

Draft

**AMENDMENT 1
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
FIRST AMENDMENT TO AGREEMENT BETWEEN
THE STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES
CONTRA COSTA COUNTY DEPARTMENT OF PUBLIC WORKS
UNDER THE FLOOD EMERGENCY RESPONSE PROJECTS –
STATEWIDE GRANT**

On June 25, 2014, the State of California Department of Water Resources (hereinafter called the State), and Contra Costa County Department Of Public Works (hereinafter called the Grantee) entered into an Agreement for the purpose of improving local flood emergency response. The project is designed to increase the capacity for locals to respond to flood threats through enhancements to early warning systems.

The State and Grantee desire to amend the original Agreement by updating the scope of work, revising the budget, and extending the contract term.

The June 25, 2014 Agreement is hereby amended by this instrument, Amendment 1, executed in triplicate to be effective as of the date of execution. This amendment is necessary to fulfill the intent and purpose of the original Agreement.

The State and the Grantee hereby agree with the following modifications:

1. Exhibit A – Scope of Work And Tasks

The scope of work is amended as noted in Exhibit A (Amendment 1), attached. This revision is necessary to update the scope of the project. Revisions include modifications to Task 1 in regards to equipment inventory and Task 2 in regards to gage site locations.

2. Exhibit B Budget

The budget is amended to match the revised budget attached, Exhibit B. This revision is necessary to reflect actual project expenditure patterns.

3. Section 2 Scope and Term of Agreement

The term of the Agreement shall be from the latest day of execution by the State through December 15, 2017.

All other terms and conditions of the June 25, 2014 agreement shall remain unchanged.

IN WITNESS WHEREOF, the following authorized representatives have executed this Agreement as of the date last written below.

**CONTRA COSTA COUNTY
DEPARTMENT OF PUBLIC WORKS**

**STATE OF CALIFORNIA
DEPARTMENT OF WATER
RESOURCES**

By: _____
Julia Bueren
Public Works Director

By: _____
Eric S. Koch, Chief
Division of Flood Management

Date: _____

Date: _____

Approved as to Legal Form
and Sufficiency

Approved as to Legal Form
and Sufficiency

By: _____
Sharon L. Anderson
County Counsel

By: _____
Robin Brewer
Chief Counsel

Date: _____

Date: _____

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**Exhibit A (Amendment 1)
Stream Gage and Webpage Development — Contra Costa County**

Amendments to the Project Scope of Work Tasks and Schedule

Introduction and Background

Due to adoption of new technologies and discoveries while fulling developing the gage sites for the project, Grantee has requested that changes in the stream gage sensors and locations as well as other minor items be allowed. This request was formalized in a letter to the State in May of 2017. The State has agreed to this change in scope as long as the budget is not exceeded.

Grantee has provided the detailed revised Equipment Inventory Table and revised Gage List, as presented under Tasks 1 and 2 respectively, in this Exhibit A.

In addition, due to possible cost reduction in the equipment, Grantee has requested that if there are remaining funds after final costs have been invoiced, that those remaining funds be applied to the labor costs that have not been fully covered.

The Description of Tasks below will supersede and replace the Description of Tasks for Task 1 and Task 2 of the original Contract Exhibit A. Task 3 of the original Contract Exhibit A is not changed.

Description of Tasks

Task 1 Purchase Equipment

Under Task 1, Grantee will purchase all equipment necessary to measure water depth in creeks, store the measurement (data) in a data collection unit and transfer the data via radio or digital cellular phone system to the Grantee’s base station. Equipment in the Equipment Inventory Table below will be purchased for the gages. In the event alternative equipment is required based on conditions in the field, changes will be made by the Grantee’s request and the DWR project manager’s written approval.

The Purchase Equipment task will include ordering and receiving all of the equipment that will be installed in the field for all of the stream gages. The equipment to be purchased is:

Equipment Inventory Table

Action	Quantity	Specification
Purchase	11	50386N ScadaLynx RTU in NEMA enclosure, (2) 3-pin connector
Purchase	8	RTR-RMI-U ScadaLynx Radio Modem, UHF (Integra-TR)
Purchase	3	Digi Connect Wan 3 G Verizon (2670516)
Purchase	8	CRG8-NM/NM,20 20’ Antenna Cable with connectors
Purchase	8	Antenna Mast (common galvanized pipe)
Purchase	8	SAM460 UHF Directional Antenna, 10dB gain
Purchase	10	5033-3.0B Solar Panel, 12Vdc 3.0amps with regulator and mount
Purchase	11	35 Amp Hour Battery
Purchase	0	AC/DC Converter
Purchase	3	NEMA Box (30x30x12) standard 3R (Big)
Purchase	6	NEMA Box (30x24x10) standard 3R (Small)
Purchase	4	Bubbler Gages (Amazon)
Purchase	1	Pressure Transducer 3.5" X 1" diameter SDI-12 output 316 stainless steel housing
Purchase	18	Concrete (bags of PCC for NEMA box pads, mast and staff gage footings.)

Purchase	5	4"x4", 2"x6", and/or steel pipe posts
Purchase	5	Staff Gage Plate pairs
Purchase	5	Pipe to Creek for sensor (average costs for each).
Purchase	6	OTT RLS - Radar Level Sensor w/ SDI-12 / 4-20 mA (cost with freight and tax)
Purchase	8	Support Posts (1 or 2--2" diameter galvanized pipes--average cost)

Task 1 Deliverables:

- Copies of invoices, shipping slips, and equipment specifications.

Task 2 Install Equipment

The Install Equipment task will include unpacking purchased equipment, organizing and bench testing equipment, programming data collection units (DCUs), preparing gage sites for installation of equipment, transport of equipment to gage sites, installation of all equipment, verifying the function of equipment, verifying transmission of data to Grantee’s base station, troubleshooting any problems with sensors, DCUs, programming, or communications. This task will include assurance of proper and correct transmission of data to the Grantee’s base station database.

The equipment to be installed at each gage site is proposed as shown in Table A1 provided at the end of this Exhibit A. The proposed gage locations are described below in the Gage List and shown in Figure A1 provided at the end of this Exhibit A.

Each gage is in a unique location and requires unique consideration for equipment, such as communication type, support equipment, enclosure type, sensor type, and power source. The equipment listed in Table A1 is the most adequate for each gage as understood at the time this Contract was executed. In the event alternative equipment is required based on conditions in the field, and if that equipment is more expensive, the differential additional cost of the equipment, beyond the total budget amount, will be borne by the Grantee with no additional cost to the State without the DWR project managers’ explicit approval. The locations for the gages will be at or substantially equivalent to those listed in the Gage List listed below and shown in Figure A1.

Almost all of the gage installations will require environmental review. The San Pablo Cr @ La Honda Dr. will not need a permit. Those with trenches in the stream slopes and bed will be looked at more closely than those proposed to be secured to existing concrete structures (channels). Environmental review and coordination with permitting agencies will be done by Grantee staff. If a gage installation requires special permit conditions, the time of year the gage can be installed may be restricted. It is important to note this for scheduling purposes.

Gage List

Gage No.	Tag	Location — Comments
1	ACZ	Alhambra Cr @ D St. — This is an old USGS gage location with a gage house. This site was recently in operation and funded by the City of Martinez, but is currently not under continuous operation.
2	RCH	Rodeo Cr @ Hawthorne Dr.
3	PSP	Pinole Cr @ San Pablo Ave.
4	GCA	Grayson Creek @ Center Ave.
5	RMB	Tice Cr @ Rossmoor Basin
6	WCD	Walnut Cr @ Diamond Blvd

7	VBR	Wildcat Cr @ Vale Rd — This is an old USGS gage location with a gage house. This site is currently under operation funded by the City of San Pablo, but the data collection system is not compatible with the Grantee's system. A parallel data collection system will be installed.
8	GCC	Galindo Cr @ Treat Blvd
9	GVD	Green Valley Cr @ Diablo Rd
10	WGC	Walnut Cr @ Marsh Rd
11	GCC	Grayson Cr @ Taylor Blvd

(The numbers, tags, and location descriptions may change after gages are installed and tags/names synced with CDEC naming conventions).

Other encroachments or right-of-entry permissions may need to be obtained. In some cases, acquiring the rights for use of electricity from a utility (PG&E), public agency, or private entity may be available.

Permits that may be required are from:

- California Department of Fish and Wildlife.
- US Army Corps of Engineers regulatory branch.
- State Regional Water Quality Control Board.
- Local jurisdiction encroachment permits (Cities of Pleasant Hill, Concord and Danville).

These tasks also include obtaining any rights for use of property or resources that are not under the ownership or easement rights of the Grantee. Such rights could include:

- Incidental access thru property for initial installation and gage maintenance activities, and
- Low voltage electricity from a willing private party, city, or utility (PG&E).

In the event that differing field conditions, access rights, or permit conditions require an alternative gage location to be used, Grantee may change the gage location upon agreement by the DWR project manager.

Task 2 Deliverables:

- Invoices for labor costs.
- A post-installation report presenting all gages with maps, site photos, and equipment list, as evidence of final installation of stream gages.
- Copies of environmental permits required for installation of some gages.

Schedule

The schedule is shown in Table A2 and Figure A2 attached hereto. The schedule is based on assumed start dates and may be adjusted for actual start dates.

Schedule Deliverables:

- An adjusted schedule will be provided to the DWR project manager for the record based on actual start dates.
- Updated schedules will be provided to the DWR project manager as part of the quarterly reports, upon request by the DWR project manager, or as deemed necessary by Grantee.

Table A1 — Equipment List

See text for more detailed equipment specifications

Table A1 - Equipment List		Support Equipment										Enclosures			Sensors			Hardware					
No.	Tag	Location	Data Collection Unit	Radio Comms Option	Cellular Comms. Option	Antenna Line	Antenna/Solar	Mast/Support Post	Antenna	Solar Panel	35 Amp Hour Battery	AC/DC Converter	NEMA Box (30X30X12) Standard 3R (Big)	NEMA Box (30X24X10) Standard 3R (Small)	Bubbler (WaterLog Amazon)	Pressure Transducer	Radar (OTT RLS)	Concrete for Posts	Support Posts	4"x4", 2"x6", and/or steel pipe posts	Staff Gages*	Pipe to Creek	
1	ACZ	Alhambra Cr @ DSt	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
2	RCH	Rodeo Cr @ Hawthorne Dr	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
3	PSP	Pinole Cr @ San Pablo Ave	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
3	GCA	Grayson Creek @ Center Ave	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
5	RMB	Tice Cr @ Rossmoor Basin	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
6	WGD	Walnut Cr @ Diamond Blvd	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
7	VBR	Wildcat Cr @ Vale Rd	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
8	GCC	Gailindo Cr @ Treat Blvd	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
9	GVD	Green Valley Cr @ Diablo Rd	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
10	WGC	Walnut Cr @ Marsh Rd	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
11	GCC	Grayson Cr @ Taylor Blvd	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X	
		Unit Count	11	8	3	8	8	8	8	10	11	0	3	6	4	1	6	18	8 sites	5 sites	5 sites	5 sites	

Table A2 – Schedule

The schedule is based on assumed start dates and may be adjusted for actual start dates. An adjusted schedule will be provided to State for the record based on actual start dates.

FER-Statewide Grant – Contra Costa County
Contra Costa County Department of Public Works
CA DEPARTMENT OF WATER RESOURCES AGREEMENT NO. 4600010642

Table A2 – Schedule

Item	Pred.	ES	Lag	Task	Description	Grant Funded	Start	End	Cal. Days	Working Days (est.)	Percent Completed
0					3 year (1095 day) Schedule Limit	-	6/25/14	6/25/17	1095	752	96%
1	0				Contract Extension	No	6/25/17	12/15/17	172	121	0%
2	N/A				Grant Scope Acceptable to DWR*	No	12/12/13	12/12/13	1	1	100%
3	N/A				CCC Board Order Approval	No	6/3/14	6/3/14	1	1	100%
4	3	E	28		Executed DWR Agreement- Notice to Proceed	No	6/25/14	6/25/14	1	1	100%
5	13		-14		Final Report	No	12/1/17	12/15/17	14	11	0%
6	4	E		Task 1	Order Electronic Equipment	Yes	1/1/16	1/1/16	1	1	100%
7	6		120	Task 1.1	Build Electronics Equipment	Yes	1/1/16	9/15/16	247	174	100%
8	6	E	120	Task 2	Receive, Assemble, & Install Equipment	Yes	7/1/16	11/15/17	501	344	40%
9	8	E	21	Task 3.1	Develop Webpage	Yes	2/4/15	3/31/15	58	39	100%
10	9	E	-21	Task 3.2	Review/Confirm function of Webpage	Yes	3/16/15	4/10/15	24	20	100%
11	10	E		Task 3.3	Publish Webpage	Yes	4/10/15	4/10/15	1	1	100%
12	2	E			Other: CEOA*	No	12/12/13	8/24/16	986	679	100%
13	12	S	5		Other: Negotiate RW and other access/use rights*	No	12/17/13	2/28/17	1167	801	86%
14	12	E			Other: Regional Board Permit*	No	4/26/14	8/24/16	850	586	100%
15	12	O			Contract Final Reports and Close Out (Float Time 30) days	No	11/15/17	12/15/17	30	23	0%

E/S = Start matches End or Start of Pred.

O = More complex precedence or rules

*Not funded by DWR and, therefore, can start early.

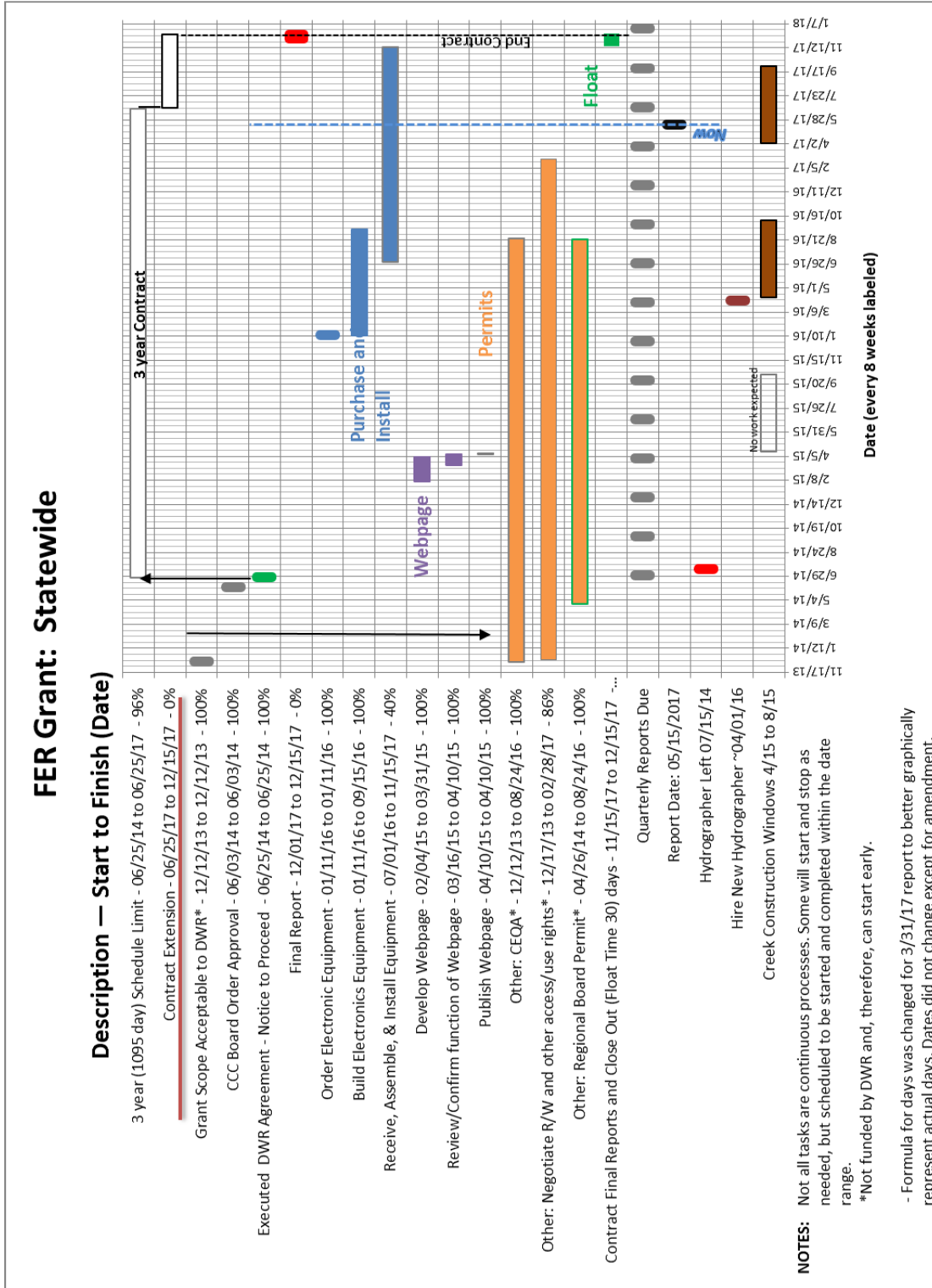
Working days are estimated due to complexities of accounting for weekends and holidays.

Note: Formula for days was changed for 3/31/17 report to better graphically represent a actual days. Dates did not change.

Date work in creek allowed: 4/15

Date work in creeks must stop: 10/1

Figure A2 —Schedule



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Budget**

The following table is an estimated budget for the project. Grantee may substitute equipment items for equal or better equipment as site conditions may warrant after DWR approval. Additional cost of items (if any) will be borne by the Grantee.

Limit of Grant Amount

The Grantee will bear the additional costs if actual costs exceed grant amount. Any surplus funds may be reallocated to other project tasks subject to the approval of DWR project manager.

Task 1 Purchase Equipment	No.	Unit	Unit Cost	DWR Total Funding
50386N ScadaLynx RTU in NEMA enclosure, (2) 3-pin connector	11	each	\$3,295	\$36,245
RTR-RMI-U ScadaLynx Radio Modem, UHF (Integra-TR)	8	each	1,475	\$11,800
Digi Connect Wan 3 G Verizon (2670516)	3	each	1,400	\$4,200
CRG8-NM/NM,20 20' Antenna Cable with connectors	8	each	120	\$960
Antenna Mast (common galvanized pipe)	8	each	50	\$400
SAM460 UHF Directional Antenna, 10dB gain	8	each	250	\$2,000
5033-3.0B Solar Panel, 12Vdc 3.0amps with regulator and mount	10	each	815	\$8,150
35 Amp-Hour Battery	11	each	75	\$825
AC/DC Converter	0	each	-	-
NEMA Box standard 30" X 30" X 12" NEMA 3R rated Two point lock (two hasps and locks will be added)	3	each	418	\$1,254
NEMA Box standard 30" X 24" X 10" NEMA 3R rated Two point lock (two hasps and locks will be added)	6	each	514	\$3,084
Bubbler Gages (Amazon)	4	each	3,935	\$15,740
Pressure Transducer 3.5" X 1" diameter SDI-12 output 316 stainless steel housing	1	each	1,300	\$1,300
Concrete (bags of PCC for NEMA box posts, mast and staff gage footings.)	18	each	4	\$72
4"x4", 2"x6", and/or steel pipe posts	5	each	42	\$210
Staff Gage Plate pairs	5	each	80	\$400
Pipe to Creek for sensor (average costs for each).	5	each	138	\$690
OTT RLS - Radar Level Sensor w/ SDI-12 / 4-20 mA (cost with freight and tax)	6	each	3320	\$19,920
Support Posts (1 or 2--2" diameter galvanized pipes--average cost)	8	each	120	\$960
Subtotal Task 1				\$108,210.00
California Sales Tax (8.5%)				\$9,197.85
Total Task 1				\$117,407.85
Task 2 Install Equipment	No.	Unit	Unit Cost	Total
Hydrographer or Technician or Student Worker**	669.67	hours	\$126	\$ 84,092.15
County Maintenance laborer assistance for in-field welding	-	LS	\$800	-
Total Task 2				\$84,092.15
Task 3 Develop Webpage	No.	Unit	Unit Cost	Total
3.1 HydroLynx Systems, Inc. (lump sum payment)	1	LS	\$5,000	\$5,000
3.2 Review and Confirm function of Webpage*	-		-	-
3.3 Publish Webpage*	-		-	-
Total Task 3				\$5,000
Cost Share Summary				Total
Total Project Budget (\$)				\$206,500
Total Project Budget (%)				100%

** Hours reflect only State Share. Maximum hourly rate used in budget, actual rate use on invoices.