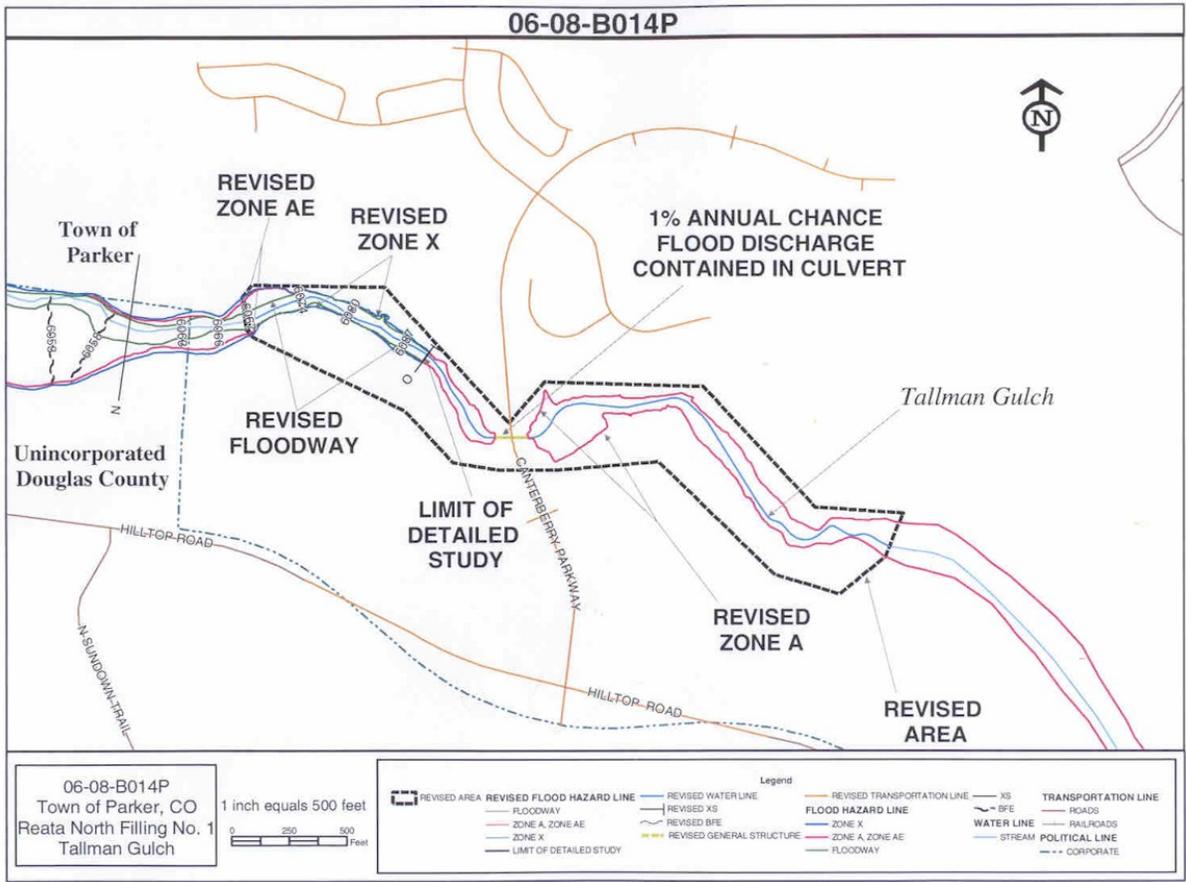




Federal Emergency Management Agency
 Washington, DC 20472
Urban Drainage and Flood Control District
 Denver, Colorado 80211



**Local Evaluation of Requests for Letters
 of Map Change – Year Four**



Final Report
FEMA Grant No. EMD-2004-GR-0484
March, 2006

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of Map Change – Year Four**

**By
Bill DeGroot, PE,
Manager, Floodplain Management Program
Urban Drainage and Flood Control District**

March, 2006

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 40 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 (LOMC), specifically Conditional Letters of Map Revision (CLOMR) and Letters of Map Revision (LOMR) for the 33 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. A report on the results of the first year of the pilot project ("Final Report, FEMA Grant No. EMD-2001-GR-0181, Local Evaluation of Requests for Letters of Map Change") was provided to FEMA in February, 2003.

FEMA has subsequently funded second, third, fourth and fifth years of this pilot project at \$180,000 for each year. A report on the second year ("Local Evaluation of Requests for Letters of Map Change – Year Two") was provided to FEMA in December, 2003. A report on the third year ("Local Evaluation of Requests for Letters of Map Change – Year Three") was provided to FEMA in March, 2005. Also completed as a product of the third year grant was a pilot project on map maintenance. A report, "DFIRM Map Maintenance Pilot, City and County of Broomfield, CO" was completed in January, 2005. All of the reports are available at www.udfcd.org.

This report builds on the findings of the previous work, and details additional findings. The reader is encouraged to read this report in conjunction with the previous reports to obtain a complete understanding of this effort.

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.

In previous years, LOMC's were tracked in FEMA's Management Information System (MIS). FEMA's National Service Provider (NSP), Michael Baker Jr., Inc., kept the MIS current. The NSP also prepared the final LOMR enclosures, completed all final mailings of letters and public notices, and otherwise provided support to FEMA staff.

On October 1, 2005 FEMA changed to the Mapping Information Platform (MIP) Workflow database. Now, Baker populates the initial database upon receipt of a LOMC request, and the District and/or Icon is responsible for all subsequent entries.

The process requires each applicant to submit duplicate copies of the request to FEMA and the District, and to submit the appropriate fee to FEMA. When the District receives a case it immediately notifies the NSP and FEMA 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 NSP enters the information into the MIP (formerly MIS) and assigns a case number by return e-mail. The District transmits the request to Icon, usually by courier. When the fee is received the NSP notifies the District and Icon, also by e-mail.

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

If Icon concludes that the requested CLOMR or LOMR is justified, it prepares a draft CLOMR or LOMR letter, exhibits such as annotated FIRMs and revised profiles and Floodway Data Tables, and a monitoring checklist that summarizes the case, and e-mails them to the District, and sends the case file to the District by courier. The District reviews the draft documents and the case file, makes any adjustments to the documents that are deemed appropriate, and forwards the documents by e-mail to FEMA and the NSP, and the case file to the NSP. FEMA and the NSP process the case from that point

on until the final letters are signed and mailed. All CLOMRs and LOMRs are on FEMA letterhead and are signed by a FEMA representative.

FEMA Region 8 provided periodic partial advances over the course of the project. The amount and frequency of each advance was dictated by the number and complexity of requests received.

Judging Performance of the LOMC Pilot Project

The District received 43 requests for LOMCs during the period of the grant and transferred one case from the previous grant. Because of the finite time frame allowed by the grant, and the fact that performance is somewhat controlled by the applicants, due to the timeliness of their responses to requests for additional information, it has not been possible to complete reviews of all of the requests received within the grant period. Nine cases were transferred to the year five grant, leaving 35 cases completed under this grant.

Quantifiable items, specifically times of performance and expenditures, have been compiled and are compared to performance standards specified in the agreement. Summaries of the performance during the third year pilot are provided below.

Evaluation of Timeline Performance

One of the goals in the agreement that can be measured is timelines. The two time requirements are a five-working day response from when either an initial request is received or additional data is received; and a 60-calendar day response from when all data has been received to providing a recommendation to FEMA. The District generally met the five-day response requirement. A few isolated instances continued to occur, generally as a result of staffing problems associated with vacations or three day weekends

As noted above 35 cases were completed. For purposes of judging time line performance Case No. 05-08-0227P, Lakewood Gulch, was omitted from this analysis for reasons given below, and therefore 34 cases were judged against the 60-day goal for making a final recommendation to FEMA after receipt of all data. In all 34 cases the goal was met. The shortest review periods from receipt of all data were four, nine, and 10 days (twice). The longest were 57 days (twice) and 56 days (twice). The average time was 36 calendar days. This compares to an average of 22 calendar days in the first year, 29 in the second year and 39 in the third year.

The NSP and FEMA took an average of 30 days to complete their portion of the process and mail the final executed letter and any attachments. The NSP continued a reduced level of review of our work product, and their time continued to drop from past years. The accompanying Table 1 - Timeline Performance, provides the times of performance for each case.

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. This financial evaluation includes the 44 cases started during the grant period, although as indicated previously, nine were not completed when this grant expired. For the 44 cases FEMA received fees totaling \$167,400. Two cases were fee exempt

Icon provided the technical review for all but three cases, which were reviewed by District staff. For the cases Icon reviewed, the District authorized Icon an expenditure equal to the fee charged by FEMA for that type of request. For the other three Icon assisted the District with draft letters and attachments at cost. Nine cases (including the one transfer) cost more than the FEMA fee, totaling \$4290.07; and 27 cost less than the FEMA fee, totaling \$8739.25. For the 44 cases, Icon was paid \$161,624.50. These figures include the amounts authorized and expended during the grant period for the case which was transferred to the year four grant. Table 3 Financial Analysis presents a summary of each case.

Benefits of Local Reviews

In addition to the quantifiable measures discussed above, during the first year grant, District and Icon staff identified eight non-quantifiable benefits of doing the reviews locally. A listing of those benefits, with definitions, is repeated below.

First year results

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.”

Second year results

During the second year grant we identified two additional benefits of local reviews:

LOMRs based on CLOMRs. One additional benefit that became increasingly valuable during the second year was that of reviewing requests for LOMRs that were based on CLOMRs we had prepared. The advantages were that we had the institutional knowledge and continuity between the CLOMR and the LOMR requests; and we had the entire case file on site, which facilitated a quicker start on the review than when we had to request the file from the NSP.

Effective models. A related development has been a number of requests received from potential LOMC applicants for effective hydraulic models from LOMRs completed by us. After consultation with Kevin Long, FEMA Washington, we agreed that the District could provide the models and charge a reasonable cost for them; and, alternatively, the model(s) could be requested from the NSP according to current practice.

Third-year results

During the third year grant we identified two additional benefits of local reviews:

Coordination between active LOMCs and communities. During this period we had three active LOMRs adjacent to each other on City Park Channel in Westminster and Broomfield. Each request was a stand alone submittal. We were able to coordinate the three developers and two local governments so that the three LOMRs fit together.

DFIRM maintenance. There are cost and time savings to be had in doing LOMR reviews and DFIRM maintenance at the same time. The DFIRM files are completed and ready for the next update, and the LOMR annotated map comes from the DFIRM.

Fourth year results

We did not identify additional benefits of local reviews during the fourth year. Rather we reaffirmed the numerous benefits already recognized and listed above.

Other Fourth Year Experiences

General observations

We have previously suggested to FEMA that CLOMR's should be required for Zone A areas where a more detailed study exists; but we have not had any written direction from FEMA. We have also discussed the idea of requiring compliance with CFR 65.12 as well. In the absence of clear direction from FEMA we continue to urge local governments to require CLOMR's for all private development. See the Trail Village case below. We have not thus far required compliance with 65.12 in non-detailed floodplains.

Many LOMRs in Jefferson County have to deal with missing profiles. We supplied missing profiles for the Lakewood Gulch (Case No. 05-08-0227P) submittal. When the South Lakewood Gulch project advances to the LOMR phase, profiles will again be required. The same situation exists for Cressmans Gulch in Golden.

Our involvement in the process has corrected some ill-advised proposals, such as a proposed floodwall on South Lakewood Gulch that would have involved levee certification issues and would have lengthened the process

We attended training sessions on FEMA's Mapping Information Platform (MIP) Workflow through Baker. We have been implementing the MIP on all projects after October 1, 2005.

FEMA's policy on time extensions for LOMC requests was changed this year. Time extensions were not granted due to issues associated with the hurricane season. Letters were issued to applicants with active cases at that time explaining that time extensions would not be granted for their cases.

We were informed that general Operation and Maintenance plans from the communities were not being required by FEMA and Baker, except for extraordinary circumstances. After learning this we no longer required the O&M plans either.

LOMC's were coordinated with on-going DFIRM conversion projects for Adams County and Arapahoe County. We had to make sure that the LOMRs would fit into the effective FIRM information, but will also easily transfer to the DFIRMs when they become effective.

Project Specific Issues:

For the Trail Village LOMR case (05-08-0129P), it was discovered that the developer had created a levee situation with their improvements. Despite warnings from the District, a CLOMR was not obtained prior to the construction and the levee could not be certified. Without the levee in place, flooding would result within a brand new subdivision that was supposed to have been removed from the floodplain. As a result, the developer proposed additional improvements to correct the "without levee" floodplain and applied for a CLOMR (05-08-0295R) prior to constructing the new improvements.

The District, Baker, and ICON attended several meetings with the community, developer, and engineer to sort this one out.

A LOMR (05-08-0046P) was submitted to remove Invesco Field, the Denver Bronco's football stadium, from the Zone A floodplain along Sloan's Lake Overflow. Improvements at Invesco Field relied on inflatable barriers to keep water out of the ramps down to the field level. At Baker's direction we obtained a letter from the City and County of Denver stating that Invesco Field is reasonably safe from flooding and the stadium was effectively removed from the floodplain.

Case 05-08-0227P modified the SFHA along Lakewood Gulch to better reflect existing conditions. There was no specific project associated with the changes. During the audit process, Baker requested that additional property owner notification be made to all property owners impacted by the changes in BFE. We did not require the property owner notification since CFR Section 65.12 did not apply. However, Baker explained to us that they generally have been requiring property owner notification for all adverse impacts to the BFE and SFHA, regardless as to whether 65.12 applied or not. After this case, we too began requiring notifications for all adverse impacts. Because the property owner notification was a surprise to us and because of the time involved in getting notification completed, we did not include this case in the timeline performance calculations.

The Big Dry Creek Update Case (04-08-0439P) was initially submitted in April of 2004. This case was completed on November 30, 2005. The case involved a substantial change to Big Dry Creek and its tributaries. Two FIRM panels were modified, changes to the FIS occurred, and 16 profiles were modified as well. ICON prepared an annotated GIS exhibit that Baker used to modify the FIRMs.

Observations and Recommendations

We have repeated below the recommendations and observations taken from the first, second and third year reports, followed by additional observations and recommendations from the fourth year.

First Year

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.

NSP costs. There will probably continue to be some costs incurred by the NSP 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.

Second Year Observations and Comments

A conflict of interest resolution process. FEMA should have a conflict of interest procedure in place if the CTP review of LOMC requests is pursued.

Fee overrun protection. If CTPs are funding LOMC reviews based on fees alone there should be some protection from severe cost overruns resulting from either complex projects or poor quality technical work.

Time spent by the NSP. After a probation period wherein the CTP demonstrates the necessary competence, FEMA should move to a random audit process for determining continued competence.

Third Year Observations and Comments

CLOMRs for Zone A's. FEMA could require CLOMRs in these situations as a way of identifying and avoiding potential problems.

Local NSP presence. The opening of a local office of the NSP holds promise for enhanced coordination and customer service.

Fourth Year Observations and Comments

Local NSP presence. As we speculated above, the opening of the local Baker office has been very helpful to us, not only for this project but also for Digital Flood Insurance Rate Map (DFIRM) conversion projects, and MIP training.

DFIRM Maintenance. As we increasingly use the DFIRM data bases to prepare the LOMR attachments, it becomes more and more apparent that adding DFIRM maintenance to our scope of work would be a cost efficient and timely addition.

Conclusions

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. We encourage FEMA to make the decision to allow other CTPs to review requests for LOMCs within their jurisdictions, and to begin the process of amending existing regulations to allow that to happen.

Our experience in working with DFIRM data bases further confirms to us the value doing LOMC review and DFIRM maintenance under one roof because it streamlines the process and enhances the quality of both. For the DFIRMs we have we are able to modify the DFIRM flood data first and then create the LOMR attachments from the modified DFIRM. The District would like very much to pursue that opportunity.

Acknowledgements

The author would like to thank Kevin Long, FEMA Washington; Dan Carlson, FEMA Region 8, and Anne McDaniel, Michael Baker Jr., for keeping things running smoothly on their end.

Thanks to Craig Jacobson, Troy Carmann, Doug Williams and Penn Gildersleeve, Icon Engineering Inc., for a thoroughly professional job of reviewing these cases

Finally, thanks to Scott Tucker and Dave Lloyd, District Executive Director, for his strong support of this effort; and to David Mallory, who has assisted me throughout this effort.

Table 1 - Timeline Performance

Case No.	Identifier	All Data Received (Date)	Draft 102 or 104 Letter to FEMA (Date)	Elapsed time from receipt of all data (Days)	Letter signed by FEMA (Date)	Elapsed time from receipt of draft letter to signed letter (Days)	Elapsed time from receipt of all data to signed letter (Days)	Comments
X	04-08-0783R	12/7/2004	2/1/2005	56	2/17/2005	16	72	
X	05-08-0022P	1/4/2005	2/25/2005	52	3/21/2005	24	76	
X	05-08-0043R	11/16/2004	1/4/2005	49	1/18/2005	14	63	
X	05-08-0046P	6/30/2005	8/22/2005	53	10/4/2005	43	96	
X	05-08-0060P	1/20/2005	2/3/2005	14	3/3/2005	28	42	
X	05-08-0081R	12/21/2004	2/3/2005	44	2/17/2005	14	58	
X	05-08-0126P	1/20/2005	2/3/2005	14	2/22/2005	19	33	
X	05-08-0129P	6/8/2005	7/1/2005	23	8/1/2005	31	54	
X	05-08-0193R	6/21/2005	7/1/2005	10	8/10/2005	40	50	
X	05-08-0206R	6/2/2005	7/19/2005	47	9/12/2005	55	102	
X	05-08-0211R	3/29/2005	4/18/2005	20	5/11/2005	23	43	
X	04-08-0439P	6/24/2005	8/19/2005	56	11/30/2005	103	159	
X	05-08-0227P	3/23/2005	4/22/2005					Not included in analysis
	Lakewood Gulch additional	8/12/2005			9/20/2005			Not included in analysis
X	05-08-0261P	3/21/2005	5/13/2005	53	6/9/2005	27	80	
X	05-08-0264R	3/10/2005	4/8/2005	29	5/2/2005	24	53	
X	05-08-0281P	6/8/2005	6/21/2005	13	7/25/2005	34	47	
X	05-08-0282P	9/26/2005	10/5/2005	9	10/26/2005	21	30	
X	05-08-0295R	4/12/2005	4/22/2005	10	5/4/2005	12	22	
X	05-08-0296R	4/27/2005	6/9/2005	43	6/23/2005	14	57	
X	05-08-0333P	10/27/2005	12/5/2005	39	1/9/2006	35	74	
X	05-08-0369P	5/4/2005	6/21/2005	48	7/8/2005	17	65	
X	05-08-0370R	6/2/2005	7/28/2005	56	8/17/2005	20	76	
X	05-08-0434R	8/17/2005	10/13/2005	57	10/26/2005	13	70	
X	05-08-0439R	7/21/2005	7/25/2005	4	8/17/2005	23	27	
X	05-08-0468R	6/22/2005	7/25/2005	33	9/16/2005	53	86	
X	05-08-0505R	7/7/2005	8/30/2005	54	9/23/2005	24	78	
X	05-08-0534R	7/13/2005	8/25/2005	43	10/3/2005	39	82	
X	05-08-0564R	8/22/2005	10/18/2005	57	11/4/2005	17	74	
X	05-08-0571R	7/29/2005	9/19/2005	52	10/24/2005	35	87	
X	05-08-0589P	12/21/2005	1/4/2006	14	2/23/2006	50	64.0	
X	05-08-0557R	8/4/2005	9/12/2005	39	10/17/2005	35	74	
X	05-08-0628R	11/1/2005	11/29/2005	18	12/16/2005	17	35	
X	05-08-0655R	11/4/2005	12/5/2005	31	12/28/2005	23	54	
X	05-08-0666R	12/9/2005	1/4/2006	26	1/30/2006	26	52	
M	06-08-A640R	12/14/2005				0	0	
M	06-08-A676P					0	0	
X	06-08-B002P	11/21/2005	1/4/2006	44	2/10/2006	37	81	
M	06-08-B010P							
M	06-08-B014P	11/30/2005						
M	06-08-B025R							
M	06-08-B030R	1/4/2006						
M	06-08-B034P							
M	06-08-B040P							
M	06-08-B041R							
				1210		1006		
			Average Time	35.6		29.6	65.2	

X = Completed
M = Moved to next grant

Table 2 – Financial Summary

Grant:	Total Grant	\$180,000.00		
	Total Received	137992.82		
	Remainder	42007.18		
		Case Specific	Non-specific	Totals
Encumbrances:	Total Encumbered	\$161,624.50	\$3,839.50	\$165,464.00
	Overs	(4,290.07)		(4,290.07)
	Unders	8,739.25		8,739.25
	Revised Encumbered	157,175.32	3,839.50	161,014.82
	Remaining	\$22,824.68		\$18,985.18

Notes:

1. The \$3839.50 in non-specific costs was for training and miscellaneous activities..
2. These figures are for all cases worked on during the grant period. They will differ from figures which account for only cases started and finished within the grant period.

Table 3 - Financial Analysis

Case No.	Descriptor	FEMA Fee	Fee Received	ICON Authorized	ICON Invoices Total	Overs	Unders
	Non-specific Costs*			\$ 3,839.50	\$ 3,839.50		
X 04-08-0783R	West Parker Road	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,960.50		\$ 39.50
X 05-08-0022P	Highlands Ranch #122	\$ 3,800.00	\$ 3,800.00	\$ 3,800.00	\$ 4,190.50	\$ (390.50)	
X 05-08-0043R	Huron St.	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,893.00		\$ 107.00
X 05-08-0046P	Invesco Field	\$ 6,000.00	\$ 6,000.00	\$ 4,200.00	\$ 3,959.50		\$ 240.50
X 05-08-0060P	Willow Creek	\$ 4,200.00	\$ 4,200.00	\$ 2,210.00	\$ 1,872.50		\$ 337.50
X 05-08-0081R	Villages North	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,794.00		\$ 206.00
X 05-08-0126P	Vance Street Center	\$ 3,800.00	\$ 3,800.00	\$ 3,800.00	\$ 3,709.75		\$ 90.25
X 05-08-0129P	Trail Village	\$ 4,200.00	\$ 4,200.00	\$ 4,200.00	\$ 3,989.75		\$ 210.25
X 05-08-0193R	Anthem	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,095.00	\$ (95.00)	
X 05-08-0206R	Globeville	\$ 4,500.00	\$ 4,500.00	\$ 4,000.00	\$ 3,747.50		\$ 252.50
X 05-08-0211R	Bear Creek Park Bridge	\$ 4,000.00	\$ 4,000.00	\$ 500.00	\$ -		\$ 500.00
X 04-08-0439P	Big Dry Creek			\$ 4,000.00	\$ 4,870.82	\$ (870.82)	
X 05-08-0227P	Lakewood Gulch	\$ 4,200.00	\$ 4,200.00	\$ 4,200.00	\$ 4,432.50	\$ (232.50)	
X 05-08-0261P	Nissen Reservoir Channel	\$ 4,200.00	\$ 4,200.00	\$ 1,890.00	\$ 1,870.00		\$ 20.00
X 05-08-0264R	Easter Lima Center	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,555.00		\$ 445.00
X 05-08-0281P	136th Ave. Bridge	\$ 3,800.00	\$ 3,800.00	\$ 3,800.00	\$ 3,748.00		\$ 52.00
X 05-08-0282P	Green Gables GC	\$ 4,200.00	\$ 4,200.00	\$ 4,200.00	\$ 4,761.25	\$ (561.25)	
X 05-08-0295R	Trail Village	\$ 4,500.00	\$ 4,500.00	\$ 4,000.00	\$ 3,520.00		\$ 480.00
X 05-08-0296R	I-70/E-470	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,942.50		\$ 57.50
X 05-08-0333P	Bronco Parkway	\$ 3,800.00	\$ 3,800.00	\$ 3,800.00	\$ 5,425.00	\$ (1,625.00)	
X 05-08-0369P	Larkridge Mall	\$ 3,800.00	\$ 3,800.00	\$ 3,800.00	\$ 3,523.75		\$ 276.25
X 05-08-0370R	Oak Gulch at Hess Road	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,412.50		\$ 587.50
X 05-08-0434R	Cherry Hills Center	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,620.00		\$ 380.00
X 05-08-0439R	Massey Draw Tributary	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,030.00		\$ 970.00
X 05-08-0468R	Piney Creek Drops	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,335.00		\$ 665.00
X 05-08-0505R	Marcy Drive Culvert	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,847.50		\$ 152.50
X 05-08-0534R	West Harvard Gulch	\$ 4,000.00	\$ 4,000.00	\$ 500.00	\$ 677.50	\$ (177.50)	
X 05-08-0564R	Calabrese	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,077.50	\$ (77.50)	
X 05-08-0571R	Home Depot	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,335.00		\$ 665.00
X 05-08-0589P	Lakewood Gulch Garrison	\$ -	\$ -	\$ 1,500.00	\$ 1,760.00	\$ (260.00)	
X 05-08-0557R	Fuller Subdivision	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,777.50		\$ 222.50
X 05-08-0628R	Canyon View	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,642.50		\$ 357.50
X 05-08-0655R	Big Dry WWTP	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,335.00		\$ 665.00
X 05-08-0666R	Aurora Ballpark	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,525.00		\$ 475.00
M 06-08-A640R	South Lakewood Gulch	\$ 4,000.00	\$ 4,000.00	\$ 585.00	\$ 555.00		\$ 30.00
M 06-08-A676P	Canyon View Filing No. 3	\$ 4,200.00	\$ 4,200.00	\$ 4,200.00	\$ 2,232.50		
X 06-08-B002P	Lower Ketner Creek	\$ 3,800.00	\$ 3,800.00	\$ 3,800.00	\$ 3,545.00		\$ 255.00
M 06-08-B010P	Rio Grande Ave. Bridge	\$ 4,200.00	\$ 4,200.00	\$ 4,200.00	\$ 930.00		
M 06-08-B014P	Reata North Filing #1	\$ 3,800.00	\$ 3,800.00	\$ 3,800.00	\$ 3,225.00		
M 06-08-B025R	ECCV W&S Detention	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 1,387.50		
M 06-08-B030R	Cherry Creek/Cottonwood	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 1,427.50		
M 06-08-B034P	Holly Street Extension	\$ 4,400.00	\$ 4,400.00	\$ 4,400.00	\$ 945.00		
M 06-08-B040P	Second Creek Farm	\$ -	\$ -	\$ 2,000.00	\$ 670.00		
M 06-08-B041R	Parkview	\$ 4,000.00	\$ 4,000.00	\$ 4,400.00	\$ 1,000.00		
TOTALS		\$ 167,400.00	\$ 167,400.00	\$ 161,624.50	\$ 137,992.82	\$ (4,290.07)	\$ 8,739.25

* Assemble case files for 3 dropped cases (\$1312.50)
 Reproduce 15 copies of DFIRM maintenance pilot report (\$300)
 Prepare profiles and FWDT for 05-08-0227P (\$1080)
 MIP training (\$529.50)
 MIP training (\$617.50)

X = Completed
 M = Moved to next grant