



ADJOURNED COUNCIL MEETING AGENDA
October 03, 2011 - 5:30 PM
City Hall Council Chambers

Adjourned City Council Meeting

1. Flood Mitigation Project Discussion _____

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Mayor and Council Communication

October 3, 2011

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SUBJECT: Flood Mitigation Project Funding Discussion

RECOMMENDATION: The Mayor and City Council are asked to discuss the City of Moorhead's future flood mitigation strategy; in particular, the City's funding commitment to the proposed projects (Base, A-F).

Staff recommends that the City Council approve the proposed financing plan which includes sufficient local funds for immediate execution of the Base Project and Projects A-C.

BACKGROUND / KEY POINTS: On July 11, July 18, August 29, September 12, and September 26, 2011, the Mayor and Council received, discussed, and/or acted on various aspects of the City's future flood mitigation strategy. For reference, all information provided to the City Council, and video of each meeting, have been made available on the City's website at: http://www.cityofmoorhead.com/city_services/engineering.asp.

The proposed future flood mitigation projects include voluntary backyard mitigation, voluntary property acquisition, and construction of City infrastructure (e.g. levees, floodwalls, road raises, storm sewer gates, etc). The projects include the Base Project and Projects A-F.

Based on previous discussion, the following points are relevant:

- As endorsed by the Mayor and Council, the City's flood mitigation objectives are:
 - to become less dependent on external resources that take time to secure and mobilize, and
 - to construct permanent flood mitigation improvements that permit implementation/activation in a much shorter time and reduce the need to rely on large scale temporary measures.
- Over the last two years, in excess of \$37M has been committed to flood mitigation.
- *Up to \$16.5M* in additional Flood Damage Reduction (FDR) grant funds have been authorized for the City. Access to these funds requires, at a minimum, an additional local match of approximately \$4.3M.
- The Mayor and Council have directed staff to move forward with the Base Project (targeted acquisition of flood prone properties and previously identified infrastructure). To satisfy DNR eligibility criteria, the minimum local match is approximately \$6.8M.
- The DNR is processing a grant amendment to access \$12M of the *up to \$16.5M* in additional Flood Damage Reduction grant funds. Access to the balance of these funds (\$4.5M) will be dependent on the timing of the City's allocation/expenditure of the first \$12M and other flood damage reduction funding needs throughout the State.

- ❑ In order to meet the local match requirements, special assessments (Minnesota Statutes Annotated, Chapter 429) are necessary. Other funding sources and/or financing mechanisms are not readily available and/or cost-effective. It is not necessary for the City Council to select a specific special assessment model at this time.
- ❑ Alternate special assessment models are available and/or can be developed.
- ❑ The proposed projects provide a clear vision toward a flood risk reduction goal equivalent to the USACE 100-year flood event river stage of 42.5 feet. The proposed projects will significantly reduce, but not completely eliminate, the need for temporary measures. If all of the proposed improvements are completed, advance preparation could be reduced to less than two weeks and possibly less than one week.
- ❑ The proposed projects establish a clear vision for future flood mitigation. The proposed projects prioritize risk reduction and maximize flexibility to work individually with property owners to achieve mutual flood risk reduction objectives. Flexibility is achieved through voluntary participation in acquisition or backyard mitigation.
- ❑ Backyard mitigation is a priority element of the future strategy. However, backyard mitigation must be implemented on a voluntary basis.
- ❑ Over 8,000 properties receive benefit of reduced flood risk with the proposed projects. Approximately two-thirds of those properties receive benefit from reduced surface flooding risk. The remaining one-third receives benefit from reduced risk of sanitary sewer backup or loss of service.
- ❑ The estimated market value of all properties receiving the benefit of reduced flood risk from surface flooding is near \$1B and the estimated market value of all properties receiving the benefit of reduced flood risk from sanitary sewer backup or loss of service exceeds \$2B.
- ❑ The proposed projects reduce the risk to the City's General Fund Reserve, the City's primary revenue source to execute the flood plan, by reducing the need for temporary measures. From 2009 through 2011, the cumulative cost to fight floods is \$10.7M (before Federal/State reimbursements which to date total \$5.4M). Perpetuating this on-going risk is unacceptable and poses a significant threat to the City's General Fund Reserve.
- ❑ The proposed financing plan, to complete all projects (Base, A-F) includes approximately \$21M in local funds and \$35M in FDR grant funds (\$16.5M available, \$18.5M to be requested).
- ❑ Future FDR grant funding for the current mitigation efforts is uncertain. If the proposed projects are funded entirely with future FDR grant funds (with the exception of the required local match), the work will not be completed for years. A local overmatch or advance of future FDR grant funds would allow completion of all proposed work within the next two to three years.
- ❑ Requests for future FDR grant funding for current mitigation efforts may conflict with requests for future FDR grant funding for the FM Metro Flood Risk Reduction (Diversion) Project.

FINANCIAL CONSIDERATIONS: Execution of the proposed strategy (Base Project and Projects A–C) will reduce the City’s financial risk to on-going operations as well as the risk associated with a devastating flood event. If accomplished, the level of risk reduction proposed will provide a positive message for future residential and commercial development within the City. Additionally, funding the Base Project and Projects A-C will permit the City to expeditiously proceed with planned work in Projects D-F when future DNR funding becomes available. While the short-term mitigation costs are significant, these costs can and will be shared equitably throughout the City.

VOTING REQUIREMENTS: Majority of Quorum

Disclaimer: Voting requirements may be subject to changes in the law, parliamentary procedural matters, or other unforeseen issues. The City Attorney provides opinion on questions of voting requirements in accordance with the Moorhead City Code, Minnesota State Statutes, and parliamentary procedure.

Respectfully Submitted:



Michael J. Redlinger
City Manager

Department: Administration
Prepared by: Michael Redlinger, City Manager

Attachments: Draft Resolution
Proposed Projects & Acquisitions
Flood Mitigation Funding Alternatives



Request for Council Action

AGENDA SECTION:		ORIGINATING DEPARTMENT: Administration	MEETING DATE: October 03, 2011
ITEM NO. 1.	ITEM DESCRIPTION: Flood Mitigation Project Discussion		PREPARED BY: Redlinger

DRAFT RESOLUTION

WHEREAS, the Mayor and City Council have previously endorsed the City's flood mitigation objectives, which include the following:

- o to become less dependent on external resources that take time to secure and mobilize, and
- o to construct permanent flood mitigation improvements that permit implementation/activation in a much shorter time and reduce the need to rely on large scale temporary measures; and

WHEREAS, after committing \$37M in State and local funds to flood mitigation projects in 2009, 2010, and early 2011, the Mayor and City Council desire to further reduce temporary flood protection measures, such as sandbags and clay contingency levees, and related costs; and

WHEREAS, additional flood mitigation projects in the Base Project and Projects A-C will potentially reduce sandbag needs by 1,401,000 sandbags and 41,790 cubic yards of clay contingency levees in future flood events; and

WHEREAS, the cost savings to the General Fund Reserve for these additional mitigation projects will result in a savings of up to \$5.6M in a future flood event.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Moorhead, Minnesota that the Mayor and City Council approve the City's Base Project and Projects A-C and authorize staff to immediately execute the mitigation plan for the Base Project and Projects A-C.






PASSED: October 03, 2011 by the City Council of the City of Moorhead.

Attachment 3 Proposed Future Flood Mitigation Projects and Priority Property Acquisitions


Legend

Property Parcel Description

Sandbag Stage

-  Not Applicable
-  39 Feet and Below (Priority Acquisition)
-  40 Feet
-  41 Feet
-  42 Feet and Above

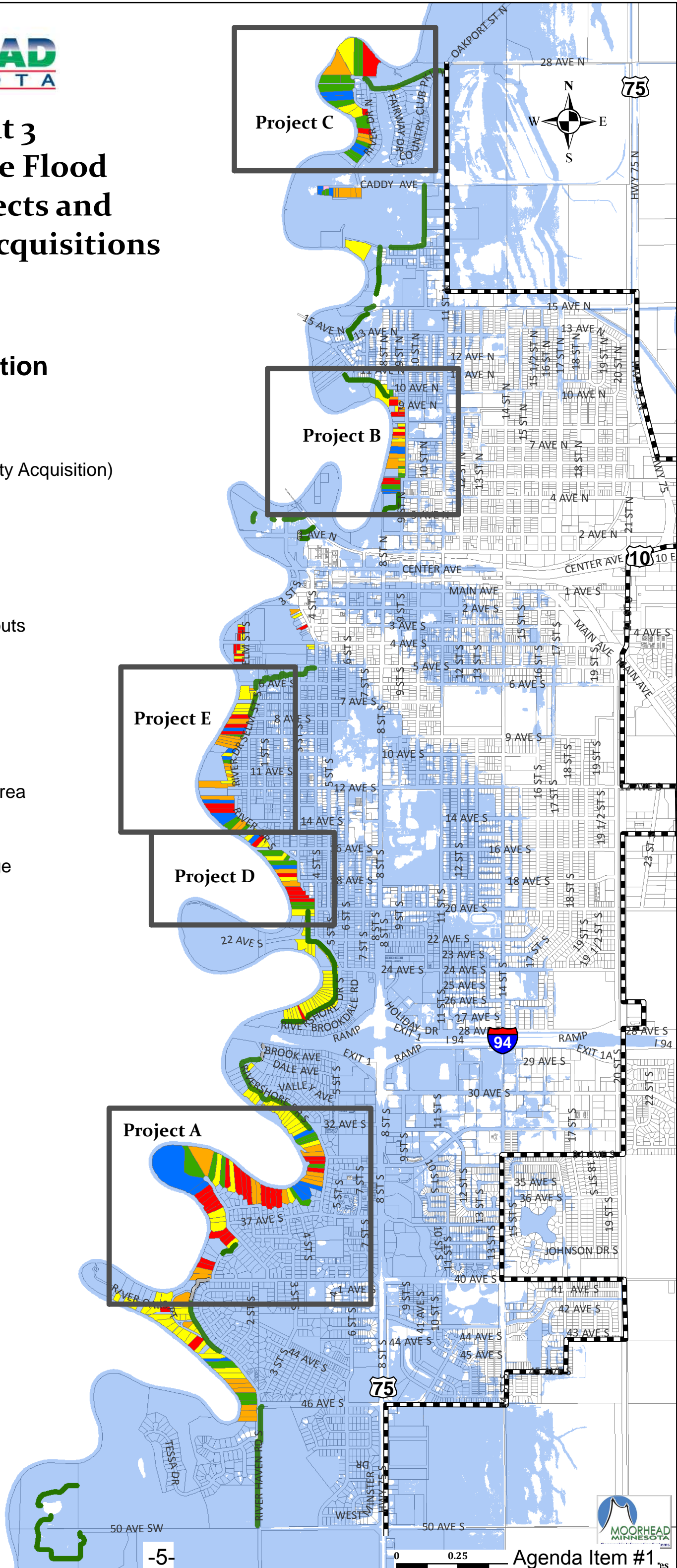
 Completed Property Buyouts

 Completed \ Contracted
Permanent Levees

 Floodwalls

 Sanitary Sewer Service Area

 43 Foot River Flood Stage



Phases							
Phase	1	2	3	4	5	6	7
Projects included (see description below)	Base	Base, A	Base, A-B	Base, A-C	Base, A-D	Base, A-E	Base, A-F
Properties included	54	75	93	110	119	142	177
Voluntary acquisition requests	35	43	49	60	62	69	82
Backyard mitigation Likely or May Be Feasible	14	21	23	31	34	41	64
Backyard mitigation Unlikely Feasible	39	53	68	77	83	98	110
Sandbag reduction (top elevation of 45 feet river stage)	1,036,000	1,167,000	1,273,000	1,401,000	1,470,000	1,646,000	1,940,000
Residual sandbag needs (top elevation of 45 feet river stage)	1,365,000	1,234,000	1,128,000	1,000,000	931,000	755,000	461,000
Days to produce sandbags (85,000 bags/day)	16.1	14.5	13.3	11.8	11.0	8.9	5.4
Days to deploy sandbags (360,000 bags/day)	3.8	3.4	3.1	2.8	2.6	2.1	1.3
Estimated sandbag savings (\$3 per bag)	\$3,108,000	\$3,501,000	\$3,819,000	\$4,203,000	\$4,410,000	\$4,938,000	\$5,820,000
Contingency levee reduction, CY	12,150	32,520	36,700	41,790	46,920	51,690	60,690
Residual contingency levee needs, CY	67,850	47,480	43,300	38,210	33,080	28,310	19,310
Days to construct contingency levees (2 crews @ 4,800 CY/crew/day)	7.1	4.9	4.5	4.0	3.4	2.9	2.0
Estimated contingency levee savings	\$425,250	\$1,138,200	\$1,284,500	\$1,462,650	\$1,642,200	\$1,809,150	\$2,124,150
Estimated total savings	\$3,533,250	\$4,639,200	\$5,103,500	\$5,665,650	\$6,052,200	\$6,747,150	\$7,944,150
Properties outside the line of temporary protection measures	35	9	9	9	2	2	0

Uses of Funds							
Infrastructure Projects	\$5,805,000	\$7,498,000	\$8,431,000	\$9,521,000	\$10,375,000	\$11,462,000	\$11,762,000
Property Acquisition	\$13,538,000	\$19,868,000	\$22,364,000	\$27,783,000	\$29,976,000	\$34,564,000	\$43,781,000
Total	\$19,343,000	\$27,366,000	\$30,795,000	\$37,304,000	\$40,351,000	\$46,026,000	\$55,543,000

Sources of Funds							
DNR Flood Damage Reduction Grant	\$12,543,000	\$16,500,000	\$16,500,000	\$16,500,000	\$19,547,000	\$25,222,000	\$34,739,000
G.O. Improvement Bond	\$6,800,000	\$10,866,000	\$14,295,000	\$20,804,000	\$20,804,000	\$20,804,000	\$20,804,000
Total	\$19,343,000	\$27,366,000	\$30,795,000	\$37,304,000	\$40,351,000	\$46,026,000	\$55,543,000

Special Assessments							
Total assessed, \$	\$1,360,000	\$2,173,200	\$2,859,000	\$4,160,800	\$4,160,800	\$4,160,800	\$4,160,800
Total area, acres	2,521.75	2,521.75	2,521.75	2,521.75	2,521.75	2,521.75	2,521.75
Term, years	10	10	10	10	10	10	10
Interest rate, %	5%	5%	5%	5%	5%	5%	5%
Special assessment rate, \$/acre	\$539	\$862	\$1,134	\$1,650	\$1,650	\$1,650	\$1,650
Minimum/Single Family assessment principal (0.25 acres), \$	\$135	\$215	\$283	\$412	\$412	\$412	\$412
Year 1 payment	\$20	\$32	\$43	\$62	\$62	\$62	\$62
Maximum assessment principal (5 acres), \$	\$2,697	\$4,309	\$5,669	\$8,250	\$8,250	\$8,250	\$8,250
Year 1 payment	\$404	\$646	\$850	\$1,237	\$1,237	\$1,237	\$1,237

Other Sources							
Water Fund, capital transfer	0.5%	0.5%	1.0%	2.0%	2.0%	2.0%	2.0%
Wastewater Fund, \$ per month	\$0.25	\$0.25	\$0.50	\$1.00	\$1.00	\$1.00	\$1.00
Stormwater Fund, \$ per month	\$0.25	\$0.25	\$0.50	\$1.00	\$1.00	\$1.00	\$1.00
Capital Improvement Fund, \$ per year	\$100,000	\$300,000	\$350,000	\$400,000	\$400,000	\$400,000	\$400,000
Levy, \$ per year	\$150,000	\$185,000	\$200,000	\$225,000	\$225,000	\$225,000	\$225,000

Approximate monthly cost-Single Family property within the benefiting area, \$ per month	\$2.50	\$3.50	\$5.00	\$8.00	\$8.00	\$8.00	\$8.00
Approximate monthly cost-Single Family property outside the benefiting area, \$ per month	\$0.75	\$0.75	\$1.50	\$3.00	\$3.00	\$3.00	\$3.00