

AGREEMENT REGARDING
THE PROVISION OF FLOOD PREDICTION
AND NOTIFICATION SERVICES

Agreement No. _____

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

WITNESSETH THAT:

WHEREAS, DISTRICT has previously established a work program for 20__ (Resolution No. __, Series of 20__) which includes providing meteorological services to supplement National Weather Service (NWS) watches and warnings and work with NWS to improve flood warning capabilities; and

WHEREAS, DISTRICT Board of Directors has authorized General Fund expenditures to establish an area-wide meteorological support service to local governments (Resolution No. __, Series of 20__); and

WHEREAS, the above mentioned work program also provides that DISTRICT shall assist local governments in developing, updating and exercising flood detection networks and flood warning plans; and

WHEREAS, flood prediction relies on radar and satellite observations, upper air data, and surface measurements; and

WHEREAS, DISTRICT has purchased radar, satellite, and lightning display equipment to enhance early storm detection and forecasting capabilities; and

WHEREAS, DISTRICT operates an ALERT flood detection network and has acquired equipment to monitor rainfall, streamflow, and weather conditions in real-time; and

WHEREAS, DISTRICT has leased office space for use as a flood prediction and communications center (hereinafter called FPC); and

WHEREAS, DISTRICT wishes to obtain the services of METEOROLOGIST to utilize the observation equipment to provide flood predictions for the local governments within DISTRICT boundaries (hereinafter called "PROJECT").

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

1. EMPLOYMENT OF METEOROLOGIST

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

2. PROJECT AREA

METEOROLOGIST shall perform or supply all necessary services provided under this Agreement in connection with and respecting DISTRICT area and all drainage basins tributary to DISTRICT. In providing such services, special attention shall be given to the populated portions of DISTRICT.

3. EQUIPMENT TO BE UTILIZED

A. DISTRICT's Equipment, Communications, and Data

1. DISTRICT shall provide METEOROLOGIST with access to computers, software, and communications equipment in the FPC that receive; analyze; and display radar, satellite, and lightning data.
2. DISTRICT shall provide METEOROLOGIST with appropriate NWS radar data and associated products, satellite imagery, and lightning data.
3. DISTRICT shall provide METEOROLOGIST with access to an ALERT Base Station in the FPC that receives, analyzes, and displays ALERT data and activates alarms when rainfall and stream level thresholds are exceeded.
4. DISTRICT shall provide METEOROLOGIST with access to a GIS workstation in the FPC that interfaces with hydrologic and meteorological data described above to enhance flood threat prediction/detection capabilities and to generate graphical forecast products for dissemination.
5. DISTRICT shall provide METEOROLOGIST with Internet access to its ALERT Base Station located at 2480 West 26th Avenue, Suite 156B.
6. DISTRICT shall provide METEOROLOGIST with three (3) unlisted phone lines in the FPC to facilitate priority voice and fax communications with NWS and local government flood response agencies. These phone lines shall be used exclusively for activities related to this Agreement.
7. DISTRICT shall provide METEOROLOGIST with necessary telephone and fax equipment in the FPC for use with the three (3) unlisted phone lines referenced in Paragraph 3.A.6.
8. DISTRICT shall provide METEOROLOGIST with Internet access from the FPC.
9. DISTRICT shall provide METEOROLOGIST with appropriate broadcast fax/email services capable of simultaneous multiple-point dissemination of products.
10. DISTRICT shall provide METEOROLOGIST with a color television in the FPC for monitoring local news stations and The Weather Channel.
11. DISTRICT shall provide all necessary backup power equipment for FPC operations.

B. METEOROLOGIST's Equipment and Data

1. METEOROLOGIST shall obtain or develop the following data:
 - a. Surface observations,
 - b. Upper air data and forecasts,
 - c. Vertical temperature, moisture, and wind profiles,
 - d. NOAA Weather Wire information, and
 - e. Specialized weather data and local analyses.
2. METEOROLOGIST shall provide portable computer equipment capable of accessing the Internet, communicating with DISTRICT's ALERT Base Station, and

disseminating fax, email and Internet products when operating from locations other than the FPC.

4. SCOPE OF SERVICES

A. General. The purpose of this Agreement is to provide flash flood and general flood prediction services to DISTRICT and local governments within DISTRICT. For the purposes of this Agreement, "flash flood" means the occurrence of a dangerous rapid rise in water level of a drainageway in a few hours or less caused by heavy localized rain, while "general flood" means the occurrence of a slow rise in river or stream levels caused by wide-area, low-intensity rainfall; snow melt; reservoir releases; or a combination of these events.

B. Specific Description of Work Items

1. Continuous Flash Flood Watch. METEOROLOGIST will provide a meteorological watch (Metwatch) of the entire DISTRICT area and drainage basins tributary to DISTRICT area for the duration of this Agreement. Normal hours for the Metwatch will be from 7:00 a.m. to 10:00 p.m.
In addition, METEOROLOGIST shall provide a 24-hour per day Metwatch, when meteorological conditions require attention outside the normal hours listed above. The Metwatch will be maintained by METEOROLOGIST utilizing the equipment listed in Paragraph 3 of this Agreement and other conventional weather data acquisition equipment at other DISTRICT-approved operating locations.
2. Flood Potential Prediction. When weather conditions warrant, METEOROLOGIST shall establish and maintain close coordination with the NWS forecast office in Boulder. METEOROLOGIST shall utilize radar, satellite data, weather observations and any other data that may be available to develop various levels of predictions of flash flood or general flood potential. Predictions must be coordinated with the NWS. In the event of a difference of opinion with the NWS, METEOROLOGIST, after utilizing its best judgment, may issue predictions which differ from those of the NWS. Every effort must be taken to attempt to avoid confusion among the recipients of METEOROLOGIST predictions if those predictions differ from those of the NWS.
3. Dissemination of Predictions. METEOROLOGIST shall disseminate its predictions by phone, fax and email to the agencies listed below which would be affected by the predictions:
 - a. Adams County Communications
 - b. Arapahoe County 911 Emergency Resource Center
 - c. Aurora Fire Communications
 - d. Broomfield Police Department Communications
 - e. Boulder Sheriff's Communications
 - f. Denver Office of Emergency Management (OEM)
 - g. Douglas County Sheriff's Department Communications

h. Jefferson County Communications

METEOROLOGIST shall utilize the following messages to disseminate predictions:

Message 1 - This is a "nuisance flood alert" meant to notify key local officials of the possibility of minor to moderate flash flooding later in the day.

Message 2 - This will be used whenever the NWS issues a flood watch or flash flood watch, or when METEOROLOGIST feels that a life-threatening flash flood may occur. METEOROLOGIST should add additional information that will be helpful to local officials.

Message 3 - This will be used whenever the NWS issues a flood warning or a flash flood warning, or when METEOROLOGIST feels a life-threatening flash flood is imminent. METEOROLOGIST should add additional information that will be helpful to local officials.

Message Update - This message allows METEOROLOGIST to update any of the other messages as the situation changes.

Message 4 – This "all clear" message will be used to cancel an effective message prior to its expiration time.

4. When weather conditions warrant, METEOROLOGIST shall provide at least one meteorologist exclusively to carry out the provisions of Paragraphs 4.B.2 and 4.B.3.
5. At all times when a flash flood potential exists, METEOROLOGIST shall establish and maintain coordination with the NWS.
6. METEOROLOGIST shall post a daily Heavy Precipitation Outlook (HPO) to the Internet website by 11:00 a.m. The HPO may also be disseminated by broadcast fax/email if requested by local officials. The HPO shall identify the message potential and may be accompanied by a geographical illustration of this potential.
7. METEOROLOGIST shall update the HPO when weather conditions warrant as determined by METEOROLOGIST.
8. METEOROLOGIST shall post an Internal Message Status (IMS) report to the Internet website when "Messages" are issued to local governments. The IMS may also be disseminated by broadcast fax/email if requested by local officials. The IMS may be accompanied by a geographical illustration depicting the message status for all DISTRICT counties.
9. METEOROLOGIST shall post an area-specific Quantitative Precipitation Forecast (QPF) to the Internet website on days when point rainfall amounts are predicted to exceed 1.5 inches in one hour or less. The QPF may also be disseminated by broadcast fax/email if requested by local officials. The QPF may be accompanied by a geographical illustration depicting the forecast rainfall amounts for specific areas.
10. METEOROLOGIST shall post a Storm Track (ST) forecast to the Internet website when a message-level storm or storms are approaching DISTRICT or developing.

The ST may also be disseminated by broadcast fax/email if requested by local officials. The ST shall be accompanied by a geographical illustration depicting the current location of storms and their predicted movement.

11. METEOROLOGIST shall also act as a point of dissemination between the U.S. Army Corps of Engineers (USACE) and local governments regarding changes in discharge releases from Chatfield, Cherry Creek and Bear Creek Reservoirs. The USACE will notify METEOROLOGIST of changes in reservoir discharge releases . METEOROLOGIST will notify by phone the following county agencies of these reservoir changes:

Chatfield

- Douglas County Sheriff's Dept. Communications
- Jefferson County Communications
- Denver OEM
- Adams County Communications
- Arapahoe County 911

Cherry Creek

- Denver OEM
- Arapahoe County 911

Bear Creek

- Denver OEM
- Jefferson County Communications
- Arapahoe County 911

12. METEOROLOGIST shall carry out the jointly agreed upon tasks assigned to it in the following plans:
 - a. Boulder Creek Flood Warning Plan,
 - b. Westerly Creek Flood Warning Plan,
 - c. Lena Gulch Flood Warning Plan,
 - d. Ralston Creek Flood Warning Plan,
 - e. Toll Gate Creek Flood Warning Plan,
 - f. Goldsmith Gulch/Harvard Gulch Flood Warning Plan.
 - g. Bear Creek Flood Warning Plan.
13. METEOROLOGIST shall provide DISTRICT with written summaries of services performed and reports of heavy rainfall and flooding within 72 hours following a "Message-day" or an extended period of Message-days.
14. METEOROLOGIST shall prepare an end-of-season report that summarizes the degree of success achieved and describes significant flooding events that occurred.
15. PARTIES shall jointly prepare a Standard Operating Procedure (SOP). The SOP shall include all pertinent contact information. The SOP shall also include standard formats

and examples of all text and graphical products. Changes to the SOP may be made during the year. DISTRICT approval of SOP changes is required prior to implementation.

5. OPERATIONAL LOCATION

DISTRICT shall provide METEOROLOGIST with access to the FPC located at 2480 West 26th Avenue, Suite 310-B. The office space associated with the FPC is leased by DISTRICT for the purpose of operating and maintaining DISTRICT-owned equipment referenced in Paragraph 3.A and for providing meteorological services and communications associated with this Agreement. METEOROLOGIST shall occupy the FPC on days when "Messages" are issued to local governments in accordance with the SOP. METEOROLOGIST may occupy the FPC at any time to conduct any other activity associated with this Agreement.

6. MAINTENANCE OF EQUIPMENT

A. DISTRICT-owned equipment is provided to METEOROLOGIST and remains the property of DISTRICT. METEOROLOGIST shall be financially responsible for any damage beyond normal wear and tear. METEOROLOGIST shall not be responsible for providing casualty insurance coverage for DISTRICT-owned equipment or for any loss normally associated with such coverage.

B. Any malfunction of DISTRICT-owned equipment shall be reported immediately to DISTRICT. In the event that DISTRICT personnel are not available, METEOROLOGIST shall institute repairs immediately in accordance with the SOP. Normal repair costs and maintenance are the responsibility of DISTRICT.

7. USE OF DISTRICT EQUIPMENT

DISTRICT-owned equipment described in Paragraph 3.A shall be used by METEOROLOGIST solely for the purpose of carrying out the scope of services contained in this Agreement. METEOROLOGIST may not use this equipment for any other client or purpose without prior written consent of DISTRICT. Such consent may include a service charge. Any such service charge will be determined by DISTRICT at the time written consent is given.

8. COST OF SERVICES

DISTRICT agrees to pay METEOROLOGIST a sum not to exceed _____ (\$ _____) for all services described herein, subject to the terms and conditions of Paragraph 9, unless a change in the Scope of Services is approved in accordance with Paragraph 16.

9. METHOD OF PAYMENT

METEOROLOGIST shall receive five (5) monthly payments of _____ Dollars (\$ _____) beginning in May. If billings are received by the 1st of the month, payment shall be by the 25th of the same month. Payments may be withheld pending completion of work items described in Paragraph 4.B of this Agreement. _____ Dollars

(\$ _____) shall be withheld from the final monthly payment until the end-of-season report described in Paragraph 4.B.14 is delivered to DISTRICT.

10. PERSONNEL

A. METEOROLOGIST represents that it shall use as a minimum the following personnel and services in performing the services under this Agreement:

<u>NAME</u>	<u>RESPONSIBILITY</u>
	Project Manager
	Project Forecaster
	Project Forecaster

Any change in the above personnel must have approval of DISTRICT, which approval shall not be unreasonably withheld.

B. All of the services required hereunder, except where specified, shall be performed by METEOROLOGIST's personnel or METEOROLOGIST's subcontractors and all personnel engaged in the services shall be fully qualified to perform such services.

C. None of the services covered by this Agreement, except where specified, shall be subcontracted without the prior approval of DISTRICT.

11. TIME OF PERFORMANCE

The Time of Performance is defined as follows:

A. Standard Operating Procedure (SOP). The SOP required in Paragraph 4.B.15 shall be completed prior to April 15.

B. Flood Prediction Services. METEOROLOGIST shall provide the flood prediction services described in Paragraph 4 for the period from April 15 through September 15.

C. End-of Season Report. METEOROLOGIST shall complete and deliver the report required in Paragraph 4.B.14 by November 30.

12. DIRECTION OF EFFORT AND COORDINATION

Notwithstanding any of the provisions of this Agreement, the Executive Director of DISTRICT will 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 METEOROLOGIST's Project Manager, and shall be subject to the provisions of Paragraph 16.

13. 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. METEOROLOGIST 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 liability for such use and METEOROLOGIST shall not make claims of liability against DISTRICT for such use.

14. DURATION OF AGREEMENT

The duration of this Agreement shall be one year.

15. TERMINATION OF AGREEMENT

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

All DATA shall be surrendered to DISTRICT by METEOROLOGIST before payment is made.

16. CHANGES IN AGREEMENT

DISTRICT may request changes in the scope of services of METEOROLOGIST. Such changes, including any increase or decrease in the amount of METEOROLOGIST'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.

17. INSURANCE

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

<u>Insurance</u>	<u>Minimum Limits</u>
A. Comprehensive 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. METEOROLOGIST shall evaluate individual needs regarding higher levels of insurance.

Each type of insurance procured by METEOROLOGIST shall provide coverage for all claims arising out of, or in connection with, any operations, work, or services performed under this Agreement by METEOROLOGIST, METEOROLOGIST's employees, subconsultants, subcontractors, agents, or representatives. METEOROLOGIST may elect not to provide the above-specified coverage for the subconsultants or subcontractors. In that event, METEOROLOGIST 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 comprehensive liability insurance policy/certificates and all automobile liability insurance policy/certificates. Under this Agreement PROJECT participant is DISTRICT.

Certificates of Insurance showing METEOROLOGIST 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 METEOROLOGIST.

18. INDEMNIFICATION

Under this Agreement PROJECT participant is DISTRICT. METEOROLOGIST 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 METEOROLOGIST, METEOROLOGIST's employees, subconsultants, subcontractors, agents, or representatives together with any liability accrued by any or all of the above-named on account thereof.

19. ASSIGNABILITY

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

20. 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.

21. NO DISCRIMINATION IN EMPLOYMENT

In connection with the performance of work under this Agreement, METEOROLOGIST 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. METEOROLOGIST 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.

22. OTHER PROVISIONS

The SOP required in Paragraph 4.B.15 shall be signed by PARTIES, and shall be incorporated herein as if fully set forth in this Agreement

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

METEOROLOGIST

(SEAL)

By_____

ATTEST:

Title_____

Date_____

URBAN DRAINAGE AND
FLOOD CONTROL DISTRICT

(SEAL)

By_____

ATTEST:

Title Executive Director

Date_____