disinfected Secondary 2.2	
Parks and playgrounds	No	No	No	Yes
School yards	No	No	No	Yes
Residential landscaping	No	No	No	Yes
Unrestricted access golf courses	No	No	No	Yes
Nonrestricted recreational impoundments	No	No	No	Yes
Cemetaries	No	Yes	Yes	Yes
Freeway landscaping	No	Yes	Yes	Yes
Restricted access golf courses	No	Yes	Yes	Yes
Industrial process water that may come into contact with workers	No	No	No	Yes
Food crops, including all edible root crops, where the recycled water comes into contact with the edible portion of the crop	No	No	No	Yes
Surface irrigation of food crops where the edible portion is produced above ground and not contacted by the recycled water	No	No	Yes	Yes
Fodder and fiber crops and pasture for animals not producing milk for human consumption	Yes	Yes	Yes	Yes

Figure No. 26: A tertiary waste water treatment plant, although expensive, provides a city with maximum flexibility in terms of the use of the “treated” effluent (see Design Disinfected Tertiary column).



3.2 Rainwater harvesting will be promoted. Rainwater harvesting refers to rainfall that has not come into contact with ground surfaces (e.g. Streets and parking lots). Rainwater, typically captured from roofs, will be used for on-site landscaping and other non-potable water uses.

3.2.1 The ACSD will consider providing rain barrels to individual parcel owners. Some cities and water districts have already initiated free distribution programs that may be used as models for an Arvin program.

3.2.2 The City and ACSD will provide demonstration projects and instructions about how to install water-conserving rain and stormwater collection landscape systems. City and District efforts will be coordinated through a collaborative education campaign.

3.3 Storm water capture and use will be promoted for all public and private projects. Policies collaboratively developed by the City and the water districts will be developed to decide how best to use captured storm water for non-potable water uses.

3.3.1 Storm water capture techniques will be utilized to comply with applicable NPDES requirements. The “Storm Water Quality Design Manual for Sacramento and South Placer Region” may be used as a model example as to how to design Low Impact Development (LID) for storm drainage facilities.

3.3.2 Low Impact Development (LID) designs will be used to capture and use stormwater. Collaborative multi-benefit designs will be required.

3.4 Managed Aquifer Recharge (MAR), the process of infiltrating or injecting water into aquifers under controlled conditions for later withdrawal, shall be encouraged. The Arvin Community Services District shall coordinate with the Arvin-Edison Water Storage District towards promoting ground water recharge up-gradient from the City of Arvin. Specifically, this policy aids in the recharge of the aquifer that underlies Arvin and from which ACSD draws its water.

3.5. Recycled wastewater capacity shall be expanded to the maximum extent that is economically feasible.

3.5.1 The recycled wastewater distribution system (purple pipes) in Arvin shall be extended to the maximum extent that is economically feasible. Examples where this type of water could be used include irrigation for parks, landscaped medians, and landscaped areas within landscaping and lighting districts.

3.5.2 Recycled water shall continue to be developed and utilized.

3.5.3 Arvin and Areola should begin discussions of converting the wastewater treatment facility from a secondary treatment to a tertiary plant. This level of treatment would permit the effluent to be used for irrigation on all types of crops.



The City of Arvin currently owns 260 acres of farmland, which is irrigated exclusively with undisinfected secondary effluent. This effluent is recharged into the groundwater system. The City also contracts for use of 400 acres of private property for agricultural use of treatment water. The current contract for the private property expires in 2021. At that time the City shall review its options for the use of this treated water.

Goal 4

We will protect our safety, health and quality of life during drought periods and as water resources become scarce.

4.1 Establish a cooling target, which will improve the quality of life, health and safety in Arvin by reducing outdoor temperatures using a multi-faceted approach to achieve the cooling target.

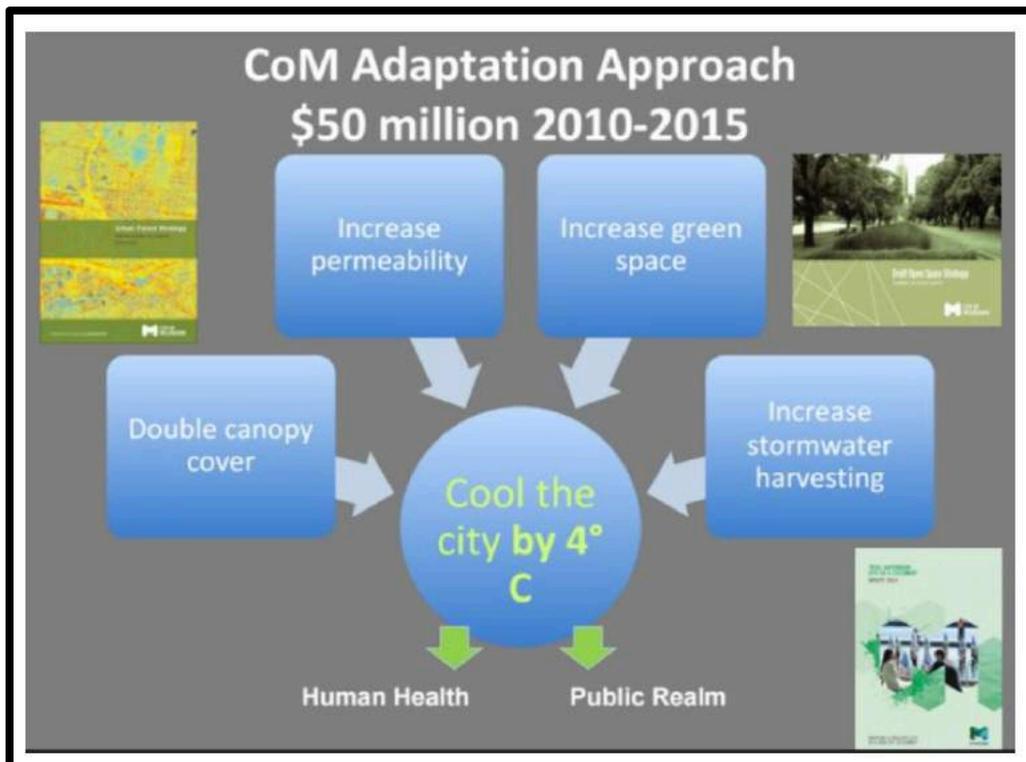


Figure No. 27 illustrates that by implementing programs that reduce impervious surfaces, increase tree canopies and harvest storm water runoff, a community can cool its ambient temperature by up to 7 degrees Fahrenheit.



Figure No. 28: Tree-lined streets reduce the ambient temperatures in the neighborhood as well as providing a pedestrian-friendly walking path that is shaded and separated from traffic on the street.

4.1.1 Identify areas within Arvin that are most vulnerable to excessive heat based on current and expected temperatures.

4.1.2 Priority will be given to strategies that will benefit areas that are identified as most vulnerable to excessive heat.

4.2 Guidelines will be developed to protect livability and health, especially in drought situations. Public open space areas and corridors needed for cooling will be identified. Plans and strategies will be developed regarding how to maintain these critical cooling areas during drought situations. This applies especially (but not exclusively) to trees along public streets, boulevards and parks.

4.2.1 Non- potable water will be used whenever possible to maintain healthy trees, which will help to improve air quality, and reduce urban heat effects.

4.2.2 Tree watering "donuts" and "bladders" will be used to maintain healthy trees during times of water scarcity when irrigation is turned off or curtailed. Reclaimed wastewater should be considered as a source for irrigation donuts and bladders.

4.2.3 Multi- benefit stormwater/street tree designs should be encouraged.



Figure No. 29: Street trees enhance the value of homes in a neighborhood as well as reducing ambient temperatures and reducing storm water runoff.



Figure No. 30: A tree irrigation bladder (or donut).



4.3 Develop strategies and guidelines to protect Arvin’s “quality of life when water is scarce.

4.3.1 Plans should be made to protect open space areas in order to uplift the public psyche and offer a respite from the stresses of the urban heat island effect.

4.3.2 Special emphasis and priority should be given to street trees. Street tree priority will be emphasized due to the cooling effect on asphalt and adjacent urban uses.

4.4 Tree health should be maintained at all times in order to promote healthy air quality, mitigate pollution, provide urban cooling and a positive city image.



Figure No. 31: Street trees can enhance entryways into the community as well as setting a good image. This tree-lined roadway in Davis, California, also provides for a parkway swale (to collect storm water runoff) and beyond the swale a bikepath/pedestrian walkway has been installed.



Goal 5

We will create and use tools to foster sustainable water use behavior by the public

5.1 Create an integrated, clear and consistent messaging program on water conservation.

5.1.1 Water districts and wholesalers should be encouraged to contribute a portion of their conservation budgets toward funding a unified and consistent campaign, collaborating with the City.

5.1.2 A water conservation and sustainability campaign should use all media including TV, radio, print, digital media and posters over a sustained period of time.

5.2 Water districts and wholesalers should provide incentives and rebates for water efficient systems including rainwater harvesting systems, greywater systems, on-site stormwater capture systems, high-efficiency clothes washers, high-efficiency toilets, rotating irrigation nozzles, irrigation controllers and other water-efficient appliances

5.3 Set aggressive policies, laws and regulations. Educate people about existing enforcement efforts and how to report violations.

5.3.1 The City shall require full and consistent adherence to the 2016 California Green Building Codes (CAL Green Division 4.3 Water Efficiency and Conservation).

5.3.2 The City shall develop guidelines that discourage use of potable water for outdoor irrigation and encourage use of non-potable water for irrigation purposes for new and existing residential and commercial development.

5.3.3 The City shall prohibit the use of potable water not delivered by drip or micro-sprinkler systems for irrigation in newly-constructed homes and commercial buildings.

5.3.4 Establish a list of drought tolerant trees, shrubs and ground cover that shall be used in new commercial, industrial and residential development in Arvin.

5.3.5 The City shall promote the use of native and drought tolerant landscaping for all public projects when water-thirsty turf is not needed for recreation activities.

5.3.6 Whenever possible, utilize stormwater, rainwater, or treated wastewater for irrigation rather than relying on high quality, expensive well water.



Figure No. 32: Use of gravel and drought-tolerant plants in any urban landscape can significantly reduce irrigation consumption. The use of gravel or mulch also helps to keep weeds down.



Figure No. 33: Even fast food franchises are getting into the trend of using drought tolerant plants with different types and sizes of rock and gravel.



5.4 Set aggressive water use targets

5.4.1 Advertise per capita water use targets for potable and non-potable water use - 120 gal/capita/ day by 2020, 100 gal/capita/day by 2022, and 80 gal/capita/day by 2025 (current indoor and outdoor potable water use is about 143 gallons per capita per day).

5.4.2 Redesign water bills to clearly state targets and actual usage.

5.5 Consider increasing the cost of non-essential use of potable water

5.6 Provide comparisons of water consumption with other cities in the Valley, based upon potable gallons per capita per day consumption.

5.6.1 Compare consumer's usage with the desired norm and target, with messaging over a sustained period of time. Use water bills, posters, social media and other public information media tools to provide target and usage information.



Appendix A: Hydrologic Cycle and Water Budget of the San Joaquin Valley

According to the California Department of Water Resources the San Joaquin Valley is composed of two sub-basins - the San Joaquin River Basin and the Tulare Lake Basin. Arvin rests at the southeastern corner of the Tulare Lake Basin.



Figure No. 34 shows in detail the San Joaquin Valley watershed which extends south from the Cosumnes River and terminates at the Tehachis south of Bakersfield. The City of Arvin is located south and east of Bakersfield.

Water in the San Joaquin Valley comes from three primary sources: local supplies from rivers that flow from the Sierra Nevada, Delta imports via the Central Valley Project (CVP) and State Water Project (SWP) canals, and the Valley's underlying groundwater system. Starting in the 1940s state and federal agencies with support from local water interests began to attempt to reverse falling water tables occurring in the drier Tulare Lake Basin by constructing massive water projects that



involved canals, dams and pumps.

To recharge the Valley's water tables (and provide new sources of water for this arid region) water was: 1) imported from Northern California through the California Aqueduct; 2) diverted from the San Joaquin River via the Friant-Kern Canal; and finally, 3) under the auspices of flood control many of the Valley's major rivers (San Joaquin, Kings, Kaweah and Kern) were dammed thereby providing more surface water for irrigation by controlling the rate and time of runoff from the Sierras.

In 2018, the water table condition in the San Joaquin Valley remains acute even with the completion of the major water projects discussed above. Shallow wells in the Valley are going dry (e.g. East Porterville), deeper wells are being drilled to chase the falling water table and the carrying capacity of certain canals is being reduced because of sections of the canals are subsiding.

The Tulare Lake Basin (a sub-basin of the San Joaquin Valley) receives water from four major rivers (Kings, Kaweah, Tule and Kern) that flow westward into the Valley from the Sierra Nevada Mountains. The low point of the Valley has an elevation of 207 feet while the four rivers that flow from the Sierra have their headwaters at 12,000 feet and higher. Arvin, with an elevation of 449 feet rests in the extreme southeast corner of the Valley, south of the Kern River and west of the Tehachapi Mountains.

The San Joaquin Valley (and the smaller Tulare Lake Basin) is subject to a Mediterranean type climate - hot dry summers and cool moist winters. The table below shows that most of the Valley's precipitation comes during the months of December, January, February and March while the regions higher temperatures and evapotranspiration rates occur during the months of June, July and August. It is during these summer months when irrigation intensifies both on the farm and residential yards. Most urban water users in the Valley pump from the ground water system. Agriculture users pump surface water when "wet" winters in the Sierra Nevada yield enough water to meet water contract obligations. When "dry" winters occur (2012 to 2016), agriculture shifts to ground water pumping to make up for the surface water shortfall. With some farming operations they may have the option of either water source.

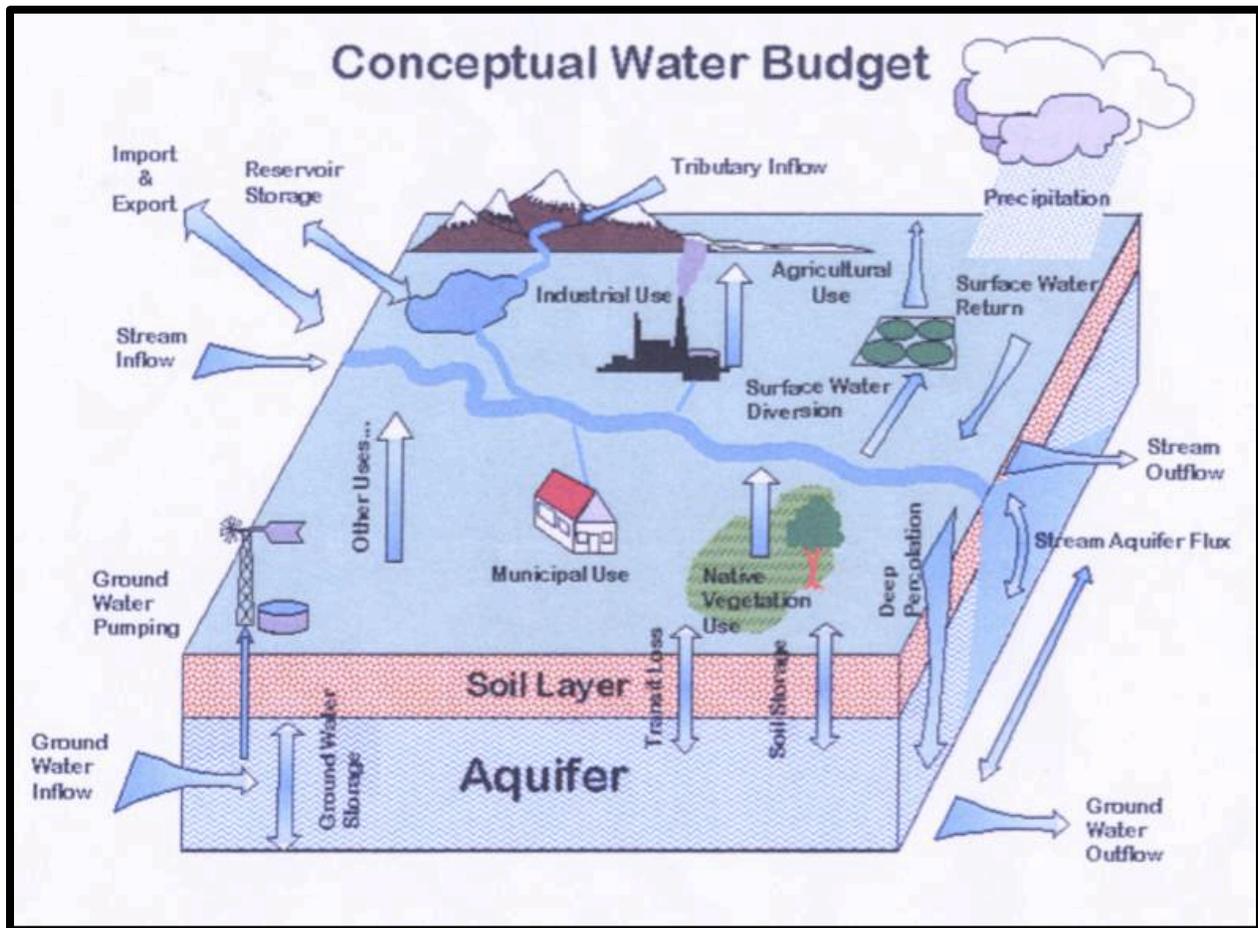


Figure 35: This illustration shows the many ways water is used in the San Joaquin Valley and how water moves through the environment.

This annual cycle of extracting more water from the groundwater system for irrigation and domestic purposes than can be recharged back into the ground continues to jeopardize the long-term viability of the Valley's aquifer. To better understand this prevailing cycle, it is important to know how water cycles throughout the Valley, called the hydrologic cycle.

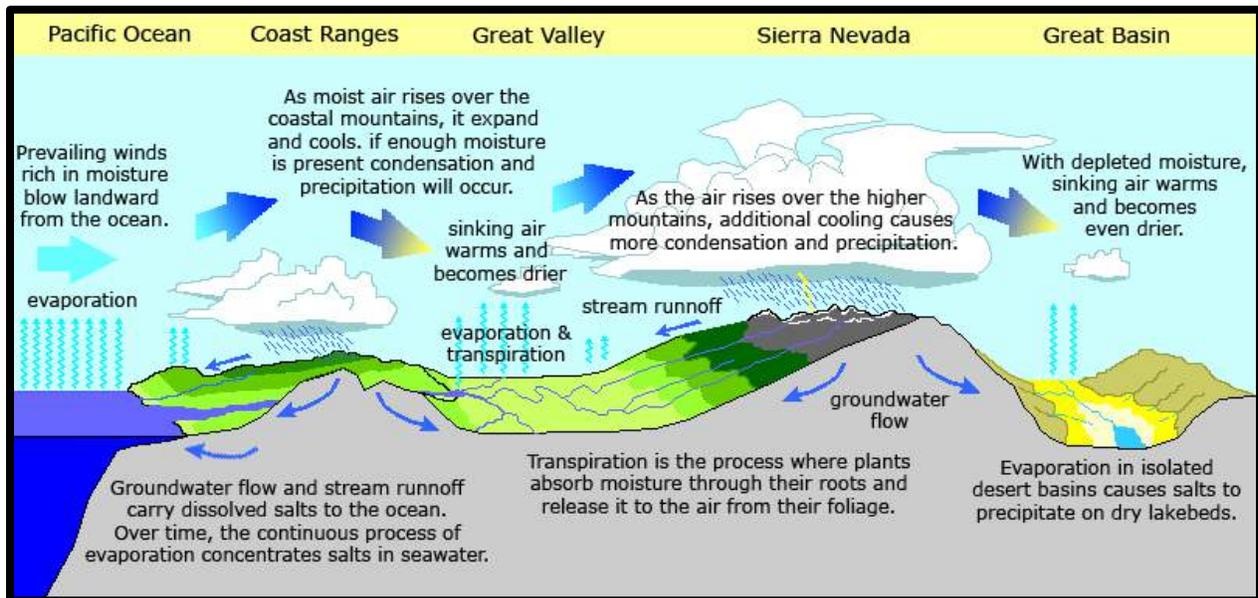


Figure No. 36 shows the hydrologic cycle for the San Joaquin Valley. The precipitation in the Sierra Nevada will fall as rain in the lower elevations and as snow in the higher elevations. The runoff from the Sierra Nevada recharges the ground water system that under lies the San Joaquin Valley.

Precipitation in the San Joaquin Valley generally occurs between the months of November through April. The precipitation comes from storms that come off the Pacific Ocean and strike the Sierra Nevada during the winter months - falling as snow at the higher elevations and rain on the Valley floor and the foothills. Runoff from snowmelt in the Sierra Nevada flows towards the Valley floor, replenishing rivers, creeks and eventually Tulare Lake bed. As water flows towards the Valley floor it percolates into the ground and replenishes the ground water system that lies below the Valley floor, called an aquifer. Agriculture and urban uses depend on both types of water systems (surface water and ground water) for irrigation and domestic water use.

Table No. 9 indicates that the Valley's Evapotranspiration (ET) far exceeds the region's average rainfall. This difference reflected in the table below indicates that the Valley is an arid environment (e.g. desert) and that both surface water (local and imported) and ground water are necessary for agricultural production and urban use.



Table No. 9
San Joaquin Valley Climatological Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Monthly Avg. Eto (in)	1.25	2.07	3.85	5.69	7.48	7.98	8.23	7.4	5.78	4.11	2.04	1.18	57.06
Avg. Rainfall (in)	1.06	1.18	1.11	0.67	0.22	0.07	0.01	0.04	0.1	0.3	0.59	0.86	6.21
Avg. Temp. (° F)	47.9	52.8	57.2	62.9	70.4	77.7	83.8	82.1	76.9	67.3	55.6	48	-

The Sierra snowpack is the Valley's water savings account. As snow melts and flows towards the Valley floor it feeds the riparian woodlands that line the rivers and creeks, and eventually quenches the thirst of urban users and thousands of farms. In Kern County, eight percent of the water that the county receives is budgeted for urban uses (e.g. the cities of Bakersfield, Arvin, Wasco, Shafter, etc.) while 92 percent is used for agriculture.

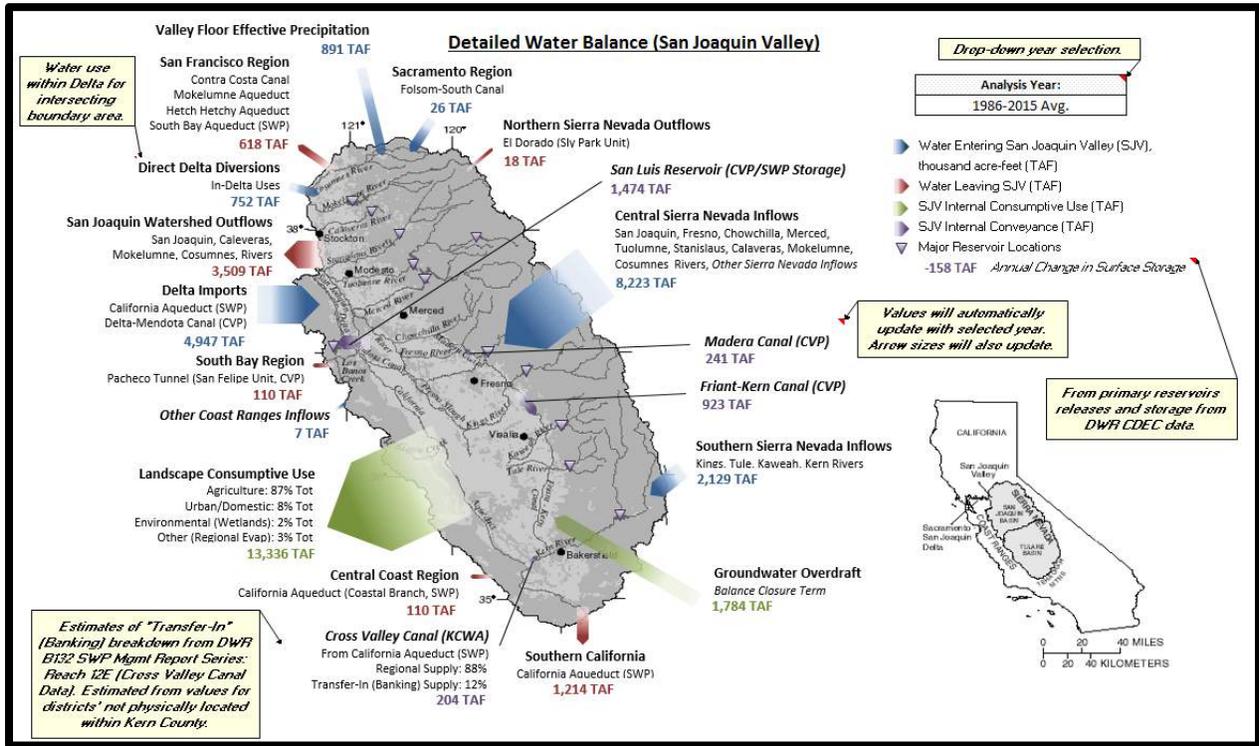
An 1880 map of the Valley showed a chain of four lakes that occupied the basin floor, starting with Kern Lake in the south and ending with Tulare Lake in the north. The intervening lakes were Buena Vista and Goose. Tulare Lake has had a storied past. In drought years the Lake has entirely dried up while in the largest of water years it ballooned in size to 570 square miles, and in the Great Flood of 1861-62 it exploded in size to cover 790 square miles - three times larger than the Great Salt Lake and four times larger than Lake Tahoe.

Some of the largest snow packs in the country are found in the Sierra Nevada. In recent times, the largest measured snow pack occurred in 1906, before the California Cooperative Snow Surveys were conducted. In 1952, the second largest snow pack occurred in the Sierra. For example, in March of that year Grant Grove received 37 inches in a 24-hour period and a total of 14 feet for the month.

Figure No. 37 provides an illustration of how water moves through the San Joaquin Valley, the source of this water and how much is consumed by various users. A close inspection of this Figure shows how complicated the water budget is in the San Joaquin Valley especially when the reader understands that numerous interests compete for this water including a population over four million people and an agricultural economy that is the most productive in the United States.



Figure No. 37 Water Budget of the San Joaquin Valley



Source: Californiawaterblog.

Because much of Kern County and Arvin are located in an arid environment (precipitation being less than evapotranspiration, or less than 10 inches of rainfall), and because the San Joaquin Valley experiences wild swings in weather patterns, vacillating between droughts and floods and everything in between, it is difficult for the water managers to plan from one year to another. The table below indicates what type of water year that could be experienced in any given year in the Valley (based on 111 years of data collection in the San Joaquin River Basin which would mirror the Kern River Basin).

Table No. 10
Water Year Characteristic in Tulare Lake Basin

<u>Water Year Characteristic</u>	<u>Number of Years</u>	<u>Percent</u>
Wet	37 years	33 percent
Above Normal	22 years	20 percent
Below Normal	18 years	16 percent
Dry	15 years	14 percent
Critical	19 years	17 percent
Total	111 years	100 percent

Source: Flood and Droughts in the Tulare Lake Basin, Austin



Because of Arvin's arid climate and the fluctuations in water year characteristics, Kern County and Arvin must rely on water being imported from regions outside of Kern County, either through the State Water Project (SWP) by means of the California Aqueduct or through the Central Valley Project (CVP) by means of the Friant-Kern Canal. The Cross-Valley Canal was built to connect these two systems in the 70s.

The CVP ensures that the Arvin-Edison Water Storage District has ample water to recharge the local groundwater system and in turn maintain Arvin's water table at sustainable levels. However, land subsidence along the Friant-Kern Canal and regulatory actions involving water releases from the San Joaquin River have reduced water deliveries to Kern County. These two conditions could jeopardize Arvin's groundwater system as well as that of the larger Arvin-Edison Water Storage District.

Arvin like most cities in the San Joaquin Valley receives its domestic water from the ground water system (aquifer). Agriculture on the other hand uses both surface and ground water for irrigation. During above normal water-years (e.g. 2016-2017 water year) agriculture depends upon surface waters for irrigation; during below normal water years, agriculture will shift to ground water for irrigation.

Groundwater conditions became acute in 2014 and 2015 when surface water deliveries were especially low. Farmers reduced irrigated acreage and total water use, but they also drilled a record numbers of new irrigation wells and pumped record volumes of groundwater in order to maintain their agricultural investments. This accelerated groundwater pumping raised numerous concerns: irreversible land subsidence, higher pumping costs and dry wells. Subsidence rates, with lands sinking by a foot per year in some places, are approaching records reached earlier in the 20th century, before Delta imports began. Since 2014, the drying up of more than 3,100 domestic and small community drinking water wells within the region has raised immediate public health concerns. Also, reduced flows through the CVP and SWP canals, which resulted from subsidence, has raised grave concern from Kern County irrigation districts, cities and water storage districts.

Unfortunately, the ground water in the Valley is being depleted at a rate faster than it can be replenished. The pumping of ground water started in the 1930s when farmers began to use the centrifugal pump. Unfortunately, this pumping was paralleled by California's worst drought in 200 years, from 1927 to 1935. It was during these decades that the condition of subsidence and lowering water tables began to surface as a "problem".

As more land came under irrigation and as permanent crops (orchards, nuts, citrus and tree fruit) replaced row crops, grain and pasture, the need for irrigation water on a yearly basis "hardened" - a term that indicates that permanent crops need irrigation water every year while row crop land can be fallowed if the water year is dry or critical.

Compounding the drop-in ground water levels, causing farmers and cities to drill deeper wells, is the physical change in the landscape. As ground water is pumped in certain areas of the Valley, generally where clay soils exist, the pressure that is exerted upward is reduced and the elevation of the ground's surface level falls, called subsidence. In soils with high clay content, the ability of soil profiles to reabsorb ground water is reduced and therefore subsidence becomes an irreversible



physical change in the environment. In addition to reducing the capacity of the aquifer to store water it can also have serious ramifications regarding the transport of water. When land along a canal or ditch subsides the capacity of the canal or ditch to transport water is reduced. This condition has occurred along the Friant-Kern Canal and to a lesser extent along the California Aqueduct. This subsidence condition along the Friant-Kern Canal reduced the volume of water received by the Arvin-Edison Water Storage District.

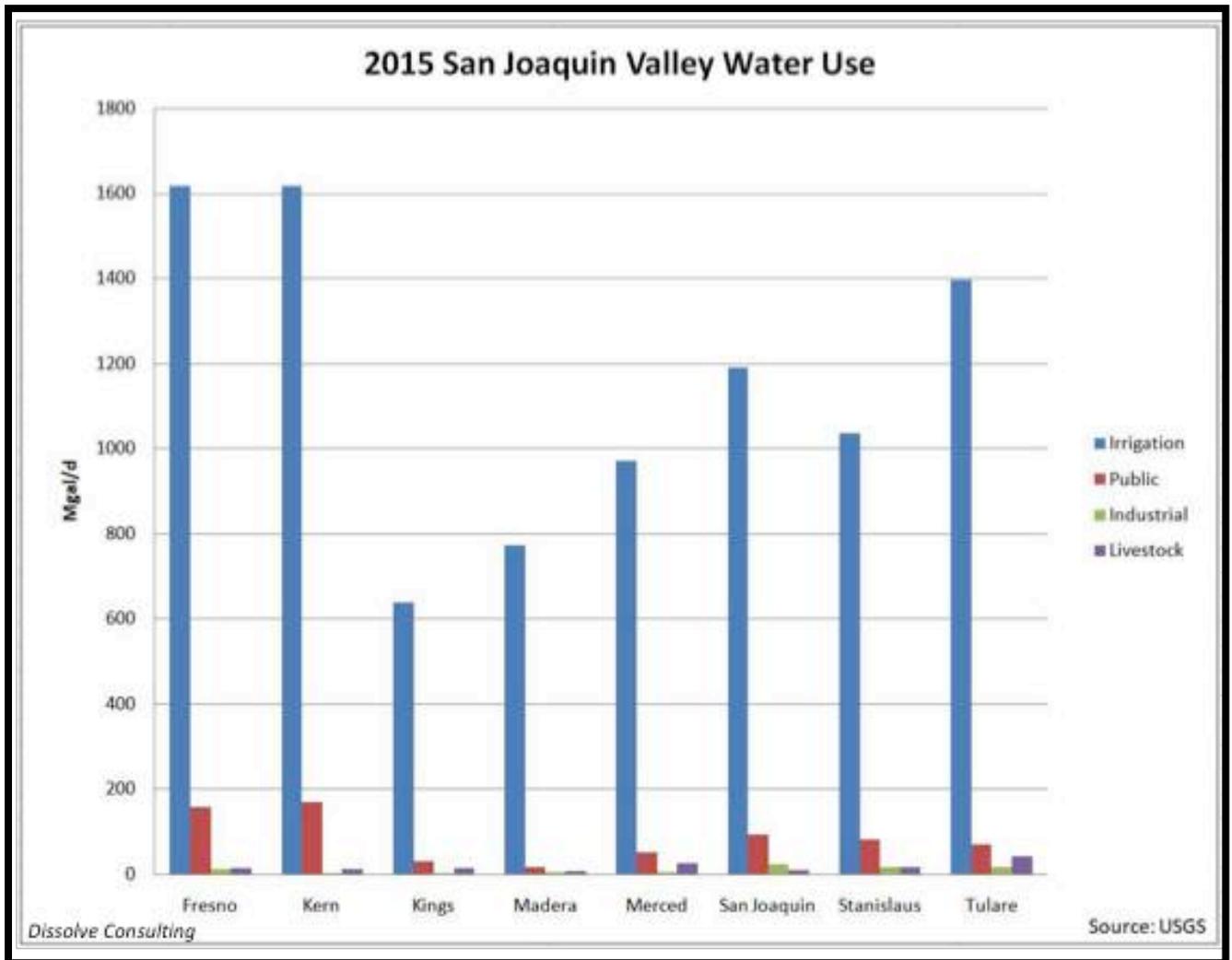
Figure No. 38 Land Subsidence



Figure No. 38 validates the notion that for the San Joaquin Valley to move towards a sustainable water budget, agriculture, the largest consumer of water in the Valley, must begin reducing consumption using a variety of tools and strategies discussed under Appendix B: California's Sustainable Groundwater Management Act (SGMA).



Figure No. 39 Water Use in the San Joaquin Valley by User



Source: USGS

Attachment: Arvin Water Resources Element (Arvin Water Resources Element)



Appendix B: SGMA (Sustainable Groundwater Management Act of 2014)

California's Sustainable Groundwater Management Act (SGMA) calls upon local agencies to find a way to avoid six undesirable results associated with groundwater use - 1) the depletion of groundwater levels; 2) the reduction of groundwater storage; 3) land subsidence; 4) potentially adverse impacts on surface water use; 5) seawater intrusion; and 6) the degradation of water quality.

In 2014, California's Legislature passed a three-bill package that called on the California Department of Water Resources (DWR) to categorize each of California's 515 alluvial groundwater basins into one of four priorities and to put in place arrangements for those basins identified as either high priority or medium priority to progressively mitigate and eliminate six undesirable results from occurring.

The 2014 Act required the formation of a Groundwater Sustainability Agency (GSA) that will be responsible for implementing the provisions of the Act within each groundwater basin. Under the Act, each GSA will be responsible for submitting a Groundwater Sustainability Plan (GSP) to the California State Water Resources Board, which will eliminate the six undesirable effects listed above. Each GSA will have a board of directors, a technical advisory committee, a management committee and a professional staff. The GSA will disseminate information and findings through websites, newsletters, social media, brochures and fact sheets.

The DWR made the decision to base its initial SGMA prioritization results off of its CASGEM (California Statewide Groundwater Elevation Monitoring) Program. Of the state's basins, 127 were identified as being of medium or high priority. A subset of 21 groundwater basins has since been designated as critically over drafted, which included all of the San Joaquin Valley. In the southern San Joaquin Valley, it included the Wells Valley Sub-basin, the Kern County Sub-basin and the Cuyama Valley Basin. Arvin is within the Kern County Sub-basin. The Act requires that groundwater use in these 21 basins be brought under a Groundwater Sustainability Plan or suite of plans by January 31, 2020.

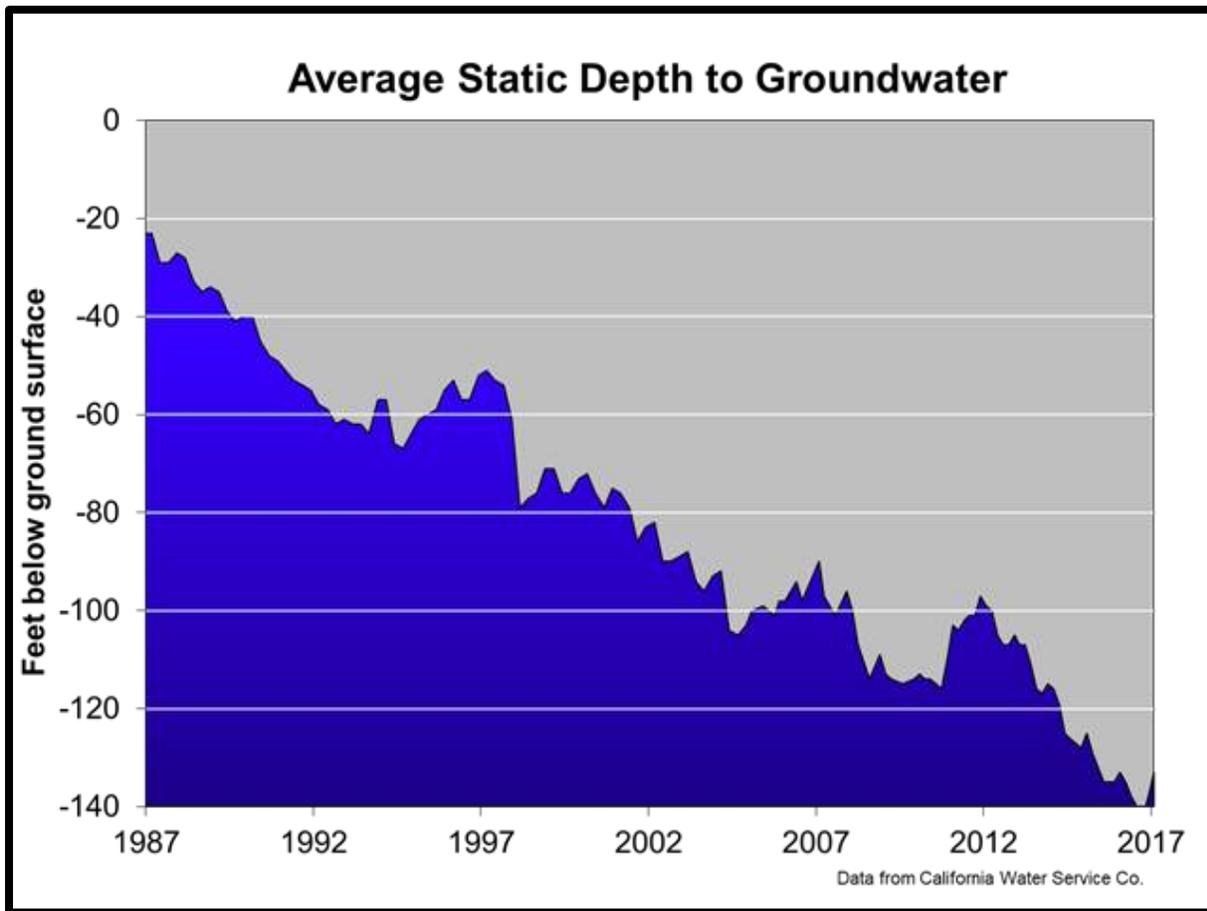


Figure 40 illustrates well what the trend line is in the water table below the City of Visalia. Although located well north of Arvin, this trend line could be a forecast for the water table under Arvin.



Figure No. 41 Groundwater Basins Subject to Overdraft



Attachment: Arvin Water Resources Element (Arvin Water Resources Element)

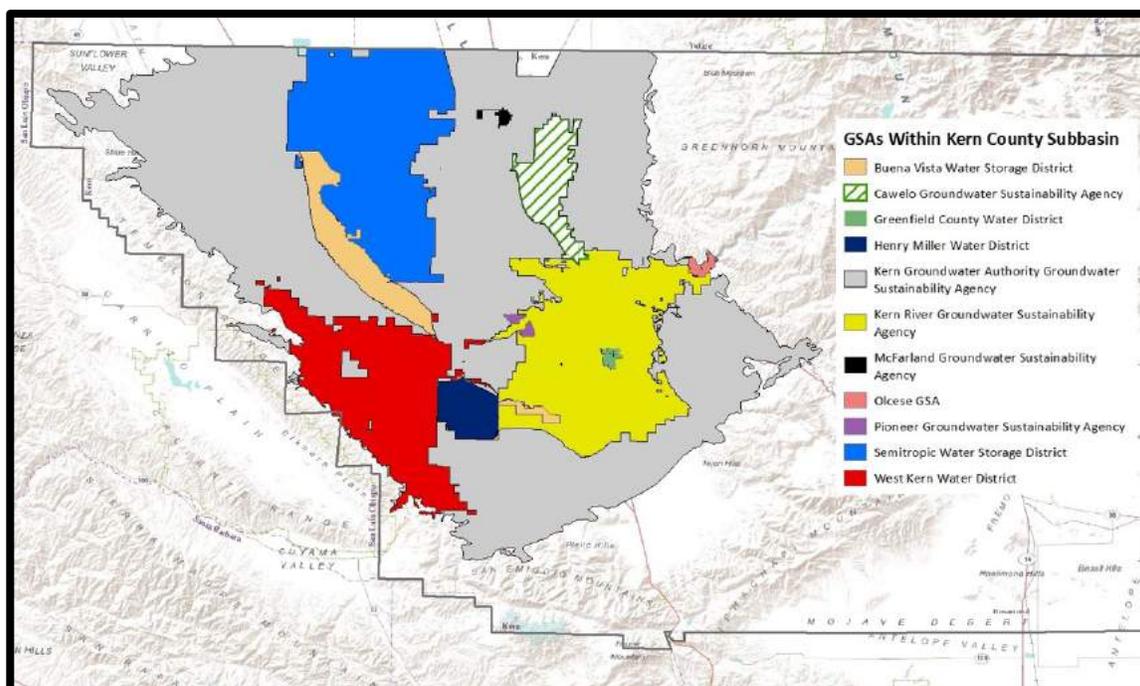


Figure No. 42 Groundwater Sustainable Agencies (GSAs) in Kern County

The GSA can implement as many of the legal tools provided by the Act and that are necessary to manage their basin. SGMA has enacted certain powers to each GSA to implement the following:

- Adopt rules, regulations, ordinances and resolutions to implement the Act.
- Monitor compliance and enforcement.
- Require registration of groundwater wells.
- Require appropriate measurement devices and reporting of extractions.
- Investigate, appropriate and acquire surface water rights, groundwater and groundwater rights into the Groundwater Sustainability Agency
- Acquire or augment local water supplies to enhance the sustainability of the ground water basin.
- Propose and collect fees.
- Adopt and fund a Groundwater Sustainability Plan according to existing laws.



The law gives local GSAs the authority to monitor and measure groundwater use and charge fees to cover the costs of basin management. At a minimum, GSAs are required to formulate reliable water accounting tools—including monitoring systems and models of how water moves within a basin and how much water is available and how much is being withdrawn. The GSA also needs the ability (and authority) to incentivize or require reductions in pumping when needed to attain long-term groundwater balance.

At a minimum, GSAs will need to collect enough funds from local groundwater users to cover the costs of monitoring and basin oversight. Ideally, they could also collect funds to cover the costs of ground water recharge, land retirement, investment in irrigation technology, etc.

To reach a point where the Valley's ground water system is considered "sustainable," the two primary consumers of this resource - agriculture and urban - need to formulate and implement a series of strategies that will resolve a resource depletion trend that has been occurring for over 80 years.

In Kern County, 92 percent of the water is consumed by agriculture; 8 percent by urban users. Below are strategies that could be employed by these two water users.

Agriculture

- accelerate ground water recharge efforts
- retire lands that could be used for habitat, solar or groundwater recharge
- continue to invest and utilize new irrigation technology
- raise crops that are more suited to an arid climate
- continue to fallow land during "dry" water years
- fix those sections of the Friant-Kern Canal and the California Aqueduct that are suffering from subsidence
- modify soils to improve the crop's ability to "take up" water.
- "flood irrigate" appropriate crops with surface water (e.g. walnuts, pecans, almonds, etc.)

Urban Uses

- continue to adhere to the California Green Building Code
- utilize treated wastewater for irrigation or ground water recharge
- reduce lawn irrigation by establishing programs that encourage homeowners to replace their lawn with drought-tolerant plants, mulch, gravel and cobblestones
- promote on-site storm water drainage using bio swales
- capture rainfall using rain barrels
- reduce impervious surfaces by installing parkways and landscaped medians, which will retain storm water runoff and recharge the groundwater system



Appendix C: Water Rights

The reader may wonder what water rights has to do with water conservation and ground water sustainability in Kern County and the City of Arvin. Actually, the understanding of water rights is extremely important to the conversation because the issue of water management is very "complex and controversial" and the reader needs to have a general understanding of how water gets allocated in the San Joaquin Valley from a "rule of law" perspective.

The earliest basic principle of allocating water in California came from Spain. The basic principle was "proportionality" - people obtaining an amount of water proportional to their legitimate need and in proportion to the amount of water available, which could change from year to year. The Plan of Pitic (created in 1783 in Hermosillo, Mexico) forebode a person's use of water from a watercourse if that use abused the rights of other individuals using water from the same watercourse. Water judges in early California prevented a resident from taking a greater volume of water when it caused injury to owners of land who also used the same source of water.

Early water law allowed persons occupying land adjacent to watercourses to claim a "riparian" water right. This law collided with "appropriation" water rights, which indicated that water from a watercourse could be diverted onto land for irrigation even if that land was not adjacent to the watercourse. Land speculators using appropriated water rights began to market land to small farmers around the country who wanted to move to California to start their farming business.

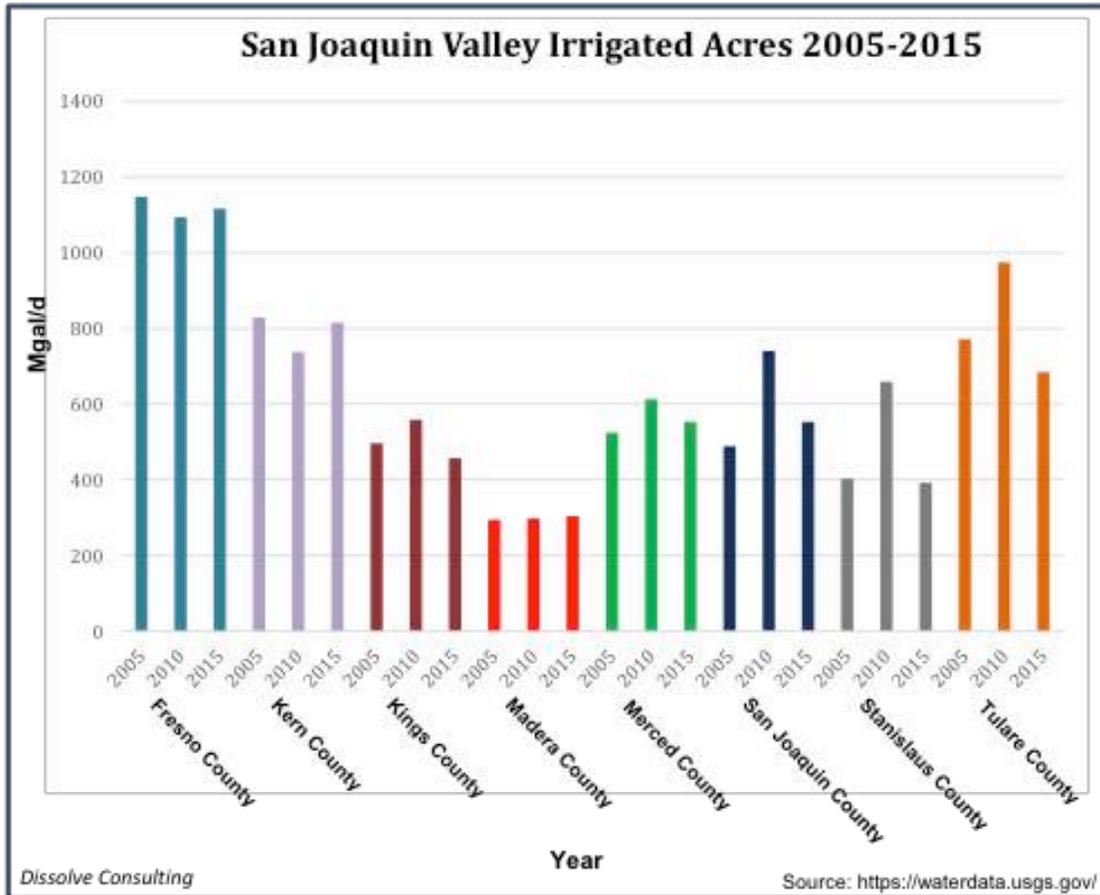
Appropriated and riparian water rights collided in a court case involving two land barons - Haggin and Lux (of Miller and Lux Land Company). Miller and Lux had riparian water rights at the lower end of the Kern River in Kern County. Haggin had appropriated water rights on the upper reaches of the Kern River. The settlement following the court decision (1886) that created the California Doctrine, which stated the following: - (1) riparian rights went with all lands that were located on a watercourse; and (2) an appropriated water right could be superior to a riparian water right if that user began using the water from the water before the riparian water right was secured downstream. In other words, timing determined which water right prevailed.

This new approach to irrigation of land enriched persons who played a role in water diversions - canal and ditch builders - and it intensified the acreage that was placed under surface water irrigation (60,000 acres in 1870, 300,000 in 1880 and one million acres in 1890). Since the 1930s when the centrifugal pump was put into use, irrigated acres in the San Joaquin Valley have sky rocketed. Figure No. 43 shows that about 4.8 million acres of land in the Valley are under irrigation. Fresno County ranks first in this category followed by Tulare and Kern counties. The amount of existing irrigated acreage in the Valley, and the reduction of imported surface water due to climate change and with the demand for water by Southern California, will place tremendous



pressure on the Valley’s groundwater system. Potentially, farm lands will be required to be retired or fallowed in order to maintain sustainability within the system.

Figure No. 43 Irrigated Acres in the San Joaquin Valley



Attachment: Arvin Water Resources Element (Arvin Water Resources Element)

Paralleling the trend of diverting water for irrigation to non-riparian lands was the California's legislature approval of the Wright Act (1887), which allowed for community control of water (called irrigation districts) that irrigated large and small plots of land throughout California. The early precursor to the irrigation district was the mutual water company, which was formed to provide surface water irrigation to planned agricultural communities that were often composed of vineyards and orchards. The first mutual water company of any size was one in Anaheim started by German immigrants on a former land grant land.

Today there is multitude of irrigation and water districts managing water throughout the Valley along with other special districts including ditch companies, water conservation districts, water storage districts, and public and private water companies (e.g. California Water Service).



These irrigation entities have done a responsible job over the last 150 years in transporting surface water throughout their districts, even in drought years; however, it is the management of the groundwater system that has become challenging. Some districts have been active in recharging the ground water system in "wet" water years but even this effort has fallen well short of a well-managed San Joaquin Valley ground water system.

With the California Doctrine somewhat resolving the conflicts between "riparian" and "appropriation" water rights, the courts turned their attention to the management of the ground water system. In 1903, the State Supreme Court in *Katz v. Walkinshaw* created the "correlative" rights doctrine, which held that there were multiple owners above an aquifer - each had a "correlative" right or a "proportional" right to a reasonable volume of water. Obviously, the reasonable use of water can be debated especially when one farmer is raising trees on a drip irrigation system while an adjacent farmer is flood irrigating an alfalfa field; or one farmer is pumping with a 5-horsepower pump at 75 feet while the adjacent neighbor is pulling water from 150 feet using a 20- horsepower engine.

Katz v. Walkinshaw did not resolve the over pumping of the ground water system and so a half century later (1949) the court waded into the ground water controversy once again by creating the "mutual prescription" doctrine. This ruling established in *Pasadena v. Alhambra* awarded prescriptive rights to users of an over drafted aquifer and set a formula for the volume of water that was rightfully owned by each party pumping water. The court used a formula for each pumper of the aquifer based on that user's highest five years of pumping. The court then indicated that each user must reduce their pumping until pumping of the aquifer did not exceed the safe yield of the aquifer. This ruling was potentially workable in Southern California, but it did nothing to resolve the overdraft problem in the San Joaquin Valley.

Fast forward to 2018 and one could argue that neither the courts, the State or the hundreds of water agencies have formulated a sustainable water management strategy for the larger San Joaquin Valley and the smaller political entities of Kern County and the City of Arvin. This ineffective management strategy could potentially lead to the collapse of the Valley's ground water system, which is critical to the economic health of the Valley's agriculture and to the health and safety of the residents of this region. Land subsidence, overdraft conditions, contaminated water systems, and failed wells are all leading indicators of a system that is on the verge of collapse.



Appendix D: Urban Water Conservation Strategies

“Necessity is the Mother of Invention”. Diminishing water resources in the Valley have spurred innovation in the field of water-savings strategies. Some of these water-saving strategies, which can be embraced by all cities in the Valley including Arvin, are detailed below.

Rain Barrels

Theoretical total annual capture of rain water for a 1,500 square foot roof area in Arvin is 11,175 gallons. This figure is obviously higher in other areas of the Valley where the average rainfall figure is higher. This volume of water is generated during the winter months but the need for irrigation water occurs in the summer months, June through September. How does one utilize rain barrels in an arid environment like the San Joaquin Valley, especially when one understands that to store a year’s worth of rainfall a 15,000-gallon storage tank (273 55-gallon barrels) and a pump system would be required? Stated another way, does rainwater harvesting make sense in a dry climate?

Jesse Froehlich, founder of BlueBarrel, discussed this question extensively. An abbreviated version of his conclusions and his supporting charts, narrative and graphs are provided below. Are rain barrels going to solve the problem? No. However, when integrated with an urban water conservation program they can reduce per capita water consumption, energy consumption and one’s carbon footprint.

Jesse Froehlich, Blue Barrel, Rainwater Catchment Systems

WHERE DOES YOUR WATER COME FROM IN THE SUMMER?

Being in the rainwater harvesting business in arid California, I often hear comments like this:

“In our climate it rains in winter when we’re not irrigating. Then when we need the water in summer, there’s no rain. I just don’t see how rainwater harvesting makes sense with such a long dry season.”

Let’s dig into this predicament. We have to ask ourselves where our water comes from during this long, hot summer.

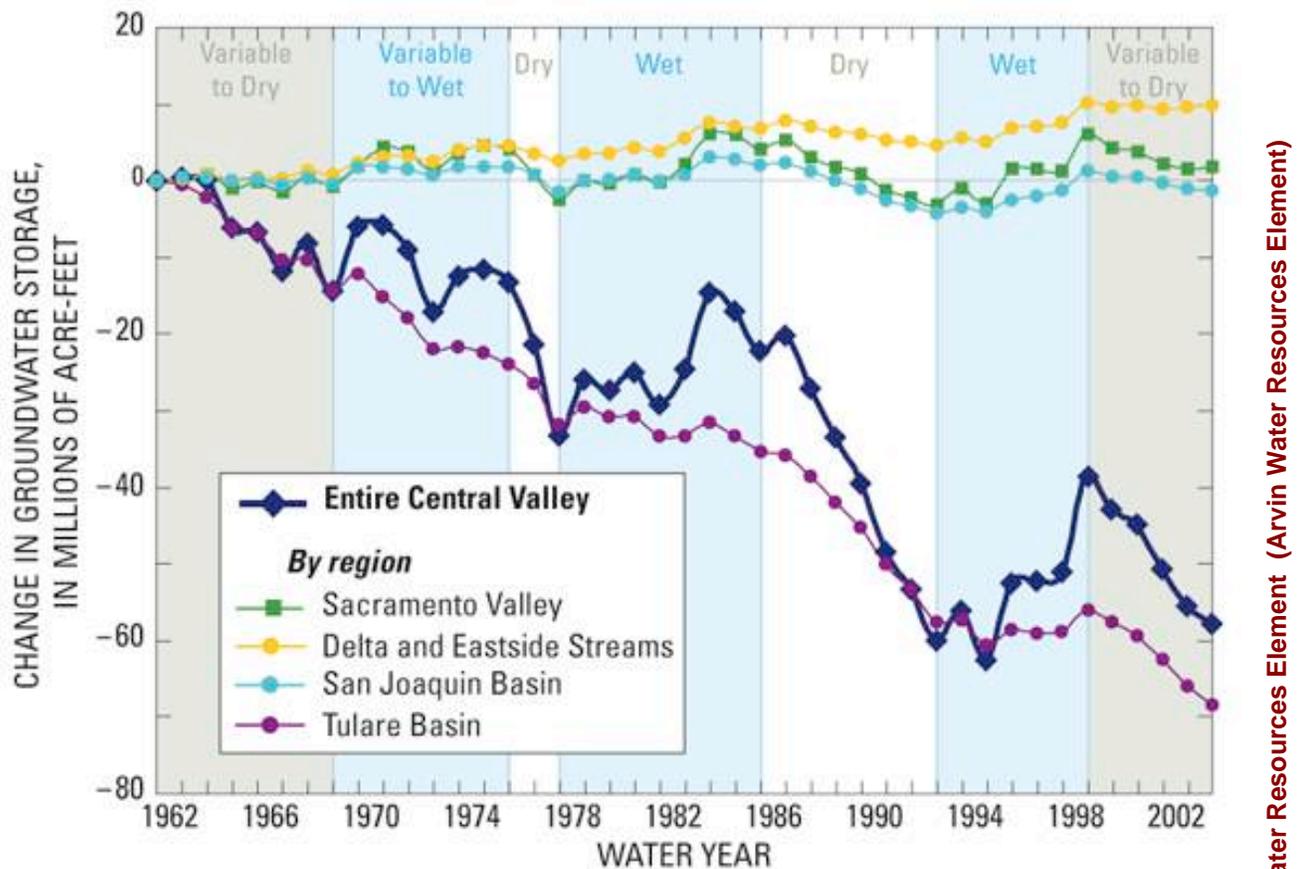
Whether you’re a municipal ratepayer or on a private well, there’s a good chance your water is pumped from underground aquifers. Or it comes from surface waters, or a combination. In any case, can you imagine what happens to these shared water sources as the dry summer drags on?

That’s right: they draw **DOWN, DOWN, DOWN!**

And unfortunately, there’s another compounding factor: when it finally does rain again, this abundant fresh water resource sheets off our hardscapes, and hurries **AWAY, AWAY, AWAY!**



See below for an illustration of the effect of our hardscapes on nature's hydrologic cycle. The water that is intended to infiltrate and recharge groundwater is prevented from doing so in our urban and semi-urban environments. The effect over time is overdraw, and in dry climates we are especially vulnerable.



That big downward-sloping blue line shows us what the California central valley aquifers have been up to (or “down” to) over a recent 40-year period: **a steep decline**. And with a rapidly growing population in this region, the problem is only getting worse.

So, let's consider this: What if you could do your share to counteract this trend by meeting even some of your summer irrigation demand with stored rainwater?

But this begs another question:

HOW MUCH WATER CAN I REALLY CATCH WHEN ITS SO DRY?

It is amazing just how much water you can catch off of a small rooftop surface, even in a dry climate. Every square foot of catchment surface will yield about 0.6 gallons for every inch of rain.



From a 1,000 square-foot rooftop, you can harvest this much water in an average year!:

Town/Area	Avg. Annual Rain	Gallons per 1,000 sq.ft.
Eureka	40.2"	24,120 gallons!
Santa Rosa	31"	18,600 gallons!
San Francisco	23.6"	14,160 gallons!
Sacramento	18.5"	11,100 gallons!
Los Angeles	15.1"	9,060 gallons!
San Diego	12"	7,200 gallons!

Now that you see the numbers in action, don't forget about garages, workshops and sheds! You really don't need much surface area to fill a rain barrel, or even a series of them.

With these numbers in mind, the question isn't about whether there's enough water to catch, it's about how much space you want to dedicate to water storage.

We all dream of a rainwater catchment system that can meet our year-round demand. (I sure do!) And as shown by the numbers above, that system may be possible even in arid California.

It is likely, however, that your budget and/or spatial constraints limit your ability to store that much water. **So, catch what you can and enjoy the benefits in proportion!**

There are three ways to manage a rainwater catchment system if you can't store enough water to meet your entire dry-season demand:

1. Store what you can, use it while it lasts (which may be longer than you think if you use gravity-fed drip irrigation), and switch back to your existing water source when your rainwater runs dry.
2. Store what you can, use it while it lasts, and then re-fill your rainwater tanks with your backup water source to continue using your gravity-fed drip system throughout the dry season.
3. Dedicate your rainwater catchment system to a particular garden zone, like a perennial border or raised vegetable beds, and size the system to meet that zone's irrigation need all summer long.

DON'T FORGET ABOUT ENERGY SAVINGS AND EMERGENCY PREPAREDNESS

If climate change is on your mind, it's worth noting the huge nexus between energy and water. Twenty percent of per capita energy use in the state of California is dedicated to pumping, treating, heating, and transporting water. And in turn, there is a large water demand associated with cleaning and cooling energy generating facilities. When you reduce your draw on pumped and treated water sources, you shrink your



carbon footprint as well. And with this energy savings, you contribute to a collective reduction in water needed for power delivery. Like many things in life, this is an interconnected cycle.

HOW LONG CAN I STORE RAINWATER?

Is it a concern that water may sit in tanks for months before being used? Not with a well-designed rainwater catchment system. Depending on your system's overflow handling, you may actually be pushing older water out as newer water enters.

But even if rainwater is held in storage for extended periods, there are a couple of best practices that help prevent problems in your tanks:

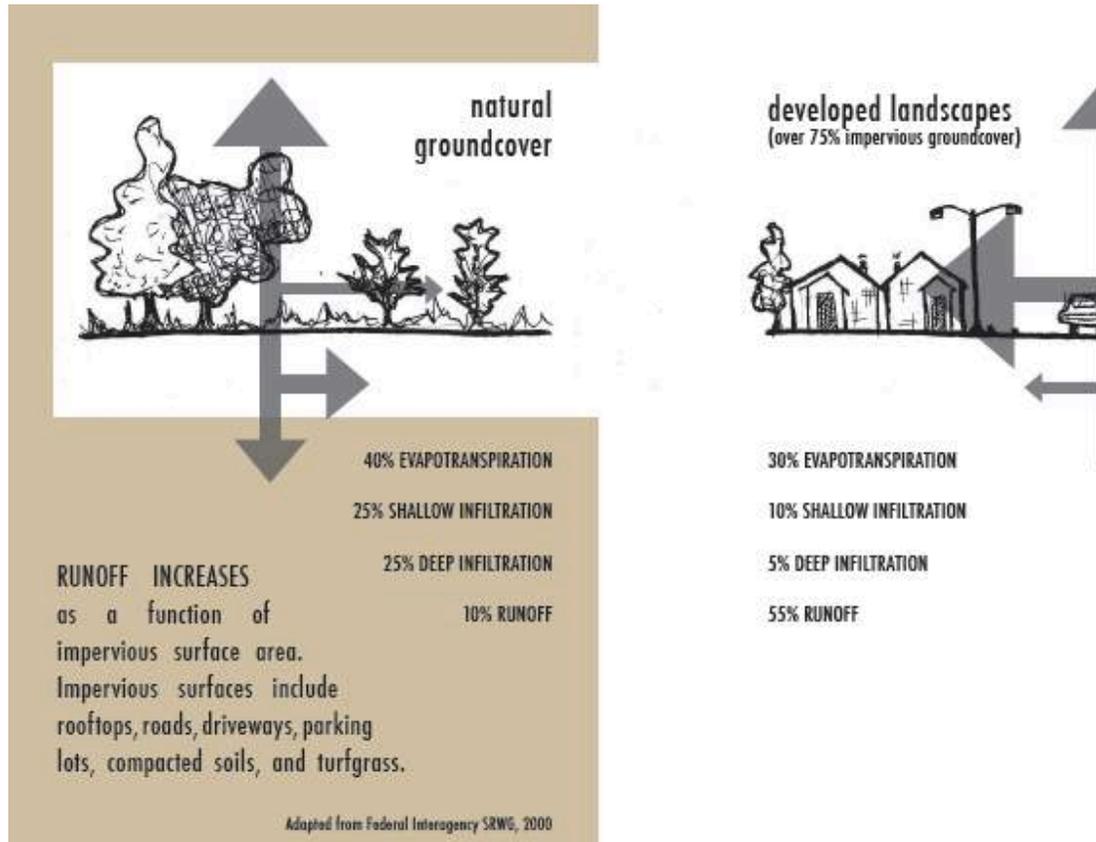
- **Use dark-colored, opaque tanks.** Sun exposure will quickly lead to algal growth, but this is completely prevented when sunlight is excluded.
- **Keep your tanks in the shade.** If tanks are kept out of direct sunlight the temperature will remain cool enough to prevent bacterial growth in the tanks.
- **Keep up with routine seasonal gutter clean-outs.** The most important time to sweep out your gutter is in the fall before the first rains.
- **Rough-filter the water on the way into the tanks.** This serves to keep out any major particulates that can cause in-tank water quality to decline.
- If storing for emergency purposes (i.e. holding the water and not drawing it down), **drain and recharge your system at least once per year.**

An optimized rainwater harvesting system (in a dry climate!) will drain by the end of the dry season so you'll get a fresh recharge at least every year. I say "at least" because this wonderful water source is also good for washing cars, defrosting windshields, rinsing boots, garden wares and lawn furniture, and watering pets, so you may find you draw down your tanks a bit (and in turn fill them up again!) even in the thick of the rainy season.

IN CONCLUSION

At this point my suspicion is that here in California we're just not dry **enough!** It's the very dry southwestern states (AZ, NM, TX) with annual rainfall averages as low as 8" – 12" that are spearheading the re-birth of rainwater harvesting in the USA with favorable policies, incentives, and active licensing programs. Many California jurisdictions are beginning to follow suit.

When it's **really** dry, rainwater harvesting is a no-brainer. Of course, when it's really wet, it's a no-brainer, too. Let's not fall victim to the Goldilocks Complex. Let's harness this fresh abundant resource to improve our gardens, be prepared for emergencies, and restore the broken link in our urban hydrologic cycle before it's too late!



Our Broken Hydrologic Cycle

In our developed environments, groundwater doesn't recharge the way it would in nature.

In a natural landscape, about **50% of precipitation hits the ground and infiltrates** to hydrate soils and recharge groundwater. About **40% evaporates** (or evapotranspires through the metabolic activity of plants and animals); and only about **10% becomes runoff**.

In a developed landscape however (including our towns and cities), with 75% impervious groundcover (think roads, parking lots, buildings, driveways, and even lawns), only **15% of water is allowed to infiltrate**, while a whopping **55% becomes runoff**. In an urban environment, this runoff sheets off the hardscape picking up automotive, industrial, and other pollutants along the way, rushing them to our sensitive waterways.

Rainwater Harvesting gives us the opportunity to hold this hardscape runoff onsite and allow it to infiltrate at a more natural rate if we use it to irrigate our gardens when it's not raining.



To Boot, Rainwater is Just Too Good!

As if all this weren't enough, serious gardeners know that rainwater is a good thing to have on hand, no matter how much rain (or how little!) you get.

Water Quality: Rainwater is the highest quality water source available to plants for three reasons:

1. Rainwater is free of the salts, minerals, and heavy metals that leach into groundwater and surface waters—a 100% soft water source.
2. If caught from a rooftop and stored in barrels, rainwater will accumulate a small amount of organic matter which can be very beneficial to your garden—a light application of fertilizer every time you water.
3. Rainwater is slightly acidic. Most organically grown plants prefer a soil pH of 5.5 – 6.5: on the acidic side of the neutral pH 7. Rainwater can help you maintain that perfect soil pH balance!

You will notice the difference, especially with young plants (they are particularly sensitive to salts and chemicals), and also with potted plants, whose containers tend to accumulate salts and minerals over time. In an open garden, you'll also get much less soil salinization and mineral buildup with rainwater.

Gravity Feed: And for the resource-conscious gardener there's even more! Stored rainwater is an ideal match for drip irrigation. In fact, drip irrigation will work by gravity feed, even on a flat site. Drip irrigation does not require pressure, it just requires water in the line. So as long as your water level is above the high-point on your drip line, you will get water to your garden with no added energy inputs!



Landscaped Medians

Most cities throughout the San Joaquin Valley contain overly wide streets the centers of which collect dust and debris, absorb heat and generate runoff that is tainted with oil and other chemicals. When these “wide” streets are adjacent to development that does not require left-hand turns into residential driveways or intersecting streets, this center area, which is 10 to 12 feet wide, can serve as a landscaped median that captures rainfall, reduces the area of heat-absorbing pavement and separates opposing traffic with a curb barrier.



Figure Nos. 44 and 45 show overly wide streets that are typical in many Valley cities.



The City of Visalia prepared a Case Study on the costs and benefits of converting paved medians to landscaped medians. The Case Study involved an overly wide street in Visalia that was a quarter mile in length and had a paved width of 12 feet. Figure 46 illustrates the before and after images of such a conversion.

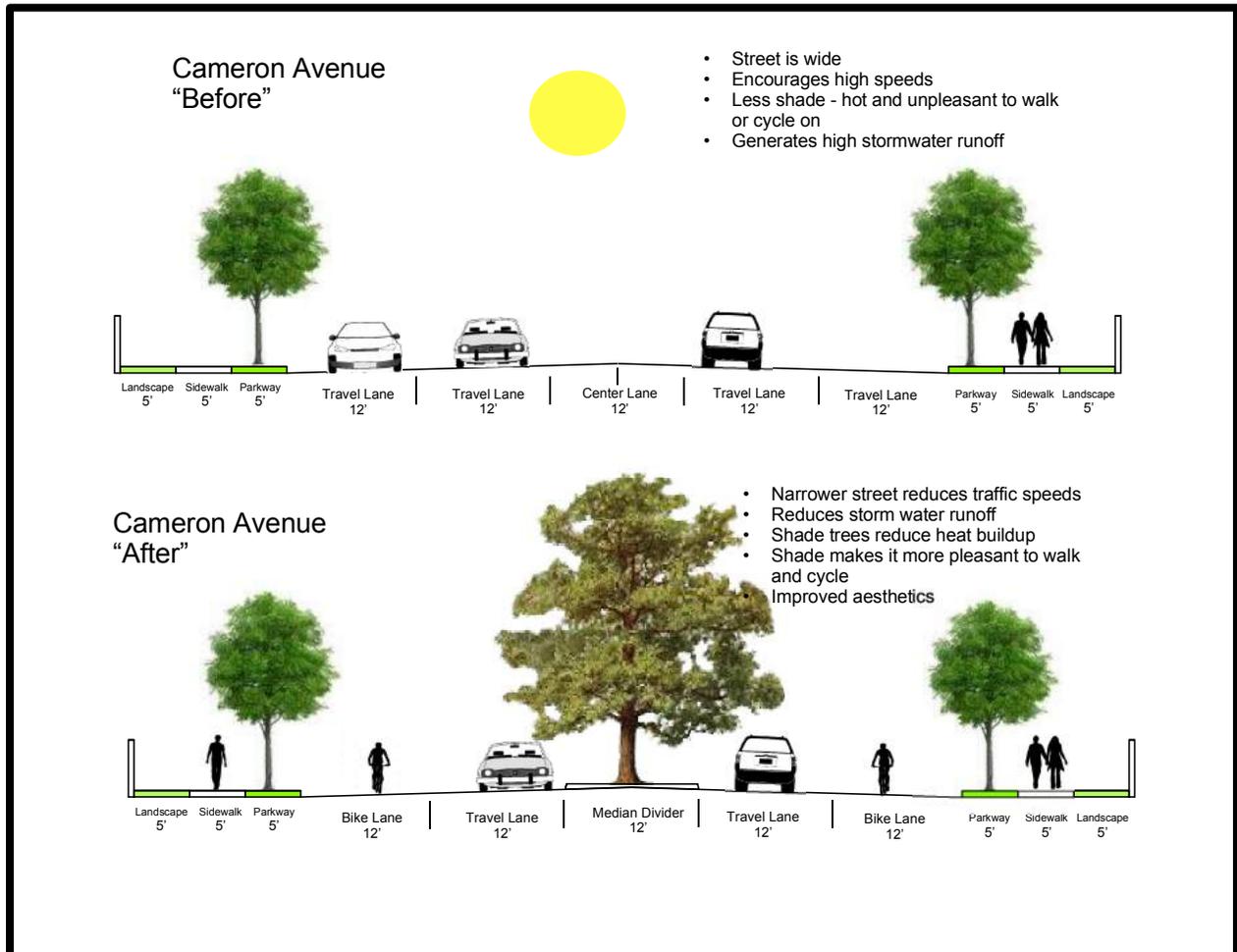


Figure No. 46: The "after" schematic of Cameron Avenue in Visalia shows a street that is cooler, more aesthetically pleasing and conveys slower moving traffic.

The project would involve removing the paved median and replacing it with a tree-lined dirt median absent an irrigation system. The median would be covered with mulch and Valley oak trees would be planted on 50-foot centers. The findings of this Case Study are as follows:



Findings for Constructing Landscaped Medians in Visalia

1. Estimated cost to construct a quarter-mile landscaped median: \$425,000
2. Traffic would drive slower along this roadway segment thereby making the roadway safer to drive along.
3. Trees planted in the median would require pruning at around 20 years and every 5 years thereafter.
4. Ambient temperatures along the median would be reduced during the summer months because pavement would be replaced with dirt (mulch) and shade trees (Valley oaks)
5. Storm water runoff would be reduced because water hitting the median area would infiltrate into the ground water system. Further, mature trees would also reduce storm water runoff due to leaf capture of rain water.
6. The quality of storm water runoff would be better because fewer contaminants would be entering the storm water drainage system from the paved median
7. The quantity of water percolating into the ground would increase because impervious surface area would be reduced – $1,320 \text{ feet} \times 10 \text{ feet} = 13,200 \text{ square feet}$ or .30 acres.
8. Mature trees increase the value of real estate when compared to neighborhoods without a mature tree canopy.
9. .15 acre-foot would be recharged into the ground water system.

The White Paper concluded that installing landscaped medians in overly wide streets in Visalia would be expensive. However, when one reviews all the benefits and compare it to the cost of the project, it may begin to make sense in the long-term, especially as the cost of water and energy increases over time.



Grey Water Systems

Gary McDonald Homes, a homebuilder in Fresno, is introducing a home water catchment and recycling system that takes do-it-yourself gray water irrigation projects to the next level. This system is being proposed for all 44 homes at its new Copper Hill Estates in northeast Fresno according to a recent article in the Fresno Be

“Gone are buckets and small water-circulation pumps. Now, pipes incorporated into a new home carry shower and laundry water to underground storage tanks while a treatment system cleans it for landscaping use – not to drink.” McDonald estimates that two out of every three gallons of water used inside the home can be recycled – used for outdoor irrigation.

A special set of pipes carry drain water from showers and washing machines to a 75-gallon in-ground collection tank. The water is then pumped into a treatment appliance that sits above ground, next to the house. Soap and solids are extracted, and the disinfected water goes into a 200-gallon underground tank. The system costs about \$250 a year to operate.

The recycled water can irrigate about 1,600 square feet of landscaping a day, McDonald said. The homes at Copper Hill Estates will range in size from 2,864 to 4,194 square feet on lots between 8,715 to 18,226 square feet.

The system, which costs about \$12,000 for the builder to buy and install, will add 10 percent to the resale value of a home, McDonald said.

Nexus is a start-up home water and energy recycler whose founders are from Australia, where a 12 year-long drought fueled the need for water-saving solutions. The company developed the water recycling system after a change in the California Building Code in 2013, called the Green Building Code.

The Green Building Code for the first-time permitted water recycling at the home level if the system is certified by the State.

Two out of every three gallons of water can be treated and used for irrigation. the average occupant creates 30 to 40 gallons of water a day that can be recycled. a family of four can have up to 160 gallons of recycled water available for reuse.



Here is how the recycling system works:

The recycled water is used to irrigate the grass, bushes, flowers and is safe to use on vegetable gardens. The water can even return into the house to be used in the toilet, although Gary McDonald Homes has not chosen this option, Hitchner said.

“About two of every three gallons first used indoors can be treated and reused for outdoor landscape,” Hitchner said. “In an area like this, where irrigation is so big, it is probably the biggest water savings that you can have.”

Installing the system into a new home is the most cost-effective solution. An existing house built on a raised foundation can be retrofitted for home water recycling, but there is no contractor in Fresno yet who can do the work, Hitchner said.

“Most of the things that motivate me personally was just reading in *The Bee* about the drought and people who are willing to make great sacrifices and effort to keep their landscaping, primarily their shrubs and trees if nothing else, alive,” McDonald said.

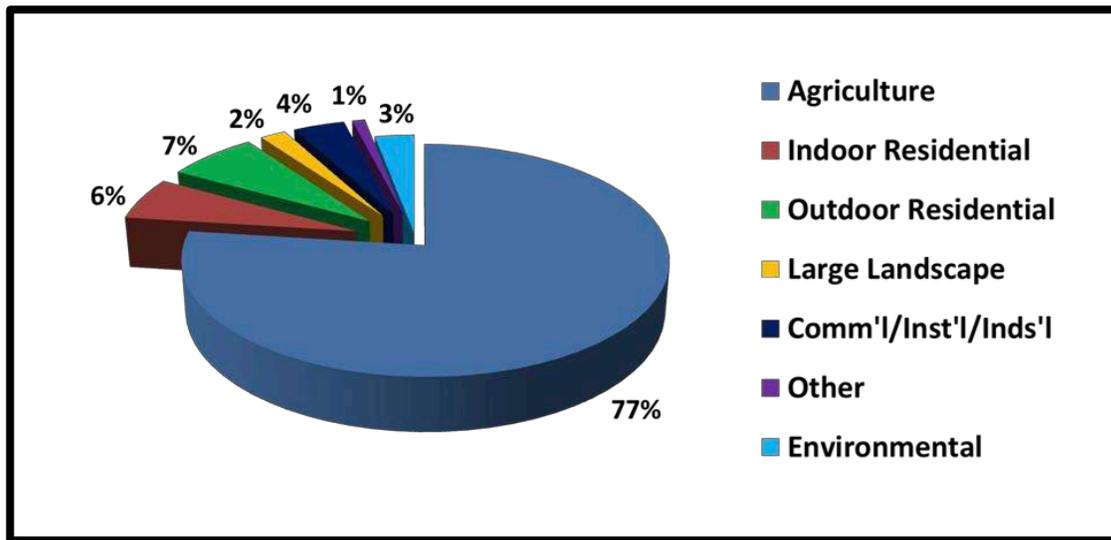
“This is just a natural step. ... What else can you say, but this is the gold standard right now of water conversation for residents.”



Outdoor Irrigation

According to a paper prepared by Donald R. Hodel and Dennis R. Pittenge called, “9%: Perspective on the California drought and landscape water use”, water used for outdoor landscaping amounts to 9 percent of the water used in California. Statewide, the major water user is agriculture at 77 percent. In the San Joaquin Valley, as a percentage of total, agriculture is closer to 92 percent and outdoor irrigation is around three percent.

Figure No. 47: Average percentages of developed water use in California during a non-drought year



Sources: Calif. Dept. of Water Resources, 2013 California Water Plan Update Chapter 3. UCLA Institute of Environment and Sustainability, So. Calif. Environmental Report Card, Fall 2009).

Hodel and Pittenge have found that statewide residential accounts for seven percent of outdoor water use while parks, golf courses and sports fields and consume about two percent.

Lawns are major users of water for outdoor irrigation. According to Hodel and Pittenge, 40 to 60 percent of the Valley’s outdoor irrigation is used on lawns, and when all outdoor irrigation is included the percentage can increase to 75 percent.

Lawn types range from cool-weather grasses such as bluegrass and fescue to warm-weather grasses like Bermuda and buffalo grass. The cool-weather grasses require the most water while Bermuda grass actually goes dormant during the winter months and therefore does not require irrigation.

The authors argue that letting one’s yard go dry has certain disadvantages – dead trees with falling branches and increased fire hazard. Other impacts that result from yards going dry include increased ambient temperatures and storm water runoff, adverse impact on aesthetics and property values, and reduced carbon sequestration. Without shade from trees the ambient temperatures

Attachment: Arvin Water Resources Element (Arvin Water Resources Element)



increase causing higher utility bills for the residents and less water holding capacity in under lying soils. Trees and shrubs help reduce storm water runoff from an urban site. A dry yard can introduce a blighting appearance to the neighborhood, causing property values to drop and discouraging persons from investing in the area.

For the urban resident to reduce their outdoor water consumption, strategies can range from the simple to the complex and expensive. Starting with the simple, a resident can save a significant amount of water (25 to 35 percent) by properly irrigating the yard area. Here are some simple water conservation solutions:

1. Deep water your trees., upper 12-inches.
2. Improve irrigation performance – fix leaks, adjust irrigation spray onto plant material not hard surfaces, run irrigation system between midnight and 6 a.m., and use drip systems on shrubs and perennials.
3. Apply organic mulch around trees and shrubs.
4. Reduce lawn cover and replace with hardscape.

Complex strategies for reducing one's outdoor water consumption can range from installing a grey water recycling or rain barrel system (both discussed above) to replacing one's entire outdoor landscape with a drought tolerant (xeriscape) landscape. When one is going to convert their traditional landscaping (lawn, perennials/annuals, shrubs and trees) to a drought-tolerant landscaping scheme, it is important to save as many trees in the yard as possible because they provide shade, which reduces summer energy costs, and they maintain soil moisture under the tree canopy. There may be some trees that require removal because they are too close to the home or they could be replaced by a tree that is better adapted to the climate of the San Joaquin Valley (e.g. Palo Verde tree versus the coastal redwood).

In Kern County and Arvin specifically, 65 to 75 percent of the gallons per capita per day (gcpd) of water is used for outdoor irrigation. The following is a description a typical drought-tolerant landscape that incorporates a number of design strategies that will reduce outdoor water use. To have a water-efficient and aesthetically pleasing landscaped yard, a qualified landscape designer or architect should be retained to prepare such a plan.



Figures 48 and 49 are two homes located across the street from each other in Visalia. The yard in the lower photo contains cool lawn (fescue), trees and shrubs. The upper photo is a yard that contains trees, shrubs but no lawn. The lawn has been replaced with boulders, gravel and drought tolerant plants. All vegetation is watered with a drip system while the home with a lawn is watered with sprinklers. The difference in water consumption between the two yards is substantial - a difference of 3,000 gallons between the two yards over the summer months.



Conserving Water in Your Landscape

1. Replace lawn with hardscape (decomposed granite, cobble stones, concrete or pavers) or artificial turf.
2. Apply mulch to all planter beds and around the base of trees.
3. Plant shrubs that are adapted to Region 8 and 9 of the Sunset's Western Garden Book.
4. Install drip irrigation to all shrubs and trees.
5. Deep water trees by soaking during evening hours or by utilizing deep watering stakes.
6. Install a Smart Irrigation System irrigation system that detects weather patterns, soil type and temperatures by using the Cloud.



California Green Building Code

California Green Building Standards Code became effective in 2009. In addition to requiring the replacement of any non-compliant plumbing fixtures in single-family homes built before 1994, the law will extend the requirement to commercial and multifamily buildings in another two years, on January 1, 2019.

California, plagued by drought despite 2017's above average precipitation, has been aggressive about water conservation. The 2009 legislation set standards for toilets, urinals, showerheads, and interior faucets, but in response to a growing sense of urgency about water shortages the California Energy Commission toughened the regulations in 2015 with two new orders — one in April and another in August — that set new limits for a number of fixtures.

Now, the limits are as follows:

- Toilets: 1.28 gallons per flush (gpf).
- Residential lavatory faucets: 1.2 gallons per minute (gpm).
- Kitchen faucets: 1.8 gpm, with a “momentary” ability to increase to 2.2 gpm
- Showerheads: 2 gpm, dropping to 1.8 gpm in 2018.
- Faucets in public rest rooms: 0.5 gpm.

In upping the ante in 2015, the Energy Commission noted there were more than 45 million faucets and 30 million toilets in the state. Total water use between toilets, faucets, and urinals was about 443 billion gallons per year. Conservation measures would save 10 billion gallons in the first year and eventually reach 105 billion gallons annually, three times the amount of water used by the City of San Francisco each year.



Appendix E: Recommended Parkway/Median Trees

The following trees will achieve canopies of 30 feet, giving sufficient uncompacted soil volume.

"The wide median and parkways will allow trees and shrubs ample room to grow. Allow trees to reach full canopy height and width for full benefit of the tree's natural form, resistance to pests, overall health and growth. No pruning is needed unless branches are damaged, broken, or diseased." Brian Hannegan, Landscape Architect, RRM Design group.

**Quercus lobata*, Valley Oak

**Quercus agrifolia*, Coast Live Oak

**Quercus weslizenii*, Interior Live Oak

Celtis reticulata, Netleaf Hackberry

Ebenopsis ebano, Texas Ebony

Pinus eldorica, Afghan Pine

Pistacia chinensis, Chinese Pistache

Pistacia 'Red Push')

Prosopis glandulosa x 'Maverick', Maverick Mesquite

Lagerstroemia indica, Crape Myrtle

Laurus nobilis, Sweet Bay 'Saratoga'

**Parkinsonia* x 'Desert Museum', Desert Museum Palo Verde

Geijera parviflora, Australian Willow

Chilopsis linearis, Desert Willow

Ulmus propinqua, Emerald Sunshine Elm



CITY OF ARVIN Staff Report

Meeting Date: May 14, 2019

TO: City Council

FROM: Jeff Jones, Finance Director
Jerry Breckinridge, City Manager

SUBJECT: A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ARVIN RECEIVING AND ADOPTING THE ANNUAL STATEMENT OF INVESTMENT POLICY AND AUTHORIZING THE INVESTMENT OF SURPLUS FUNDS CONSISTENT WITH THE SAME

BACKGROUND:

This statement is intended to provide a guideline for the prudent investment of funds and to outline the policies for maximizing the efficiency of the City of Arvin and its components units (“Entity”) cash management system. The ultimate goal is to enhance the economic status of the City while protecting its pooled funds. This investment policy has been prepared so as to be in conformance with all pertinent existing laws of the State of California for General Law cities.

OBJECTIVE

The goal of the City’s investment policy is to enable the City to invest funds to enhance the economic status while protecting its pooled cash. The city attempts to obtain a market rate of interest without assuming undue risk to principal. The objective of such investments is:

- 1) preservation of capital with maintenance of liquidity ; and
- 2) a competitive rate of return.

DELEGATION OF AUTHORITY

The authority of the legislative body to invest or to reinvest funds of the Entity is delegated to the City Finance Director in accordance with State Statutes.

INVESTMENT RESPONSIBILITY /REPORTING

Investments are the responsibility of the City Finance Director. He shall be responsible for reporting the status of investments to the City Council and the City Manager on a quarterly basis.

In addition, to be in compliance with the California Government Code, a report will be submitted to City Council not later than thirty (30) days after the end of the quarter which shows the type of investment, institution, cost, par, market value, interest rate, date of maturity, and source of market value for all investments of more than twelve months. The report will contain a certification regarding the compliance of investments with the Entity's investment policy and disclosure regarding the availability to provide sufficient liquidity to meet six months of estimated expenditures.

PRUDENCE

The standard of prudence to be applied by the City Finance Director shall be the "prudent investor" rule, which states, "Investments shall be made with judgment and care, under circumstances then prevailing, which persons of prudence description and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital, as well as the probable income to be derived." The prudent investor rule shall be applied in the context of managing the overall portfolio.

INVESTMENT CRITERIA

Criteria for selecting investments and the order of priority are:

1. SAFETY

The safety and risk associated with an investment refers to the potential loss of principal, interest or a combination of these amounts. The City only operates in those investments that are considered secure.

2. LIQUIDITY

This refers to the ability to "cash in" at any moment in time with a minimal chance of losing some portion of principal or interest. Liquidity is an important investment quality especially when the need for unexpected funds occurs occasionally.

3. YIELD

Yield is the potential dollar earnings an investment can provide and sometimes is described as the rate of return.

INVESTMENT INSTRUMENTS

California cities may invest in any instrument allowable under current legislation of the State of California (Government Code Section 53600 et al.) so long as the investment is appropriate when the City's investment objectives and policies are taken into consideration. Please see the attached proposed City of Arvin 2019-2020 Investment Policy for specifics.

FINANCIAL IMPACT:

N/A.

RESOLUTION

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ARVIN RECEIVING AND ADOPTING THE ANNUAL STATEMENT OF INVESTMENT POLICY AND AUTHORIZING THE INVESTMENT OF SURPLUS FUNDS CONSISTENT WITH THE SAME

WHEREAS, The Legislature of the State of California has declared that the deposit and investment of public funds by local officials and local agencies is an issue of statewide concern (California Government Code sections 53600.6 and 53630.1; and

WHEREAS, the legislative body of a local agency may invest surplus monies not required for the immediate necessities of the local agency in accordance with the provisions of California Government Code Sections 5920 et seq. and 53601 et seq.; and

WHEREAS, the Finance Director of the City of Arvin shall annually prepare and submit a statement of investment policy and such policy, and any changes thereto, shall be considered by the legislative body at a public meeting; (CGC 53646(a)); and

WHEREAS, the Financial Audit of the City of Arvin for the Fiscal Year ending June 30,2018 indicated that the City does not have a current investment policy on file; and

WHEREAS, both the Finance Director and the City Council declare the Annual Statement of Investment Policy included as Attachment "A" to this resolution to be the City of Arvin's Investment Policy for Fiscal Year 2019-2020.

NOW THEREFORE BE IT RESOLVED, by the City Council of Arvin as follows:

1. The City Council receives, files and adopts the Annual Statement of Investment Policy for the City of Arvin.
2. The City Council confirms the authority of the Finance Director of the City of Arvin to invest surplus funds consistent with the adopted Annual Statement of Investment Policy and consistent the requirements of local, state and federal law.

I HEREBY CERTIFY that the foregoing resolution was passed and adopted by the City Council of the City of Arvin at a Regular Meeting thereof held on the 14th day of May, 2019 by the following vote:

ATTEST

CECILIA VELA, City Clerk

CITY OF ARVIN

By: _____
JOSE GURROLA, Mayor

APPROVED AS TO FORM:

By: _____
SHANNON L. CHAFFIN, City Attorney
Aleshire & Wynder, LLP

I, _____, City Clerk of the City of Arvin, California, DO HEREBY CERTIFY that the foregoing is a true and accurate copy of the Resolution passed and adopted by the City Council of the City of Arvin on the date and by the vote indicated herein.

City of Arvin
Investment Policy
Fiscal Year 2019-2020

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Glossary of Investment Policy Terms

Exhibit I -Allowable Investment Instruments Per State Government Code

1. Policy

This statement is intended to establish the policies for prudent investment of the City of Arvin ("City") funds, and to provide guidelines for suitable investments.

It shall be the policy of the City to invest public funds not required for immediate day-to-day operations securely and in such a manner as to comply with federal, state and local laws, ensure prudent money management, and meet the objectives of this Investment Policy ("Policy"), in priority order of safety, liquidity and return on investment.

In the event of any conflict between this policy and the municipal code, the provisions of the municipal code shall govern.

2. Scope

This investment Policy applies to all investment activities and financial assets of the City. The funds covered by this policy are accounted for and incorporated in the City's Comprehensive Annual Financial Report ("CAFR"), and include but are not limited to:

- General Fund
- Special Revenue Funds
- Capital Projects Funds
- Enterprise Funds
- Any new fund created and approved by the City Council.

3. Prudence

In accordance with California Government Code ("CGC") §53600.3, the Treasurer and/or his designee, who are authorized to make investment decisions on the City's behalf, are trustees and therefore fiduciaries subject to the "prudent investor standard":

"When investing, reinvesting, purchasing, acquiring, exchanging, selling, or managing public funds, a trustee shall act with the care, skill, prudence, and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the agency, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the agency."

Indemnification of Investment Officials

Investment officers acting in accordance with written procedures and the City's investment policy and exercising due diligence and prudence shall be relieved of personal liability for an individual security credit risk or market price changes, provided that deviations from expectations are reported in a timely fashion, and appropriate action is taken to control adverse developments.

4. Investment Objectives

The City's primary investment objectives, in order of priority, are (1) safety - the preservation of principal, (2) liquidity - maintaining sufficient liquidity to meet its cash flow needs, and (3) yield - achieving a reasonable rate of return on public funds, while minimizing the potential for capital losses.

A. Safety: Preservation of principal is the foremost objective of the investment program. Investments shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio. The objective is to mitigate credit or default risk, interest rate risk, and market risk, as summarized below.

Credit or Default Risk- The risk of loss due to the failure of the security issuer and/or guarantor, or backer, may be mitigated by:

- Limiting purchases to the safest types of investments,
- Diversifying the investment portfolio among a variety of securities offering independent returns to minimize any potential losses on individual securities,
- Avoiding the concentration of investments in any one specific security type or asset class, in any one financial institution, or in any one specific geographic area or industry,
- Pre-qualifying financial institutions, brokers/dealers, intermediaries, and advisers with which the City does business and ensuring competitive transaction pricing.

Interest Rate Risk- The risk that the market value of securities will fall as interest rates rise in the general market may be mitigated by:

- Holding individual securities to maturity: i.e. structuring the investment portfolio to match the timing of cash requirements for ongoing operations, thereby avoiding the need to sell securities on the open market prior to maturity;
- Employing a laddering strategy: i.e. staggering maturities of individual securities to provide incremental liquidity over a time horizon;
- Investing an appropriate level of operating funds in money market mutual funds, or similar investment pools, which provide for same or next day access to cash.

Market Risk - The risk of market value fluctuations or volatility may be mitigated by:

- Purchasing securities which are readily tradable in active secondary markets, rather than in thinly traded markets;
- Maintaining prudent duration levels;
- Staggering investment maturity dates over a desired overall duration target.

B. Liquidity: The investment portfolio shall remain sufficiently liquid to meet all reasonably anticipated operating requirements. This is accomplished by structuring the portfolio so that securities mature concurrently with the anticipated operational demands. Furthermore, since

all possible cash demands cannot be anticipated, it is recommended that a portion of the portfolio consist of money market mutual funds or local government investment pools that offer same-day liquidity for short-term funds, and/or securities with active secondary or resale markets.

C. Yield: The investment portfolio shall be designed with the objective of attaining a market rate of return throughout the budgetary and economic cycles, taking into account the investment risk constraints and liquidity needs. Return on investment is of secondary importance compared to the safety and liquidity objectives described above. The core of investments is limited to relatively low risk securities in anticipation of earning a fair return relative to the risk being assumed. In so far as the City generally maintains a "Buy-and-Hold" investment posture (one that avoids disposing of security positions prior to scheduled maturity) securities shall not be sold prior to maturity with the following exceptions:

- A declining credit security which could be sold early to minimize loss of principal;
- Liquidity needs of the portfolio that require the security be sold;
- A capital gain that would be realized to better position the overall portfolio to achieve investment policy goals.

5. Delegation of Authority

The City Council, as permitted under CGC §53607, delegates the responsibility to invest or reinvest City funds, or to sell or exchange securities so purchased, to the City Treasurer ("Treasurer"). Under the oversight of the Treasurer, responsibility of the operation of the investment program may be explicitly delegated to the Finance Director or City Manager who shall act in accordance with established written procedures and internal controls consistent with this policy. No person may engage in an investment transaction except as provided under the terms of this Policy and the investment procedures established by the Treasurer and approved by the Finance Director.

6. Ethics and Conflicts of Interest

Officers and employees involved in the investment process shall refrain from personal business activity that could conflict with proper execution of the investment program or could impair their ability to make impartial investment decisions. City employees involved in the investment process shall disclose to the City Manager any material financial interest in financial institutions that conduct business within the jurisdiction. They shall further disclose any personal financial/investment positions that could be related to the performance

of the investment portfolio. Officers shall refrain from undertaking any personal investment transactions with the same individual with whom business is conducted on behalf of the City.

These disclosure requirements shall include complying with the disclosure requirements as established by the Fair Political Practices Commission and Conflict of Interest Codes of the City.

7. Authorized Financial Dealers and Institutions

The Treasurer, in coordination with the Finance Director, shall maintain a list of approved financial institutions authorized to provide investment services to public agencies in the State of California. These may include "primary" dealers or regional dealers that qualify under Securities & Exchange Commission Rule 15C3-1 (uniform net capital rule). Deposits shall only be made in a qualified public depository as allowed under State Statute. In selecting financial institutions for the deposit or investment of City funds, the Treasurer will consider the credit rating of the institutions.

All financial institutions and broker/dealers who desire to become qualified bidders for investment transactions must supply the City Treasurer and Finance Director with the following:

- Audited financial statements;
- Proof of FINRA certification;
- Trading Resolution;
- Proof of State of California registration;
- Completed broker/dealer questionnaire;
- Written annual certification agreeing to abide by the City's investment policy and depository contracts.

An annual review of the financial condition and registrations of qualified bidders may be conducted by the City Treasurer or designee. As part of any review performed, a current audited financial statement will be obtained for those financial institutions and brokers/dealers subject to review. Whenever reasonable a competitive bid process, utilizing a minimum of two financial institutions deemed eligible by the Treasurer, will be used to place investment purchases. The City shall transact business only with banks, savings and loans, and with brokers/dealers approved by the Treasurer or designee.

8. Authorized and Suitable Investments

Investment of City funds is governed by the California Government Code Sections 53600 et seq. Within the context of such limitations, the following investments are authorized:

INVESTMENT TYPE	MAXIMUM MATURITY	MAXIMUM %	MINIMUM RATING
U.S. Treasury Obligations	5 years	100%	None
U.S. Agency Obligations	5 years	100%	None
Bankers' Acceptances	180 days	15%/ 10% per issuer	None
Commercial Paper	270 days	15%/ 10% per issuer	A1/PI issue; AA issuer
Negotiable Certificates of Deposit	5 years	30%	\$250,000 FDIC Insured
Non-Negotiable Certificates of Deposit	5 years		\$250,000 FDIC Insured
Placement Service Certificates of Deposit	5 years		None
Repurchase Agreements*	1 year	15%/ 10% per issuer	None
Medium Term Notes	2 years	15%/ 10% per issuer	AA
Mutual Funds/Money Market Mutual Funds	<i>NIA</i>	20%/ 10% per issuer	Highest rating by 2 NRSROs
Collateralized Bank Deposits	5 years	100%	None
Kern County Pooled Investment Fund	<i>NIA</i>	100%	None
Local Agency Investment Fund (LAIF)	<i>NIA</i>	100%	None

*Requires a Master Repurchase Agreement to be signed and on file with the bank or broker/dealer.

Legislative Changes

Any State of California legislative action that further restricts allowable maturities, investment type or percentage allocations will be incorporated into the Investment Policy and supersede any and all previous applicable language (see Exhibit 1, Allowable Investment Instruments Per State Government Code).

Unauthorized Investments

Investment of the City's investment portfolio in any of the following identified instruments is specifically prohibited:

- Local Agency Bonds
- California State and Local Agency Obligations
- Other State Obligations
- Negotiable Certificates of Deposit over \$250,000 FDIC Limit
- Reverse Repurchase Agreements
- Supranational Obligations

- Derivatives
- Common Stock
- Prohibited investments cited in CGC Section 53601.6, including but not limited to:
 - o Inverse Floaters
 - o Range Notes
 - o Mortgage Derivatives or other similar asset backed securities
 - o Interest Only Strips
 - o Zero Interest Coupon Securities

9. Review of Investment Portfolio

The City's investment portfolio must be in compliance with Section 8 of this Policy at the time an investment is purchased. However, it is possible that, subsequently, the portfolio may be in breach of compliance even without any purchase activity due to a downgrade in a security's ratings, redemptions or maturities resulting in exceeding stipulated maximum percentages of a particular investment type, fluctuation in total portfolio size, or a change in California Government Code.

The portfolio shall be monitored, as often as practical, but at least quarterly. The Treasurer shall report any major and critical incidences of portfolio non-compliance either with statutes or Policy to the City Council and provide recommendations to remedy at least quarterly.

10. Investment Pools/Mutual Funds

A thorough investigation of any government sponsored pool and/or mutual fund is required prior to investing and on a continual basis. There shall be a questionnaire developed which will answer the following general questions:

- A description of eligible investment securities, and a written statement of investment policy and objectives.
- A description of how interest is calculated and distributed, and how gains and losses are treated.
- A description of how the securities are safeguarded (including the settlement processes), and how often the securities are priced and the program audited.
- A description of who may invest in the program, how often, and what size of deposits and withdrawals are allowed.
- A schedule for receiving statements and portfolio listings.
- Are reserves or retained earnings utilized?
- A fee schedule, and method for assessing fee
- Does the pool accept bond proceeds?

11. Collateralization

Collateralization will be required on two types of investments: certificates of deposit and repurchase agreements. In order to anticipate market changes and provide a level of security for all funds, the collateralization level for certificates of deposit will be 110% of market value of principal and accrued interest. Collateralization level for repurchase agreements shall be 102% of market value of principal and accrued interest. Collateral can be either U.S. Treasury

securities or Federal Agency securities.

Section 53649 of the California Government Code specifies that the City Treasurer is responsible for entering into the deposit contracts with each depository. Investments held with third parties holding collateral shall be properly collateralized in accordance with collateralization requirements of the California Government Code.

12. Safekeeping and Custody

A. Delivery vs. Payment: All security transactions entered into by the City shall be conducted on a "delivery vs. payment" (DVP) basis. The DVP basis for delivery applies also to the delivery and safekeeping of repurchase agreement collateral. Any exception to this standard delivery practice, e.g. a DVP failure necessitating delivery other than by simultaneous exchange, will require written procedural approval by the City Treasurer.

B. Custody: To protect against fraud and embezzlement, the investment securities of the City shall be held by a third party custodian according to established safekeeping procedures.

To protect against potential losses caused by the collapse of individual securities dealers, all securities owned by the City, including collateral on repurchase agreements, shall be held in safekeeping by the City's custodian bank or a third party bank trust department, acting as agent for the City under the terms of a custody or trustee agreement executed by the bank and by the City. Custody will be evidenced by safekeeping receipts.

13. Diversification

The City will diversify its investments by security type, issuer, credit risk profile, financial institution and maturity. See Section 8 for limitations by category on the investment of City funds. Maturities shall be selected which provide for stability of income and reasonable liquidity. Risks of market price volatility shall be controlled through maturity and issuer diversification.

In order to reduce portfolio risk, the City's portfolio will be diversified by type and issuer. The portfolio shall be diversified to avoid incurring unreasonable and avoidable risks regarding specific security types or individual financial institutions. The City shall diversify its investments by investing funds among a variety of securities offering independent returns and financial institutions. In a diversified portfolio, occasional measured losses are inevitable, and must be considered within the context of the overall portfolio's investment return.

14. Maximum Maturities

To the extent possible, the City shall attempt to match its investments to anticipated cash flow requirements. The Treasurer will not directly invest in securities maturing more than five (5) years from the date of purchase or in accordance with government statute. The weighted average maturity (or duration) of the pooled portfolio shall reflect the liquidity needs and risk profile that the Treasurer deems appropriate. It is intended that all investments will be held to maturity to avoid possible capital loss.

15. Internal Controls

The Finance Director is responsible for establishing and maintaining a system of internal controls to ensure that City assets are protected from loss arising from fraud, employee error, imprudent actions, theft or misuse, and to ensure compliance with this Policy, City-mandated procedures and federal and state laws.

An internal control structure should include written procedures that encompass the following principles:

- Segregation of duties,
- Explicit delegation of authority and responsibility
- Timely reconciliation and balancing,
- Documentation, recording, and record keeping,
- Management control and oversight,
- Dual or secondary authorization.

The control structure should cover timely projections of cash flow and funding needs, cash collection and disbursements, wire transfers, anti-theft and anti-fraud practices, depository and custody services, collateral management, broker/dealer services, trading and confirmation, and master repurchase agreements (if appropriate).

It should be designed to provide reasonable assurance that these objectives are met. The concept of reasonable assurance recognizes that (1) the cost of a control should not exceed the benefits likely to be derived, and (2) the valuation of costs and benefits requires estimates and judgments by management.

The Finance Director shall establish an annual process for independent review of these controls, including cash and investment testing, by an external auditor. This review will help to ensure compliance with the City's investment policies and procedures.

16. Performance Standards

The investment portfolio shall be designed with the objective of principal preservation, liquidity and obtaining a rate of return throughout budgetary and economic cycles, commensurate with the investment risk constraints and the cash flow needs.

The City's investment strategy is passive, i.e. securities are purchased with the intent to hold to maturity. Given this strategy and given that the portfolio strategy may change over time due to the City's cash flow needs or due to market conditions, the Treasurer shall select an appropriate benchmark approximating the portfolio's weighted average maturity or select an appropriate combination of benchmarks that reflects the portfolio composition. The Treasurer shall compare the portfolio's total return annually against the appropriate benchmark to determine whether market yields are being achieved.

17. Reporting**Quarterly Reports**

The Treasurer shall prepare a quarterly investment report to the City Council and City Manager within 30 days of the end of the quarter, in accordance with CGC Section 53646. Reports may be rendered more frequently at the discretion of the Treasurer or upon request by the City Council or City Manager. Quarterly reports shall include the following information as of the end of the quarter:

- Type of investment
- Issuer
- Par and book value of the investment
- Market value
- Source of market value
- Maturity date
- Weighted average maturity of the portfolio
- Interest rate
- Percentage of the total portfolio represented by each investment category
- Liquid balances, including, but not limited to, funds held in bank demand deposit accounts, LAIF and county pools
- A statement that the projected cash flow is adequate to meet expected obligations over the next six months, or an explanation of why sufficient money will not be available
- A statement that the portfolio is in compliance with this investment policy, and if not, the reason for non-compliance and plan for remedy

Monthly Report

In accordance with CGC Section 53607, the Treasurer shall present a monthly report of transactions, including interest earned, purchases, sales and maturities to the City Council within 30 days of the end of the month.

Annual Report

Annually there shall be provided to the City Council and City Manager a report on the performance of the investment program. The report shall include a narrative discussion of the performance of the investment portfolio.

18. Investment Policy Adoption

The City's Investment Policy shall be adopted by resolution annually by the City Council. The policy shall be reviewed at least annually by the City Treasurer and the Finance Director, in conjunction with the City Manager, and any modifications must be approved by the City Council.

CITY ARVIN GLOSSARY OF INVESTMENT POLICY TERMS

Bank Deposit: Deposits in banks or other depository institutions that may be in the form of demand accounts (checking) or investments in accounts that have a fixed term and negotiated rate of interest

Bankers' Acceptance: A draft or bill of exchange accepted by a bank or trust company. The accepting institution, as well as the issuer, guarantees payment of the bill.

Benchmark: A passive index used to compare the performance, relative to risk and return, of an investor's portfolio.

Book Value: The value at which an asset is carried on a balance sheet.

Broker: A person or firm that acts as an intermediary by purchasing and selling securities for others rather than for its own account

Buy and Hold Strategy: A strategy based on holding all securities until maturity, regardless of fluctuations in the market.

Cash Flow: A comparison of cash receipts (revenues) to required payments (debt service, operating expenses, etc.).

Certificate of Deposit (CD): A short-term, secured deposit in a financial institution that usually returns principal and interest to the lender at the end of the loan period.

CD Placement Service: A service that allows local agencies to purchase more than \$250,000 in CDs from a single financial institution while still maintaining FDIC insurance coverage.

Collateral: Securities, evidence of deposit or other property, which borrower pledges to secure repayment of a loan. Also refers to securities pledged by a bank to secure deposits of public monies.

Collateralization of Deposit: Process by which a bank or financial institution pledges securities, or other deposits for the purpose of securing the repayment of deposited funds.

Commercial Paper (CP): An unsecured short-term promissory note issued by corporations or municipalities, with maturities ranging from 2 to 270 days.

Comprehensive Annual Financial Report (CAFR): The official annual report for the City. It includes combined statements for each individual fund and account group prepared in conformity with GAAP. It also includes supporting schedules necessary to demonstrate compliance with finance-related legal and contractual provisions, extensive introductory material, and a detailed Statistical Section.

County Pooled Investment Funds: The aggregate of all funds from public agencies placed in the custody of the county treasurer or chief finance officer for investment and reinvestment.

Coupon: The annual rate of interest that a bond's issuer promises to pay the bondholder on the bond's face value.

Credit Risk: The chance that an issuer will be unable to make scheduled payments of interest and principal on an outstanding obligation. Another concern for investors is that the market's perception of an issuer/borrower's credit will cause the market value of a security to fall, even if default is not expected.

Custodian: A bank or other financial institution that keeps custody of stock certificates and other assets.

Dealer: Someone who acts as a principal in all transactions, including underwriting, buying, and selling securities, including from his/her own account.

Default Risk: The risk that issuers/borrowers will be unable to make the required payments on their debt obligations.

Delivery vs. Payment: The payment of cash for securities as they are delivered and accepted for settlement.

Diversification: The allocation of different types of assets in a portfolio to mitigate risks and improve overall portfolio performance.

Duration: Indicator of the effect of an interest rate change on a bond price. The longer the duration, the greater the expected change in a portfolio's value when interest rates change.

Federal Deposit Insurance Corporation (FDIC): A federal agency that insures bank deposits, currently up to \$250,000 per entity.

Financial Industry Regulatory Authority (FINRA): FINRA is the successor to the National Association of Securities Dealers (NASD) and the member regulation, enforcement and arbitration operations of the New York Stock Exchange. It is a non-governmental organization that regulates member brokerage firms and exchange markets. The government agency which acts as the ultimate regulator of the securities industry, including FINRA, is the Securities and Exchange Commission.

Government Sponsored Enterprises (GSE): Privately held corporations with public purposes created by the U.S. Congress to reduce the cost of capital for certain borrowing sectors of the economy. Securities issued by GSEs carry the implicit backing of the U.S. Government, but they are not direct obligations of the U.S. Government. For this reason, these securities will offer a yield premium over Treasuries.

Interest: The amount a borrower pays to a lender for the use of his or her money.

Interest Rate Risk: Interest rate risk is the risk that an investment's value will change due to a change in the absolute level of interest rates, spread between two rates, shape of the yield curve, or any other interest rate relationship.

Liquidity: The measure of the ability to convert an instrument to cash on a given date at full face or par value.

Liquidity Risk: The risk that a security, sold prior to maturity, will be sold at a loss of value. For a local agency, the liquidity risk of an individual investment may not be as critical as how the overall liquidity of the portfolio allows the agency to meet its cash needs.

Local Agency Investment Fund (LAIF): A voluntary investment fund open to government entities and certain non-profit organizations in California that is managed by the State Treasurer's Office.

Market Risk: The chance that the value of a security will decline as interest rates rise. In general, as interest rates fall, prices of fixed income securities rise. Similarly, as interest rates rise, prices fall. Market risk also is referred to as systematic risk or risk that affects all securities within an asset class similarly.

Market Value: The price at which a security is trading and presumably could be purchased or sold at a particular point in time.

Master Repurchase Agreement: A written contract covering all future transactions between the parties to repurchase/reverse repurchase agreements that establishes each party's rights in the transactions. A master agreement will often specify, among other things, the right of the buyer/lender to liquidate the underlying securities in the event of default by the seller/borrower.

Maturity: The date on which the principal or stated value of an investment becomes due and payable.

Medium Term Note: Corporate or depository institution debt securities meeting certain minimum quality standards (as specified in the California Government Code) with a remaining maturity of five years or less.

Money Market Mutual Funds: MMF's are mutual funds that invest exclusively in short-term money market instruments. MMF's seek the preservation of capital as a primary goal while maintaining a high degree of liquidity and providing income representative of the market for short-term investments.

Mutual Fund: An investment company that pools money and can invest in a variety of securities, including fixed-income securities and money market instruments.

Nationally Recognized Statistical Rating Organization (NRSRO): A rating organization designated by the SEC as being nationally recognized.

Negotiable Certificates of Deposit: Generally, short-term debt instrument that usually pays interest and is issued by a bank, savings or federal association, state or federal credit union, or state-licensed branch of a foreign bank. The majority of negotiable CDs mature within six months while the average maturity is two weeks. Negotiable CDs are traded in a secondary market and are payable upon order to the bearer or initial depositor (investor). Negotiable CDs are insured by FDIC up to \$250,000, but they are not collateralized beyond that amount.

Non-Negotiable Certificates of Deposit: CDs that carry a penalty if redeemed prior to maturity. A secondary market does exist for non-negotiable CDs, but redemption includes a transaction cost that reduces returns to the investor. Non-negotiable CDs issued by banks and savings and loans are insured by the Federal Deposit Insurance Corporation up to the amount of \$250,000, including principal and interest. Amounts deposited above this amount may be secured with other forms of collateral through an agreement between the investor and the issuer. Collateral may include other securities including Treasuries or agency securities such as those issued by the Federal National Mortgage Association.

Par Amount or Par Value: The principal amount of a note or bond which must be paid at maturity. Par, also referred to as the "face amount" of a security, is the principal value stated

on the face of the security. A par bond is one sold at a price of 100 percent of its principal amount.

Portfolio: Combined holding of more than one stock, bond, commodity, real estate investment, cash equivalent, or other asset. The purpose of a portfolio is to reduce risk by diversification.

Price: Price is the amount of monetary consideration required by a willing seller and a willing buyer to sell an investment on a particular date.

Principal: The face value or par value of a debt instrument, or the amount of capital invested in a given security.

Prudent Investor Standard: A standard of conduct where a person acts with care, skill, prudence, and diligence when investing, reinvesting, purchasing, acquiring, exchanging, selling, and managing funds. The test of whether the standard is being met is if a prudent person acting in such a situation would engage in similar conduct to ensure that investments safeguard principal and maintain liquidity.

Qualified Public Depository: A financial institution which does not claim exemption from the payment of any sales or compensating use or ad valorem taxes under the laws of this state, which has segregated for the benefit of the commission eligible collateral having a value of not less than its maximum liability and which has been approved by the Public Deposit Protection Commission to hold public deposits.

Rate of Return: The yield obtainable on a security based on its purchase price or its current market price.

Repurchase Agreement: An agreement of one party (for example, a financial institution) to sell securities to a second party (such as a local agency) and simultaneous agreement by the first party to repurchase the securities at a specified price from the second party on demand or at a specified date.

Safekeeping: Offers storage and protection of assets provided by an institution serving as an agent.

Safety: In the context of investing public funds, safety relates to preserving the principal of an investment in an investment portfolio; local agencies address the concerns of safety by controlling exposure to risks.

Secondary Market: A market made for the purchase and sale of outstanding issues following the initial distribution.

Total Return: Total return includes interest, realized gains and losses, and unrealized gains and losses over a given period of time.

U.S. Agency Obligations: Agencies of the Federal government set up to supply credit to various classes of institutions (e.g. savings & loans, small business firms, students, farmers, housing agencies). Examples include Federal Home Loan Mortgage Corporation (FHLMC), Federal National Mortgage Association (FNMA), Federal Home Loan Bank (FHLB) and Federal Farm Credit Bank (FFCB).

U.S. Treasury Obligations: Debt obligations of the U.S. Government sold by the Treasury Department in the forms of bills, notes, and bonds. Bills are short-term obligations that

mature in one year or less and are sold at a discount. Notes are obligations that mature between one year and ten years. Bonds are long-term obligations that generally mature in ten years or more.

Weighted Average Maturity: The average maturity of all the securities that comprise a portfolio, typically expressed in days or years.

Yield: The current rate of return on an investment security generally expressed as a percentage of the securities current price.



CAP PROJECTS - OVERVIEW

- 17 Projects
- \$10 Million total
- The majority of the grants (14) are reimbursable, not advanced cash to the City

Does not include \$2.9 CDBG grant applied for in April of 2019 for Franklin Street reconstruction.

This means that cash flow will be a critical part of a successful implementation. City management will have to prioritize how best to 'phase' in the projects.



FY 20 CAPITAL PROJECTS BUDGET

- CALTRANS – COMPLETE STREETS (PLANNING) \$150,000
- CAL FIRE – URBAN FORESTRY (TREE PLANTING) \$100,000
- TDA 3 – LANGFORD SIDEWALKS (KCOG) \$135,000
- URBAN GREENING/PATHWAYS GREENER ARVIN \$527,747
- SCGIP – WATER ELEMENT PLANNING \$ 49,000
- GRANTS FOR 3 ELECTRIC BUSES+INFRA \$3,566,000



FY 20 CAPITAL PROJECTS BUDGET

- CMAQ SIDEWALK/GUTTER S. DERBY (KCOG) \$385,615
- TDA 3 - DERBY BIKE PATH (KCOG) \$192,235
- SEWER IMPROVEMENTS – DERBY \$250,000
- PTMISEA – PARK AND RIDE PROJECT \$228,000
- SB 1 – STREET REPAIRS AND IMPROVE \$900,000
- W/WATER PLANT PARSHALL FLUME \$386,000



CAL TRANS ATP PROJECTS

- CYCLE 1 PROJECTS – COMPLETE USING TDA \$580,000
- CYCLE 3 – VARSITY SIDEWALK \$833,000
shortfall – need to use TDA funds to finish (KCOG) \$136,000
- CYCLE 3 – FRANKLIN COMPLETE STREETS \$350,000
shortfall – need to use TDA funds to finish (KCOG) \$128,000
- CYCLE 3 – HAVEN STREET SIDEWALKS \$643,000
- RSTP FRANKLIN (Stockton to A Street) \$502,574