

**Roseau River, Roseau Minnesota Feasibility Study**

Report Summary  
27 November 2006

**STUDY INFORMATION**

**1. Study Authority:**

This report was authorized by a 30 September 1974 resolution, which reads as follows:

*“RESOLVED BY THE COMMITTEE ON PUBLIC WORKS OF THE UNITED STATES SENATE, That the Board of Engineers for Rivers and Harbors be, and is hereby, requested to review reports on the Red River of the North Drainage Basin, Minnesota, South Dakota and North Dakota, submitted in House Document Numbered 185, 81st Congress, 1st Session, and prior reports, with a view to determining if the recommendations contained therein should be modified at this time, with particular reference to flood control, water supply, waste water management and allied purposes.”*

**2. Study Sponsor:**

The Non-federal sponsor is the City of Roseau, Minnesota.

**3. Study Purpose and Scope:**

The purpose of this study is to evaluate and determine the feasibility of implementing a Federal flood damage reduction project that would provide a reduction in flood damages for the City of Roseau. To accomplish this purpose, an array of possible flood damage reduction plans was analyzed for possible implementation in the study area. This report documents the Federal interest in providing flood damage reduction improvements for the City of Roseau, covering a period of analysis of 50 years.

**4. Project Location/Congressional District:**

The project area for this feasibility report focuses on the city of Roseau and the surrounding area. Roseau, Minnesota, is located 10 miles south of Canada and 65 miles east of North Dakota and has a population of 2,756 in the year 2000 census. The Roseau River bisects the city, and then flows north toward Canada, draining more than 1,100 square miles in the United States and an additional 900 square miles in Canada. Roseau is in Minnesota’s 7th Congressional District.

**5. Prior Reports and Existing Water Projects:**

The following is a list of the most relevant and recent reports in the Roseau River basin.

**A. Reports and Studies**

(1) *Alternatives Screening Report, Letter Report - Roseau, Minnesota, Flood Control Feasibility Study, April 2005.* Indicated which alternatives made it to the final screening and presented the selected alternative, which was the east diversion.

(2) *Section 905(b) Analysis Roseau River Subbasin – Roseau, Minnesota, Local Flood Protection, August 2003.* Determined that at least one cost-effective engineering solution to the flood problems in Roseau existed and recommended the start of the feasibility study.

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(3) *Phase I Environmental Site Assessment Report, Roseau River Diversion Feasibility Study Area, Roseau, Minnesota, May 2005.* Determined that further assessments would be needed for the in-town levee alternatives, with minimal assessments needed for the east diversion plan.

(4) *Section 22 Study, City of Roseau and Upstream Reaches on the Roseau River, Roseau County Minnesota, December 2004.*

(5) *Section 205, Federal Interest Milestone Report, Initial Appraisal Report, Corps of Engineers, June 2003.*

(6) *Hay Creek Section 206 – Ecosystem Restoration Report/Environmental Assessment, November 2003.*

(7) *Section 905(b) (WRDA 1986) Analysis, Red River Basin; Minnesota, North Dakota, South Dakota, September 2001.*

### **B. Water Projects**

(1) *West Intercept Project, Roseau River Watershed District, Minnesota:* This project is currently under construction. The project will capture overland flows from the west of the City of Roseau and bring them to the Roseau River to the north.

(2) *West Side Storm Water System, Roseau, Minnesota:* This project is currently under construction. This system will divert storm water into a large storm water basin, with a pump station being used for continuous operation.

### **6. Federal Interest:**

The recommended flood damage reduction plan has total costs of \$23,400,000, provides net annual benefits of \$2,350,000 (October 2006 price level), and has a benefit-cost ratio of 1.7 at a 4-7/8% interest rate. The recreational portion of the project has a total cost of \$1,700,000, provides net annual benefits of \$2,160,000, and results in a benefit-cost ratio of 19.8. The combined recommended cost is \$25,100,000 with annual net benefits of \$4,510,000, resulting in an overall benefit-cost ratio of 3.0. An environmental assessment was completed which resulted in a Finding of No Significant Impact (FONSI). Since flood damage reduction is a priority mission for the U.S. Army Corps of Engineers and the recommended plan is consistent with Army policy and is technically sound, economically feasible, and environmentally acceptable, it is in the Federal interest.

## **STUDY OBJECTIVES**

### **1. Problems and Opportunities**

The city of Roseau is vulnerable to flooding from both spring snowmelt and rainfall events. During the summer of 2002 a rainfall event caused flooding in more than 80 percent of the city causing damages estimated at more than \$120,000,000. The flood lasted several weeks and city services were significantly affected for months.

The city of Roseau relies heavily on temporary emergency levees, which are in poor condition, leaving the city vulnerable to levee failures and catastrophic flooding. These levees were overtopped during the 2002 flood and do not provide reliable flood protection. Additional flood protection is needed to reduce flood damages in the city from these frequent events. An opportunity also exists to provide the city with passive, family oriented recreational resources which are currently not present.

## 2. Planning Objectives

The primary planning objective is to identify an implementable permanent flood damage reduction project that would significantly reduce the long-term risk of catastrophic flood damages to Roseau. This project must be technically feasible from engineering and economic perspectives.

## 3. Planning Constraints

The planning constraints identified for this study were requirements that the plan alternatives be economically and environmentally feasible and qualify for Federal interest under existing laws. Furthermore, a key constraint for social acceptability to the community is that the project would not induce damages to areas upstream or downstream of the study area and that damage to the “opposite side of the river” from any proposed project features would not occur or is minimized. Poor riverbank and levee foundation stability are problems in the project area and were a constraint to the planning process.

## ALTERNATIVES

### 1. Plan Formulation Rationale

Initial coordination with the City of Roseau and the State of Minnesota focused on identification of a flood damage reduction project that would be feasible from a local, state, and federal perspective. From this coordination, the study team defined an array of possible primary and secondary features. These features were considered as measures that could potentially address some or all of the planning objectives, opportunities, and concerns.

The study team identified 11 possible plans, including the no action plan, as potential alternatives which could provide some benefit to the City of Roseau and meet the goals and objectives of the project. Of those 11 plans, 3 were initially eliminated because they were conceptually found to have extremely large costs and were not expected to have a significant amount of flood damage reduction benefits. The remaining plans were analyzed based on economic costs and their ability to provide outputs similar to the other plans considered. Those with fewer net benefits were eliminated at that time. The result was that two plans remained, the East Diversion Channel and the In-Town Levee alternative. Various sizes of these two plans were evaluated, resulting in the plan with the greatest net benefits being the selected plan. This plan, the East Diversion Channel, was then optimized by looking at smaller secondary measures which would be able to add net benefits to the overall project, resulting in the NED plan.

It was determined that the selected NED plan would cause a 0.1 foot increase in stage downstream of the project area for the 100-year flood event. This was not acceptable to the City of Roseau. As a result, two large storage areas were added to the plan, and the NED plan plus the storage areas became the recommended locally preferred plan (LPP). Recreational features were determined to be economically justified and were included as part of both the NED plan and the recommended LPP.

### 2. Management Measures and Alternative Plans

Both structural and nonstructural flood damage reduction measures were considered during the development of alternatives. Structural measures considered include: levees, reservoirs, channel modifications, cutoff channels, and diversion channels. Nonstructural measures considered included: buyouts of flood prone structures, flood proofing of structures, and elevating structures. Ecosystem restoration and recreational features were also considered. Table 1 summarizes measures eliminated from further analysis.

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Table 1.

Measure	Reason for Elimination
Upstream Flood Water Storage	<ol style="list-style-type: none"> <li>1. The upstream storage would be very costly and have minimal ability to reduce the river stage in Roseau.</li> <li>2. Much of the watershed is flat and creating a reservoir could have large environmental and social effects.</li> </ol>
Channel Modification	<ol style="list-style-type: none"> <li>1. Channel modifications would have high environmental impacts with minimal ability to reduce stage.</li> <li>2. The ability to reduce stage would only be in limited areas, and overall net benefits are low with this alternative.</li> <li>3. This plan was dropped as a stand alone plan but will be considered with the levee alternatives.</li> </ol>
Non Structural measures	<ol style="list-style-type: none"> <li>1. Flood proofing is cost prohibitive because of the large numbers of properties due to the flat topography in the project area.</li> <li>2. Relocations or buyout measures are not feasible as the majority of the city will be in the regulatory floodplain and the costs of relocating the city would not be justified.</li> <li>3. This plan was dropped as a stand alone plan but will be considered as a way to optimize future plans.</li> </ol>
West Aligned Diversion Channel	<ol style="list-style-type: none"> <li>1. This alternative is more costly than the East Diversion. Initial estimates indicated that the West Diversion would have at least \$1 million less in net benefits.</li> <li>2. This plan potentially would have had larger social and environmental impacts than the East Diversion.</li> </ol>
North Aligned Diversion Channel	<ol style="list-style-type: none"> <li>1. This plan had net benefits of \$500,000 less than that of the East Diversion Plan.</li> <li>2. The plan did not remove the majority of the city from the 100-year regulatory floodplain, with diminishing impact going upstream of the inlet.</li> </ol>
Northeast Aligned Diversion Channel	<ol style="list-style-type: none"> <li>1. This plan had net benefits of \$400,000 less than that of the East Diversion Plan.</li> <li>2. The plan did not remove the majority of the city from the 100-year regulatory floodplain, with diminishing impact going upstream of the inlet.</li> </ol>
High Flow Cutoff Channels	<ol style="list-style-type: none"> <li>1. This plan had net benefits of \$120,000 less than that of the East Diversion Plan.</li> <li>2. The plan did not remove the majority of the city from the 100-year regulatory floodplain, and had minimal effect on stage.</li> </ol>
Railroad Bridge Modifications	<ol style="list-style-type: none"> <li>1. Analysis revealed that modifications to the bridge would only have minor effects on stages.</li> <li>2. Although a fairly cheap alternative, this plan had \$-194,000 in net benefits.</li> <li>3. This plan is unable to remove the majority of the city from the 100-year regulatory flood plain.</li> <li>4. This plan was considered in the optimization of the selected plan.</li> </ol>
Ecosystem Restoration	<ol style="list-style-type: none"> <li>1. It was determined that ecosystem restoration although possibly feasible, would not result in significant benefits to the region. This is due to the rural nature of the region and the large amount of pristine ecosystems in the region. In addition the local sponsor was not as interested in this project option.</li> <li>2. It is anticipated that some of the project lands will return to natural conditions by changing their current land use.</li> <li>3. The project team will continue to look for possible environmental opportunities, although not as a stand alone feature.</li> </ol>

### 3. Final Array of Alternatives

Following development and initial screening of the alternatives, two plans remained as possible solutions to the problems in the City of Roseau. Table 2 below presents the final array of alternatives that remained following the screening process.

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Table 2.

Measure	Initial Estimated Benefits	Reasons for Elimination
Levee/Floodwall 25 year 100 year 500 year	/1 < \$188,000 < \$1,189,000 < \$1,074,000	1. Overall the Levee/Floodwall alternative had less net benefits than the East Diversion. 2. This alternative has significantly higher social and environmental costs. 3. Information on setback levees was determined after cost estimates were developed which would result in net benefits lower than those indicated in table 2.
<b>Reasons for Selected Plan</b>		
East Diversion 50 foot 150 foot 350 foot	\$1,103,000 \$1,210,000 \$924,000	1. Highest net benefits. 2. Meets the goals and objectives of the project. 3. Provides ability to fight floods larger than design event. 4. Environmentally and Socially acceptable.

/1 - Project costs were underestimated, so net benefits are actually less than shown.

#### 4. Comparison of Alternatives

The alternatives shown in the table above were evaluated for economic feasibility and the alternative with the greatest net benefit, the 150 foot east diversion channel, was the NED plan. Two large storage areas were added to the plan at the request of the City of Roseau and this locally preferred plan is the recommended plan. The recommended plan meets the project planning objectives and constraints.

Key risks associated with the flood damage reduction alternatives included the risk of residual flood damages from floods that exceed the design capacity of the alternatives. Each of the alternatives would reduce, but not eliminate, the possibility of flooding in the City of Roseau. However, implementation of the recommended plan would provide significant protection. Although it would not be able to protect against a repeat of the 2002 event, this plan would put the City of Roseau in a much better position to perform successful flood fighting against those extremely large events. In addition the recommended plan provides benefits for all floods, not just to a top of levee elevation. There is also risk associated with flooding prior to completion of the recommended plan. With the City of Roseau fighting 8 floods in the past 10 years, delays to implementation could have significant consequences.

#### 5. Key Assumptions

The no action alternative assumes that the community will continue to rely on heroic responses and poorly maintained temporary emergency levees as the primary line of defense against future floods. The city would also remain in the floodplain and would require flood insurance.

#### 6. Recommended Plan

The recommended plan is the locally preferred plan. This alternative includes the NED plan and two large storage areas to eliminate downstream stage increases. The plan meets the project objectives and constraints. The following is a description of the NED and recommended plans.

##### NED Plan Features

- Approximately 4.5 miles of diversion channel (ranging from a maximum depth of 16 feet to areas where no channel cut is needed, with a bottom width of 150 feet and 1V:5H side slopes).
- 763 acres of land acquisition.
- Approximately 5.1 miles of levees used to contain flows within the diversion channel. The

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- majority would have a height of less than 5 feet.
- 0.51 mile of road raises ranging from 2 to 4 feet.
- An inlet control structure to regulate the events that would pass into the diversion channel, beginning with 2-year frequency events.
- A restriction structure to increase the efficiency of the diversion channel. This structure would be 16 feet wide and 100 feet long. It would begin to restrict flows at the 5-year event (20-percent exceedance frequency).
- Construction of three bridges (two associated with roads crossing the diversion and one railroad bridge crossing the diversion).
- Relocations of electrical, sewer, gas, and telephone infrastructure.
- Riprap at various locations to protect the levees and diversion structures from erosion.
- Approximately 200 acres of native plantings to provide ground cover in the project area.

### LPP Features (Changes to NED Plan)

- Approximately 4.1 miles of additional levees used to contain peak flows within the storage areas. The majority would be less than 5 feet, the highest would be 15 feet.
- Approximately 5.1 miles of reduced levee heights; the reduction would vary from 2 to 5 feet (see NED plan features above).
- 1,089 acres of additional land acquisition for storage areas and associated levees.
- 0.69 mile of additional road raises ranging from 2 to 4 feet.
- 9.0-acre reduction in disposal stockpiles; the material would be used in levee construction.
- Four additional spillways along the levee system to allow for peak flow storage.

### Recreation Plan Features

- Three multipurpose recreational trail loops combining for a total of approximately 7 miles of paved or compacted gravel trails.
- 4.3 miles of canoe trails in two segments, the north being 1.3 miles and the south 3 miles.
- One scenic overlook, two interpretative sites, and birding stations.
- A total of 9 miles of off-road vehicle trails of different levels of difficulty.
- Restrooms, potable water, picnic facilities, grills, and parking at the off-road vehicle trailhead where the project intersects with Highway 11.
- 5 acres of hardwood planting for trail head and park areas.
- Planting of 25 acres of wooded areas near trails.

## 7. Systems / Watershed Context

The study area was limited to the City of Roseau, the areas surrounding the city, and along the river from Malung to Roseau Lake. Within this context, the study team developed/evaluated planning objectives and alternatives for flood damage reduction, ecosystem restoration, and recreation. The recommended plan includes storage areas because the sponsor is sensitive to the perception of induced flooding. The plan has no significant impacts to the watershed. Minnesota DNR and the U.S. Fish and Wildlife Service helped determine the environmental impacts and provided input into the Environmental Assessment. The recommended plan would have no negative impacts on the watershed ecosystem. No formal agency partnership was created as a part of this study.

## 8. Environmental Operating Principles

The feasibility study was conducted in accordance with the Environmental Operating Principles. Alternatives were developed with a thorough consideration of impacts to the environment and society while meeting project objectives and constraints. Impacts to the environment were minimized through coordination with appropriate Federal, state, and local agencies. The channel and levee alignments were

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adjusted to minimize impacts to wetlands, forests, and homesteads. Impacts to society were minimized through public involvement and coordination with the City and stakeholders. Comments received through the public involvement process were considered for implementation and addressed as appropriate. Selection of the recommended plan balanced economic feasibility with potential environmental and societal impacts.

### **9. Independent Technical Review**

The independent technical review (ITR) was performed by the Rock Island USACE District and formally concluded in January 2006. The ITR resulted in 138 comments, all of which have been resolved and closed. Primary ITR issues were related to the environmental analysis and inconsistencies throughout the document.

**EXPECTED PROJECT PERFORMANCE**

**1. Project Costs**

See page 2, paragraph 6 for project costs in October 2006 price levels.

See table 3 for a list of project first costs.

**TABLE 3  
ALLOCATION OF TOTAL PROJECT COSTS  
ROSEAU, MINNESOTA FLOOD DAMAGE REDUCTION PROJECT  
(October 2005 price levels)**

Item	Federal (\$) NED	Non-Federal (\$)			Total (\$)
		NED	LPP (Increment)	Total	
Flood Damage Reduction					
Lands and Damages	102,000	1,924,000	1,958,000	3,882,000	3,984,000
Relocations	999,000	3,493,000	0	3,493,000	4,492,000
Channels and Canals	8,007,000	0	427,000	427,000	8,434,000
Levees and Floodwalls	1,616,000	0	287,000	287,000	1,903,000
Planning, Engineering, & Design	2,083,000	514,000	131,000	645,000	2,728,000
Construction Management	742,000	415,000	58,000	473,000	1,215,000
Cash Contribution	-995,000	995,000	<u>1/</u>	995,000	0
Total FDR	12,554,000	7,341,000	2,861,000	10,202,000	22,756,000
Recreation					
Lands and Damages	0	0	0	0	0
Relocations	0	0	0	0	0
Recreation Facilities	1,312,000	0	0	0	1,312,000
Planning, Engineering, & Design	238,000	0	0	0	238,000
Construction Management	111,000	0	0	0	111,000
Cash Contribution	-830,500	830,500	0	830,500	0
Total Recreation	830,500	830,500	0	830,500	1,661,000
Total Project	13,384,500	8,171,500	2,861,000	11,032,500	24,417,000

1/ The non-Federal sponsor will be responsible for 100 percent of the costs associated with the LPP increment by paying the Corps for the additional costs associated with design and construction (currently estimated at \$903,000) and providing all additional LERRD (currently estimated at \$1,958,000).

## 2. Equivalent Annual Costs and Benefits

See page 2, paragraph 6 for project costs in October 2006 price levels.

Table 4. Project Costs and Benefits Recommended Plan

Item	Flood Damage Reduction	Recreation	Total Costs
<b>Investment Cost</b>			
Total Project Costs	22,756,000	1,661,000	24,417,000
Interest During Construction <sup>1</sup>	1,173,720	85,670	1,259,390
Total	23,929,720	1,746,670	25,676,390
<b>Average Annual Cost</b>			
Interest and Amortization <sup>2</sup>	1,336,189	97,531	1,433,720
OMRR&R	54,998	12,828	67,826
Subtotal	1,391,187	110,359	1,501,546
<b>Average Annual Benefits</b>			
Monetary (FDR) & (Recreation)	2,265,300	2,074,900	4,340,200
Net Annual Benefits	874,100	1,964,500	2,838,600
Benefit-Cost Ratio	1.63	18.79	2.89
FDR Benefit-Cost Ratio (at 7%) <sup>4</sup>	1.24	14.6	2.21

<sup>1</sup> Two year period of construction

<sup>2</sup> Based on October 2005 price levels, 5 1/8 percent rate of interest, and a 50-year period of analysis

<sup>3</sup> Operation, Maintenance, Repair, Replacement, and Rehabilitation

<sup>4</sup> Per Executive Order 12893

The project will reduce the overall flood damages for all flood events by nearly 86 percent. However, this still results in an average annual residual damage of \$312,000. The majority of the city will benefit from the project, as more than 95% of the city would be removed from the 100-year regulatory floodplain. In addition, the diversion channel will reduce stage for all flood events, not just the design event, putting the city in a favorable position to flood fight those events larger than the design event.

### 3. Cost Sharing

See page 2, paragraph 6 for project costs in October 2006 price levels.

Table 5. Cost Sharing Totals  
**Estimated Implementation Costs** (October 2005 price level)

<b>Federal</b>	
Corps of Engineers - flood damage reduction (65%)	\$12,554,000
Corps of Engineers - recreation (50%)	\$830,500
Corps of Engineers - total	\$13,384,500
<b>Non-Federal</b>	
City of Roseau - flood damage reduction (35%) <sup>1, 2</sup>	\$7,341,000
City of Roseau - recreation (50%)	\$830,500
City of Roseau - locally preferred plan (100%)	\$2,861,000
City of Roseau - total	\$11,032,500
<b>Total</b>	<b>\$24,417,000</b>

<sup>1</sup> \$6448000 of this amount is LERRD credit and the remainder is cash

<sup>2</sup> This is greater than 35% due to the cost of the LERRDs and the required 5% cash contribution

### 4. Project Implementation

The non-federal sponsor for project implementation is the City of Roseau, Minnesota. The non-federal sponsor's responsibilities will be defined in a Project Cooperation Agreement. There are no institutional arrangements with the state or other partners in this project. However, the State of Minnesota will be providing a large portion of the funds used by the City of Roseau on this project.

### 5. Operation, Maintenance, Repair, Rehabilitation, and Replacement (OMRR&R)

The City of Roseau will operate and maintain the project in accordance with the procedures and schedules set forth in an Operation and Maintenance manual. The total estimated annual cost of operation, maintenance, repair, rehabilitation, and replacement for the recommended plan is \$67,826, which includes both flood control and recreation features. Maintenance would consist of annual inspections of and repairs to the project permanent levees, diversion channel, bridges, and recreation facilities. Operation would include the operation of gated culverts and the servicing of all project structures. No major rehabilitation or replacement of project features during the 50 year period of analysis is anticipated.

### 6. Key Social and Environmental Factors

Much of the City of Roseau is located within the floodplain of the Roseau River. The area immediately outside of Roseau consists mainly of farmed lands, with the occasional small pockets of woodlands and wetlands providing minimal habitat value. The recommended plan is approximately 4.5 miles long and will be traversing mainly through these farm lands. A small number of wetlands will be impacted by the project alignment and no separable mitigation will be needed. The project was designed to create wetlands which will more than offset any impacts from the recommended plan.

The woodlands in the project area are small and disconnected from other woodlands by roads and farm fields. The project will require the removal of a small number of woodlands, these impacts will be offset

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by plantings associated with the recreational features. The City of Roseau has also indicated that it would be willing to take additional measures if unforeseen issues were to arise.

The plan is not expected to affect the game or non-game fish species in the Roseau River. There will be minimal impacts to the riparian habitat at the channel inlet and outlet but those are expected to be a temporary condition as the area would quickly repopulate.

Concerns were raised during coordination regarding fish stranding and changes to channel morphology. Due to these concerns two monitoring plans will be developed. One will monitor the diversion channel and storage areas following use for fish stranding. The second monitoring plan will take surveys of cross sections on the river to verify that changes to the channel and sediment flushing are taking place as expected. If they are not, a series of structural solutions is available to alleviate the problem, which will need to be implemented in a timely manner by the non-federal sponsor. Adaptive management and collaborative planning with the Minnesota Department of Natural Resources, the U.S. Fish and Wildlife Service, Corps, and the City of Roseau will be used to ensure that problems, if any, are adequately addressed.

Construction of the recommended plan would have beneficial effects by reducing flood damages and would not significantly affect the quality of the human environment. An EIS is not required and a FONSI has been issued. Following construction the diversion channel and levees will have a grass cover, which will require periodic mowing, and some trees will be planted in the project corridor to enhance recreation.

## **7. Stakeholder Perspectives and Differences**

The Roseau River Feasibility Study was conducted as a partnership between the City and the St. Paul District. The partnership included extensive coordination with numerous groups including federal, state, county, township, and city agencies; businesses, landowners, the media, and the general public. The study had an email distribution list of 22 people with a mail distribution list of 944 interested parties.

Public outreach and coordination activities conducted as part of this study include:

- Study Newsletters: March 2005; June 2005
- Study website: <http://www.mvp.usace.army.mil/Roseau>
- Public Open House Meetings: April 2004, April 2005, July 2006
- Formal environmental coordination with Federal, State, and Local Resource Agencies

Environmental coordination activities resulted in the identification of potential project impacts. Public involvement activities resulted in identification of several local concerns that influenced development of alternatives, selection of, and modifications to the recommended plan.

All stakeholder concerns have been resolved. There were some public suggestions focusing on the diversion channel going through the city park and removing the woodlands there versus going through the campsites. Additional public concerns were related to flows on the north end of the diversion where flows from Hay Creek enter into the Roseau River, the project. The study team will keep both of those remaining concerns in mind during the design phase.

The proposed Chief of Engineers report was circulated for State and Agency review on 25 September 2006. The 30-day review period ended 25 October 2006. In a letter dated 27 October 2006, the Department of Interior did not object to the proposed project. In a letter Dated 22 November 2006 the State of Minnesota expressed support for the project and did not offer any comments on the proposed project. In a letter dated 26 September 2006, the U.S. Department of Homeland Security, FEMA did not object to the project and offered comments on the

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Environmental Assessment. A Corps response letter addressing these comments was provided to FEMA on 20 November 2006. The Environmental Protection Agency offered no comments via phone on 13 November 2006 and in an e-mail dated 14 November 2006 the Department of Agriculture had no comments to offer.