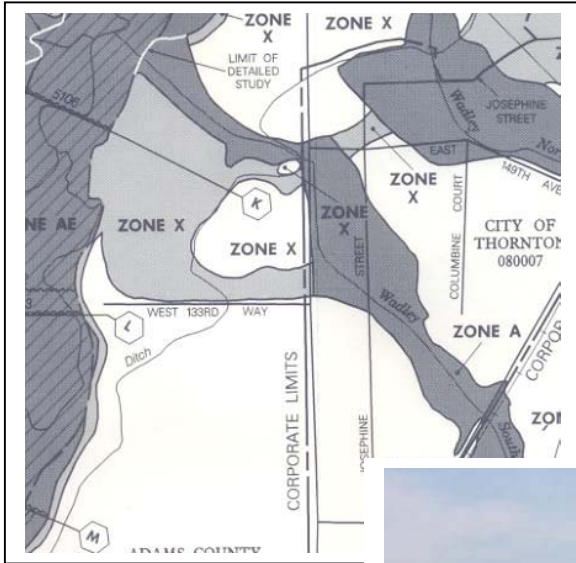
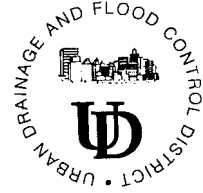




Federal Emergency Management Agency
Washington, DC

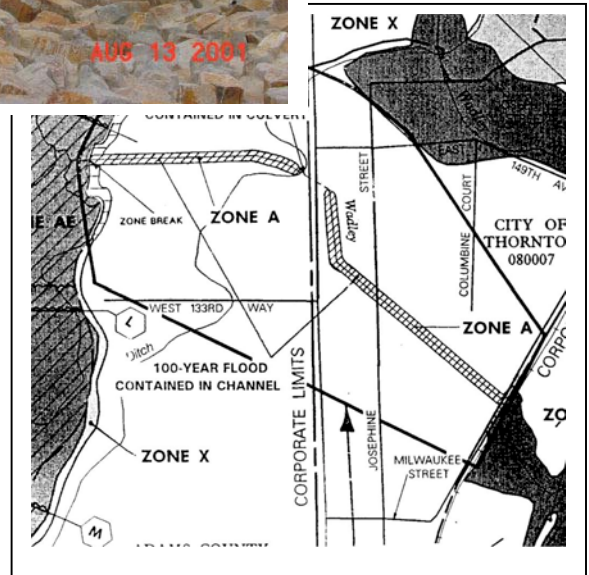
Urban Drainage and Flood Control District
Denver, Colorado



Local Evaluation of Requests for Letters of Map Change



Final Report
FEMA Grant No.
EMD-2001-GR-0181
February, 2003



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Local Evaluation of Requests for Letters of Map Change

By
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Chief, Floodplain Management Program
Urban Drainage and Flood Control District

Introduction

The Urban Drainage and Flood Control District (District) is a regional agency established by the Colorado General Assembly to assist local governments in the Denver Metropolitan Area with multi-jurisdictional drainage and flood control problems. The District includes 1608 square miles, and all or parts of 39 cities and counties.

In early 2001, the Federal Emergency Management Agency (FEMA) and the District entered into an agreement to conduct a pilot project under FEMA's Cooperating Technical Partners (CTP) Program. The agreement called for the District to review requests for Letters of Map Change, specifically Conditional Letters of Map Revision (CLOMR) and Letters of Map Revision (LOMR) for the 32 communities within the District that are participating in the National Flood Insurance Program (NFIP). The project was funded by a \$100,000 grant administered through FEMA Region 8.

The project began on Monday, July 2, 2001, and a request was received that day. The agreement called for a six-month evaluation of the District's performance, which was held in Denver on February 26, 2002. Key results of the evaluation meeting are provided below. It is important to note that additional funding to finish the year was provided, and a second year was also agreed to.

Thirty-seven cases were ultimately assigned to this initial grant. Of those, thirty-three were successfully completed, two applicants withdrew, and two were still active and were reassigned to the second grant. FEMA received fees from the applicants totaling \$121,200 and the District expended \$98,661.94.

Overview of the Process

The District has a small staff, and relies heavily on the private sector to provide services as needed. In this case the District retained Icon Engineering, Inc. (Icon) to provide technical review and drafting support for the CLOMR and LOMR requests. The District managed the contract with Icon, coordinated all aspects of the review process, and kept track of budget and time line issues.

FEMA's Map Coordination Contractor (MCC), Michael Baker Jr., Inc., continued to keep the MIS current, as it does for all other cases. The MCC prepared the final LOMR enclosures, completed all final mailings of letters and public notices, and otherwise provided support to FEMA staff.

The process required each applicant to submit duplicate copies of the request to FEMA and the District, and to submit the appropriate fee to FEMA. In order to minimize incomplete applications the District sent letters to each NFIP participating local government explaining the process, as well as notices of the new process to over 100 consulting engineering firms likely to be preparing LOMC requests. As a result only two of thirty-seven cases were not submitted to both FEMA and the District on the first try.

When the District received a case it immediately notified the MCC of the request by e-mail; including the name and address of the requestor, communities affected, FIRM panels affected, affected drainageway and identifying name. The MCC entered the information into the MIS and assigned a case number by return e-mail. When the fee was received the MCC notified the District and Icon, also by e-mail. The District transmitted the request to Icon, usually by courier.

Icon completed an initial review of each request for adequacy, and prepared the appropriate response letter from form letters provided by FEMA. The letter, which either stated that sufficient information was included to begin a detailed review, or that additional information (and possibly the fee) was required, was e-mailed to the District for review, signature and mailing to the requestor. When Icon determined that sufficient information had been submitted to support the request a detailed technical review was performed. At the conclusion of the review Icon again prepared a letter from form letters provided by FEMA. If more information was required the letter requesting the information was e-mailed to the District for review, signature and mailing. The letterhead for the above letters was designed by FEMA, and included the names and logos of both organizations and the address and phone numbers for the District. An example is included in the Appendix.

If Icon concluded that the requested CLOMR or LOMR was justified, it prepared a draft CLOMR or LOMR letter and e-mailed it to the District, and sent the case file to the District by courier. The District reviewed the draft letter and the case file, made any adjustments to the draft that were deemed appropriate, and forwarded the letter by e-mail to FEMA and the MCC, and the case file to the MCC. FEMA and the MCC processed

the case from that point on until the final letters were signed and mailed. All CLOMRs and LOMRs were on FEMA letterhead and were signed by a FEMA representative.

FEMA Region 8 provided three periodic advances of \$25,000 and one of \$20,000 over the course of the project. The remaining \$5000 was held until a final accounting was completed.

Judging Performance of the Pilot Project

Quantifiable items, specifically times of performance and expenditures, have been compiled and are compared to performance standards specified in the agreement. Eight non-quantifiable benefits of doing the case review locally have been identified by the District, and a matrix identifying which of those benefits accrued to each case has been prepared.

A one-page summary of each case has been prepared. Each case summary sheet includes all relevant dates and times of performance, expenditures, a project narrative, and a description of which non-quantifiable benefits were realized. These benefits are cross-referenced in the matrix mentioned above. The summaries are located in the Appendix.

Evaluation of Timeline Performance

One of the goals in the agreement that could be measured was timelines. The two time requirements were a five-working day response from when either an initial request was received or additional data was received; and a 60-calendar day response from when all data had been received to providing a recommendation to FEMA. The accompanying Table 1 - Timeline Performance, summarizes the performance of the District and Icon in this category.

At the time of the six-month evaluation, there had been 35 instances where a five-day response time was required. In 25 of these instances the five-day goal was met. In 10 instances, it was not. Of the 10 instances where the goal was not met, six took six days, two took seven days, one took eight days, and one took nine days.

The six and seven-day instances were due to a misunderstanding as to when the clock started for each response. The agreement between FEMA and the District had the clock starting when the District received the request. The contract between the District and Icon had the clock starting the day Icon received the request. Consequently, because there were sometimes one or two days lost in getting the request from the District to Icon, the five-day goal was missed. This problem was corrected by shortening the delivery time by use of a courier service, and by Icon knowing when the clock started. The eight day and nine day delays were due at least in part to the Thanksgiving Holiday, in addition to the problem described above.

Thirty-three cases were completed and judged against the 60-day goal for making a final recommendation to FEMA after receipt of all data. In all 33 cases the goal was met. The longest period was 44 days from receipt of all data to the date the draft letter was e-mailed to FEMA and the MCC, and the shortest periods have been two, four, five and seven days. The average time was 22 calendar days.

Evaluation of Financial Performance

The other quantifiable item is the financial performance. Table 2 - Financial Summary, presents an overview of the financial performance for this grant. Table 3 - Financial Analysis, includes detailed financial information for each of the 37 cases assigned to this grant.

For the 37 cases FEMA received fees totaling \$124,300. One fee for \$3100 was later transferred to the second grant, leaving \$121,200. The District completed the technical review for four cases at no cost to the project. For one case the District completed the technical review and utilized Icon for drafting assistance.

Icon provided the technical review for 31 cases and the drafting assistance for one case. For each of the 31 cases, the District authorized an expenditure for Icon equal to the fee charged by FEMA for that type of request. Of the 31 cases, 12 cost more than the FEMA fee, totaling \$8219.76; and 20 cost less than the FEMA fee, totaling \$19,574.30. For the 31 cases, Icon expended \$92,145.46. In addition Icon expended \$6516.48 for non-case specific costs, including a kick-off meeting with FEMA and MCC staff; a progress meeting in November with FEMA staff; and preparation for and attendance at the six-month evaluation meeting. The total cost to the grant was \$98,661.94.

For the Haven at York, the District staff reviewed the request and Icon's only involvement was to prepare the LOMR map. For Brookhaven and Country Club Villas, Icon was the town engineer for the local jurisdiction, and reviewed the two requests on behalf of the town at the expense of the applicants. They also prepared the LOMR map at the applicants' expense. The District staff consulted with Icon on these two cases, and drafted the LOMR letters for FEMA signature. For Cherry Creek Drops, Icon was the design engineer. In this case, District staff reviewed the request and prepared the draft CLOMR letter for FEMA signature. The fee for the Sand Creek case was received by FEMA but the applicant asked that the request not be reviewed due to pending changes. The case was later transferred to the second grant. Little Dry Creek was a District sponsored project that we wanted to submit in accordance with another task agreement with FEMA, and we didn't feel that this project should pay for a technical review by Icon.

The question has been asked regarding why the District would not request funding for its costs in doing this project. First, the District has always had a policy of not charging any individual or organization for seeking District review and comment on any proposal. Fees would only discourage some from seeking District comments, which would hamper

our ability to perform our mission. Second, because the District doesn't charge fees for any other activities we don't collect the data we would need to substantiate any charges to this project. Third, we are serious about bringing this activity to the local level and are willing to pay the price of staff time and incidental expenses to make that happen.

Benefits of Local Reviews

In addition to the quantifiable measures discussed above, and in preparation for the six-month evaluation meeting, District and Icon staff identified eight non-quantifiable benefits of doing the reviews locally. A listing of the benefits, with definitions, is provided below. Table 4 – Benefits of Local Reviews, identifies which of those benefits accrued to each case.

Meeting(s) with applicant before request submitted. Meet with the applicant and the local jurisdiction to resolve questions prior to submittal of the request.

Meeting(s) with applicant during review of request. Meet with the applicant and the local jurisdiction to resolve issues identified during the review of a request.

Local knowledge. Includes reviews of the project during the local approval process, such as zoning and platting; knowledge of adjoining properties and their potential effect on the request; and District capital or maintenance projects.

District studies. Includes completed or in-progress master plans (MP) and flood hazard area delineation studies (FHAD). In several cases the FIRMs have Zone A areas, which have been taken from FHADs based on future hydrology. We are able to provide the hydraulic models and the hydrology to assist the applicant in preparing an application.

District Maintenance Eligibility Program (MEP). Participation in the District's maintenance eligibility program means the District has approved the construction drawings for conformance to our criteria, and assures the local jurisdiction that the finished facilities can receive District maintenance assistance. The District visits every site to confirm construction. The District has an informal network of local government inspectors as well.

Time Extensions. Warnings given to applicants when their time to respond to requests for additional data is near expiration.

Site visits. Visit the site as necessary to evaluate special situations, or to confirm construction conformance to approved plans.

Local exchange of data. On occasion a request will be lacking an item, such as a disc with hydraulic models or a signed Form 1. A phone call can elicit an immediate response and the review can continue uninterrupted. This often avoids an official letter, and occurs without stopping the "review clock."

An additional benefit of local reviews that has become apparent more recently is that we are now processing LOMR requests for which we prepared the CLOMR. Not only do we have the case file readily available, but we have the institutional memory to quickly and efficiently process these requests.

The District prepared a one-page summary of each case. Each case summary sheet includes all relevant dates and times of performance, expenditure information, a project narrative, and a description of non-quantifiable benefits the District has identified for doing the case review locally. The summaries are in the Appendix.

Results of Six-Month Evaluation Meeting

The six-month evaluation meeting was held in Denver on February 26, 2002, at the District's office in Denver. In attendance were Matt Miller and Mike Grimm, FEMA Washington; Steve Olson and Dan Carlson, FEMA Region 8; Tom Smith, Michael Baker Jr.; Scott Tucker, Bill DeGroot and David Mallory, the District; and Mike Vinson and Penn Gildersleeve, Icon.

The meeting addressed the progress of the effort through the first six months, including the timeline, financial, and benefits of local reviews topics described above. FEMA also had a financial analysis of its costs, which included FEMA staff time. The following is a summary of the results of the meeting.

FEMA agreed to add \$40,000 to this grant to finish the first year and to extend the grant agreement or complete a new agreement for a second year at \$140,000. The second year grant would include a requirement for the District to provide mentoring of other CTPs. FEMA also wanted to consider adding LOMAs and LOMR-Fs to the second year grant with a commensurate increase in the grant amount above the \$140,000 mentioned above. FEMA later decided against adding the LOMAs and LOMR-Fs. Finally, FEMA wanted to consider expanding the program by one or two additional CTPs over the next year.

The District agreed to continue the pilot project with a second year grant, and to provide a certain level of mentoring for the second year, subject to defining exactly what that would entail.

The possibility of changing the turn around goal from five days to ten days was proposed, but there was no consensus on doing so. The District felt that the five-day goal was fine since it had identified and corrected the misunderstanding that resulted in missing several of the five-day goals.

The possibility of allowing the District to sign the CLOMR letters was discussed, but it was decided to leave it as is, because the CLOMR letter is a promise by FEMA to change the maps if certain things happen, and the District was not comfortable making that promise.

FEMA will consider writing rule changes during the second year of this pilot project that would enable other CTPs to review LOMRs and CLOMRs. CTP collection of the fees would have to be addressed at that time. The grant approach, while acceptable for this pilot project, would not be workable in the long run.

ICON expressed concern over the lack of copies of CLOMR letters and case files located in the Denver area. It was decided that if the applicant could not provide a copy of the letter and the District could not locate one, the MCC would be asked to fax a copy to the District. This would assist in determining if sufficient information had been provided to provide a "clean" acknowledgement within the five-day goal. The District would request the CLOMR file from the Michael Baker Jr. library. This procedure was followed for several cases, and the MCC has been very responsive, so that it has not been a problem.

The District questioned why FEMA staff time was being included in the financial analysis of its costs referenced above. The answer was that if this program were expanded to include other CTPs, there would probably be some additional FEMA staff time involved, and this was an attempt to track that probable expense during this project.

Observations and Recommendations

The District would certainly like to continue to review requests for LOMCs following the conclusion of the pilot project. We also hope that FEMA will be convinced by the experience of this pilot project to offer the same opportunity to other qualified local and state CTPs.

A number of factors were identified that should be considered by FEMA prior to any final decision. These are in addition to the timeline, budget and local review benefits discussed earlier. In no particular order they are presented below.

Training. The individual at Icon who was their lead engineer had previous experience working for the MCC, and was ready to hit the ground running on day one. That will probably not be the case very often, and FEMA will probably have to establish a training program for CTPs.

Some level of funding commitment. The District elected to not charge any District staff time or incidental expenses to the project, which turns out to be a significant financial contribution. It may be reasonable for FEMA to require a certain level of financial commitment (at least in-kind) in order to become a reviewer CTP.

Fee collection. At some point FEMA will have to either allow fee collection by the CTPs or get involved in a new area of funding disbursement (such as advances to, or monthly invoices from, CTPs). FEMA's grant process is tailored to a different type of project, and is not conducive to an on-going process like this one.

MCC costs. There will probably continue to be some costs incurred by the MCCs for administrative tasks. How those are funded will have to be addressed.

Staffing. Should CTPs be allowed to use their own staff, or should there still be a private sector component?

Software incompatibility. Icon identified software compatibility problems during this pilot, which will probably show up elsewhere as well. These will have to be resolved.

Acknowledgements

The author would like to thank Mike Buckley, Matt Miller and Mike Grimm, FEMA Washington, for their support of the Cooperating Technical Partner program and their willingness to explore ways to allow local agencies to be true partners with FEMA. Also, Sally Magee and Kevin Long, FEMA Washington; and Tom Smith, Michael Baker Jr., for keeping things running smoothly on the Washington end of this effort.

Thanks to Steve Olson, FEMA Region 8, for his support of the CTP program and this pilot project; and Dan Carlson, FEMA Region 8, who kept us straight with the region.

Thanks to Mike Vinson and Penn Gildersleeve, Icon Engineering Inc., for a thoroughly professional job of reviewing these cases

Finally, thanks to Scott Tucker, District Executive Director, for his strong support of this effort; and to David Mallory, who completed the technical reviews for those cases that Icon was unable to perform.

Table 1 - Timeline Performance

Case No.	Identifier	1	2	3	4	5	6	7	8	9
01-08-302R	Broomfield	5	Y	4	Y	1	Y	16	Y	18
01-08-307R	Meridian #5	5	Y	2	Y	3	Y	16	Y	50
01-08-342R	Parkwood #1	4	Y	Dropped						
01-08-353P	Haven at York	4	Y	2	Y			26	Y	49
01-08-358P	Compark	6	N	5	Y			14	Y	58
01-08-361R	Courseside	5	Y	Dropped						
01-08-371R	Preserve at Weaver Creek	3	Y	4	Y	2	Y	23	Y	25
01-08-379R	E-470 @ Todd Creek	5	Y					34	Y	37
01-08-396R	E-470 @ Third Creek	7	N					24	Y	34
01-08-397R	E-470 @ South Platte River	6	N	1	Y	2	Y	7	Y	17
01-08-410R	Sand Creek	Reassigned to second grant								
01-08-412P	Canyon Club Apartments	7	N	6	N			43	Y	72
01-08-417P	Brookhaven	4	Y	2	Y			17	Y	22
01-08-418R	Buckley Road Bridge	1	Y					23	Y	43
02-08-024R	E-470 @ Big Dry Creek	6	N	2	Y			5	Y	12
02-08-030R	Reunion @ Second Creek	3	Y	6	N	2	Y	15	Y	22
02-08-040P	Country Club Villas	5	Y					13	Y	18
02-08-052P	Random Road	3	Y	3	Y			34	Y	65
02-08-058R	Greenwood Village	9	N	5	Y			40	Y	50
02-08-059R	Monterey Point	8	N	5	Y	3	Y	42	Y	51
02-08-081R	Cherry Creek Drops	2	Y					4	Y	10
02-08-083R	Quail Creek/Bull Canal	6	N	2	Y	2	Y	8	Y	16
02-08-119R	Westerly Creek	4	Y					24	Y	37
02-08-134R	Cherry Creek Country Club	6	N	3	Y			19	Y	27
02-08-156P	Airport Creek	3	Y	4	Y	2	Y	24	Y	66
02-08-171P	Parker	3	Y	3	Y			32	Y	99
02-08-178R	Lincoln Ave/Pine Drive	4	Y					21	Y	30
02-08-185P	Ford Street	5		2				16		118
02-08-211P	Big Dry Creek, Huron to I-25	3	Y	5	Y	5	Y	44	Y	172
02-08-250P	Little Dry Creek	Reassigned to second grant								
02-08-258R	Toll Gate Crossing	3	Y	1	Y			15	Y	50
02-08-259R	Williams Village	2	Y					19	Y	37
02-08-264R	North City Park Creek	5	Y	5	Y			30	Y	52
02-08-283P	South Adams County WSD	4	Y	3	Y			13	Y	82
02-08-284R	South Adams County WSD	4	Y	4	Y			13	Y	41
02-08-286R	Red Leaf	3	Y	2	Y			22	Y	55
02-08-411R	NW Parkway @ Coal Creek	3	Y	4	Y			36	Y	85

Definitions of columns 1 through 9

1. **Time in working days from receipt of request to mailing letter.**
2. **Y means the goal of 5 working days was met. N means it wasn't.**
3. **Time in working days from receipt of additional data to mailing acknowledgement letter.**
4. **Y means the goal of 5 working days was met. N means it wasn't.**
5. **Time in working days from receipt of additional data to mailing acknowledgement letter.**
6. **Y means the goal of 5 working days was met. N means it wasn't.**
7. **Time in calendar days from receipt of all data to date draft LOMR or CLOMR e-mailed to FEMA.**
8. **Y means the goal of 60 total days was met. N means it wasn't.**
9. **Time in total days from receipt of all data to date of LOMR or CLOMR (includes FEMA processing time).**

Table 2 – Financial Summary

Grant:	Total Grant	\$100,000.00		
	Total Received	98,661.94		
	Remainder	1338.06		
		Case Specific	Non-specific	Totals
Encumbrances:	Total Available	\$100,000.00		\$100,000.00
	Total Encumbered	103,500.00	\$6,500.00	110,000.00
	Overs	8,219.76	16.48	8,236.24
	Unders	19,574.30		19,574.30
	Revised Encumbered	92,145.46	6,516.48	98,661.94
	Remaining	7,854.54		1,338.06

Table 3 - Financial Analysis

Case No.	Descriptor	Fee		ICON	ICON Invoices		Unders
		FEMA Fee	Received	Authorized	Total	Overs	
NA	Non-specific case costs	\$ -		\$ 6,500.00	\$ 6,516.48	\$ (16.48)	
02-08-411R	NW Parkway @ Rock Creek	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 3,431.50	\$ (331.50)	
01-08-302R	Broomfield Urban Transit Village	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,998.80	\$ (998.80)	
01-08-307R	Meridian Int. Business Center #5	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 2,677.50		\$ 422.50
01-08-353P	Haven at York	\$ 3,400.00	\$ 3,400.00	\$ 500.00	\$ 921.50	\$ (421.50)	
01-08-358P	Compark	\$ 3,400.00	\$ 3,400.00	\$ 3,400.00	\$ 3,385.00		\$ 15.00
01-08-342R	Parkwood #1	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 1,419.50		\$ 1,680.50
01-08-361R	Courseside	\$ 3,100.00	\$ 800.00	\$ 3,100.00	\$ 824.50		\$ 2,275.50
01-08-371R	Preserve at Weaver Creek	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 2,874.60		\$ 225.40
01-08-379R	E-470 at Todd Creek	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 1,904.96		\$ 1,195.04
01-08-396R	E-470 at Third Creek	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 4,634.62	\$ (1,534.62)	
01-08-397R	E-470 at South Platte River	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 3,553.30	\$ (453.30)	
01-08-412P	Canyon Club Apartments	\$ 3,400.00	\$ 3,400.00	\$ 3,400.00	\$ 2,193.94		\$ 1,206.06
01-08-418R	Buckley Road Bridge	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 1,468.10		\$ 1,631.90
01-08-417P	Brookhaven	\$ 4,000.00	\$ 4,000.00	\$ -	\$ -		
02-08-024R	E-470 at Big Dry Creek	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 3,213.80	\$ (113.80)	
02-08-030R	Reunion at Second Creek	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 3,553.30	\$ (453.30)	
02-08-052P	Random Road	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 2,473.50		\$ 1,526.50
02-08-059R	Monterey Point	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 2,580.50		\$ 519.50
02-08-040P	Country Club Villas	\$ 4,000.00	\$ 4,000.00	\$ -	\$ -		
01-08-410R	Sand Creek	\$ 3,100.00	\$ 3,100.00	\$ -	\$ -		
02-08-058R	Greenwood	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 1,695.00		\$ 2,305.00
02-08-081R	Cherry Creek Drops	\$ 3,100.00	\$ 3,100.00	\$ -	\$ -		
02-08-083R	Quail Creek/Bull Canal	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 2,279.50		\$ 820.50
02-08-119R	Westerly Creek	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 2,728.80		\$ 371.20
02-08-134R	Cherry Creek Country Club	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 2,720.00		\$ 380.00
02-08-156P	Airport Creek	\$ 3,400.00	\$ 3,400.00	\$ 3,400.00	\$ 5,752.25	\$ (2,352.25)	
02-08-171P	Parker	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,010.11	\$ (10.11)	
02-08-178R	Lincoln Ave/Pine Dr	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 2,231.00		\$ 869.00
02-08-185P	Ford Street	\$ 3,400.00	\$ 3,400.00	\$ 3,400.00	\$ 3,362.80		\$ 37.20
02-08-211P	Big Dry Creek, Huron to I-25	\$ 3,400.00	\$ 3,400.00	\$ 3,400.00	\$ 3,925.00	\$ (525.00)	
02-08-250P	Little Dry Creek	\$ 6,000.00	\$ 6,000.00	\$ -	\$ -		
02-08-258R	Toll Gate Crossing	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 1,659.00		\$ 2,341.00
02-08-259R	Williams Village	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 2,629.00		\$ 471.00
02-08-264R	North City Park Creek	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 3,372.58	\$ (272.58)	
02-08-283P	South Adams County WSD	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,753.00	\$ (753.00)	
02-08-284R	South Adams County WSD	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 2,958.50		\$ 141.50
02-08-286R	Red Leaf	\$ 3,100.00	\$ 3,100.00	\$ 3,100.00	\$ 1,960.00		\$ 1,140.00
					\$ -		
					\$ -		
TOTALS		\$ 126,600.00	\$ 124,300.00	\$ 103,500.00	\$ 92,145.46	\$ (8,219.76)	\$ 19,574.30

Table 4 - Benefits of Local Reviews

Case No.	Identifier	Benefits of Local Reviews							
		1	2	3	4	5	6	7	8
01-08-302R	Broomfield	X		X	X	X			X
01-08-307R	Meridian #5	X		X	X	X	X	X	
01-08-342R	Parkwood #1	X	X	X	X				
01-08-353P	Haven at York			X	X	X			
01-08-358P	Compark		X	X	X	X	X	X	
01-08-361R	Courseside			X					
01-08-371R	Preserve at Weaver Creek	X	X		X	X			X
01-08-379R	E-470 @ Todd Creek	X			X				X
01-08-396R	E-470 @ Third Creek	X			X	X			X
01-08-397R	E-470 @ South Platte River	X			X				X
01-08-410R	Sand Creek		X		X		X		
01-08-412P	Canyon Club Apartments	X	X	X	X	X	X	X	
01-08-417P	Brookhaven	*	X	X	X	X		*	X
01-08-418R	Buckley Road Bridge			X	X	X		X	
02-08-024R	E-470 @ Big Dry Creek	X			X				X
02-08-030R	Reunion @ Second Creek	X			X	X			X
02-08-040P	Country Club Villas	*	X	X	X			*	X
02-08-052P	Random Road				X				X
02-08-058R	Greenwood Village	X			X				X
02-08-059R	Monterey Point			X	X				X
02-08-081R	Cherry Creek Drops	X	X	X	X				
02-08-083R	Quail Creek/Bull Canal	X		X	X				X
02-08-119R	Westerly Creek	X		X	X	X			X
02-08-134R	Cherry Creek Country Club	X	X	X	X	X			
02-08-156P	Airport Creek			X	X	X			X
02-08-171P	Parker								X
02-08-178R	Lincoln Ave/Pine Drive				X				X
02-08-185P	Ford Street			X	X				
02-08-211P	Big Dry Creek, Huron to I-25				X	X			X
02-08-258R	Toll Gate Crossing	X		X	X	X			X
02-08-259R	Williams Village	X		X	X	X			X
02-08-264R	North City Park Creek		X						X
02-08-283P	South Adams County WSD	X			X				X
02-08-284R	South Adams County WSD	X			X				X
02-08-286R	Red Leaf			X	X				X
02-08-411R	NW Parkway @ Coal Creek	X		X		X			X

Benefits of Local Reviews

1. Meeting(s) with applicant before request submitted.
2. Meeting(s) with applicant during review of request.
3. Local knowledge.
4. District studies.
5. District Maintenance Eligibility Program (MEP).
6. Time Extensions.
7. Site visits (other than normal MEP visits).
8. Local exchange of data.

*ICON is the Town Engineer for this community.

Case Evaluation Summary Sheets

This section includes one-page summaries of each case. The pages are arranged by case number, in ascending order.

The following abbreviations are used in the case summary sheets:

WGD – Bill DeGroot, PE, Chief, Floodplain Management Program for the District
DLM – David Mallory, PE, Senior Project Engineer for the District
Icon - Icon Engineering, Inc. who provided technical review support to the District
MCC – Map Coordination Contractor, Michael Baker Jr., Inc
FHAD – Flood Hazard Area Delineation
MP – Master Plan

The following are the definitions of local benefits:

Meeting(s) with applicant before request submitted. Meet with the applicant and the local jurisdiction to resolve questions prior to submittal of the request.

Meeting(s) with applicant during review of request. Meet with the applicant and the local jurisdiction to resolve issues identified during the review of a request.

Local knowledge. Includes reviews of the project during the local approval process, such as zoning and platting; knowledge of adjoining properties and their potential effect on the request; and District capital or maintenance projects.

District studies. Includes completed or in-progress master plans (MP) and flood hazard area delineation studies (FHAD). In several cases the FIRMs have Zone A areas which have been taken from FHADs based on future hydrology. We are able to provide the hydraulic models and the hydrology to assist the applicant in preparing an application.

District Maintenance Eligibility Program (MEP). Participation in the District's maintenance eligibility program means the District has approved the construction drawings for conformance to our criteria, and assures the local jurisdiction that the finished facilities can receive District maintenance assistance. The District visits every site to confirm construction. The District has an informal network of local government inspectors as well.

Time Extensions. Warnings given to applicants when their time to respond to requests for additional data is near expiration.

Site visits. Visit the site as necessary to evaluate special situations, or to confirm construction conformance to approved plans.

Local exchange of data. On occasion a request will be lacking an item, such as a disc with hydraulic models or a signed Form 1. A phone call can elicit an immediate response and the review can continue uninterrupted. This often avoids an official letter, and occurs without stopping the "review clock."

CTP Case Evaluation

Case No.:	Identifier:	Type:	Status:
01-08-302R	Broomfield Urban Transit Village	CLOMR	Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
7/2/01	7/10/01	Yes	5 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
10/10/01	10/16/01	Yes	4 days	Yes
12/28/01	12/31/01	No	1 day	Yes

Date final letter mailed: 1/15/02

Elapsed Time from receipt of all data to draft letter to FEMA:	Elapsed Time	Goal met?
	10 total days	Yes
Elapsed Time from receipt of all data to final letter:	18 total days	Yes
Elapsed Time from receipt of initial request to final letter:	197 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$4000	\$4000	\$4113	(\$113)

Project Narrative:

The project consists of putting Airport Creek and a tributary in underground conduits. The only open areas are two on-line detention ponds. The fee was \$4000 because the project relied on an upstream detention pond that had recently been constructed but had not yet been submitted for a LOMR of its own. This applicant was therefore required to submit that information in order to proceed.

The FIRM did not show a Zone X (500-year), but the FIS included the 500-year profile. Therefore, we were directed by Sally Magee to require them to show a Zone X (500-year) over the top of the conduits, since they were not large enough to contain the 500-year discharges. New 500-year hydraulic calculations to meet this requirement extended the length of the review process.

Describe any special benefits or problems with doing this review locally.

Meetings. We were aware of this proposal and had previously reviewed and commented on the drainage plan and met with the applicant before the CLOMR request was submitted. We tried to discourage the conduits, without success. *Local knowledge.* We were aware of the upstream detention facilities which this proposal relied upon but which initially were not included in the request. *FHAD & MP.* The discharges from this site were required to be consistent with the MP for this watershed. *MEP.* The upstream detention pond was going through our maintenance eligibility program, so we were confident it was in fact in place, and hydrologically adequate. *Local exchange of data.* Icon and the consultant have had numerous contacts leading to resolution of problems in developing acceptable models and drawings.

CTP Case Evaluation

Case No.:	Identifier:	Type:	Status:
01-08-307R	Meridian International Business Center #5	CLOMR	Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
7/24/01	7/31/01	Yes	5 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
3/8/02	3/12/02	No	2 days	Yes
	4/16/02	Yes	34 days	Yes
9/4/02	9/9/02	No	3 days	Yes

Date final letter mailed: 10/29/02		
Elapsed Time from receipt of all data to draft letter to FEMA:	16 total days	Yes
Elapsed Time from receipt of all data to final letter:	50 total days	Yes
Elapsed Time from receipt of initial request to final letter:	462 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$2677.50	\$422.50

Project Narrative:

The request was originally submitted to FEMA Region IV, who sent it to PBS&J, who sent it to Baker, who notified the District that a case had been received. WGD called the applicant, explained the process, and a request was then sent to the District.

The affected drainageway is Happy Canyon Creek, and the District has both a FHAD and MP for this drainageway. The proposal is consistent with the MP and consists of a drop structure, several grade control structures and some bank stabilization. The creek meanders in and out of the applicant's property, and he was proposing to construct only the facilities shown in the MP on his property. However, the grade control structures will not be effective if only some of them are installed. DLM visited the site with the design engineer and found that significant construction had already taken place. Following the site visit the applicant requested an extension. Additional comments concerning the construction drawings and those elements already constructed were then provided to the engineer.

Describe any special benefits or problems with doing this review locally.

Meetings. DLM met with the engineer to discuss design and implementation issues. *Local knowledge.* We have reviewed the plat. We know the adjacent owner is in another jurisdiction and has no immediate plans to develop his side. *FHAD & MP.* Provide Q's and plan for implementation. *MEP.* We reviewed the design but did not approve it because of the missing grade control structures. We also informed the applicant that we would not recommend a CLOMR to FEMA without the missing grade controls. We also reminded Douglas Co. of MEP. The applicant is now working with the adjacent property owner, and we expect to approve construction plans shortly. *Time Extension.* We reminded the engineer of the need to apply for one. *Site visit.* We found out it was already under construction. DLM and Icon also toured the project site prior to recommending approval of the CLOMR.

CTP Case Evaluation

Case No.:
01-08-342R

Identifier:
Parkwood Filing No. 1

Type:
CLOMR

Status:
Dropped

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
8/8/01	8/14/01	Yes	4 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?

Date final letter mailed:

Elapsed Time from receipt of all data to draft letter to FEMA:		
Elapsed Time from receipt of all data to final letter:		
Elapsed Time from receipt of initial request to final letter:		N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$1419.50	\$1680.50

Project Narrative:

The proposal consisted of channelization of approximately 2,600-feet of an unnamed tributary in Basin 4100. An MP exists from 1986, with a revised MP in progress. The adjacent downstream developer is completing a design to formalize inadvertent detention behind a railroad embankment. The final water surface elevation for that pond is an issue with this proposal. It is also apparent that a previous owner of this site did some work in the floodplain without the appropriate permits. There was a question of whether to use the FIS hydrology from the late 1970s, the 1986 MP hydrology (which was for future basin conditions) or the in-progress MP hydrology. The City of Thornton had other issues regarding the future location of street and trail crossings of the proposed channel.

In an attempt to resolve these questions, a meeting was held on October 10 with the City of Thornton, the developer, his engineer, ICON, and the District. At the conclusion of the meeting we felt that a clearer direction had been obtained and the applicant would be able to go further and address ICON's original comments in a timely manner. As the 90-day response limit approached, we contacted the developer's engineer to remind him of the deadline. He responded that they had been unable to resolve differences with Thornton and the developer had decided to drop the CLOMR request.

Describe any special benefits or problems with doing this review locally.

Meetings. DLM had met with Thornton and the developer prior to submittal of the request. As noted above, we also met with all parties during review of the request. *Local knowledge.* We were aware of the proposal. We were also aware of the on-going plans of the adjacent downstream developer and its potential impact on this site. *MP.* The 1986 MP calls for the downstream detention pond discussed previously. The hydrology for the in-progress MP update revealed reduced Qs from the 1986 MP. This was due to development of the watershed at a lower density than previously anticipated.

CTP Case Evaluation

Case No.:

01-08-353P

Identifier:

Haven at York

Type:

LOMR

Status:

Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
8/8/01	8/14/01	Yes	4 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
8/27/01	8/29/01	No	2 days	Yes

Date final letter mailed: 9/25/01

Elapsed Time from receipt of all data to draft letter to FEMA:	16 total days	Yes
Elapsed Time from receipt of all data to final letter:	26 total days	Yes
Elapsed Time from receipt of initial request to final letter:	49 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3400	\$3400	\$921.50	\$2478.50

Project Narrative:

The project consists of approximately 4,700-feet of channelization of Wadley Creek South in Adams County and the City of Thornton. This was a request for a LOMR based on a CLOMR, so we obtained the CLOMR case files from the Baker library. The project had been through the District's MEP process. The engineer provided as-built drawings and certified that the construction was such that a new hydraulic analysis was not required. We were familiar enough with the project to accept it. Even so, two things happened that delayed issuance of the LOMR.

Since we were familiar with the project we decided to have ICON do only the revised map. The plan was for Baker to "clip" the appropriate portion of the DFIRM and e-mail it to ICON, who would make the appropriate changes and return it to Baker. Software incompatibility made this an impossible task, cost more money than we had anticipated, and we ultimately had to provide a paper copy to Baker for them to make the digital revisions.

Also, Sally Magee was scheduled to be in Denver for a review meeting on September 11, and we had the LOMR ready for her signature at that time. The terrorist attacks on New York and Washington prevented her from making it to Denver and it ultimately was not signed until September 25th.

Describe any special benefits or problems with doing this review locally.

Local knowledge. We had reviewed the preliminary and final plats for this development prior to their approval. The effective date was an issue because the FIRM showed part of the channel in Adams County and it was on an adjacent property. We knew that the area had been annexed and that the other property owner had contributed funding to the construction. Based on an engineered channel in a Thornton easement with all affected parties aware of the proposed change, we were able to use the letter date as the effective date. *FHAD and MP.* The Zone X on the DFIRM was based on the floodplain published in the FHAD, which was based on future hydrology. There is also an MP that includes this area. The channel design is based on the MP discharges. *MEP.* As noted above, this project was in the MEP process, and construction has been accepted for maintenance eligibility.

CTP Case Evaluation

Case No.:

01-08-358P

Identifier:

Compark

Type:

LOMR

Status:

Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
8/13/01	8/21/01	Yes	6 days	No

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
10/14/02	10/21/02	No	5 days	Yes

Date final letter mailed: 12/18/02

Elapsed Time from receipt of all data to draft letter to FEMA:	14 total days	Yes
Elapsed Time from receipt of all data to final letter:	58 total days	Yes
Elapsed Time from receipt of initial request to final letter:	492 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3400	\$3400	\$3385	\$15

Project Narrative:

This is a request for a LOMR based on a CLOMR. The project consists of 8,500-l.f. of stabilized floodplain on Happy Canyon Creek, and includes one grouted sloping boulder drop structure, several grade control structures, bank and toe stabilization, and one bridge crossing. There is a 1977 FHAD which was completed concurrently with the Douglas County FIS contractor, using the same 1" = 100', 2-foot contour interval mapping but future discharges. There is also a 1993 MP.

This project is much less structural than called for in the MP. The District spent a considerable amount of time with the applicant, his engineer, the Corps of Engineers and the Environmental Protection Agency in order to obtain a stable channel design that the Corps of Engineers would accept and permit. The project also is going through the MEP. A punch list has been developed, and once the items on that list are addressed, we anticipate accepting the construction for the MEP. Several extensions were granted in order to allow the applicant to construct and as-built an adjacent trail.

Describe any special benefits or problems with doing this review locally.

Meetings. The District met with the applicant and others as noted above to develop a plan acceptable to all parties. *Local Knowledge.* We have reviewed the plat, and are aware of adjacent proposals both upstream and downstream. *FHAD & MP.* The floodplain for the FHAD and FIS were compatible because they were done at the same time. The MP was not acceptable to the Corps of Engineers and EPA, but we were able to arrive at a plan acceptable to all parties in lieu of the master plan concept. *MEP.* The project is going through the MEP process, and we expect to approve the construction in the near future. *Time Extension.* We called the consultant to remind him that his first time extension was almost expired, and to determine the status of his response to our initial letter. They requested another extension in order to add some additional on-going trail construction along E-470 to the as-built drawings.

CTP Case Evaluation

Case No.:
01-08-361R

Identifier:
Courseside

Type:
CLOMR

Status:
Dropped

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
8/15/01	8/22/01	Yes, also \$	5 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
No				

Date final letter mailed: N/A

Elapsed Time from receipt of all data to draft letter to FEMA:		
Elapsed Time from receipt of all data to final letter:		
Elapsed Time from receipt of initial request to final letter:		N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$800	\$824.50	(\$24.50)

Project Narrative:

This proposal included channelization and drop structures on Lakewood Gulch. The submitted fee was for a CLOMR-F. Lakewood had not signed Form 1. Icon contacted Anne Heine at Lakewood Public Works, who indicated they knew nothing about the proposal. There was no response from the applicant, and the case was dropped after 90 days.

Describe any special benefits or problems with doing this review locally.

Local knowledge. We perhaps saved some money by learning from Lakewood that this was not a serious proposal.

CTP Case Evaluation

Case No.:	Identifier:	Type:	Status:
01-08-371R	Preserve at Weaver Creek	CLOMR	Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
8/23/01	8/28/01	Yes	3 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
Yes	10/3/01	Yes	4 days	Yes
Yes	10/15/01	No	2 days	Yes

Date final letter mailed: 11/9/01

Elapsed Time from receipt of all data to draft letter to FEMA:	23 total days	Yes
Elapsed Time from receipt of all data to final letter:	25 total days	Yes
Elapsed Time from receipt of initial request to final letter:	78 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$2874.60	\$225.40

Project Narrative:

The proposal consists primarily of encroachment into the edges of the 100-year floodplain for Weaver Creek over a length of approximately 1300-feet, with the construction of one drop structure at the site of the embankment of an abandoned stock pond at approximately the mid-point of the project. This approach was taken in order to protect a significant area of wetlands. We had met with the City of Lakewood and two different developers on several previous occasions regarding this concept, so it was not a surprise when it arrived.

We found out that a previous request for a CLOMR had been submitted, but had been dropped. We obtained the file for that request from the Baker library to see what issues Baker had identified. Although we had agreed in principal to the concept, it took some effort to get the hydraulics to a point where we could recommend that FEMA issue a CLOMR.

Describe any special benefits or problems with doing this review locally.

Meetings. We met with the engineer and City to agree on the concept before the request was submitted. *FHAD.* The FHAD was the basis for the Zone AE on the FIRM, and the discharges used in this request. *MEP.* We have reviewed the construction drawings and are close to approving them for the MEP. We met with the developer and his engineer to resolve concerns over adequate maintenance access. The construction drawings have been approved. *Local exchange of data.* During the review Icon met with the engineer twice to go over additional data prior to submittal. Also, additional data was requested by phone on 10/16 and was received on 10/18, thus avoiding an additional data letter.

CTP Case Evaluation

Case No.:
01-08-379R

Identifier:
E-470 @ Todd Creek

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
8/28/01	9/5/01	No	5 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?

Date final letter mailed: 10/4/01

Elapsed Time from receipt of all data to draft letter to FEMA:	34 total days	Yes
Elapsed Time from receipt of all data to final letter:	37 total days	Yes
Elapsed Time from receipt of initial request to final letter:	37 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$1904.96	\$1195.04

Project Narrative:

E-470 is a 4-lane toll road being constructed by a design-build contractor. The District spent a lot of time working with the owner's engineer on the preliminary design; and has spent time with the contractor during final design, so we were well aware that this was coming.

This project consists of crossings of Todd Creek and Tributary 4. The floodplains are Zone A and are based on the District's FHAD. The applicant used the FHAD discharges and hydraulic models to prepare this request.

Describe any special benefits or problems with doing this review locally.

Meetings. We were aware this was coming because of numerous coordination meetings held with the owner. *FHAD.* The FHAD was the basis for the Zone A's, and provided the discharges and hydraulic models. *Local exchange of data.* The original submittal package was missing the floppy discs with the computer models. Icon called the engineer who immediately sent the discs over. This allowed us to send a "clean" acknowledgement letter.

CTP Case Evaluation

Case No.:	Identifier:	Type:	Status:
01-08-396R	E-470 @ Third Creek	CLOMR	Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
9/7/01	9/18/01	No	7 days	No

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?

Date final letter mailed: 10/11/01		
Elapsed Time from receipt of all data to draft letter to FEMA:	24 total days	Yes
Elapsed Time from receipt of all data to final letter:	34 total days	Yes
Elapsed Time from receipt of initial request to final letter:	34 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$4634.62	(\$1534.62)

Project Narrative:

E-470 is a 4-lane toll road being constructed by a design-build contractor. The District spent a lot of time working with the owner’s engineer on the preliminary design; and has spent time with the contractor during final design, so we were well aware that this was coming. This request involves new hydrology, approximately 11,000-l.f. of Third Creek, and includes excavation of a major regional detention facility/borrow pit, crossing 120th Avenue, encroachment of roadway embankment into the Third Creek floodplain, channelization of a portion of Third Creek, a ramp bridge over Third Creek, and another excavated regional detention pond/borrow area on the Buffalo Run Tributary to Third Creek. The request impacts three communities. There is a 1976 FHAD and a 1990 MP. The FIRM floodplain is a Zone A based on the FHAD. This request is consistent with the MP, although some of the project elements are different. We opposed the encroachment of roadway embankment into the floodplain, but the Corps of Engineers denied a 404 Permit for the original alignment due to the existence of a fen in that alignment. Several meetings were held to resolve this issue. Once we lost the issue we conducted rigorous examinations of the proposal before this request was received. We provided existing and future conditions hydrology models to the consultant. The floodplain analysis is based on existing/post project hydrology as directed by John Liou, FEMA Region 8, in a meeting attended by many organizations. We were also involved with the City of Brighton, the City of Commerce City and Adams County in their floodplain permit processes for this reach of Third Creek. The Authority has not pursued MEP, although Commerce City will ultimately own the two regional detention ponds, and will pursue MEP prior to assuming ownership.

Describe any special benefits or problems with doing this review locally.

Meetings. As described above a number of meetings were held with the applicant and the local jurisdictions before the request was submitted. *FHAD & MP.* The floodplain came from the FHAD. The design of the project is consistent with the MP. The hydrology models came from the MP. *MEP.* The project detention ponds will eventually be in the MEP. *Local Exchange of Data.* Icon and the consultant had numerous contacts leading to resolution of problems in developing an acceptable effective model. The District will provide an updated hydrology model to the applicant for use in the LOMR request.

CTP Case Evaluation

Case No.:
01-08-397R

Identifier:
E-470 @ South Platte River

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
9/10/01	9/18/01	Yes	6 days	No

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
11/5/01	11/9 (phone call)	Yes	4 days	Yes
11/15/01	11/16/01	No	1 day	Yes
	12/31/01	Yes	45 total days	Yes
1/7/02	1/9/02	No	2 days	Yes

Date final letter mailed: 1/24/02

Elapsed Time from receipt of all data to draft letter to FEMA:	7 total days	Yes
Elapsed Time from receipt of all data to final letter:	17 total days	Yes
Elapsed Time from receipt of initial request to final letter:	136 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$3553.30	(\$453.30)

Project Narrative:

E-470 is a 4-lane toll road being constructed by a design-build contractor. The District spent a lot of time working with the owner's engineer on the preliminary design; and has spent time with the contractor during final design, so we were well aware that this was coming. The project consists of twin bridges crossing the river and roadway embankment encroaching into the floodplain on both sides. The request impacts two communities. The floodplain is a Zone AE with floodway. There is a 1977 FHAD that is the source of the Zone AE. There is a 1985 MP and an on-going MP revision. The applicant utilized updated topography, some provided by Adams County and some obtained by the E-470 Authority, to develop a new effective model. It took some time and several discussions between Icon and the consultant to resolve differences between the BFE's and the elevations in the new effective model.

Describe any special benefits or problems with doing this review locally.

Meetings. We have met with the applicants, as noted above. *FHAD & MP.* The FHAD was the basis for the FIRM. This crossing is being incorporated into the revised MP. *Local Exchange of Data.* Icon and the consultant had numerous contacts leading to resolution of problems in developing an acceptable effective model.

CTP Case Evaluation

Case No.:
01-08-412P

Identifier:
Canyon Club Apartments

Type:
LOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
9/24/01	10/3/01	Yes	7 days	No

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
1/30/02	2/7/02	No	6 days	No

Date final letter mailed: 4/12/02

Elapsed Time from receipt of all data to draft letter to FEMA:	43 total days	Yes
Elapsed Time from receipt of all data to final letter:	72 total days	Yes
Elapsed Time from receipt of initial request to final letter:	200 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3400	\$3400	\$2193.94	\$1206.06

Project Narrative:

This project consists of channelization of 2200-l.f. of SJCD (South) North Tributary, including seven vertical drop structures, 500-feet of channel with a boulder lined trickle channel and 1500-feet of channel with a wetland bottom, a box culvert under Platte Canyon Road at the upstream end of the channel and a transition to an upstream project. This is a request for a LOMR based on a CLOMR. The request impacts two communities. The floodplain is a Zone AO. The District completed a combination FHAD and MP in 1976. We believe the Zone AO came directly from the FHAD/MP. The applicant was unable to obtain a 404 Permit from the Corps of Engineers for the original design, and a complete redesign was required in order to meet Corps acceptance. After the project was constructed and we were considering acceptance for the MEP, we discovered that all of the drop structures had been built two feet too high. A new consulting engineer was brought on to the project by the applicant, we worked with them to develop a corrective design, observed construction of the corrections, and have accepted the construction of the 500 feet of channel with the boulder lined trickle channel for the MEP. We also advised the consultant to seek a time extension. Finally, we helped the consultant resolve a problem with the upstream tie-in to an adjacent LOMR dated 5/10/01.

Describe any special benefits or problems with doing this review locally.

Meetings and Site Visits. We met on numerous occasions with the engineer and city officials to help with the design, and then the re-design of the project. *Local Knowledge.* We have reviewed projects upstream and downstream of this proposal and were able to assist with transitions on either end. The property to the south is going to be converted into a water supply reservoir, and a portion of the channel that is the subject of this request will be rebuilt as a part of a PMF diversion channel for that reservoir. We helped with the upstream tie-in. All of this local knowledge was of assistance in moving this proposal through the process. *FHAD/MP.* This document provided the discharges for this proposal. *MEP.* We have approved the construction of this project. Along the way we found and had corrected a 2-foot bust in the construction of the seven drop structures. The project is now eligible. *Time Extension.* We reminded the engineer of the need to apply for one.

CTP Case Evaluation

Case No.:	Identifier:	Type:	Status:
01-08-417P	Brookhaven	LOMR	Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
9/27/01	10/3/01	Yes	4 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
10/22/01	10/24/01	Yes	2 days	Yes
11/26/01	No			

Date final letter mailed: 12/18/01

Elapsed Time from receipt of all data to draft letter to FEMA:	17 total days	Yes
Elapsed Time from receipt of all data to final letter:	22 total days	Yes
Elapsed Time from receipt of initial request to final letter:	51 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$4000	\$4000	\$0	\$4000

Project Narrative:

This project consists of approximately 2100-feet of channelization of Drainageway D in Columbine Valley. The floodplain is a shaded Zone X, 100-year flooding less than 1-foot deep. This request was processed concurrently with a request for Country Club Villas (CCV), which is located immediately upstream from this site. CCV intercepts most of the 100-year discharge and conveys it through its site in a conduit which discharges into the Brookhaven channel. Brookhaven did not recognize the conduit, and was proposing a floodplain that we knew to be incorrect. The engineers for the two developers could not or would not combine efforts to produce a single hydraulic model. It should also be noted that ICON is the Town Engineer for Columbine Valley and reviewed both of these LOMR requests on behalf of the Town at the expense of the developers. We conducted our own review of the two submittals, with ICON's input, to arrive at our conclusions.

We made several attempts by e-mail and telephone to get the two consultants to share information and develop combined hydraulic models and floodplains. We finally scheduled a meeting attended by Brookhaven (WRC), CCV (Love), ICON and the District. WRC agreed to revise their model to include the discharge arriving at their channel in CCV's conduit and to provide that model to Love. Love agreed to use that model to revise their hydraulic model and floodplain limits. ICON reviewed both hydraulic models and found that both still had errors. WRC then prepared a combined hydraulic model that accomplished what we needed to proceed with the LOMRs. Finally, ICON prepared annotated FIRMs, which were provided to Baker to prepare the LOMR map enclosures.

Describe any special benefits or problems with doing this review locally.

Meetings. The meeting between the two developers, engineers, ICON, and the District was the key factor in getting the two projects coordinated. *Local knowledge.* We were aware that the Country Club Villas project was under construction and would have an impact on the Brookhaven proposal. *MP.* The MP was the source of the discharges used to map the floodplain on the FIRM, as well as the source of the design discharges for these two projects. *MEP.* The Brookhaven construction drawings were approved under the MEP process. We have reviewed the construction and expect to accept construction as soon as a few remaining punch list items have been addressed. *Local exchange of data.* As described above, ICON, WRC, and Love were all exchanging data and information face-to-face, by local telephone calls and by e-mail.

CTP Case Evaluation

Case No.:	Identifier:	Type:	Status:
01-08-418R	Buckley Road Bridge	CLOMR	Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
10/2/01	10/3/01	No	1 day	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?

Date final letter mailed: 11/15/01		
Elapsed Time from receipt of all data to draft letter to FEMA:	23 total days	Yes
Elapsed Time from receipt of all data to final letter:	43 total days	Yes
Elapsed Time from receipt of initial request to final letter:	43 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$1468.10	\$1631.90

Project Narrative:

The project consists of a bridge crossing Piney Creek with a downstream grade control structure and riprap bank protection. The documentation was complete, and ICON was able to quickly determine that a CLOMR was warranted. However, two situations developed. The first was that since the applicant was Arapahoe County we assumed that the fee would soon be received by FEMA and we did not request it in the initial acknowledgement letter. We ended up sending the proposed 104 letter and the case file to Sally Magee but asked her to not sign the letter until the fee was received. This was on October 25. The fee was finally received by FEMA on November 13, and the 104 letter was dated November 15.

The other interesting note with this case is that part of the affected area is within the newly created City of Centennial. While the City exists, it relies on the County to provide all of the normal services as it tries to establish its own government structure. The Centennial boundaries are not shown on the Arapahoe County FIRM and the City has not joined the NFIP. After consultation with Sally Magee, we agreed to treat this case as an Arapahoe County CLOMR, send a copy of the CLOMR to the mayor of Centennial, and then pursue efforts to bring Centennial into the NFIP.

Describe any special benefits or problems with doing this review locally.

Local Knowledge. We discovered and resolved the issue of the newly created City of Centennial. Arapahoe County, the District and several downstream property owners are preparing a stabilization construction project downstream, which has been coordinated with this proposal. Icon is the design engineer for the stabilization project. *FHAD and MP.* The project was designed according to the FHAD discharge and is consistent with the MP. *MEP.* We have approved the construction drawings for the project and have been observing construction. *Site visits.* DLM had made several visits to the site relative to the stream stability issues.

CTP Case Evaluation

Case No.:	Identifier:	Type:	Status:
02-08-024R	E-470 @ Big Dry Creek	CLOMR	Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
10/22/01	10/30/01	Yes	6 days	No

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
12/27/01	12/31/01	No	2 days	Yes
2/14/02				

Date final letter mailed: 2/26/02

Elapsed Time from receipt of all data to draft letter to FEMA:	5 total days	Yes
Elapsed Time from receipt of all data to final letter:	12 total days	Yes
Elapsed Time from receipt of initial request to final letter:	127 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$3213.80	(\$113.80)

Project Narrative:

E-470 is a 4-lane toll road being constructed by a design-build contractor. The District spent a lot of time working with the owner's engineer on the preliminary design; and has spent time with the contractor during final design, so we were well aware that this was coming. The project includes two mainline bridges, two ramp bridges and one crossing of nearby 152nd Avenue, and new hydrology models. Big Dry Creek floodplain is a Zone AE with a floodway. We insisted that they obtain a CLOMR prior to beginning construction because they were developing in the floodway and causing a rise in water surface elevation. The project also involved Zone A floodplains on Short Run, Mustang Creek, Sack Creek and Wadley North Creek.

There is a 1973 MP, which included a 100-year floodplain, which according to the FIS was the basis for the Zone AE. There is also a 1986 FHAD for Big Dry Creek. There is a 1989 FHAD that is the source of the Zone A floodplains for the tributaries. There is a 1989 MP for the tributaries. The District had several meetings with the design-build contractor and local jurisdictions to coordinate MP implementation and floodplain management issues. Their plan is to go the CLOMR/LOMR route for Big Dry Creek, but to only do LOMR requests for the Zone A tributaries. The project is not in the MEP, although we have reviewed the construction plans for the hydraulic impacts and consistencies with the MPs.

Describe any special benefits or problems with doing this review locally.

Meetings. The District had several meetings with the applicant and local jurisdictions prior to submittal of this request. *FHAD & MP.* The District MP is the source of floodplain information for Big Dry Creek, and the FHAD is the source of the floodplains for the four tributaries. The design of this portion of E-470 is consistent with the MPs. *Local Exchange of Data.* Icon and the consultant had numerous contacts leading to resolution of problems in developing acceptable models.

CTP Case Evaluation

Case No.:
02-08-030R

Identifier:
Reunion @ Second Creek

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
10/26/01	10/31/01	Yes	3 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
12/20/01	12/31/01	Yes	6 days	No
1/31/02	2/5/02	No	2 days	Yes

Date final letter mailed: 2/22/02

Elapsed Time from receipt of all data to draft letter to FEMA:	15 total days	Yes
Elapsed Time from receipt of all data to final letter:	22 total days	Yes
Elapsed Time from receipt of initial request to final letter:	119 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$3553.30	(\$453.30)

Project Narrative:

Both a 1976 and a 1990 MP exist. The MP includes several regional detention ponds. This request is for one of them. We have prepared a preliminary design of this facility to coordinate its design with a 9-hole golf course expansion into the flood pool. The FIRM is a Zone A based on the FHAD. The applicant is proposing to build a portion of the pond in lieu of providing on-site detention nearby. The engineer used the wrong hydrology model, using the MP hydrology for future conditions and facilities that we pointed out to them would require them to wait for a LOMR until all upstream planned regional detention facilities were built. In their last submittal they used the FHAD hydrology. The 5-day goal for the second submittal was not met due to vacations during the Christmas holidays.

Describe any special benefits or problems with doing this review locally.

Meetings. We met with the city before this submittal and agreed with them on the concept. *FHAD & MP.* Both were in place. The FHAD provided the floodplain for the FIRM. The MP calls for this facility. *MEP.* We are reviewing the construction drawings for both the ultimate condition (this request) and for an interim condition. *Local Exchange of data.* Icon and the consultant had numerous contacts leading to resolution of problems in developing acceptable models.

CTP Case Evaluation

Case No.:
02-08-040P

Identifier:
Country Club Villas

Type:
LOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
11/30/01 (Form 1)	12/7/01	No	5 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?

Date final letter mailed: 12/18/01

Elapsed Time from receipt of all data to draft letter to FEMA:	13 total days	Yes
Elapsed Time from receipt of all data to final letter:	18 total days	Yes
Elapsed Time from receipt of initial request to final letter:	18 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$4000	\$4000	\$0	\$4000

Project Narrative:

The request was received on 10/30/01 but Form 1 had not been signed by the Town. The signed form was received on 11/30/01. We did not request any additional data in the acknowledgement letter, and all requests for additional data were done by phone, e-mail or face-to-face.

Country Club Villas was completed in conjunction with the Brookhaven project. Please see the Brookhaven case evaluation for the combined project narrative. It should be noted that this project is not eligible for the MEP because the drainageway was placed in a conduit and the District does not accept conduits for the MEP.

Describe any special benefits or problems with doing this review locally.

The benefits are the same as for the Brookhaven project, with the exception of the MEP.

CTP Case Evaluation

Case No.:

02-08-052P

Identifier:

17 Random Road

Type:

LOMR

Status:

Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
11/7/01	11/12/01	Yes + \$	3 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
2/6/02	2/11/02	No	3 days	Yes

Date final letter mailed: 4/12/02

Elapsed Time from receipt of all data to draft letter to FEMA:	34 total days	Yes
Elapsed Time from receipt of all data to final letter:	65 total days	Yes
Elapsed Time from receipt of initial request to final letter:	155 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$4000	\$3100	\$2473.50	(\$1526.50)

Project Narrative:

This request involves a single family house located within Zone AE of Quincy Gulch in Cherry Hills Village. The applicant has imported fill and placed it around the house in order to change the floodplain boundary. This was apparently done without benefit of the appropriate permits, but Cherry Hills Village is now requiring that the owner obtain a LOMR.

Describe any special benefits or problems with doing this review locally.

MP. The 100-year floodplain in the District's 1974 MP was the basis for the Zone AE. *Local exchange of data.* Icon and the engineer had several contacts leading to the resolution of problems with the hydraulic model.

CTP Case Evaluation

Case No.:
02-08-058R

Identifier:
Greenwood Village

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
11/15/01	11/29/01	Yes	9 days	No

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
2/20/02	2/27/02	No	5 days	Yes

Date final letter mailed: 4/11/02

Elapsed Time from receipt of all data to draft letter to FEMA:	40 total days	Yes
Elapsed Time from receipt of all data to final letter:	50 total days	Yes
Elapsed Time from receipt of initial request to final letter:	147 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$4000	\$4000	\$1695	\$1405

Project Narrative:

The project consists of two regional detention ponds and miscellaneous channel work along approximately 6000 l. f. of Greenwood Gulch in Greenwood Village. A 1974 MP (with 100-yr floodplain published in the same document) exists. The original FIRM floodplain came from the MP. A portion was later revised by LOMR (1992) to reflect better topographic information. A study for a FHAD and revised MP will begin later this year. We met with the engineer before the request was submitted to coordinate their work with the pending MP/FHAD study, and to look for any problems with their CLOMR request.

Describe any special benefits or problems with doing this review locally.

Meetings. We met with the applicant before the submittal. *MP.* The MP hydrology is the basis for the FIRM floodplain. *Local exchange of data.* Icon had several e-mail and telephone contacts with the applicant to resolve small but significant issues.

CTP Case Evaluation

Case No.:
02-08-059R

Identifier:
Monterey Point

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
11/14/01	11/27/01	Yes + \$	8 days	No

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
1/28/02	2/4 Phone call	Yes	5 days	Yes
2/19/02	2/25/02	No	3 days	Yes

Date final letter mailed: 4/11/02

Elapsed Time from receipt of all data to draft letter to FEMA:	42 total days	Yes
Elapsed Time from receipt of all data to final letter:	51 total days	Yes
Elapsed Time from receipt of initial request to final letter:	148 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$2279.50	\$820.50

Project Narrative:

This request is for channelization of 1500 feet of Granby Ditch in Aurora. We had received a couple of calls from the city before this request was received indicating that a problem case was being prepared that they wanted to discuss with us before they submitted it. However, they never followed through before the case arrived. It turns out that the problem is that the city has raised Colfax Ave. immediately downstream from this site, which made it essentially impossible for this applicant to match back to the existing plan and profile. Icon thinks they can match in and has had conversations with the engineer to that effect. We have a FHAD and an MP. The FIRM floodplain came from the FHAD. The plans have not been submitted for MEP. We have constructed an upstream regional detention facility that has significantly reduced the Q and we will be doing our own LOMR this year to revise the hydrology accordingly. The elapsed time for the first ACK letter included vacations associated with the Thanksgiving holiday. The phone call for the second ACK was because the submittal was not responsive to the first request for additional data. The applicant was given a choice of receiving a letter or preparing a more complete response, and he chose the latter option. He was also advised to request an extension if the submittal was not done soon. An extension request was received on 2/19/02.

Describe any special benefits or problems with doing this review locally.

Local Knowledge. We were aware of the construction of the upstream detention facility, and others at the District were aware of the Colfax Ave. problem and were already working on a solution. *MP.* The regional detention was constructed in accordance with the MP. *Local Exchange of Data.* We were able to work with the developer to resolve the problem of matching into the downstream plan and profile so that the developer wasn't penalized for Aurora's raising of Colfax. Icon and the consultant had numerous e-mail and telephone contacts leading to resolution of problems in developing acceptable models.

CTP Case Evaluation

Case No.:
02-08-081R

Identifier:
Cherry Creek Drops

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
12/3/01	12/5/01	No	2 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?

Date final letter mailed: 12/13/01

Elapsed Time from receipt of all data to draft letter to FEMA:	4 total days	Yes
Elapsed Time from receipt of all data to final letter:	10 total days	Yes
Elapsed Time from receipt of initial request to final letter:	10 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$	\$3100

Project Narrative:

The project consists of the construction of two drop structures on Cherry Creek. One is new and the other is a replacement for an existing rubble drop structure that protects the High Line Canal siphon. It also includes significant trail construction and two bridges. The request impacts two communities. The project is sponsored by the District, Arapahoe County, Denver, and Denver Water Department. It has been coordinated with an adjacent downstream project by a private developer (Case No. 02-08-134R, Golf Club of Cherry Creek) that also includes two new drop structures in Cherry Creek. The design engineer was Icon. A FHAD and MP exist. The FIRM is based on existing conditions hydrology for the tributary area below Cherry Creek Dam.

Normally we would construct the project and submit a LOMR that, under our basic CTC agreement, would be accepted with minimal review by the MCC. In this case a rise in excess of one foot was being caused, requiring a CLOMR. The rise is contained on publicly owned property and does not affect any insurable structures. All of this was discussed with Sally Magee who agreed to the District doing the review, so long as someone other than Icon did the work. DLM from the District's Floodplain Management Program staff completed the review in-house.

Describe any special benefits or problems with doing this review locally.

Meetings. We were able to meet with the design engineer and the District's project manager both before and during the review of the proposal. *Local Knowledge.* This project was coordinated with the downstream developer's project (Case No. 02-08-134R). *FHAD & MP.* The design is in accordance with the MP and uses discharges from the FHAD that are higher than from the FIS.

CTP Case Evaluation

Case No.:
02-08-083R

Identifier:
Quail Creek/Bull Canal

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
12/4/01	12/12/01	Yes	6 days	No

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
1/18/02	1/23 (phone)	Yes	2 days	Yes
3/11/02	3/13/02	No	2 days	Yes

Date final letter mailed: 3/27/02

Elapsed Time from receipt of all data to draft letter to FEMA:	8 total days	Yes
Elapsed Time from receipt of all data to final letter:	16 total days	Yes
Elapsed Time from receipt of initial request to final letter:	113 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$2279.50	\$820.50

Project Narrative:

The project consists of the relocation of the confluence of Quail Creek with Big Dry Creek as part of the construction of an interchange of I-25 and 136th Ave. The Bull Canal also has to be rerouted. The applicant is the City of Westminster. The request impacts three communities. There is a 1986 FHAD and a 1985 MP. A revised MP is in progress. Sally Magee used data from the FHAD, and existing and on-going MP studies for her masters thesis concerning use of GIS for flood hazard analysis. The floodplain is based on the FHAD and is shown as Zone A on the Adams County FIRM, although it is in Westminster. The FHAD and MP discharges are significantly different. Icon requested guidance from Sally on which hydrology model to use, and she had them use the on-going MP hydrology for existing conditions.

There is an ongoing LOMR request on Quail Creek upstream of this case, and an ongoing CLOMR request on McKay Lake Drainageway (adjacent to Quail Creek). Both of these are under review by MBJ, and Icon and MBJ have had several coordinating discussions and exchanges of data by fax.

Describe any special benefits or problems with doing this review locally.

Meetings. We attended at least two progress meetings during the design of the project and offered suggestions regarding the design and the CLOMR request. *Local Knowledge.* We also reviewed the FIR drawings that are a part of the CDOT approval process for the interchange. *FHAD & MP.* The applicant has used the hydrology model from the on-going MP study. *Local Exchange of Data.* The City claimed this request should be fee exempt based on a mis-reading of the regulations. Two telephone conversations were held with city officials, after which the fee was sent to FEMA. A response to our request for more data was received on 1/22/02. It was still lacking, and Icon spoke to the consultant and gave him the choice of fixing it up or receiving another letter from us requesting more data. He opted to fix it up. It still took several additional telephone and e-mail contacts to resolve all of the issues.

CTP Case Evaluation

Case No.:
02-08-119R

Identifier:
Westerly Creek

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
1/7/02	1/11/02	No	4 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?

Date final letter mailed: 2/13/02

Elapsed Time from receipt of all data to draft letter to FEMA:	24 total days	Yes
Elapsed Time from receipt of all data to final letter:	37 total days	Yes
Elapsed Time from receipt of initial request to final letter:	37 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$2728.80	\$371.20

Project Narrative:

The project consists of approximately 8000 lf of grass-lined channel through the former Stapleton International Airport. Much of this reach of creek was contained in a conduit under a runway and taxiway. The project includes two road crossings, two drop structures, several low flow crossing structures and extensive landscaping.

Describe any special benefits or problems with doing this review locally.

Meetings. WGD attended six monthly progress meetings with the designers, developer and city staff to review progress on the design and resolve any outstanding issues. *Local knowledge.* The District was able to assist the designer in establishing a design discharge for the low flow channel based on stream gaging from the District's flood warning network. Upstream construction of two regional detention facilities established the 100-year discharge. *FHAD and MP.* Both were available for Westerly Creek and provided guidance to the designer. *MEP.* The project was submitted for MEP and three meetings were held between the District and the engineer prior to acceptance of the design. *Local Exchange of Data.* Icon and the engineer exchanged several phone calls and e-mails to clarify minor issues. A revised hydraulic model was also provided.

To issue a CLOMR for a project of this size and complexity in 37 days was a significant achievement.

CTP Case Evaluation

Case No.:
02-08-134R

Identifier:
Cherry Creek Country Club

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
1/22/02	1/30/02	Yes	6 days	No

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
2/22/02	2/27/02	No	3 days	Yes

Date final letter mailed: 3/21/02

Elapsed Time from receipt of all data to draft letter to FEMA:	19 total days	Yes
Elapsed Time from receipt of all data to final letter:	27 total days	Yes
Elapsed Time from receipt of initial request to final letter:	58 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$2720	\$380

Project Narrative:

The project consists of two drop structures on Cherry Creek adjacent to the applicant's golf course.

Describe any special benefits or problems with doing this review locally.

Meetings. Several meetings were held with the applicant both before and after this request was submitted, both for MEP and to coordinate with the District's project upstream from this location (Case No. 02-08-081R). *Local knowledge.* We had reviewed the rezoning and platting referrals and were well aware of this project when it was submitted, as well as the adjoining project upstream, and a previously constructed drop structure downstream. *FHAD & MP.* The project is consistent with the District's stabilization master plan, and the design discharge came from the FHAD, which has higher discharges than the FIS.

CTP Case Evaluation

Case No.:
02-08-156P

Identifier:
Airport Creek

Type:
LOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
2/8/02	2/13/02	Yes	3 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
5/10/02	5/16/02	No	4 days	Yes
	6/20	Yes	35 days	Yes
7/22/02	7/24/02	No	2 days	Yes
8/21/02	No	Data by Icon		

Date final letter mailed: 10/29/02

Elapsed Time from receipt of all data to draft letter to FEMA:	24 total days	Yes
Elapsed Time from receipt of all data to final letter:	66 total days	Yes
Elapsed Time from receipt of initial request to final letter:	263 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3400	\$3400	\$5752.25	(\$2352.25)

Project Narrative:

This project is channelization of a portion of Airport Creek in the City and County of Broomfield, adjacent to the City of Westminster. It is a LOMR based on a CLOMR. There are both a FHAD and a MP that include Airport Creek. Westminster and Broomfield are constantly feuding about something. In this case Westminster refused to acknowledge this request. This was a very difficult submittal to review, and Icon was in constant communication with the consultant trying to put together a quality request. Finally, in order to bring this case to a close, Icon revised the hydraulic model and got the consultant to agree to the revisions.

Describe any special benefits or problems with doing this review locally.

Local knowledge. We were aware of the feuding between Broomfield and Westminster and decided this request could go forward without a signed acknowledgement from Westminster. *FHAD & MP.* The FIRM was based on the FHAD. The design was consistent with the MP. *MEP.* The construction drawings were approved for MEP, and the District is currently waiting for the applicant to finish a few punch list items before accepting construction. *Local Exchange of data.* Icon made repeated contacts with the consultant seeking information to keep the review moving. In the end Icon had to revise the hydraulic model in order to be able to finish the review.

CTP Case Evaluation

Case No.:

02-08-171P

Identifier:

Parker

Type:

LOMR

Status:

Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
2/13/02	2/19/02	Yes	3 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
5/7/02	5/10/02	No	3 days	Yes

Date final letter mailed: 9/16/02

Elapsed Time from receipt of all data to draft letter to FEMA:	32 total days	Yes
Elapsed Time from receipt of all data to final letter:	99 total days	No
Elapsed Time from receipt of initial request to final letter:	215 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$4000	\$4000	\$4010.11	(\$10.11)

Project Narrative:

We received one request that actually included four separate sites. We conferred with FEMA and decided to break it into two requests. This one is for Sulphur Gulch from Cherry Creek to Parker Road. The other request is Case No. 02-08-186P, which was processed under the second grant.

Describe any special benefits or problems with doing this review locally.

Local exchange of data. Icon had several contacts with the engineer to clarify the submittal and obtain additional information. WGD worked with the Town of Parker to get their understanding of the need to split the request into two and get the additional fee submitted.

CTP Case Evaluation

Case No.:
02-08-178R

Identifier:
Lincoln Ave/Pine Drive

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
2/19/02	2/25/02	No	4 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?

Date final letter mailed: 3/21/02

Elapsed Time from receipt of all data to draft letter to FEMA:	21 total days	Yes
Elapsed Time from receipt of all data to final letter:	30 total days	Yes
Elapsed Time from receipt of initial request to final letter:	30 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$2231	\$869

Project Narrative:

This project consists of channelization of Baldwin Gulch and a new culvert crossing in conjunction with the extension of Pine Drive in Douglas County near the Town of Parker. This is a joint project between the District and Douglas County

Describe any special benefits or problems with doing this review locally.

FHAD & MP. Both a FHAD and MP exist for Baldwin Gulch. The FIRM is based on the FHAD. The project is consistent with the MP. *Local exchange of data.* Several contacts were initiated with the consultant by Icon to obtain clarification of questions, which allowed the review to move forward without delays.

CTP Case Evaluation

Case No.:

02-08-185P

Identifier:

Ford Street

Type:

LOMR

Status:

Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
2/20/02	2/27/02	Yes	5 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
3/25/02	3/27/02	No	2 days	Yes

Date final letter mailed: 7/23/02

Elapsed Time from receipt of all data to draft letter to FEMA:	16 total days	Yes
Elapsed Time from receipt of all data to final letter:	118 total days	No
Elapsed Time from receipt of initial request to final letter:	153 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3400	\$3400	\$3362.80	\$37.20

Project Narrative:

The project is a replacement bridge for Ford Street over Clear Creek in the City of Golden. It also affected the Kenneys Run floodplain, and its impacts extended into Jefferson County. The review was straightforward after receipt of all data. The MCC encountered some problems in preparing the LOMR map because the applicant used the Golden FHBM as a base and FEMA wanted the LOMR prepared on the draft countywide FIRM base map.

Describe any special benefits or problems with doing this review locally.

Local Knowledge. The District provided some funding for the Clear Creek channel portion of this project. *FHAD & MP.* The FHAD is the basis for the FIRM. The bridge was consistent with the District's Clear Creek MP.

CTP Case Evaluation

Case No.:
02-08-211P

Identifier:
Big Dry Creek, Huron to I-25

Type:
LOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
3/1/02	3/6/02	Yes	3 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
7/8/02	7/15/02	Yes	5 days	Yes
8/19/02	8/26/02	No	5 days	Yes

Date final letter mailed: 2/7/03

Elapsed Time from receipt of all data to draft letter to FEMA:	44 total days	Yes
Elapsed Time from receipt of all data to final letter:	172 total days	No
Elapsed Time from receipt of initial request to final letter:	337 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3400	\$3400	\$3925	(\$525)

Project Narrative:

The project consists of improvements to Big Dry Creek in the City of Westminster that were completed to remove the city's wastewater treatment plant from the 100-year floodplain. The LOMR request was based on a CLOMR.

Describe any special benefits or problems with doing this review locally.

FHAD & MP. The project was consistent The District's MP for Big Dry Creek. *MEP.* The project has been accepted for MEP. *Local exchange of data.* Following the initial technical review several issues were discussed by Icon with the requestor by phone and e-mail. The issues were resolved by this approach without writing a letter requesting information and thus avoiding stopping the "clock" or lengthening the total review time.

CTP Case Evaluation

Case No.:
02-08-258R

Identifier:
Toll Gate Crossing

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
4/1/02	4/4/02	Yes	3 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
8/13/02	8/14/02	No	1 day	Yes

Date final letter mailed: 10/3/02

Elapsed Time from receipt of all data to draft letter to FEMA:	15 total days	Yes
Elapsed Time from receipt of all data to final letter:	50 total days	Yes
Elapsed Time from receipt of initial request to final letter:	186 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$4000	\$4000	\$1659	\$2341

Project Narrative:

This case involves channelization of Murphy Creek and construction of a regional detention pond at the downstream end of the property. It is mostly in the City of Aurora, but had some Arapahoe County impacts. Most of the data requested was received by 8/1/02 and the technical review was started. The only missing item was an acknowledgement from Arapahoe County, which it would not provide. We finally agreed on 8/13/02 to finish the review without the acknowledgement from the county. The county later provided the acknowledgement on 8/14.

Describe any special benefits or problems with doing this review locally.

Meetings. We had met with the applicant and the city to discuss proposed changes in the master plan, and how to incorporate the changes into this request. *Local Knowledge.* We had reviewed early referrals of this proposal from the city. *FHAD & MP.* The FIRM was based on a 1975 FHAD. The FHAD discharges were used for this request. A 1990 MP was also available to assist the applicant in formulating his plan. *MEP.* The project is currently in the MEP process. *Local exchange of data.* By discussing Arapahoe County's concerns with them we were able to determine that the technical review could go forward while the county's issues were resolved. This saved the applicant some time because the county acknowledgement was not received until 8/14/02. Following the initial detailed review, Icon discussed minor technical issues (starting WSELs and discharge discrepancies) with the requestor by phone and revised models were e-mailed to Icon the same day.

CTP Case Evaluation

Case No.:
02-08-259R

Identifier:
Williams Village

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
4/1/02	4/3/02	No	2 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?

Date final letter mailed: 5/10/02

Elapsed Time from receipt of all data to draft letter to FEMA:	19 total days	Yes
Elapsed Time from receipt of all data to final letter:	37 total days	Yes
Elapsed Time from receipt of initial request to final letter:	39 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$2522	\$578

Project Narrative:

This is University of Colorado sponsored channelization of Bear Canyon Creek in the City of Boulder, in order to construct student housing. A quick turnaround was required in order to meet school calendar deadlines.

Describe any special benefits or problems with doing this review locally.

Meetings. We met with the consultant before submittal of the request to assure as clean a submittal as possible, and to better understand their deadlines. *Local Knowledge.* We have completed a flood control (channelization) project immediately upstream from the site and were aware of their situation. *FHAD & MP.* Both a FHAD and MP were available. The FIRM was based on the FHAD. *MEP.* The construction drawings were submitted to the District and approved for MEP. *Local exchange of data.* Several minor problems were identified in the initial technical review. The consultant was made aware of the problems and corrected them by e-mail and courier submittals, thus allowing the review to proceed to an early conclusion.

CTP Case Evaluation

Case No.:
02-08-264R

Identifier:
North City Park Creek

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
4/5/02	4/11/02	Yes	5 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
6/4/02	6/11/02	No	5 days	Yes

Date final letter mailed: 8/2/02

Elapsed Time from receipt of all data to draft letter to FEMA:	30 total days	Yes
Elapsed Time from receipt of all data to final letter:	52 total days	Yes
Elapsed Time from receipt of initial request to final letter:	119 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$3372.58	(\$272.58)

Project Narrative:

This was a proposed residential subdivision straddling a minor tributary to Big Dry Creek in the City of Westminster. The 100-year discharge was only 65 cfs, and the floodplain should probably never have been included on the FIRM. The proposed solution was storm sewers with 100-year capacity. The CLOMR will eliminate the floodplain through the site.

Describe any special benefits or problems with doing this review locally.

Meetings. We met with the engineer and the city after receipt of the initial request to discuss how best to handle the fact that the 100-year discharge was so small. The decision was made to assure adequate conveyance facilities through the site and to then remove the floodplain from the FIRM. *Local exchange of data.* The applicant and Icon conferred at least twice on modeling techniques for the proposed storm sewer.

CTP Case Evaluation

Case No.:
02-08-283P

Identifier:
South Adams County WSD

Type:
LOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
4/17/02	4/23/02	Yes	4 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
5/21/02	5/23/02	No	3 days	Yes
7/11/02		Response to phone calls		

Date final letter mailed: 10/1/02

Elapsed Time from receipt of all data to draft letter to FEMA:	13 total days	Yes
Elapsed Time from receipt of all data to final letter:	82 total days	Yes
Elapsed Time from receipt of initial request to final letter:	167 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$4000	\$4000	\$4753	(\$753)

Project Narrative:

The purpose of this request was to update the floodplain to account for omissions in the original FIS hydraulic model as well as changes in the floodplain that had not been previously submitted. It was submitted concurrently with a request for a CLOMR (02-08-284R) for the same general area to allow expansion of a wastewater treatment plant in the South Platte River floodplain in Adams County. WGD talked to the consultant prior to submittal of both requests and suggested one submittal in which the existing changes to the floodplain could be accounted for in the corrected effective model for the CLOMR, but the applicant wanted to have the changes made as quickly as possible and did not want to wait for the treatment plant expansion to be built and then a new LOMR submitted. The FIRM is based on a 1977 FHAD. A master plan is also in place. In addition, the District and the affected local governments were in the process of preparing an updated master plan, which included new mapping using 1988 datum, and new hydraulics.

Describe any special benefits or problems with doing this review locally.

Meetings. While not an actual meeting, there were discussions with the consultant prior to submittal as noted above. *FHAD & MP.* The FHAD and the MP in progress were helpful in preparing this request. *Local exchange of data.* Icon communicated with the consultant on several occasions to obtain additional information or clarification.

CTP Case Evaluation

Case No.:
02-08-284R

Identifier:
South Adams County WSD

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
4/17/02	4/23/02	Yes	4 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
5/21/02	5/28/02	No	4 days	Yes
7/11/02	No	Response to phone calls		

Date final letter mailed: 8/21/02

Elapsed Time from receipt of all data to draft letter to FEMA:	13 total days	Yes
Elapsed Time from receipt of all data to final letter:	41 total days	Yes
Elapsed Time from receipt of initial request to final letter:	126 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$2958.50	\$141.50

Project Narrative:

The purpose of this request was to allow expansion of a wastewater treatment plant in the South Platte River floodplain in Adams County. It was submitted concurrently with a request for a LOMR (02-08-283P) for the same general area to update the floodplain to account for omissions in the original FIS hydraulic model as well as changes in the floodplain that had not been previously submitted. WGD talked to the consultant prior to submittal of both requests and suggested one submittal in which the existing changes to the floodplain could be accounted for in the corrected effective model, but the applicant wanted to have the changes made as quickly as possible and did not want to wait for the treatment plant expansion to be built and then a new LOMR submitted. The FIRM is based on a 1977 FHAD. A master plan is also in place. In addition, the District and the affected local governments were in the process of preparing an updated master plan, which included new mapping using 1988 datum, and new hydraulics.

Describe any special benefits or problems with doing this review locally.

Meetings. While not an actual meeting, there were discussions with the consultant prior to submittal as noted above. *FHAD & MP.* The FHAD and the MP in progress were helpful in preparing this request. *Local exchange of data.* Icon communicated with the consultant on several occasions to obtain additional information or clarification.

CTP Case Evaluation

Case No.:
02-08-286R

Identifier:
Red Leaf

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
4/17/02	4/22/02	Yes	3 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
7/22/02	7/24/02	No	2 days	Yes

Date final letter mailed: 9/17/02

Elapsed Time from receipt of all data to draft letter to FEMA:	22 total days	Yes
Elapsed Time from receipt of all data to final letter:	55 total days	Yes
Elapsed Time from receipt of initial request to final letter:	153 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$1960	\$1140

Project Narrative:

This project involves channelization of Westlake Channel drainageway in conjunction with a residential subdivision in the City and County of Broomfield.

Describe any special benefits or problems with doing this review locally.

Local knowledge. The current FIRMs showed a portion of the affected area in Adams County. However, the area had been included in the newly formed City and County of Broomfield, and Adams County was no longer involved. We were able to clear up the confusion of having a portion of the project appearing on the Adams County FIRM. *FHAD & MP.* Both a FHAD and MP exist for the drainageway. The FIRM used the FHAD discharge. *Local exchange of data.* Icon contacted the engineer on several occasions for clarification of issues such as datum information. This was done without stopping the “clock” or lengthening the review time.

CTP Case Evaluation

Case No.:
02-08-411R

Identifier:
NW Parkway @ Rock Creek

Type:
CLOMR

Status:
Complete

Turn around times:

Request Received	ACK Mailed	More data requested?	Elapsed Time	Goal met?
6/25/02	6/28/02	\$	3 days	Yes

Add. Data received	ACK Mailed	More data requested	Elapsed Time	Goal met?
7/2/02	7/8/02	No	4 days	Yes

Date final letter mailed: 10/1/02

Elapsed Time from receipt of all data to draft letter to FEMA:	36 total days	Yes
Elapsed Time from receipt of all data to final letter:	85 total days	Yes
Elapsed Time from receipt of initial request to final letter:	98 total days	N/A

Cost Data:

FEMA Fee	Received	Expended by ICON	Over/Under
\$3100	\$3100	\$3431.50	(\$331.50)

Project Narrative:

This project involves the construction of two main line bridges and two single lane ramp bridges over Rock Creek in an area involving the City and County of Broomfield, City of Lafayette and Boulder County.

Describe any special benefits or problems with doing this review locally.

Meetings. WGD met with the consultant early in the design process. We knew this would be a very complicated hydraulic analysis, so we arranged another meeting with Icon in attendance to gain the benefit of the meeting before the request for a CLOMR was submitted. *Local knowledge.* We knew that the floodplain on the FIRM was based on an SCS study in which the WSP2 hydraulic model had been used. We knew that the consultant would have to develop an existing conditions HEC-RAS model to replace the WSP2 model. *MEP.* The channel improvements associated with all of the bridges went through the MEP and have been approved. *Local exchange of data.* There were several contacts between Icon and the applicant to obtain clarification of questions and obtain data, which allowed the review to move forward without delays.

Task Agreement 3



Urban Drainage and Flood Control District
Federal Emergency Management Agency
Cooperating Technical Partners
Mapping Activity Statement

Mapping Activity Statement 3 - Hydrologic and Hydraulic (H&H) Review for Letters of Map Change (LOMCs)

In accordance with the Cooperating Technical Community (CTC) Memorandum of Agreement dated May 17, 1999, between the Urban Drainage and Flood Control District (UDFCD) and the Federal Emergency Management Agency (FEMA), Mapping Activity Statement 3 is as follows:

1. **Objective and Scope:** The objective of this Mapping Activity is to have UDFCD assume the responsibility of the Flood Map Production Coordination Contractor (MCC) with regard to the evaluation of all requests for Letters of Map Revision (LOMRs) and Conditional Letters of Map Revision (CLOMRs) for the 32 communities within the UDFCD which are participating in the National Flood Insurance Program. Revision and conditional revision requests will be made under the provisions of Title 44 of the Code of Federal Regulations, Part 65 (44 CFR 65). Based on the results of UDFCD's review, FEMA will issue a Conditional Letter of Map Revision (CLOMR) in accordance with 44 CFR 65.8 for proposed projects or a LOMR (or perform a Physical Map Revision (PMR)) in accordance with 44 CFR 65.9 for existing or "as-built" projects, as appropriate.
2. **Period of Performance:** This Mapping Activity will begin on July 1, 2001, and end no later than June 30, 2002. This Mapping Activity may be terminated at the option of FEMA or UDFCD in accordance with the provisions of the May 17, 1999, CTC Memorandum of Agreement. This is a pilot activity agreement that will be reviewed after the first 6 months.
3. **Funding/Cost-Sharing:** FEMA will provide funding to UDFCD estimated based on the past two years of receipts of LOMR and CLOMR cases in the UDFCD. Based on FEMA's records, approximately 50 cases are received in a 1 year period. The review and processing cost is estimated to be \$100,000. This amount will be provided to UDFCD for this Mapping Activity in four increments of \$25,000 each. FEMA will collect the fees from revision requestors based on the current fee schedule, and then will forward the case to UDFCD. For reference, FEMA's fee schedule is accessible at www.fema.gov/mit/tsd/.
4. **Standards:** The following documents and standards are relevant to this Mapping Activity.
 - UDFCD shall comply with the *Guidelines and Specifications for Flood Map Production Coordination Contractors* (Final Draft, February 17, 1999), which is available via the Internet at: http://www.fema.gov/mit/tsd/DL_FMPCC.htm
 - Detailed H&H analyses will follow the standards set forth in 44 CFR 65, in particular:
 - 65.2 Definitions
 - 65.5 Revision to special hazard area boundaries with no change to Base Flood Elevation (BFE) determinations
 - 65.6 Revision of BFE determination
 - 65.7 Floodway revision

- 65.8 Review of proposed projects (conditional LOMR)
 - 65.10 Mapping of areas protected by levee systems
 - 65.12 Revision to FIRMs to reflect BFE changes caused by proposed encroachments
 - 65.13 Mapping and map revisions for areas subject to alluvial fan floods
 - 65.14 Remapping of areas for which local flood protection systems no longer provide base (1% annual chance) flood protection
- All projects, “as-built” or proposed, shall comply with all applicable criteria set forth in 44 CFR 60, which outlines floodplain management regulations for NFIP participation.
 - All requests shall comply with requirements set forth in *Revisions To National Flood Insurance Program Maps: Application/Certification Forms and Instructions For Conditional Letters of Map Revision, Letters of Map Revision, and Physical Map Revisions*, MT-2 form 81-89 Series, JAN 99.
 - All requests shall include a completed copy of the application/certification MT-2, or comparable, forms.
 - All revision requests shall comply with the *Guidelines and Specifications for Study Contractors* (FEMA 37) available via the Internet at http://www.fema.gov/mit/tsd/EN_reg.htm
 - Base flood discharges cannot be revised as a result of the use of alternative methodology or data for computing discharges, unless the change is shown to be statistically significant as per 44 CFR 65.6(a)(5).
 - The hydraulic models shall be completed in the various “layers” described in MT-2 Form No. 4, *Riverine Hydraulic Analysis*. This “layering” approach allows the impacts of projects on Water Surface Elevations (WSELs) to be isolated from impacts resulting from using more detailed data (e.g., additional cross sections). For determining compliance with 44 CFR 60.3(c)(10) or 44 CFR 60.3(d)(3) of:
 - Proposed projects - the “post-project conditions” model will be compared to the “existing conditions” or “pre-project conditions” model.
 - “As-built” projects - “revised conditions” or “post-project conditions” model will be compared to the “pre-project conditions” model.
 - Existing conditions requests - the “existing conditions” model will be compared to the “corrected effective” model.

For flooding sources designated as approximate Zone A, the provisions of 44 CFR 60.3(c)(10) shall apply (no more than a 1.00 foot increase in the WSEL). If the community proposes to allow a project that will result in an increase in WSELs greater than those allowed by 44 CFR 60.3(c)(10) or 44 CFR 60.3(d)(3), the project must comply with 44 CFR 65.12.

- Computer models used for H&H analyses must meet the requirements of 44 CFR 65.6(a)(6) and be on FEMA’s *Numerical Models Accepted by FEMA for NFIP Usage* (http://www.fema.gov/mit/tsd/EN_modl.htm). Hydraulic analyses shall be made using the same computer model used to develop the BFEs shown on the effective FIRMs. An alternative model can be used only if the basis of the request is the use of an alternative hydraulic methodology or it can be demonstrated that the data of the original hydraulic computer model is unavailable or its use is inappropriate, set forth in 44 CFR 65.6(a)(8).
- Flood elevations and floodplain and floodway boundaries will tie in to effective information in accordance with 44 CFR 65.6(a)(2).
- Approximate Zone A area analyses will follow standards set forth in FEMA 265, *Managing Floodplain Development in Approximate Zone A Areas* (January 1995).
- Annotated NFIP maps and water-surface elevation profiles for Letters of Map Change

(LOMCs) and map revisions shall follow standards set forth in *Guidelines and Specifications for Flood Map Production Coordination Contractors: Appendix B, Specifications for Preparing Maps and Graphics*. A copy of the standards can be requested by e-mail at mapmod@fema.gov. FEMA's standard digital file templates for preparing maps and graphics to meet the above specifications can be obtained from the Regional FMPC.

- Public notification of intended revisions to the floodway shall be completed in accordance with 44 CFR 65.7(b).
- 5. Products and Schedule:** The following outlines the steps and timelines to follow in reviewing, processing, and tracking cases for this Mapping Activity:
- Both FEMA and UDFCD will receive copies of map revision requests (LOMRs and CLOMRs) from requestors within UDFCD. The review and processing fee for these cases will be received by FEMA under the current payment procedures (check or money order in U.S. funds made payable to the National Flood Insurance Program, or credit card payment).
 - Upon receipt of a case, FEMA or the MCC will complete a “Fact Sheet” that outlines the details of each particular case (i.e., communities impacted by revision, flooding sources, project identifier) for its records. The MCC will enter the information into the Management Information System (MIS) and generate a case number for the revision case within 24 hours, which will be used to track the cases that are being reviewed and processed by UDFCD. Upon generating the case number, the MCC will forward the Fact Sheet to UDFCD via e-mail if possible. The unique case number will be used on all correspondence generated by UDFCD regarding that particular case. After receiving the case, UDFCD is responsible for all activities involved with processing the case.
 - Upon receiving a case, UDFCD will review the submittal for technical and regulatory adequacy, required information, application/certification forms, H&H modeling, and supporting data and documentation. UDFCD will identify previous letter or map actions for the affected map panel(s); determine if any pending request for the same area may affect the submittal; and contact the requester for missing information or additional data required to ensure that the data are scientifically sound and technically accurate (see Section 8, Technical Assistance and Resources). These activities are a part of the “pre-acceptance review” of the case, which will be completed within 5 working days of receiving the case.
 - An acknowledgment letter shall be prepared by UDFCD, using the case number provided by the MCC. The acknowledgment letter will outline additional data that is necessary to complete the case, or inform the requester that all data has been received; it shall be mailed within the 5 day timeframe.
 - If the additional data is requested and information is not received within 90 days, UDFCD shall suspend processing of the case and notify the requester in writing.
 - All subsequent actions associated with revision requests shall be in accordance with Parts 60, 65, and 67 of the National Flood Insurance Program (NFIP) regulations and Section 2 of FEMA’s *Document Control Procedures Manual* and will be prepared by UDFCD. The regulatory timeframe for a determination on a map revision under Part 65 is 90 days; however, FEMA’s goal is to complete cases within 60 days of receiving all necessary data. If additional time is required, due to complexities of the particular case, an interim letter is prepared to explain that more time is needed. UDFCD will adhere to the 60-day schedule for processing cases. This schedule will allow an additional 30 days for further coordination between FEMA and UDFCD, while meeting the 90-day regulatory requirement.
 - UDFCD will prepare draft determination letters and map attachments for final review by FEMA within 60 days of receiving all necessary data. At the time these are submitted to FEMA, a complete file of the case correspondence, backup material, engineering review

notes, a case summary, and any other pertinent information will be included. A detailed list of the required products is as follows:

1. A copy of the appropriate MT-2 or comparable forms and copies of all supporting data and documentation supporting the revision request.
 2. A copy of the "H&H Review Information" form, signed by a UDFCD official, summarizing the case background and review and final recommendation.
 3. Annotated FIRM(s) containing the effective and revised 1% (100-year) and 0.2 % (500-year) annual chance floodplain and floodway boundaries.
 4. Topographic maps of the revision area that meet the requirements outlined in MT-2 Form No. 5, *Riverine/Coastal Mapping*.
 5. A map of the watershed showing the location of the revision.
 6. Digital profiles of the 10% (10-year), 2% (50-year), 1%, and 0.2% annual chance water-surface elevations representing existing conditions, if applicable.
 7. Revised floodway data table(s), if applicable.
 8. Revised "Summary of Discharge" table(s), if applicable.
 9. Individual property notification if a request for a revision to the FIRM involves an increase in the BFE, the 1% annual chance floodplain, and/or the floodway. An increase is defined by the comparison of the effective Flood Insurance Study (FIS) and FIRM data, including profiles, and the requested revised condition. For the 1% annual chance floodplain and floodway, an increase is the addition of the 1% annual chance floodplain and/or floodway into an area not so designated on the effective FIRM(s). Only those property owners impacted by the increase need to be notified. The notification should explain the extent and reason for the increase and its impact, if any, on the property owner.
 10. Digital copies of all H&H modeling (input and output files).
 11. Draft determination letter, based on the template letter types provided to UDFCD.
- The final determination letters, CLOMRs and LOMRs, will be reviewed and signed by FEMA's Project Engineer for Region VIII. FEMA will retain the responsibility for preparing newspaper and *Federal Register* announcements regarding changes in BFEs associated with these cases.
 - All appeals and protests in reference to these cases will be reviewed by UDFCD in accordance with Part 67 of the NFIP regulations. UDFCD will provide FEMA with a recommendation for resolving each appeal or protest. UDFCD will coordinate with FEMA's Project Officer to resolve the appeal or protest.
 - UDFCD will coordinate with the Project Officer and/or Project Engineer regarding potential violations of the NFIP regulations.
 - UDFCD will provide FEMA with support in the processing of special responses and Congressional inquiries related to LOMRs/CLOMRs activities.
6. **Certification:** The definitions of certification in 44 CFR 65.2(b) for certification of analyses, "as-built" plans, and structural works apply to this Mapping Activity. Specifically:
- If fill is to be considered in the mapping to raise land areas to or above the 1% annual chance flood elevation, certification of the fill will be provided in accordance with 44 CFR 65.5(a)(6) by the community's NFIP permit official, a registered professional engineer, or a licensed land surveyor.
 - Topographic information will be certified by a registered professional engineer or licensed land surveyor in accordance with 44 CFR 65.5(c).
 - H&H analyses and data will be certified by a registered professional engineer or licensed land surveyor in accordance with 44 CFR 65.6(f).

- Floodway analyses submitted will be certified by a registered professional engineer in accordance with 44 CFR 65.7(d).
- Any levee systems to be accredited as discussed in Section 4 of this Mapping Activity Statement will be certified in accordance with 44 CFR 65.10(e).
- Data submitted to support flood control measures that provide protection from the 1% annual chance flood in an area subject to alluvial fan flooding will be certified by a registered professional engineer in accordance with 44 CFR 65.13(f).

7. Technical Assistance and Resources:

- UDFCD may obtain copies of FEMA-issued Letters of Map Change (LOMC), archived engineering backup data, and data collected as part of the Mapping Needs Assessment from the MCC.
- UDFCD may contact the FEMA Map Assistance Center toll-free number: 1-877-FEMA-MAP (1-877-336-2627) for general technical and programmatic questions about the NFIP.
- General technical and programmatic information can also be downloaded from FEMA's Flood Hazard Mapping web site (www.fema.gov/mit/tsd/).
- Additional guidance for H&H analyses and floodplain mapping can be found in FEMA 37, Guidelines and Specifications for Study Contractors (January 1995), which can be found on FEMA's web site at: http://www.fema.gov/mit/tsd/EN_reg.htm.
- UDFCD may obtain the map revision production tools, software, automated QA/QC tools, etc., that FEMA has developed for its own use. For example, copies of FEMA's rule-based engineering software packages, such as CHECK-RAS for evaluating HEC-2/HEC-RAS models and RASLOT for automatically plotting flood profiles, may be obtained through the MCC;
- Specific technical and programmatic support may be provided through the MCC. The Revisions Coordinator for Region VIII at the MCC is Tom Smith, who can be reached at (703) 317-6267. Additional training assistance should be requested through the FEMA Project Officer, specified in Section 11 of this Mapping Activity Statement and may include:
 - Technical assistance in the form of training and/or technical guidance regarding the review and processing of revision cases; and
 - Training on resolving protests and appeals.

8. Subcontractors: UDFCD intends to utilize a consulting engineering firm located in the Denver, Colorado, area that has demonstrated the ability to perform the activities which are the subject of this Agreement. For any requests for which the consulting firm was involved in the development of analyses, site or project plans, surveys, or otherwise constitute an organizational conflict for the firm, UDFCD, FEMA, or MCC staff will perform the necessary review. Procurement of the consultant will comply with the requirements of 44 CFR 13.36.

9. Reporting: UDFCD will report to FEMA upon receipt of revision cases. UDFCD shall send copies of all correspondence between UDFCD and the requestor to FEMA, including acknowledgment letters, additional data letters, phone call reports, email correspondence, and any others, so that it can be entered into the MIS by the MCC. Completed cases will be packaged in accordance with FEMA's guidelines, as explained in Appendix G: "Procedures for Storage of Revision Data" of the *Guidelines and Specifications for Technical Evaluation Contractors*. UDFCD shall retain a complete case file for each case in an archive, and a complete case file shall be transmitted to FEMA for archiving in the FEMA Project Library.

In addition, UDFCD will comply with the reporting requirements of FEMA's Region VIII office that pertain to managing the Cooperating Technical Partner (CTP) grant. Quarterly progress and financial reports are required. UDFCD will submit the quarterly reports to both FEMA's HQ and Region VIII offices for review.

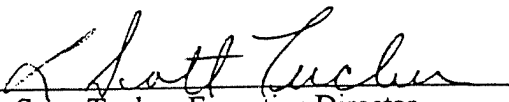
10. Quality Assurance/Quality Control (QA/QC) Procedures:

- UDFCD shall establish procedures for quality control.
- Products are subject to periodic auditing by FEMA.

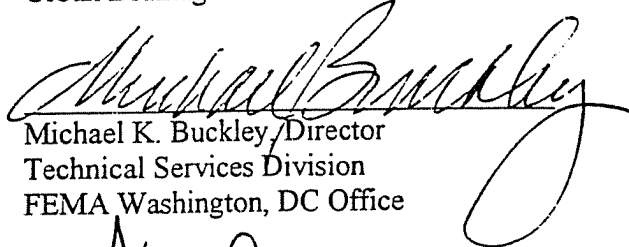
11. Points of Contact: The FEMA Project Officer will be Mike Grimm, the Project Engineer will be Sally Magee, and the UDFCD Project Manager will be Bill DeGroot, or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. In addition, the MCC point of contact will be Tom Smith, Revisions Coordinator for Region 8.

Each party has caused this Mapping Activity Statement to be executed by its duly authorized representatives on the date mentioned above.

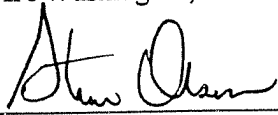
Authorized Signatures:


L. Scott Tucker, Executive Director
Urban Drainage and Flood Control District

6/4/01
Date


Michael K. Buckley, Director
Technical Services Division
FEMA Washington, DC Office

5-21-01
Date


Steve Olsen, Director
Mitigation Division
FEMA Region VIII Office

5/30/01
Date

Other CTP Coordinators:

Bill DeGroot
Bill DeGroot, Chief

Floodplain Management Program
Urban Drainage and Flood Control District

6/4/01
Date

Matthew B. Miller
Matt Miller, Chief

Hazards Study Branch
FEMA Washington, DC Office

5-21-01
Date

Mike Grimm
Mike Grimm, Project Officer

Hazards Study Branch
FEMA Washington, DC Office

5/21/01
Date

Sally Magee
Sally Magee, Project Engineer

Hazards Study Branch
FEMA Washington, DC Office

5/18/01
Date

Dan Carlson
Dan Carlson, NFIP Team Leader

Mitigation Division
FEMA Region VIII Office

5-30-01
Date

Tom Smith
Tom Smith, Region 8 Revisions Coordinator

MCC: Michael Baker Jr., Inc.

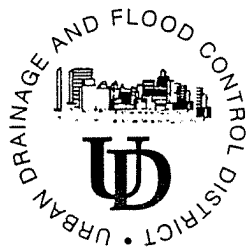
5-24-01
Date

Fernando Pasquel
Fernando Pasquel, Engineering Division Director

MCC: Michael Baker Jr., Inc.

5-24-01
Date

Examples of Local Outreach



L. Scott Tucker, Executive Director

June 5, 2001

Board of Directors

Executive Committee:

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City/County of Denver

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Chairman Pro-Tem
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City of Arvada

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W. Mike Maxwell
Douglas County

Jim McShane
Town of
Columbine Valley

Deborah Ortega
City/County of Denver

Art Patton
Engineer

DENVER, COLORADO 80211-5304
2480 W. 26TH AVENUE, SUITE 156 B
www.udfcd.org
FAX 303-455-7880
TELEPHONE 303-455-6277

Ken Fellman

Mayor

City of Arvada

8101 Ralston Road
Arvada, CO 80002

Dear Mayor Fellman:

I am pleased to inform you of a significant development regarding your community's participation in the National Flood Insurance Program, and more specifically, your effective Flood Insurance Rate Map (FIRM). The Urban Drainage and Flood Control District and the Federal Emergency Management Agency (FEMA) have executed a Cooperating Technical Partners (CTP) agreement that will allow the District to assume the responsibility of reviewing requests for Conditional Letters of Map Revision (CLOMRs) and Letters of Map Revision (LOMRs) to your FIRM. Until now, all requests for CLOMRs and LOMRs from the Denver area have been reviewed by Baker Engineers, a private consultant hired by FEMA and located in Virginia.

The agreement is for a period of one year beginning July 1, 2001. It is a pilot project that will assist FEMA in determining the feasibility of allowing other qualified local agencies around the country to assume similar responsibilities for reviewing requests for CLOMRs and LOMRs.

I want to also alert you to a Map Revisions Workshop being presented in Ft. Collins on July 12 and 13 (see enclosure).

Applicants, whether local governments or private developers, will continue to submit a copy of their request and appropriate fees to FEMA in Washington D.C., but will also submit a copy of the request to the District (see enclosure). We will be reviewing the requests and making the appropriate recommendations to FEMA regarding changes to the FIRMs. ICON Engineering has been retained by the District to assist in the review of these requests.

I would like to take this opportunity to also mention the District's maintenance eligibility program. This program sets forth procedures for local governments to follow to assure that flood control facilities constructed by, or approved for construction by, local governments will ultimately be eligible for District maintenance assistance. There is an opportunity for significant overlap between the review of CLOMR and LOMR requests, and maintenance eligibility requests. For example, local governments are required by FEMA to guarantee maintenance of flood control facilities which result in a LOMR. Having these facilities eligible for District maintenance assistance provides an extra level of confidence for local governments that maintenance can be achieved.

If your community has been actively participating with the District in the maintenance eligibility program I hope you will continue to do so. If for some reason your community has not been participating in the maintenance eligibility program I would urge you to take this opportunity to reconsider your participation so that a coordinated effort can be achieved.

We are looking forward to working with both FEMA and your community on this important pilot project. If you have any questions regarding any of the above, please contact me or Bill DeGroot, Chief, Floodplain Management Program.

Sincerely,

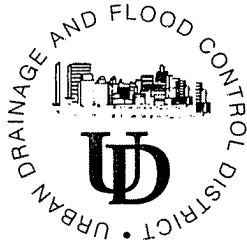


L. Scott Tucker
Executive Director

LST/WGD/mc

Enclosures

cc: William Ray (w/encl.)



L. Scott Tucker, Executive Director

MEMORANDUM

TO: Land Development Manager
FROM: Bill DeGroot, P.E., Chief, Floodplain Management Program
SUBJECT: Requests for CLOMRs and LOMRs
DATE: June 5, 2001

Board of Directors
Executive Committee:

Cathy Reynolds
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City/County of Denver
Debra Vickrey
Chairman Pro-Tem
Arapahoe County
Paul Danish
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Boulder County
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Douglas County
Jim McShane
Town of
Columbine Valley
Deborah Ortega
City/County of Denver
Art Patton
Engineer

2480 W. 26TH AVENUE, SUITE 156 B • DENVER, COLORADO 80211-5304
www.udfcd.org
FAX 303-455-7880
TELEPHONE 303-455-6277

I am pleased to inform you that the Urban Drainage and Flood Control District and the Federal Emergency Management Agency (FEMA) have executed a Cooperating Technical Partners (CTP) agreement that will allow the District to assume the review of requests for Conditional Letters of Map Revision (CLOMRs) and Letters of Map Revision (LOMRs) to FIRMs for communities located within the District. Until now, all requests for CLOMRs and LOMRs from the Denver area have been reviewed by Baker Engineers, a consultant hired by FEMA and located in Virginia.

The agreement is for one year, beginning July 1, 2001. It is a pilot project to assist FEMA in determining the feasibility of allowing qualified local agencies to assume similar responsibilities for reviewing requests for CLOMRs and LOMRs.

Applicants will continue to submit a copy of their request and appropriate fees to FEMA in Washington, D.C.; but will also submit a copy of the request to the District (see enclosure). We will be reviewing the requests and making the appropriate recommendations to FEMA regarding changes to the FIRMs. ICON Engineering has been retained by the District to assist in the review of these requests.

I want to also alert you to a Map Revisions Workshop being presented in Ft. Collins on July 12 and 13 (see enclosure).

Finally, I would like to remind you of the District's maintenance eligibility program. This program sets forth procedures for local governments to follow to assure that flood control facilities constructed by, or approved for construction by, local governments will be eligible for District maintenance assistance. There is an opportunity for significant overlap between the review of CLOMR and LOMR requests, and maintenance eligibility requests. For example, local governments are required by FEMA to guarantee maintenance of flood control facilities that result in a LOMR. Having these facilities eligible for District maintenance assistance provides an extra level of confidence for local governments that maintenance can be achieved.

We are looking forward to working with both FEMA and the development community on this important pilot project. If you have any questions regarding any of the above, please contact me.

WGD/mc
Enclosures

**Urban Drainage and Flood Control District
Federal Emergency Management Agency**

**Cooperating Technical Partners
Hydrologic and Hydraulic Review for Letters of Map Change**

**Procedures for submitting requests for Letters of Map Change (LOMCs),
including Conditional Letters of Map Revision (CLOMRs) and
Letters of Map Revision (LOMRs)**

Affected communities:

Arvada	Denver	Lakewood	Thornton
Aurora	Edgewater	Littleton	Westminster
Boulder	Englewood	Louisville	Wheat Ridge
Brighton	Erie (portions)	Morrison	Adams Co. (portions)
Broomfield	Federal Heights	Northglenn	Arapahoe Co. (portions)
Cherry Hills Village	Golden	Parker	Boulder Co. (portions)
Columbine Valley	Greenwood Village	Sheridan	Douglas Co. (portions)
Commerce City	Lafayette	Superior	Jefferson Co. (portions)

Submit one complete copy of the request to:

Federal Emergency Management Agency
Hazards Study Branch, Room 423
500 C Street SW
Washington, DC
ATTN: Sally Magee

Submit the appropriate fee (check or money order made out to “National Flood Insurance Program”)

Using US Postal Service
Federal Emergency Management Agency
Fee-Charge System Administrator
P. O. Box 3173
Merrifield, VA 22116-3173

OR *Using Overnight Service*
Fee-Charge System Administrator
C/o Dewberry & Davis, METS Division
8401 Arlington Blvd.
Fairfax, VA 22031

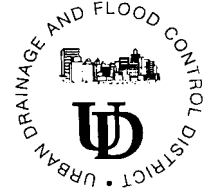
Submit one complete copy of the request to:

Urban Drainage and Flood Control District
2480 West 26th Ave., Suite 156-B
Denver, CO 80211

FEMA's current fee schedule can be obtained at www.fema.gov/mit/tsd.



Federal Emergency Management Agency
Washington, DC
Urban Drainage and Flood Control District
Denver, Colorado



IN REPLY REFER TO:

Case No.:

Community:

Community No.:

316-AD/ACK

**THIS IS AN EXAMPLE OF THE DUAL AGENCY LETTERHEAD USED FOR
CORRESPONDENCE SIGNED BY A DISTRICT REPRESENTATIVE.**

2480 West 26th Avenue, Suite 156B, Denver, Colorado 80211 PH: 303.455.6277 FX: 303.455.7880

Urban Drainage and Flood Control District, by agreement with the FEDERAL EMERGENCY MANAGEMENT AGENCY,
is a Cooperating Technical Partner for the National Flood Insurance Program