

AGREEMENT REGARDING
ALERT GAGING SYSTEM MAINTENANCE SERVICES

Agreement No. _____

THIS AGREEMENT, made this _____ day of _____, 20__, by and between URBAN DRAINAGE AND FLOOD CONTROL DISTRICT (hereinafter called "DISTRICT") and _____ (hereinafter called "CONSULTANT") and collectively known as "PARTIES";

WITNESSETH:

WHEREAS, DISTRICT, Boulder County, City of Boulder, Wheat Ridge, Lakewood, Jefferson County, The Consolidated Mutual Water Company, Arvada, Aurora, Denver, Morrison, and Douglas County have executed agreements to develop flood detection networks for Boulder Creek, South Boulder Creek, Lena Gulch, Ralston Creek, Westerly Creek, Toll Gate Creek, Goldsmith Gulch, Harvard Gulch, Bear Creek, Douglas County, Southwest Denver, and Upper Sand Creek; and

WHEREAS, DISTRICT has installed ALERT gaging equipment at a number of flood control facilities in which DISTRICT participated in the funding and construction thereof; and

WHEREAS, DISTRICT has installed ALERT gaging equipment on the South Platte River, Cherry Creek, and Sand Creek in conjunction with DISTRICT's South Platte River and Master Planning Programs; and

WHEREAS, DISTRICT Board of Directors has authorized the expenditure of 20__ maintenance funds to assist local governments in maintaining existing flood warning systems (Resolution No. __, Series of 20__); and

WHEREAS, DISTRICT wishes to obtain the services of CONSULTANT to perform system testing, adjustments, and installations; to conduct regularly scheduled preventative maintenance activities; to perform minor system adjustments on an unscheduled basis when problems develop; to provide recommendations to District when major repairs or replacements are required; to conduct end-of-season testing, equipment removal, documentation and equipment storage; to repair equipment or secure the repair of equipment by others; and to monitor system performance to ensure data integrity, identify potential problems, and take appropriate remedial actions (hereinafter called "PROJECT").

NOW, THEREFORE, in consideration of the mutual promises contained herein, PARTIES agree as follows:

1. EMPLOYMENT OF CONSULTANT

DISTRICT shall engage CONSULTANT and CONSULTANT hereby agrees to perform the services hereinafter set forth.

2. SCOPE OF SERVICES

CONSULTANT shall perform all work items set forth in Attachment No. 1. The Scope of Services shall be limited to the equipment and locations identified in Attachment No. 2.

3. COST OF SERVICES

DISTRICT agrees to pay CONSULTANT a sum not to exceed _____ Dollars (\$_____) for all services described herein, subject to the terms and conditions of Paragraph 4, unless a change in the Scope of Services is approved in accordance with Paragraph 12.

4. METHOD OF PAYMENT

CONSULTANT shall receive twelve (12) monthly payments of _____ Dollars (\$_____). If billings are received by the 1st of the month, payment shall be by the 25th of the same month. For all billings, CONSULTANT shall keep work and cost records that shall permit easy comparison with work performed as specified in each billing. Payments may be withheld pending completion of work items described in Paragraph 2. Additional compensation, approved in accordance with Paragraph 12, shall be based on the cost for time and materials using rates in Attachment No. 4.

5. TIME OF PERFORMANCE

CONSULTANT shall complete the Scope of Services of this Agreement according to Attachment No. 1 and the following schedule:

- A. Beginning-of-season installations and system start-up services shall be completed by April 1.
- B. Routine inspections of all weather stations, stage gages and known troublesome rain gages shall be completed within a 15-day period beginning on calendar dates June 15 and August 15. A supplemental inspection of other known troublesome sites shall be completed within a 15-day period beginning July 15. Attachment No. 3 lists the preventative maintenance schedule for specific gaging stations.
- C. Unscheduled service calls shall be performed as needed.
- D. End-of-season removal, testing and storage of equipment shall occur on or after October 1 beginning with sites above elevation 6,000 feet. Removal of sites below 6,000 feet shall occur on or after October 15.
- E. Year-round operations shall apply to all repeaters, weather stations, Boulder County mountain rain gages, and certain stage gages specified by DISTRICT. Routine inspections for Station Nos. 700, 1640, 1650, 1660 and 1810 shall occur during the month of January.

6. SYSTEM MODIFICATIONS BY DISTRICT

DISTRICT shall notify CONSULTANT prior to performing any maintenance service, modification, adjustment, relocation, reconfiguration or any like work on or to any hardware at any remote gage site, repeater station or base station for which CONSULTANT is responsible. CONSULTANT shall provide recommendations to DISTRICT concerning any DISTRICT

proposed system modification. Adequate written records of such modifications shall be maintained by DISTRICT with copies provided to CONSULTANT.

7. DIRECTION OF EFFORT AND COORDINATION

Notwithstanding any of the provisions of this Agreement, the Executive Director of DISTRICT shall be the only individual authorized to redirect the effort or in any way amend or modify the terms of this Agreement. DISTRICT may appoint a Project Director who shall represent the Executive Director in matters related to PROJECT. All such redirection shall be transmitted in writing and directed to CONSULTANT, and shall be subject to the provisions of Paragraph 12.

8. OWNERSHIP OF DATA

Ownership, in paper and electronic form, of all data; maps; drawings; details, documents; special software; spreadsheets and templates; photographs; and information collected, acquired, developed, and documented under this Agreement (hereinafter called "DATA") shall be vested with DISTRICT. CONSULTANT may retain a record copy of such DATA. Should DISTRICT see fit to make use of DATA assembled under this Agreement for a use not included under the scope of this Agreement, DISTRICT shall assume all subsequent liability for such use and CONSULTANT shall not make claims of liability against DISTRICT for such use.

9. OWNERSHIP OF MATERIALS AND EQUIPMENT

Ownership of materials and equipment acquired under this Agreement shall be vested with DISTRICT.

10. DURATION OF AGREEMENT

The duration of this Agreement shall be one year.

11. TERMINATION OF AGREEMENT

This Agreement may be terminated by DISTRICT and/or CONSULTANT upon seven (7) days' written notice. In the event of termination, CONSULTANT shall be paid for services performed to termination date as determined by DISTRICT. This payment shall be full satisfaction of all obligations to CONSULTANT under this Agreement.

In the event of termination or should Agreement not be renewed for the following flood season, all DISTRICT-owned materials, equipment and DATA stored by virtue of this Agreement shall be surrendered to DISTRICT by CONSULTANT before payment is made.

12. CHANGES IN AGREEMENT

DISTRICT may request changes in the scope of services of CONSULTANT. Such changes, including any increase or decrease in the amount of CONSULTANT's compensation and/or time of performance, which are mutually agreed upon by and among PARTIES, shall be incorporated in written amendments to this Agreement.

13. INSURANCE

During the performance of the work defined by this Agreement, CONSULTANT, acting as an independent contractor, shall be solely responsible for procuring and keeping in full force and effect the insurance listed below:

Insurance

Minimum Limits

- | | |
|---------------------------------|--|
| A. Commercial General Liability | \$1,000,000 each occurrence and in the aggregate in combined single limit coverage for bodily injury and property damage |
| B. Professional Liability | \$250,000 each claim and in the aggregate |
| C. Automobile Liability | \$600,000 each occurrence in combined single limit coverage for bodily injury and property damage |
| D. Workers' Compensation | |
| 1. Workers' Compensation | statutory limits required by law |
| 2. Employer's Liability | statutory limits required by law |

The limits of coverage listed above are as required by DISTRICT. CONSULTANT shall evaluate individual needs regarding higher levels of insurance.

Except for Professional Liability insurance, each type of insurance procured by CONSULTANT shall provide coverage for all claims arising out of, or in connection with, any operations, work, or services performed under this Agreement by CONSULTANT, CONSULTANT's employees, subconsultants, subcontractors, agents, or representatives. CONSULTANT's Professional Liability insurance shall provide coverage for claims arising out of the negligent acts, errors and omissions of CONSULTANT in the performance of services under this Agreement. CONSULTANT may elect not to provide the above-specified coverage for the subconsultants or subcontractors. In that event, CONSULTANT shall require that the subconsultants or subcontractors procure and maintain the same insurance coverage as set forth above. All PROJECT participants shall be listed as "additionally insured" on all commercial liability insurance policy/certificates and all automobile liability insurance policy/certificates. Under this Agreement PROJECT participant is DISTRICT. Certificates of Insurance showing CONSULTANT is carrying the above-described insurance shall be provided to DISTRICT at the time of execution of this Agreement. As necessary, certificates of insurance showing the subconsultants and subcontractors are carrying the above described insurance shall be provided to DISTRICT within ten (10) days of beginning work by the subconsultant or subcontractor pertaining to this Agreement. All the certificates of insurance shall include language stating that, should the insurance policy be canceled before its expiration date, the insurance company shall provide 30 days written notice to DISTRICT. The costs of insurance shall be considered a part of the overhead costs of CONSULTANT.

14. INDEMNIFICATION

Under this Agreement PROJECT participant is DISTRICT. CONSULTANT shall indemnify and save all PROJECT participants harmless from and against claims, demands, liabilities, damages, suits, actions, or causes of action including reasonable attorney's fees and costs which may be brought or asserted against any or all of the above named on account of, by reason of, or caused by

the negligent acts, errors, or omissions in the performance of the work under this Agreement by CONSULTANT, CONSULTANT's employees, subconsultants, subcontractors, agents, or representatives together with any liability accrued by any or all of the above-named on account thereof.

15. ASSIGNABILITY

This Agreement is for the expert professional services of the personnel of CONSULTANT, and is not assignable, save and except with the consent of DISTRICT, who may withhold consent at its option with or without cause.

16. APPLICABLE LAWS

This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado. Venue for any and all legal actions arising under the Agreement shall lie in the District Court in and for the County of Denver, State of Colorado.

17. NO DISCRIMINATION IN EMPLOYMENT

In connection with the performance of work under this Agreement, CONSULTANT agrees not to refuse to hire, discharge, promote or demote, or to discriminate in matters of compensation against any person otherwise qualified on the basis of race, color, ancestry, creed, religion, national origin, gender, age, military status, sexual orientation, marital status, or physical or mental disability and further agrees to insert the foregoing provision in all subcontracts hereunder. CONSULTANT shall provide a list of subcontractors and which of those subcontractors are Disadvantaged Business Enterprises (DBE) and the basis for determining or defining the subcontractor as a DBE. The list shall be submitted prior to final payment.

18. OTHER PROVISIONS

PARTIES also agree to the terms and provisions contained in Attachment Nos. 1-3 which are made a part of this Agreement.

WHEREFORE, PARTIES hereto have caused this instrument to be executed by properly authorized signatories as of the date and year first above written.

CONSULTANT

(SEAL)

By _____

ATTEST:

Title _____

Date _____

URBAN DRAINAGE AND
FLOOD CONTROL DISTRICT

(SEAL)

By _____

ATTEST:

Title Executive Director

Date _____

SCOPE OF SERVICES FOR: ALERT GAGING SYSTEM MAINTENANCE SERVICES

A. General

CONSULTANT shall provide all services necessary for the installation, operation, maintenance and end-of-season removal and storage of the ALERT gages and equipment identified in Attachment No. 2. All technical work associated with this Agreement shall be performed by qualified technicians. Maintenance of ALERT base stations shall be limited to radio equipment, data decoders and connecting cables. CONSULTANT shall not be responsible for maintenance of base station computer equipment or peripheral components. Major repairs or replacement of major electronic components are not part of this Scope of Services. Appropriate records shall be maintained by CONSULTANT of all activities performed. DISTRICT shall be provided with copies of all such records. The following work items are described more fully in Paragraphs B.1, B.2, B.3, B.4, B.5, B.6, and B.7.

1. Beginning-of-Season Radio Maintenance, Electronic Testing, Field Installations, System Activation, and Radio Station Licensing
2. Scheduled Routine Inspections and Data Analysis
3. Unscheduled Service Calls
4. End-of-Season Field Equipment Removal, Testing, Storage, and Annual Report
5. New Installations and Radio Station Licensing
6. Spare Transmitters, Spare Sensors, and Maintenance Equipment
7. Repair and Replacement of Equipment

While this Agreement addresses year-round operation and maintenance of the ALERT system, the "flood season" is the primary focus of this program. DISTRICT flood forecast services run from April 15 through September 15 each year and heavy rainfall is possible outside of this time period. Therefore, CONSULTANT shall maintain a fully operational ALERT system between April 1 and October 1. Mountain gages may be removed for winter maintenance beginning October 1, but plains gages below elevation 6,000 feet shall remain in service through October 15. All ALERT repeaters, weather stations and certain other stations specified by DISTRICT shall remain in service year-round.

B. Specific Description of Work Items

1. Beginning-of-Season Radio Maintenance, Electronic Testing, Field Installations, System Activation, and Radio Station Licensing
 - a. CONSULTANT shall inspect and test all equipment pertinent to remote gaging station operation including radio transmitters, antennas, cables, connectors, tipping buckets, pressure transducers, shaft encoders, weather sensors, and batteries. CONSULTANT shall prepare a punch list of any deficiencies observed and recommend additional equipment and services not included in this Scope of Services.
 - b. CONSULTANT shall perform all preliminary equipment preparation necessary to assure complete operation of each gaging station. This work shall include battery charging, battery replacement, calibration checks, and other electronic adjustments as needed.

- c. CONSULTANT shall test all electronics packages and perform minor adjustments as needed in accordance with manufacturer's RF specifications and Federal Communications Commission (FCC) requirements.
- d. CONSULTANT shall install required hardware at each ALERT gaging station. This work shall include installing electronics packages; connecting antenna and battery cables; leveling and calibrating tipping buckets; painting standpipes, weather housings and other parts subject to corrosion; physical securing of site including antenna mounts, clamps, cables, conduits and sensors; general cleaning of site including funnel, screen and pressure transducer orifices; replacement or repair of defective pressure transducers and signal conditioning boards; and any other items deemed necessary to meet the terms of existing license agreements, land use permits, or varying field conditions. Specific activities performed shall be site dependent. Station IDs, RF turn-on times, analog event and time mode switches, and other station configuration programming shall be set per specifications approved by DISTRICT and as required to assure proper repeater operation. Serial numbers shall be recorded. Test transmissions shall be performed to check that gage transmitters are operating according to factory specifications and the repeaters are receiving and re-transmitting the signal. Watt meter readings shall be recorded. Minor RF adjustments and field calibrations shall be made as needed.
- e. CONSULTANT shall complete minor adjustments and testing of all repeater stations. CONSULTANT shall maintain all power supplies including solar panels, voltage regulators, and batteries.
- f. CONSULTANT shall provide all services necessary to assure proper radio and data decoder operation at ALERT base stations. This work shall include testing radio receivers and data decoders and verifying data collection by the base station computer. CONSULTANT shall not be responsible for maintenance or repair of computer hardware or software. All antennas, connectors, and cables shall be inspected and repaired as needed. Major repairs or replacement of major electronic components shall be approved by DISTRICT prior to such action.
- g. CONSULTANT shall review the status of all existing FCC radio station licenses associated with this Agreement and assist DISTRICT with renewals and maintenance of such licenses in accordance with current regulations.

2. Scheduled Routine Inspections and Data Analysis

- a. CONSULTANT shall conduct a physical inspection of all remote gaging stations. The mechanical functions of each site shall be tested to assure proper operation. Minor mechanical and calibration adjustments shall be made as needed. Minor parts such as cables, connectors, mounting hardware, and batteries shall be replaced as needed. Routine inspection of rain gages shall occur during flood season start-up and shut down, unless known site problems warrant a more frequent inspection cycle. Routine inspection of stage gages and meteorological instruments shall occur on a 75-day interval.
- b. CONSULTANT shall remove top section of each ALERT rain gage standpipe assembly to clean the screen, funnel, and tipping bucket. This work shall include leveling tipping buckets; painting of standpipes, and other appurtenances to protect against corrosion and vandalism; physical securing of site including antenna mounts, clamps, cables, conduits, and sensors; general cleaning of site; inspecting antennas

and connecting cables; and any other items deemed necessary to meet the terms of existing license agreements or varying field conditions. Test transmissions shall be performed to assure that gage reports are being received by ALERT base stations. Pressure transducer (PT) orifices and protective housings shall be checked and maintained free of mud and debris. Pressure tests shall be performed on all accessible PTs. Transmitted data shall be recorded and compared with calibration tables. Defective PTs or signal conditioning boards shall be repaired or replaced as needed using available spare parts. Calibration adjustments shall be made as needed. Specific activities performed shall be site dependent.

- c. CONSULTANT shall conduct general inspection of repeater sites and test batteries to assure proper performance. Solar panels shall be cleaned and voltage regulators adjusted as needed. Suspected problems shall be reported immediately to DISTRICT.
- d. CONSULTANT shall evaluate ALERT rain and stream gage data reliability following precipitation events that cumulate an inch or more of precipitation at ten (10) or more rain gages within seven (7) consecutive days. Based on the analysis results, any equipment suspected faulty should be scheduled for service in accordance with this Agreement. CONSULTANT shall provide DISTRICT with a brief written summary of the system status and recommended remedial actions following each event-driven analysis.
- e. CONSULTANT shall provide daily system performance monitoring. The findings from this daily analysis shall be presented to DISTRICT on a weekly basis. If site or system malfunctions are discovered during the daily analysis, CONSULTANT shall notify DISTRICT immediately upon verification of the problem and effect repairs in accordance with Paragraph 3 of this Attachment.

3. Unscheduled Service Calls

Upon notification by DISTRICT, or determination of potential problems from the data analysis described in Paragraph B.2 of this Attachment, CONSULTANT shall make unscheduled service calls necessary to assure full system operation during the flood season. CONSULTANT shall respond to DISTRICT request for service or other problem confirmation within three (3) working days of notification or confirmation of a remote sensor or transmitter failure, within forty eight (48) hours of notification or confirmation of repeater failure and within seventy two (72) hours of notification or confirmation of radio related failure at an ALERT base station. In the event of minor part failure, CONSULTANT shall effect immediate field repairs and provide appropriate minor replacement parts. In the event of a major part failure, CONSULTANT shall install available spare parts and return failed units to the lab or factory for repair. Major repairs or replacement of major electronic components shall be approved by DISTRICT prior to such action. CONSULTANT shall provide DISTRICT with monthly chronologic summaries of actions taken pursuant to this Paragraph.

4. End-of-Season Field Equipment Removal, Testing, Storage, and Annual Report

- a. CONSULTANT shall remove electronics packages, tipping buckets, and other appropriate equipment from the ALERT gaging stations not specified by DISTRICT for year-round operations. Pressure transducers and associated cables and conduits shall be secured on-site. Electronic and mechanical deficiencies shall be identified and either remedied immediately or recommended for future repair. Serial numbers shall be checked and recorded. General cleaning of each site shall be performed and

all parts secured for the off-season period. This work shall include the physical securing of the site; painting of standpipes, weather housings, and other parts subject to corrosion; and any other items deemed necessary to meet the terms of existing license agreements or varying field conditions. Specific activities shall be site dependent.

- b. CONSULTANT shall service all repeater batteries and solar panels and conduct general site inspection and testing. All repeaters shall be maintained in working condition for continuous year-round operations.
- c. CONSULTANT shall test each electronics package prior to off-season storage. Any units needing factory service or parts shall be repaired as soon as possible to insure readiness for the following flood season.
- d. CONSULTANT shall provide equipment storage area for all electronics packages, batteries, tipping buckets, and other equipment in a manner acceptable to DISTRICT. All batteries shall be maintained in properly charged condition according to manufacturer's specifications. All equipment shall be available for inspection or access within seventy-two (72) hours of notification by DISTRICT. CONSULTANT shall provide adequate casualty insurance coverage for all DISTRICT-owned equipment being stored.
- e. CONSULTANT shall provide DISTRICT with an end-of-season report by December 15. The annual report shall include a description of system performance and problems encountered, recommendations for the upcoming season and copies of maintenance records.

5. New Installations and Radio Station Licensing

All new gaging stations, repeater stations, and base stations shall be installed in accordance with Paragraphs 5.a. through 5.m, as appropriate. Specific installation requirements for new sites shall be determined by DISTRICT during final design. DISTRICT shall provide all major components to be installed and CONSULTANT shall provide all other parts and materials necessary to complete construction. Installation fees shall be negotiated with CONSULTANT prior to construction and CONSULTANT's compensation shall be in accordance with Paragraphs 4 and 12 of this Agreement.

- a. As a basis for the time and cost estimate, CONSULTANT shall prepare a master project plan that clearly outlines the tasks to be completed and a project-specific Scope of Work describing all deliverables and responsibilities.
- b. CONSULTANT shall inspect all equipment pertinent to ALERT station operation. CONSULTANT shall prepare a punch list of any deficiencies observed and recommend additional equipment and services not included in this Scope of Services.
- c. CONSULTANT shall perform all preliminary equipment preparation necessary to assure complete installation and operation of the remote gage, repeater or base station.
- d. CONSULTANT shall test all electronics packages and perform minor adjustments as needed in accordance with manufacturer's RF specifications and FCC requirements.
- e. CONSULTANT shall provide DISTRICT with a list of serial numbers for all new equipment received.

- f. An initial field inspection shall be conducted by PARTIES of each site. Preliminary site design and layout recommendations shall be provided to DISTRICT by CONSULTANT. DISTRICT shall approve of final design prior to installation.
- g. CONSULTANT shall install all hardware necessary for station operation. This work shall include: installing standpipe tower assembly; securing all hardware; installing electronics package, antenna, battery, and solar panel; leveling tipping bucket; painting standpipe and other parts subject to corrosion; securing appurtenant supports; securing pressure transducer, PT housing, cables, connectors, and conduit in a manner to protect against vandalism; general cleaning of site; and any other items deemed necessary to meet the terms of existing license agreements, easements or existing field conditions. Specific activities performed shall be site dependent.
- h. Transmitter configurations shall be set per specifications approved by DISTRICT. Test transmissions shall be performed to verify that data transmitters are operating according to factory specifications and the repeaters are receiving and re-transmitting the signal. Watt meter readings shall be taken and recorded. Minor RF and calibration adjustments shall be made as needed.
- i. A final field inspection shall be conducted by PARTIES. A punch list shall be prepared and CONSULTANT shall correct any deficiencies noted.
- j. CONSULTANT shall prepare all correspondence and technical materials necessary for obtaining required FCC radio station licenses. This work shall include all coordination activities required by the Federal Interagency Hydrologic Radio Frequency Coordination Group.
- k. New base stations shall be installed and tested to verify that all components perform properly including the antenna, receiver, data decoder, connecting cables, uninterruptible power supply and computer. DISTRICT shall be responsible for the computer hardware, ALERT software maintenance, database management, and database calibrations for all QNX base stations.
- l. CONSULTANT shall provide DISTRICT with a final installation report documenting pertinent site data, sensor IDs, serial numbers, model numbers, cable lengths, access requirements, and other pertinent information. Photographs of new stations and sensor locations shall be included.
- m. CONSULTANT shall bear the risk of any and all loss or damage of equipment or property, which are the subject matter of this Agreement, during the course of construction of the facilities. Upon acceptance of the installation by DISTRICT, CONSULTANT shall automatically be relieved of such risk.

6. Spare Transmitters, Spare Sensors, and Maintenance Equipment

- a. CONSULTANT shall be responsible for the maintenance, storage, and use of all DISTRICT-owned electronics packages, radio transmitters and receivers, sensors, battery chargers, battery dischargers, remote station testers, spare parts, and all other system maintenance equipment provided by DISTRICT.
- b. Appropriate care shall be taken in the use of all DISTRICT-owned equipment and such use shall be limited to ALERT system maintenance activities conducted in accordance with this Agreement.
- c. All DISTRICT-owned equipment shall be available for inspection by DISTRICT in accordance with Paragraph B.4.d of this Attachment.
- d. DISTRICT shall provide CONSULTANT with a current inventory of all spare parts and maintenance equipment. CONSULTANT shall maintain a separate inventory of equipment and assist DISTRICT with reconciling differences. CONSULTANT shall notify DISTRICT when spare equipment is placed in-service and when inventoried equipment is discarded or otherwise determined to be inoperable.
- e. CONSULTANT shall have no responsibility to provide casualty insurance coverage for DISTRICT-owned equipment located at gaging station sites. However, CONSULTANT shall bear the risk of any and all loss or damage of equipment or property, which are the subject matter of this Agreement, during the course of transporting equipment and maintaining facilities.

7. Repair and Replacement of Equipment

- a. CONSULTANT shall repair or replace failed equipment such as site antennas, cables, connectors, pressure transducers, signal conditioning boards, tipping buckets, housings, mountings, batteries, and other items valued at less than \$100.
- b. CONSULTANT shall provide minor repairs including cleaning; adjustments; calibration; tuning; and replacement of miscellaneous hardware parts on equipment such as transmitters, repeaters, pressure transducers, and sensors as part of the regular preventive maintenance services.
- c. CONSULTANT shall analyze failed equipment and make recommendations to DISTRICT concerning replacement or repair of major components, supplier options, and estimated costs. DISTRICT is responsible for the costs of repair or replacement of such equipment. On approval by DISTRICT, CONSULTANT shall oversee repairs, including the return of equipment to factory and testing of equipment after repair. CONSULTANT may, at CONSULTANT's discretion, provide DISTRICT with quotations for the repair of equipment by CONSULTANT as one option.

ALERT SYSTEM SUMMARY

DISTRICT WIDE FLOOD DETECTION NETWORK

STA=20, P=1, S=1, PS=12, PS2=1, Wx=4, R=1, RP=0

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Jefferson Co.	JEFFERSON	Clear Creek	950	Blue Mountain (Colo 72, South Canyon Rim)	R	HL
Louisville	BOULDER	Coal Creek	1100	Louisville Dwy 'D' (Via Appia & McCaslin - SE)	PS	HL
Boulder Co.	BOULDER	Dry Creek	1110	Gunbarrel (75th Street & Lookout Road - NE)	PS	V
Broomfield	BOULDER	Nissen Resv. Basin	1200	Broomfield 3207 (10th St. & Main-SE @ Pond 6)	PS	HSE
Lakewood	JEFFERSON	Sloan Lake Basin	1400	Upper Sloan Detention (26th & Wadsworth - SE)	PS	HSE
Adams County	ADAMS	Hidden Lake	1300	Hidden Lake (64th & Lowell - NW)	PS	HSE
Adams County	ADAMS	Little Dry Creek	1310	Little Dry at 64th (64th & Pecos - NW)	PS	HSE
Denver	DENVER	South Platte River	1420	Diamond Hill (2480 W. 26th Avenue, Bldg. B)	Wx	HL
Elbert	ELBERT	Running Creek	1440	Elbert (County Roads 17 & 106 - SW)	Wx	V
Denver	DENVER	Third Creek	1480	Third Creek at DIA (104th & E-470 - NE)	PS2	IM
Littleton	ARAPAHOE	Slaughterhouse Gulch	1500	Powers Park (W. Littleton Blvd. & Broadway - NW)	PS	HSE
Boulder Co.	BOULDER	Coal Creek	1540	Marshall Test Site (Marshall Rd & S. 66th St - SE)	P	HSE
Arapahoe Co.	ARAPAHOE	Willow Creek	1600	Englewood Dam (Arapahoe & Holly - SE)	PS	HSE
Arapahoe Co.	ARAPAHOE	Little Dry Creek	1610	Holly Dam (Arapahoe & Holly - NE)	S	HSE
Littleton	ARAPAHOE	Slaughterhouse Gulch	1620	Slaughterhouse Detention (Orchard & Broadway - SE)	PS	HSE
Denver	DENVER	Cherry Creek	1720	Cherry Cr @ Steele (Steele & Cherry Cr Dr S)	PS	V
Aurora	ADAMS	Sand Creek	1800	Sand Creek Park (28th & I-225 - NW)	PS	HSE
Thornton	ADAMS	Niver Creek	1900	Niver Detention (88th & I-25 - NW)	PS	HSE
Brighton	ADAMS	South Platte River	1920	Brighton (Highways 7 & 51, 3 blocks north)	Wx	HL
Clear Cr Co.	CLEAR CREEK	Clear Creek	2190	Squaw Mountain (South of Idaho Springs)	Wx	V

SOUTH PLATTE RIVER, MASTER PLANNING & STORMWATER PROGRAMS

STA=6, P=0, S=2, PS=4, PS2=0, Wx=0, R=0, RP=0

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Englewood	ARAPAHOE	South Platte River	1630	S. Platte @ Dartmouth (Santa Fe & Dartmouth - NW)	S	V
Englewood	ARAPAHOE	South Platte River	1640	S. Platte @ Union (Santa Fe & Union Avenue - NW)	PS	OR
Denver	DENVER	South Platte River	1650	S. Platte @ 19 th Street (19 th & Grinnel Ct. - SW)	S	V
Adams Co.	ADAMS	South Platte River	1660	S. Platte @ Henderson (Brighton Rd & Colo 22 - SW)	PS	V
Denver	DENVER	Cherry Creek	1700	Cherry Creek @ Champa (Speer & Champa - NW)	PS	HSE
Commerce City	ADAMS	Sand Creek	1810	Sand Creek at mouth (Burlington Ditch crossing)	PS	HSE

LENA GULCH FLOOD DETECTION NETWORK

STA=7, P=4, S=1, PS=2, PS2=0, Wx=0, R=0, RP=0

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Lakewood	JEFFERSON	Lena Gulch	1000	Maple Grove Reservoir (27th & Youngfield - SE)	PS	HSE
Lakewood	JEFFERSON	Lena Gulch	1010	Denver West (10th & Hawthorne - SW)	P	HSE
Lakewood	JEFFERSON	Lena Gulch	1020	Lena @ Nolte Pond (18th Drive & Winfield - NW)	S	HSE
Jefferson Co.	JEFFERSON	Lena Gulch	1030	NREL/S. Table Mtn. (South Table Mountain)	P	HSE
Golden	JEFFERSON	Lena Gulch	1040	Lena @ U.S. Highway 6 (6th & Mt. Vernon Rd-SW)	PS	HSE
Jefferson Co.	JEFFERSON	Tributary G	1050	Jeffco Fairgrounds (6th Avenue & Indiana - SW)	P	HSE
Golden	JEFFERSON	Apex Gulch	1060	Heritage Square (US 40 & Colo 93 - SW)	P	HSE

RALSTON CREEK FLOOD DETECTION NETWORK

STA=13, P=4, S=1, PS=7, PS2=0, Wx=1, R=0, RP=0

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Arvada	JEFFERSON	Ralston Creek	100	Carr Street (Brooks Drive & Carr Street - SW)	PS	HSE
Jefferson Co.	JEFFERSON	Ralston Creek	110	Ralston Reservoir (West of 64th & Colo Hwy 93)	PS	HSE
Arvada	JEFFERSON	Ralston Creek	120	Westwoods (68th & McIntyre @ Croke Pump Station)	PS	HSE
Arvada	JEFFERSON	Ralston Creek	130	Simms Street (64th & Simms - NW)	S	V
Jefferson Co.	JEFFERSON	Coal Creek	140	Blue Mountain (Howard Lacy Property)	Wx	V
Colorado	GILPIN	Nott Creek	150	Nott Creek (Golden Gate Canyon State Park)	P	V
Jefferson Co.	JEFFERSON	Leyden Creek	200	Leyden Reservoir (82nd & Indiana - SW)	PS	HSE
Arvada	JEFFERSON	Leyden Creek	210	Leyden Confluence (72nd & Simms Street - SE)	PS	HSE
Jefferson Co.	JEFFERSON	Leyden Creek	220	Upper Leyden (Colo 93 & Leyden Road - NW)	P	V
Jefferson Co.	JEFFERSON	Van Bibber Creek	300	Van Bibber Park (54th & Alkire Street - NE)	P	HSE
Jefferson Co.	JEFFERSON	Tucker Gulch	310	Guy Hill Ranch (Golden Gate Canyon, 16-T3S-R71W)	P	HSE
Arvada	JEFFERSON	Van Bibber Creek	320	Sports Complex (58th & Newcombe Street - SW)	PS	HSE
Jefferson Co.	JEFFERSON	Van Bibber Creek	330	Van Bibber @ Hwy 93 (58th & Colo 93 - NW)	PS	V

NOTE: See pages 4 and 5 for equipment summary, codes and abbreviations, device ID information and cost summary tables.

ALERT SYSTEM SUMMARY

WESTERLY CREEK FLOOD DETECTION NETWORK

STA=10, P=5, S=0, PS=5, PS2=0, Wx=0, R=0, RP=0

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Aurora	ADAMS	Westerly Creek	400	Montview Park (Montview Blvd & Chester - NW)	PS	HSE
US Air Force	DENVER	Westerly Creek	410	Kelly Dam (Lowry AFB/11th & Wabash - SW)	PS	HSE
Aurora	ARAPAHOE	Westerly Creek	420	Expo Park (Alameda & Havana - SE)	PS	HSE
Aurora	ARAPAHOE	Westerly Creek	430	Utah Park (Pond D/Mexico & Peoria - SE)	PS	HSE
Aurora	ARAPAHOE	Westerly Creek	440	Fire Station #7 (Iliff & I-225 - NE)	P	HSE
Aurora	ARAPAHOE	Easterly Creek	500	Havana Park (11th & Havana - SE)	PS	HSE
Aurora	ARAPAHOE	Westerly Creek	510	Virginia Court (Alaska & Troy - NW)	P	HSE
Aurora	ARAPAHOE	Westerly Creek	520	Jewell Detention (Jewell & Havana - SE)	P	HSE
Denver	DENVER	Cherry Creek	530	Fire Station #19 (Alameda & Holly - SE)	P	HSE
Denver	DENVER	Cherry Creek	540	Parker/Mississippi (Highline Canal crossing)	P	HSE

GOLDSMITH/HARVARD FLOOD DETECTION NETWORK

STA=6, P=1, S=0, PS=4, PS2=1, Wx=0, R=0, RP=0

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Denver	DENVER	Harvard Gulch	600	Harvard Gulch Park (Logan & Harvard Ave - NE)	PS	HSE
Denver	DENVER	Harvard Gulch	610	Harvard @ Jackson (Colorado Blvd & Yale - NW)	PS	HSE
Cherry Hills	ARAPAHOE	Harvard Gulch	620	Quincy/Highline (Colorado Blvd & Quincy - NE)	P	HSE
Denver	DENVER	Goldsmith Gulch	630	Temple Pond (Temple Drive & DTC Parkway - NE)	PS	HSE
Denver	DENVER	Goldsmith Gulch	640	Goldsmith @ Eastman (Eastman & Tamarac Dr-SW)	PS	HSE
Denver	DENVER	Goldsmith Gulch	650	Iliff Pond (Iliff & Monoco - SE)	PS2	HSE

UPPER SAND CREEK & TOLL GATE CREEK FLOOD DETECTION NETWORK

STA=17, P=4, S=0, PS=9, PS2=1, Wx=2, R=0, RP=1

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Aurora	ARAPAHOE	Toll Gate Creek	700	Toll Gate @ 6th (6th Avenue & Sable Blvd - SE)	PS	HSE
Aurora	ARAPAHOE	West Toll Gate Creek	710	Horseshoe Park Drop (Chambers & Mexico - NE)	PS	HSE
Aurora	ARAPAHOE	West Toll Gate Creek	720	Confluence Pond (Yale & Ventura Street - SE)	PS2	HSE
Aurora	ARAPAHOE	West Toll Gate Creek	730	No Name Cr. @ Quincy (Quincy & Himalaya - SE)	PS	HSE
Aurora	ARAPAHOE	West Toll Gate Creek	740	Smoky Hill (Smoky Hill Road & Gun Club - NW)	RP	HSE
Aurora	ARAPAHOE	West Toll Gate Creek	750	Quincy Reservoir (Quincy Ave & Tower Road - NW)	Wx	V
Aurora	ARAPAHOE	Meadowood Creek	760	Mission Viejo Park (Hampden & Buckley Road-SW)	P	HSE
Aurora	ADAMS	Sable Ditch	800	Sable Ditch @ 18th (18th & Chambers - SE)	PS	HSE
Aurora	ARAPAHOE	Granby Ditch	810	Granby Ditch @ 6th (6th & Buckley Road - SW)	PS	HSE
Aurora	ARAPAHOE	East Toll Gate Creek	820	ETG @ Buckley (Alameda & Buckley Road - NE)	PS	HSE
Aurora	ARAPAHOE	East Toll Gate Creek	830	Side Creek Park (E. Colo. Dr. & Tower Road - NE)	P	HSE
Aurora	ADAMS	First Creek	840	Aurora FS 12 (32nd & Tower Road - NE)	P	OR
Aurora	ADAMS	Sand Creek	850	Flying J (I-70 & Airport Blvd - SW)	PS	OR
Aurora	ADAMS	Sand Creek	860	Sand Creek at Colfax	PS	OR
Aurora	ARAPAHOE	Murphy Creek	870	Murphy Creek GC (Jewell & Gun Club Road - NE)	PS	OR
Aurora	ARAPAHOE	Senac Creek	900	Aurora Reservoir (E-470 & Smoky Hill Road - NE)	Wx	OR
Aurora	ARAPAHOE	Shop Creek	1710	Shop Creek (Parker Road & Quincy - SW)	P	OR

BEAR CREEK FLOOD DETECTION NETWORK

STA=15, P=6, S=1, PS=6, PS2=0, Wx=1, R=0, RP=1

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Jefferson Co.	JEFFERSON	Troublesome Creek	2210	Hiwan G.C. (golf club parking lot-north side)	Wx	V
Jefferson Co.	JEFFERSON	Bear Creek	2220	Evergreen Lake (top of dam-south side)	S	HSE
Jefferson Co.	JEFFERSON	Bear Creek	2230	Bear Creek below Cub Creek (EMD water plant)	PS	V
Jefferson Co.	JEFFERSON	Bear Creek	2240	Cold Spring Gulch Conf (GWSD water diversion)	PS	V
Jefferson Co.	JEFFERSON	Bear Creek	2250	Rosedale (1 mile east of county line)	PS	V
Jefferson Co.	JEFFERSON	Green Creek	2260	Brook Forest (near county line)	P	V
Jefferson Co.	JEFFERSON	Cub Creek	2270	Cub Creek below Blue Creek (0.3 miles north)	PS	V
Jefferson Co.	JEFFERSON	Little Cub Creek	2280	Kinney Peak (Annapurna Drive, SE of mtn peak)	P	V
Jefferson Co.	JEFFERSON	Mount Vernon Creek	2310	Genesee Village (GWSD Aster Lift Station)	P	V
Jefferson Co.	JEFFERSON	Mount Vernon Creek	2320	Choke Cherry Reservoir (1mi E of Genesee Mtn)	RP	HL
Jefferson Co.	JEFFERSON	Bear Creek	2330	Bear Creek at Morrison (u/s of Colo Highway 8)	PS	HSE
Jefferson Co.	JEFFERSON	Swede Gulch	2340	El Rancho (Lookout Mtn. Fire Station No. 2)	P	HSE
Jefferson Co.	JEFFERSON	Sawmill Gulch	2350	Idledale (East & West Grapevine Roads)	P	V
Jefferson Co.	JEFFERSON	Parmalee Gulch	2360	Indian Hills (Jeffco 120 & Comanche Road - SW)	P	V
Jefferson Co.	JEFFERSON	Mount Vernon Creek	2370	Red Rocks Park (north entrance & Colo 26 - NW)	PS	V

NOTE: See pages 4 and 5 for equipment summary, codes and abbreviations, device ID information and cost summary tables.

ALERT SYSTEM SUMMARY

DOUGLAS COUNTY FLOOD DETECTION NETWORK

STA=7, P=0, S=0, PS=4, PS2=0, Wx=3, R=0, RP=0

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Douglas Co.	DOUGLAS	Dad Clark Gulch	2710	Highlands Ranch WTP (HR Parway & HR Blvd – NW)	Wx	HL
Parker	DOUGLAS	Cherry Creek	2730	Salisbury Park (Motsenbocker Rd & Stroh Rd - NE)	Wx	HL
Castle Rock	DOUGLAS	East Plum Creek	2750	Castle Rock (Franktown Rd & Valley Drive - SW)	Wx	HL
Douglas Co.	DOUGLAS	West Plum Creek	2810	Pine Cliff Road (Wolfensburger Rd & Colo 105 - SW)	PS	HSE
Douglas Co.	DOUGLAS	East Plum Creek	2820	Haskins Gulch Conf. (US 85 & Daniels Park Rd. - SW)	PS	HSE
Douglas Co.	DOUGLAS	Cherry Creek	2830	Castle Oaks Road (Franktown Rd & Parker Rd – NW)	PS	HSE
Parker	DOUGLAS	Sulphur Gulch	2840	Sulphur Gulch (Franktown Rd & Main Street – NW)	PS	HSE

DENVER FLOOD DETECTION NETWORK EXPANSION

STA=10, P=4, S=1, PS=3, PS2=0, Wx=1, WxS=1, R=0, RP=0

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Denver	DENVER	South Platte River	1320	SPR at 3rd Ave (W. 2nd Ave & Tejon St. - NE)	PS	HL
Denver	DENVER	Sand Creek	1330	Roslyn (E. 56th Ave & Roslyn St. - SE)	P	HL
Denver	DENVER	Sanderson Gulch	1340	Sanderson at Xavier (W. Jewell Ave & Sheridan - NE)	PS	HL
Jefferson Co.	JEFFERSON	South Platte River	1350	Chatfield COE (C-470 & Wadsworth - SE)	P	HL
Denver	DENVER	South Platte River	1360	Denver Zoo (E. 23rd Ave & Colorado Blvd. - SW)	P	HL
Jefferson Co.	JEFFERSON	Massey Draw	1370	West Metro FS 13 (C-470 & Ken Caryl Ave. - NE)	P	HL
Denver	DENVER	Sand Creek	1460	Stapleton (Havana & Smith Road – SW)	Wx	IM
Denver	DENVER	Marston Lake North Dwy	1520	Marston Lake North (W. Quincy Ave & Wadsworth - SE)	WxS	OR
Sheridan	ARAPAHOE	Bear Creek	1530	Bear Creek at Lowell (Hampden Ave & Knox Ct. - SE)	PS	HL
Denver	DENVER	Lakewood Gulch	1560	Lakewood Gulch at 10th (W. 10th Ave & Perry St. - NE)	S	OR

BOULDER CREEK / SOUTH BOULDER CREEK FLOOD DETECTION NETWORK

STA=39, P=20, S=8, PS=0, PS2=0, Wx=4, R=2, RP=0

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Boulder County	BOULDER	South Boulder Creek	4010	Crescent	P	HSE
Boulder County	BOULDER	South Boulder Creek	4020	Rio Grande	P	HSE
Boulder County	BOULDER	South Boulder Creek	4030	Red Garden	P	HSE
Boulder County	BOULDER	South Boulder Creek	4040	Martin Gulch	P	HSE
Boulder County	BOULDER	South Boulder Creek	4050	Walker Ranch	P	HSE
Boulder County	BOULDER	South Boulder Creek	4060	Lakeshore	P	HSE
Boulder County	BOULDER	Bear Canyon Creek	4070	Bear Peak	P	HSE
Boulder County	BOULDER	South Boulder Creek	4080	Twin Sisters	P	HSE
Boulder County	BOULDER	Boulder Creek	4090	Magnolia	P	HSE
Boulder County	BOULDER	Boulder Creek	4100	Filter Plant	P	HSE
Boulder County	BOULDER	Boulder Creek	4110	Betasso	P	HSE
Boulder County	BOULDER	Boulder Creek	4130	Swiss Peaks	P	HSE
Boulder County	BOULDER	Boulder Creek	4140	Logan Mill	P	HSE
Boulder County	BOULDER	Boulder Creek	4150	Gold Hill	P	HSE
Boulder County	BOULDER	Fourmile Canyon Creek	4160	Sunshine	P	HSE
Boulder County	BOULDER	Fourmile Canyon Creek	4170	Pine Brook	P	HSE
Boulder County	BOULDER	Boulder Creek	4240	Sunset	P	HSE
Boulder, City of	BOULDER	Boulder Creek	4360	Justice Center	P	HSE
Boulder County	BOULDER	South Boulder Creek	4530	Winiger Ridge	P	HSE
Boulder County	BOULDER	Boulder Creek	4570	St. Antons	P	HSE
Boulder, City of	BOULDER	Boulder Creek	4580	Broadway	S	OR
Boulder, City of	BOULDER	Boulder Creek	4590	Green Ditch	S	OR
Boulder County	BOULDER	South Boulder Creek	4370	Gross Reservoir	S	HSE
Boulder County	BOULDER	South Boulder Creek	4380	Eldorado Springs	S	HSE
Boulder County	BOULDER	Boulder Creek	4390	Boulder Falls	S	HSE
Boulder County	BOULDER	Boulder Creek	4400	Tunnel	S	HSE
Boulder County	BOULDER	Boulder Creek	4410	Fourmile	S	HSE
Boulder County	BOULDER	Boulder Creek	4420	Bridge	S	HSE
Boulder County	BOULDER	Boulder Creek	4710	Ward C-1 (Hills Mills)	Wx	HL
Boulder County	BOULDER	Boulder Creek	4730	Sugarloaf	Wx	HL
Boulder County	BOULDER	Coal Creek	4750	Louisville Lake	Wx	HL
Boulder County	BOULDER	South Saint Vrain Creek	4770	Cal-Wood Ranch	Wx	HL
Boulder County	BOULDER	South Boulder Creek	4810	Shanahan Ridge	P	HSE
Boulder County	BOULDER	South Boulder Creek	4820	Doudy Draw	P	HSE
Boulder County	BOULDER	South Boulder Creek	4830	SBC at San Souci	PS	HSE
Boulder County	BOULDER	South Boulder Creek	4840	SBC at South Boulder Ditch	PS	HSE
Boulder County	BOULDER	Fourmile Canyon Creek	4210	Lee Hill	R	HL
Boulder County	BOULDER	Coal Creek	4540	Louisville	R	HL
Boulder County	BOULDER	Coal Creek	8015	Gold Hill	R	HL

NOTE: See pages 4 and 5 for equipment summary, codes and abbreviations, device ID information and cost summary tables.

ALERT SYSTEM SUMMARY

ALERT BASE STATIONS

Name	Location	Phone
District Base Station	Urban Drainage and Flood Control District, 2480 West 26th Avenue, Suite 156-B, Denver	303-455-6277
FPC Base Station	UDFCD Flood Prediction Center, 2480 West 26th Avenue, Suite 310-B, Denver	303-458-0789
w/Repeater Control		
Lena Gulch Base Station	Consolidated Mutual Water Company, 12700 West 27th Avenue, Lakewood	303-238-0451
Denver WMD Base Station	Denver Wastewater Management Division, 2000 West 3rd Avenue, Denver	303-446-3607

B=4

EQUIPMENT SUMMARY

NETWORK	STA	B	EQUIPMENT IN FIELD											SPARE EQUIPMENT								
			R	TX	TB	PT	SE	WS/WD	AT/RH	BP	SR	SM	FM	FT	AT/RH	TB	PT	WS/WD	SE			
District Wide	20	2	1	19	18	15			4	4								2	5	5	2	
SPR / MP / WQ	6			6	4	3	3															1
Lena Gulch	7	1		7	6	3												3				
Ralston Creek	13			13	12	8			1	1					1	1						
Westerly Creek	10			10	10	5																
Goldsmith/Harvard	6	1		6	6	6																
Sand/Toll Gate Cr	17		*1	16	17	11			2	2	1	1								2		
Bear Creek	15		*1	14	14	7			1	1					1	1						1
Douglas County	7			7	7	4			3	3												
Denver Expansion	10			10	9	5			2	2	1	1	1									
Boulder/S. Boulder	39			3	36	28	10		4	4	4								2			
TOTALS	150	4		6	144	131	77	3	17	17	6	2	1	2	2	2	2	2	10	7	2	2

* REPEATER WITH RAIN GAGE

Spare Transmitters: 21

Spare Repeaters: 2

Spare Repeater Control: 1

ADDITIONAL STATIONS MAINTAINED BY BOULDER COUNTY (Information Only)

N. Boulder County	27	2	*1	26	21	6	2		1	1	1												UNKNOWN
TOTALS	175	7		7	168	151	82	5	18	18	7	2			2	2							

CODES AND ABBREVIATIONS

STATION TYPE CODES: P Rain Gage S Stage Gage PS Rain & Stage PS2 Rain & 2-Stage Wx Weather Station WxS Weather & Stage R Repeater B Base Station	VENDOR CODES: E EG&G V Vaisala (formerly Handar) HL HydroLynx (see note) HSE High Sierra Electronics DA Design Analysis DR Druck OR OneRain Incorporated K Keller PSI IM Intermountain Environmental Inc.	EQUIPMENT ABBREVIATIONS & DEVICE IDs: STA ALERT gaging station and/or repeater TX ALERT data transmitter TB Tipping bucket rain sensor (ID+0) PT Water level pressure transducer (ID+3 or +4) SE Water level float shaft encoder (ID-1) WS/WD Wind speed & wind direction sensors (ID-3) RH Relative humidity sensor (ID+1) AT Air temperature sensor (ID+2) SR Solar radiation sensor (ID+3) BP Barometric pressure sensor (ID+4) FM Fuel Moisture (ID+3) FT Fuel Temperature (ID+4) SM Soil Moisture
---	---	--

NOTES:

1. HydroLynx formerly NovaLynx & Sierra Misco
2. SE (shaft encoder) devices at Station Nos. 1630, 1650 and 1660

NOTE: See pages 4 and 5 for equipment summary, codes and abbreviations, device ID information and cost summary tables.

ALERT SYSTEM SUMMARY

YEAR-ROUND OPERATIONS

Local Govt.	County	Nearest Stream	Sta ID	Station Name (Location)	Type	Vendor
Lakewood	JEFFERSON	Lena Gulch	1000	Maple Grove Reservoir (27th & Youngfield - SE)	PS	HSE
Denver	DENVER	Third Creek	1480	Third Creek at DIA (104th & E-470 - NE)	PS2	IM
Englewood	ARAPAHOE	South Platte River	1630	S. Platte @ Dartmouth (Santa Fe & Dartmouth - NW)	S	V
Englewood	ARAPAHOE	South Platte River	1640	S. Platte @ Union (Santa Fe & Union Avenue - NW)	PS	HSE
Denver	DENVER	South Platte River	1650	S. Platte @ 19 th Street (19 th & Grinnel Ct. - SW)	S	V
Adams Co.	ADAMS	South Platte River	1660	S. Platte @ Henderson (Brighton Rd & Colo 22 - SW)	PS	V
Denver	DENVER	Cherry Creek	1700	Cherry Creek @ Champa (Speer & Champa - NW)	PS	HSE
Commerce City	ADAMS	Sand Creek	1810	Sand Creek at mouth (Burlington Ditch crossing)	PS	HSE
Jefferson Co.	JEFFERSON	Bear Creek	2220	Evergreen Lake (top of dam - south side)	S	HSE
Jefferson Co.	JEFFERSON	Bear Creek	2330	Bear Creek at Morrison (u/s of Colo Highway 8)	PS	HSE
Douglas Co.	DOUGLAS	East Plum Creek	2820	Haskins Gulch Conf. (US 85 & Daniels Park Rd. - SW)	PS	HSE

ALL Weather Stations & Repeaters
 ALL 4000 Series Boulder County Rain Gages
 4000 Series Stream Gages co-located w/Satellite-linked DCPs
 OTHERS specified by District

COST SUMMARY

ANNUAL UNIT MAINTENANCE COSTS

Wx:	Weather station
WxS	Combo weather & stage
P:	Rain gage
S:	Stage gage
PS:	Combo rain & stage
PS2:	Combo rain & dual stage
RP:	Repeater w/rain gage
R:	Repeater w/o rain gage
B:	Base Station
STX:	Spare Transmitter
TOTAL	

	Urban Drainage and Flood Control District	
	UDFCD 2007 ALERT Gaging System Maintenance Services Proposal	January 30, 2007

EXHIBIT A – UDFCD ALERT GAGES AND PREVENTIVE MAINTENANCE SCHEDULE

Site ID	Site Name	Type	Jan Suppl.	Apr Round 1	Jun Round 2	Jul Suppl.	Aug Round 3	Oct Round 4
100	Carr St	PS		1	1		1	1
110	Ralston Res	PS		1	1		1	1
120	Croke Pump Stn	PS		1	1		1	1
130	Simm St	S		1	1	1	1	1
140	Blue Mountain	PW		1	1		1	1
150	Nott Creek	P		1		1	1	1
200	Leyden Reservoir (new screen, monitor)	PS		1	1	1	1	1
210	Leyden Conf.	PS		1	1		1	1
220	Upper Leyden (new screen, monitor)	P		1		1		1
300	Van Bibber Park	P		1				1
310	Guy Hill	P		1				1
320	Sports Complex	PS		1	1		1	1
330	Van Bibber @ 93	PS		1	1	1	1	1
400	Montview Park	PS		1	1		1	1
410	Kelly Dam	PS		1	1		1	1
420	Expo Park	PS		1	1		1	1
430	Utah Park	PS		1	1		1	1
440	Aurora FS#7	P		1				1
500	Havana Park	PS		1	1		1	1
510	Virginia Court	P		1				1
520	Jewell Detention	P		1				1
530	Denver FS #19	P		1				1
540	Parker & Miss.	P		1				1
600	Harvard Gulch Pk	PS		1	1		1	1
610	Harvard/Jackson	PS		1	1		1	1
620	Quincy/Highline	P		1				1
630	Temple Pond	PS		1	1		1	1
640	Goldsmith/E'man	PS		1	1		1	1
650	Iliff Pond	PS2		1	1		1	1
700	Tollgate at 6th	PS	1	1	1		1	1
710	Horseshoe Park	PS		1	1	1	1	1
720	Confluence Pond	PS2		1	1	1	1	1
730	No Name @ Quincy	PS		1	1		1	1
740	Smoky Hill	RP		1	1		1	1
750	Quincy Reservoir	PW		1	1		1	1
760	Mission Viejo Pk	P		1				1
800	Sable Ditch	PS		1	1		1	1
810	Grandby Ditch	PS		1	1		1	1
820	ETG @ Buckley	PS		1	1		1	1
830	Side Creek Park	P		1				1
840	Aurora FS #12	P		1				1
850	Flying J	PS		1	1		1	1
860	Sand Creek @ Colfax	PS		1	1		1	1
870	Murphy Creek	PS		1	1		1	1
900	Aurora Reservoir	PW		1	1		1	1

	Urban Drainage and Flood Control District	
	UDFCD 2007 ALERT Gaging System Maintenance Services Proposal	January 30, 2007

Site ID	Site Name	Type	Jan Suppl.	Apr Round 1	Jun Round 2	Jul Suppl.	Aug Round 3	Oct Round 4
950	West Repeater	R		1	1		1	1
1000	Maple Grove Res	PS		1	1		1	1
1010	Denver West	P		1				1
1020	Nolte Pond	S		1	1		1	1
1030	NREL/SERI	P		1				1
1040	Lena @ Hwy 6	PS		1	1		1	1
1050	Fairgrounds	P		1				1
1060	Apex	P		1				1
1100	L'ville Hwy "D"	PS		1	1		1	1
1110	Gunbarrel	PS		1	1	1	1	1
1200	Broomfield #3207	PS		1	1		1	1
1300	Hidden Lake	PS		1	1		1	1
1310	Headless @ 64th	PS		1	1		1	1
1320	SPR @ Mausoleum	PS		1	1		1	1
1330	Roslyn	P		1				1
1340	Sanderson Gulch	PS		1	1		1	1
1350	Chatfield Dam	P		1				1
1360	Denver Zoo	P		1				1
1370	FS# 13	P		1				1
1400	Upper Sloan	PS		1	1		1	1
1420	Diamond Hill	PW		1	1		1	1
1440	Elbert Wx	PW		1	1		1	1
1460	Stapleton Wx	PW		1	1		1	1
1480	DIA @ Third Creek	PS2		1	1		1	1
1500	Powers Park	PS		1	1		1	1
1520	Marston Wx	PWS		1	1		1	1
1530	Bear Ck @ Lowell	PS		1	1		1	1
1540	Marshall	P		1				1
1560	Lakewood Gulch	S		1	1		1	1
1600	Englewood Dam	PS		1	1		1	1
1610	Holly Dam	S		1	1		1	1
1620	Slaughterhouse	PS		1	1		1	1
1630	S Platte @ Dart	E		1	1	1	1	1
1640	SPR at Union Ave.	PS	1	1	1		1	1
1650	SPR at 19th Street	E	1	1	1	1	1	1
1660	SPR at Henderson	PE	1	1	1	1	1	1
1700	Cherry Ck @ Champa	PS	1	1	1		1	1
1710	Shop Creek (issue during Aug '06 storm)	P		1		1		1
1720	Cherry Ck/Steele	PS		1	1		1	1
1800	Sand Creek Park	PS		1	1		1	1
1810	Sand Creek Mouth	PS	1	1	1		1	1
1900	Niver Detention	PS		1	1		1	1
1920	Brighton	PW		1	1		1	1
2190	Squaw Mountain	PW		1	1		1	1
1560	Lakewood Gulch	S		1	1		1	1
2210	Hiwan	PW		1	1		1	1
2220	Evergreen Lake	S		1	1		1	1
2230	Bear Creek @ Cub	PS		1	1	1	1	1
2240	Cold Spring Glch	PS		1	1	1	1	1
2250	Rosedale	PS		1	1	1	1	1

	Urban Drainage and Flood Control District	
	UDFCD 2007 ALERT Gaging System Maintenance Services Proposal	January 30, 2007

Site ID	Site Name	Type	Jan Suppl.	Apr Round 1	Jun Round 2	Jul Suppl.	Aug Round 3	Oct Round 4
2260	Brook Forest	P		1		1		1
2270	Cub Ck below Blue	PS		1	1	1	1	1
2280	Kinney Peak	P		1		1		1
2310	Genesee Village	P		1		1		1
2320	Choke Cherry Res	RP		1	1		1	1
2330	Morrison	PS		1	1		1	1
2340	El Rancho (HSE transmitter)	P		1				1
2350	Idledale	P		1		1		1
2360	Indian Hills	P		1		1		1
2370	Red Rocks	PS		1	1	1	1	1
2710	Highlands Ranch WTP	PW		1	1		1	1
2730	Salisbury Park	PW		1	1		1	1
2750	Castle Rock	PW		1	1		1	1
2810	Pine Cliff Rd	PS		1	1		1	1
2820	East Plum Creek	PS		1	1		1	1
2830	Castle Oaks	PS		1	1		1	1
2840	Sulphur Creek	PS		1	1		1	1
4010	Crescent Rain	P		1				1
4020	Rio Grande Rain	P		1				1
4030	Red Garden Rain	P		1				1
4040	Martin Gulch	P		1				1
4050	Walker Ranch	P		1				1
4060	Lakeshore (issue in Aug '06 storm)	P		1		1		1
4070	Bear Peak	P		1				1
4080	Twin Sisters	P		1				1
4090	Magnolia	P		1				1
4100	Filter Plant	P		1				1
4110	Betasso	P		1				1
4130	Swiss Peaks	P		1				1
4140	Logan Mill	P		1				1
4150	Gold Hill	P		1				1
4160	Sunshine	P		1				1
4170	Pinebrook	P		1				1
4210	Lee Hill Repeater	R		1	1		1	1
4240	Sunset	P		1				1
4360	Justice Center	P		1				1
4370	Gross	S		1	1		1	1
4380	Eldorado Spring	S		1	1		1	1
4390	Boulder Falls	S		1	1		1	1
4400	Orodell	S		1	1		1	1
4410	Fourmile	S		1	1		1	1
4420	Bridge	S		1	1		1	1
4530	Winiger Ridge	P		1				1
4540	Louisville Rptr	R		1	1		1	1
4570	St. Antons	P		1				1
4580	Broadway	S		1	1		1	1
4590	Green Ditch	S		1	1		1	1
4710	Hills Mills	PW		1	1		1	1
4730	Sugarloaf	PW		1	1		1	1
4750	Lafayette	PW		1	1		1	1

	Urban Drainage and Flood Control District	
	UDFCD 2007 ALERT Gaging System Maintenance Services Proposal	January 30, 2007

Site ID	Site Name	Type	Jan Suppl.	Apr Round 1	Jun Round 2	Jul Suppl.	Aug Round 3	Oct Round 4
4770	CalWood Ranch	PW		1	1		1	1
4810	Shanahan Ridge	P		1				1
4820	Doudy Draw (issue in Aug '06, RF is OK)	P		1		1		1
4830	SBC @ San Souci	PS		1	1		1	1
4840	SBC @ Canon Ditch	PS		1	1		1	1
8015	Gold Hill Repeater	R		1	1		1	1
	UDD Base station	B		1				1
	FPC Base station	B		1				1
	Lena base station (Consolidated water)	B		1				1
	Denver WMD base station	B		1				1

The hourly rates for CONSULTANT professional services for 20__ are as follows:

Software Development Services: design and development of custom software components and scripts	\$
Project Management Services: planning, coordination, communication, and reporting	\$
Engineering Services: system survey, solution design, and performance analysis	\$
Field Services: on-site construction, installation, and equipment inspection	\$
Materials (when not otherwise quoted)	Cost

These are the rates charged for work performed on a time and material basis. They are also the rates used in providing fixed-cost estimates for contract amendments.