



**URBAN DRAINAGE & FLOOD CONTROL DISTRICT**

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## **Local Evaluation of Requests for Letters of Map Change – Year Six**



**Final Report  
FEMA Grant No. EMD-2006-GR-0695  
December, 2007**

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of Map Change – Year Six**

**By  
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Urban Drainage and Flood Control District**

**December, 2007**

## **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 five additional years of this pilot project at \$180,000 for each year. Final reports for years two through five have been provided to FEMA. Also completed in this time frame were two pilot projects on the topic of DFIRM maintenance. All of the reports are available at [www.udfcd.org](http://www.udfcd.org).

This report builds on the findings of the previous work, and presents 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. For this project the District has 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 the first four 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. For the fifth year Baker populated the initial database upon receipt of a LOMC request, and the District and/or ICON was responsible for all subsequent entries. For the sixth year the District and/or ICON took responsibility for all MIP entries, from initiating a case through final uploads.

The submittal process for the first five years required 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 received a case it immediately notified 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 entered the information into the MIP (or MIS) and assigned a case number by return e-mail. In the sixth year the process was changed to have the applicant submit two copies of the request and the fee to the District. The District initiates the case on the MIP, transmits one copy of the request to ICON, usually by courier, and keeps the second copy until the case is resolved. The fee is FedExed to the Fee Charge System Administrator.

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 the appropriate documentation from templates on the MIP. 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 drafts of the CLOMR or LOMR documents, 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, along with the second copy of the request and any additional submittals, 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 29 requests for LOMCs during the period of the grant and transferred three cases 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. At the end of this grant period three cases had been suspended and three were transferred to the year six grant, leaving 26 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 fifth 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 26 cases were completed, and were judged against the 60-day goal for making a final recommendation to FEMA after receipt of all data. In 23 cases the goal was met. The shortest review periods from receipt of all data were 16, 17 and 18 days. The longest were 66 days and 62 days. The average time was 42 calendar days, which was the same as the fifth year performance

The NSP and FEMA took an average of 22 days, down from 36 days in year five, 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. The accompanying Table 1 - Timeline Performance, provides the times of performance for each case. The average time from receipt of all data to a signed LOMC was 63 days, below the year five average of 78, and well below the 90-day target.

### **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 29 cases started during the grant period, and the three transferred cases from the previous grant. For the 29 cases started in the grant period, FEMA received fees totaling \$118,000.

ICON provided the technical review for all of the cases. The District initially authorized ICON an expenditure of \$119,845.50. Of the 26 cases completed during the grant period 23 cases cost more to complete than the FEMA fee, totaling \$71,174.33; and three cost less than the FEMA fee, totaling \$658.00. These figures include the amounts authorized and expended during the grant period for the cases which were transferred to this grant and from this grant. The remaining funds were expended on cases that were suspended or transferred to year seven for completion. In addition, ICON was paid \$1257.17 for non-case specific projects; primarily MIP uploads which occur after the case file is closed out. Table 3 Financial Analysis presents a summary of each case.

This was the second consecutive year that the costs of completing the work exceeded the fees collected by FEMA. The fees have since been raised by FEMA and the seventh year pilot will shed some light on the adequacy of the increases.

### **Benefits of Local Reviews**

In addition to the quantifiable measures discussed above, over the first four years District and ICON staff identified 12 non-quantifiable benefits of doing the reviews locally. A listing of those benefits, with definitions, is repeated below.

**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.”

**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.

**Coordination between active LOMCs and communities.** During the third year 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.

### **Sixth Year Observations**

Our sixth year experience has generally validated the above benefits of local reviews to varying degrees, with the exception of time extensions which is discussed below. We had one particularly difficult and contentious case, a request for a CLOMR, known as Cornerstar, that included a significant incursion into the floodway of Cherry Creek. The benefits of local reviews for this case included meetings with the applicant before the request was submitted, meetings with the applicant during review of the request, local knowledge, the District Maintenance Eligibility Program (MEP), several site visits, local exchange of data and coordination between active LOMCs and communities. In fact we thought this case was so unique we have submitted an abstract (attached at the end of this report) to the Association of State Floodplain Managers for their 2008 annual conference.

FEMA stopped allowing extensions for LOMC requests following Hurricane Katrina. This policy has caused the suspension of some cases which might otherwise have requested extensions and ultimately been completed; while others were continued only because we had ICON reminding the applicants that they faced suspension if they didn't provide additional data within 90 days.

LOMC's were coordinated with on-going DFIRM conversion projects for Adams County, Arapahoe County Boulder County and Jefferson 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. That meant that we had to prepare every exhibit in both NGVD 29 and NAVD 88 datum's, and the flood outlines had to match both effective and DFIRM outlines. Once all conversions are complete this work load will go down. The Adams County DFIRM became effective in March, 2007.

We had our first levee (floodwall) case, which was a LOMR following a CLOMR for a floodwall protecting the City of Englewood water treatment plant on the banks of Big Dry Creek. The Alexandria office of the NSP provided levee certification assistance for us.

### **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 know that two additional CTP's were added in 2006. We encourage FEMA 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.

Finally, several of the cases, notably the Cornerstar CLOMR, reinforced the benefits we see in completing the LOMC reviews locally.

### **Acknowledgements**

The author would like to thank Dan Carlson, FEMA Region 8; and Jennifer Winters and Paul Anderson, 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 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.	September 30, 2007 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)	
X	06-08-B400P	Piney Creek	9/5/2006	9/22/2006	17	12/8/2006	77	94
X	06-08-B537P	Quail Creek	10/13/2006	12/6/2006	54	1/9/2007	34	88
X	06-08-B596R	Gartrell to Aurora Pkwy	9/5/2006	11/10/2006	66	12/6/2006	26	92
X	06-08-B627P	Home Depot	9/5/2006	10/19/2006	44	12/11/2006	53	97
X	06-08-B633R	Cutler Property	12/13/2006	1/24/2007	42	2/15/2007	22	64
X	06-08-B655R	Pine Lane	11/6/2006	11/28/2006	22	12/13/2006	15	37
X	07-08-0014R	Pomona Drive Culvert	11/20/2006	12/18/2006	28	1/8/2007	21	49
X	07-08-0019P	Maple Grove WTP	11/17/2006	12/18/2006	31	1/11/2007	24	55
X	07-08-0039P	Boyd Ponds	1/10/2007	1/31/2007	21	2/9/2007	9	30
X	07-08-0043P	Canyon View #2	3/29/2007	5/30/2007	62	6/6/2007	7	69
S	07-08-0063R	Golden High School	-	-	-	-	-	-
X	07-08-0081R	104th Ave. Corridor	12/15/2006	1/31/2007	47	2/9/2007	9	56
X	07-08-0084R	Bridgewater	2/5/2007	2/23/2007	18	2/28/2007	5	23
X	07-08-0089R	Badger Gulch at Meridian	1/5/2007	2/6/2007	32	2/23/2007	17	49
X	07-08-0091R	Deer Creek Golf Course	12/15/2006	1/24/2007	40	2/26/2007	33	73
S	07-08-0092P	Kentfield	-	-	-	-	-	-
X	07-08-0130P	Dancing Willows	11/28/2006	1/8/2007	41	1/22/2007	14	55
X	06-08-B392P	Big Dry Creek	1/2/2007	2/23/2007	52	3/15/2007	20	72
X	06-08-B414R	Cornerstar	5/18/2007	7/12/2007	55	8/27/2007	46	101
X	06-08-B552P	Lena Gulch	3/8/2007	5/8/2007	61	5/29/2007	21	82
X	07-08-0232R	Quail Creek	1/16/2007	3/6/2007	49	3/20/2007	14	63
X	07-08-0250R	Kinney Creek Restoration	2/21/2007	3/9/2007	16	3/20/2007	11	27
X	07-08-0252P	I70/E470 Interchange	2/6/2007	3/26/2007	48	4/4/2007	9	57
X	07-08-0253P	Pinery West (Pradera)	4/3/2007	5/23/2007	50	5/29/07	6	56
X	07-08-0311R	Southlands	2/8/2007	3/9/2007	29	3/30/07	21	50
T	07-08-0401R	Wild Grass	-	-	-	-	-	-
X	07-08-0425R	Golden High School	5/8/2007	6/28/2007	51	7/23/07	25	76
X	07-08-0439P	South Lakewood Gulch	3/14/2007	5/10/2007	57	5/25/07	15	72
T	07-08-0455R	Waterstone	-	-	-	-	-	-
X	07-08-0461P	Redleaf #2	5/3/2007	6/21/2007	49	6/29/07	8	57
T	07-08-0474R	Isabelle Estates	6/5/2007	-	-	-	-	-
S	07-08-0492P	Kentfield	-	-	-	-	-	-
Elapsed time averages for 26 cases				41.6		21.6	63.2	

X = completed  
S = suspended  
T = transferred

## Table 2 – Financial Summary

<b>Grant:</b>	Total Grant	\$180,000.00
	Total Received	179,790.50
	Unallocated	209.50
<b>Encumbrances:</b>	Total Available	\$180,000.00
	Total Encumbered	119849.50
	Overs	69108.33
	Unders	8707.33
	Revised Encumbered	180,250.00
<b>Total Paid out</b>		\$179,790.50
<b>Notes:</b>		
1. 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.		
2. Expenses in excess of \$179,790.50 were transferred to the year seven grant.		

**Table 3 - Financial Analysis**

Updated:		September 30, 2007						
Case No.	Descriptor	Fee		ICON	ICON Invoice:		Overs	Unders
		FEMA Fee	Received	Authorized	Total	Fee Remaining		
	Non-specific Costs*			\$ 5,000.00	\$ 1,257.17	\$ 3,742.83		\$ 3,742.83
X	06-08-B400P Piney Creek	\$ 4,000.00	\$ 4,000.00	\$ 3,410.00	\$ 4,518.50	\$ (1,108.50)	\$ (1,108.50)	
X	06-08-B537P Quail Creek	\$ 4,400.00	\$ 4,400.00	\$ 5,513.00	\$ 13,310.06	\$ (7,797.06)	\$ (7,797.06)	
X	06-08-B596R Gartrell to Aurora Pkwy	\$ 4,000.00	\$ 4,000.00	\$ 915.00	\$ 1,309.00	\$ (394.00)	\$ (394.00)	
X	06-08-B627P Home Depot	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,121.25	\$ (121.25)	\$ (121.25)	
X	06-08-B633R Cutler Property	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 6,401.26	\$ (2,401.26)	\$ (2,401.26)	
X	06-08-B655R Pine Lane	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,061.51	\$ (61.51)	\$ (61.51)	
X	07-08-0014R Pomona Drive Culvert	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,921.50	\$ 78.50		\$ 78.50
X	07-08-0019P Maple Grove WTP	\$ 4,400.00	\$ 4,400.00	\$ 4,400.00	\$ 4,658.50	\$ (258.50)	\$ (258.50)	
X	07-08-0039P Boyd Ponds	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,253.50	\$ (253.50)	\$ (253.50)	
X	07-08-0043P Canyon View #2	\$ 4,400.00	\$ 4,400.00	\$ 4,400.00	\$ 7,346.00	\$ (2,946.00)	\$ (2,946.00)	
S	07-08-0063R Golden High School	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,681.00	\$ 319.00		\$ 319.00
X	07-08-0081R 104th Ave. Corridor	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,129.50	\$ (129.50)	\$ (129.50)	
X	07-08-0084R Bridgewater	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,763.50	\$ (763.50)	\$ (763.50)	
X	07-08-0089R Badger Gulch at Meridian	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 5,121.00	\$ (1,121.00)	\$ (1,121.00)	
X	07-08-0091R Deer Creek Golf Course	\$ 4,000.00	\$ 4,000.00	\$ 4,400.00	\$ 3,976.00	\$ 424.00		\$ 424.00
S	07-08-0092P Kentfield	\$ 4,400.00	\$ 4,400.00	\$ 4,000.00	\$ 2,986.00	\$ 1,014.00		\$ 1,014.00
X	07-08-0130P Dancing Willows	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 7,848.50	\$ (3,848.50)	\$ (3,848.50)	
X	06-08-B392P Big Dry Creek				\$ 12,049.00	\$ (12,049.00)	\$ (12,049.00)	
T	06-08-B414R Cornerstar				\$ 11,140.18	\$ (11,140.18)	\$ (11,140.18)	
X	06-08-B552P Lena Gulch			\$ 2,309.00	\$ 18,581.50	\$ (16,272.50)	\$ (16,272.50)	
X	07-08-0232R Quail Creek	\$ 4,000.00	\$ 4,000.00	\$ 1,102.50	\$ 1,417.50	\$ (315.00)	\$ (315.00)	
X	07-08-0250R Kinney Creek Restoration	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,844.50	\$ 155.50		\$ 155.50
X	07-08-0252P I70/E470 Interchange	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 8,571.00	\$ (4,571.00)	\$ (4,571.00)	
X	07-08-0253P Pinery West (Pradera)	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 5,430.00	\$ (1,430.00)	\$ (1,430.00)	
X	07-08-0311R Southlands	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,139.00	\$ (139.00)		\$ (139.00)
T	07-08-0401R Wild Grass	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 2,652.50	\$ 1,347.50		
X	07-08-0425R Golden High School	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 4,332.50	\$ (332.50)	\$ (332.50)	
X	07-08-0439P South Lakewood Gulch	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 5,794.07	\$ (1,794.07)	\$ (1,794.07)	
T	07-08-0455R Waterstone	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,565.50	\$ 434.50		
X	07-08-0461P Redleaf #2	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 5,927.00	\$ (1,927.00)		
T	07-08-0474R Isabelle Estates	\$ 4,000.00	\$ 4,000.00	\$ 4,000.00	\$ 3,395.00	\$ 605.00		
S	07-08-0492P Kentfield	\$ 4,400.00	\$ 4,400.00	\$ 4,400.00	\$ 1,287.50	\$ 3,112.50		\$ 3,112.50
<b>TOTALS</b>		<b>\$ 118,000.00</b>	<b>\$ 118,000.00</b>	<b>\$ 119,849.50</b>	<b>\$ 179,790.50</b>	<b>\$ (59,941.00)</b>	<b>\$ (69,108.33)</b>	<b>\$ 8,707.33</b>

\* MIP Maintenance & Uploads  
X = completed; S = suspended; T = transferred

## **Abstract:**

### **How NAI Principals Guided Us Through A Difficult CLOMR Review**

The Urban Drainage and Flood Control District (District [www.udfcd.org](http://www.udfcd.org)) through a Cooperating Technical Partnership (CTP) agreement with the Federal Emergency Management Agency (FEMA) reviews letters of map change (LOMC) for compliance with the National Flood Insurance Program (NFIP) in the Denver Metropolitan Area. The District commenced the first-in-the-nation pilot program in 2001. The District works closely with Michael Baker Jr. (Baker), the National Service Provider for FEMA, and our consultant, ICON Engineering, Inc. (ICON) to effectively administer the LOMC program in the Denver Region.

When a large retail developer proposed a significant floodway encroachment at arguably the highest flood risk area in the Denver Metropolitan Area, we were alarmed. Cherry Creek at Arapahoe Road has a 100-year peak discharge of nearly 50,000 cfs, the highest in the District. Arapahoe Road is a state highway with an inadequate bridge waterway opening, resulting in significant roadway overtopping. The development project proposed floodway encroachments in the community that would receive the sales tax benefit, while the adverse impacts would occur in adjacent communities. Our initial assessment was that this proposal should be denied. We entered into a unique review arrangement with Baker and ICON to work through the denial process. Our legal counsel also recommended denial based on Colorado common law.

Several individuals on the review team attended a No Adverse Impact (NAI) Workshop sponsored by the Colorado Association of Stormwater and Floodplain Managers (CASFM [www.casfm.org](http://www.casfm.org)) midway through the review process. As a result, we were able to formulate a way forward using NAI principals. We recommended to the development team a strategy that would significantly reduce adverse impacts to properties in adjacent communities, reduce the floodway encroachment, and gain support from all communities affected by the project. Faced with the prospect of denial, and a reasonable alternative, the developer entered into a constructive dialogue with the review team. The developer was tasked with securing approvals from each adversely impacted property owner as a condition of community acknowledgement. All parties were eventually satisfied with the revised proposal and a CLOMR was issued.

The project was concurrently reviewed for inclusion in the District's Maintenance Eligibility Program. A secondary benefit was the preservation of natural floodplain functions through a commonsense geomorphic-based approach to drainageway modification.

In the end, the project was significantly revised in order to render a smaller adverse impact, the project gained the support of adjacent communities, and natural beneficial floodplain functions were preserved. More importantly, we set a precedent for enhanced floodplain management using NAI principals that go beyond NFIP minimum standards.