Testimony of Matt Pedersen, Valley City Commissioner

&Valley City Permanent Flood Protection Task Force Chairman

Water Topics Committee

Senator Tom Fischer, Chairman

October 10, 2011

Impacts of Recent Flooding Events:

Stayed Dry but at a High Cost - $38,000,000

2009 Flood Executive Summary:

- **Costs to Protect Valley City**
  - Emergency Dike Construction and Flood Preparation: $6,250,000
  - Removal of Dikes, Sandbags and Debris: $7,000,000
  - Repairs to Streets and Sanitary Sewer: $8,250,000
  - **Total** **$21,500,000**

- **Other Costs Incurred as a Result of the 2009 Flood:**
  - Valley City State University (VCSU) $823,000
  - Mandatory closing of non-essential businesses $6,000,000
  - Valley City Parks & Recreation damage $200,000
  - Mercy Hospital $361,000
  - **Total** **$7,384,000**

Other Notable 2009 Flood Facts:

- 4/14/09: Evacuation of several hundred people including elderly and residents living behind contingency dikes
- 4/17/09: Sanitary sewer failed requiring residents to use porta-potti's for several weeks
- 450 ND National Guard personnel protected Valley City supported by US Coast Guard and ND Game & Fish

2011 Flood Executive Summary:

- **Costs to Protect Valley City**
  - Emergency Dike Construction and Flood Preparation: $5,170,000
  - Removal of Dikes, Sandbags and Debris: $1,800,000
  - Repairs to Streets and Sanitary Sewer: $1,750,000
  - Buildings and Utilities $80,000
  - **Total** **$8,800,000**

What's at Risk?

Both the 2009 and 2011 spring floods mirrored the 500-year flood eventmodeling of approximately 21 feet. At 21 feet, the below table illustrates the real estate that is subjected to extensive loss if an emergency levee were to fail.

	Floodway	100 Year Floodplain	500 Year Floodplain	Total
Residential	11,065,800	38,111,200	17,932,900	67,109,900
Commercial	8,932,100	14,419,800	16,878,500	40,230,400
Exempt (estimated)*	30,249,586	54,995,997	24,682,435	109,928,018
Total	**$50,247,486**	**$107,526,997**	**$59,493,835**	**$217,268,318**

** - Notable Exempt properties include 9 VCSU buildings ($40,549,618), Mercy Hospital ($35,000,000), Valley City Auditorium and Recreation Center ($9,000,000), Post Office ($3,000,000), Washington Elementary School ($6,000,000) and the City Hall/Police/Fire Station Complex ($5,500,000). The value of several exempt churches are not included in above detail.*

The above table summarizes why **permanent flood protection is a priority 1 investment in Valley City**to diminish the risk of catastrophic loss caused by inferior emergency levies, Hesco containers and sandbags.

Valley City can't continue to bet our future on the durability of such inadequate, temporary flood protection.

Devils Lake Imminent Threat:

- The ever-increasing **risk of Devils Lake requires significant investment of mitigation funds in Valley City**to protect our community and ensure public safety.

- **Less than 900,000 acre-feet of storage remain**before natural overflow of 1,458 through Stump Lake. The spring inflows of 2009 and 2011 were approximately 600,000 acre-feet each. Prior to spring 2009, the average inflows into Devils Lake were 250,000 acre-feet annually. As a result, the remaining storage equates to:

    - Natural overflow in spring 2013 (1 average year of inflows and 1 spring equivalent to 2009 or 2011)
    - Or, natural overflow in spring 2015 (4 average years of inflows)

- **Increased outlet capacity**via expansion of West-end outlet, new pump-based east-end outlet and planned gravity-based outlet through Stump Lake **will dramatically increase the risk of flood damages**both during spring melt and summer rain events that occurred in 2011.

Research and Analysis:

- The Valley City Commission formed a Permanent Flood Protection Task Force (Task Force) in 2010 comprised of community and business leaders chaired by Commissioner Matt Pedersen

- The Task Force has **partnered with theUS Army Corps of Engineers (Corps)**on a Reconnaissance Study to determine federal interest in a project in Valley City. The **Reconnaissance Study concluded Valley City has a significant and growing need for flood protection given the risks of Devils Lake.**

- The Task Force has been **working closely with the ND State Water Commission**on more short-term solutions such as building clay levees where Phase 1 and Phase 2 buy-outs would occur starting in 2012. The ND State Water Commission is **analyzing the feasibility of permanent flood protection where Phase 1 and Phase 2 buy-outs are scheduled to occur**as well as more long-term solutions like straightening the river channel in two key locations and reducing the impacts of all the bridges.

- The Task Force has been **working with a leading flood wall company**that designed and manufactured the flood walls used in East Grand Forks, MN. They have identified several areas in Valley City where **there solution would work perfectly**. Primarily, we are considering their product **on the campus of VCSU and along Main Street to protect downtown**.

Proposed Investments in Valley City's Future:

Short-Term (12 – 18 months):

Phase 1 Buy-out Program:

VISION:

- Increase public safety
- Dramatically reduce the dependency on sandbags and Hesco containers
- Lower risk of flood damage to neighborhoods and key community assets like the downtown business district and VCSU
- Increase efficiency of emergency levee construction
- Reduce disruption associated with contingency dikes
- Enable permanent flood protection long-term

The Phase 1 buy-out properties were selected due totheir proximity to the river's edge and the inferior levees that are built behind **them posing extra risk to public safety, neighborhoods and key assets like the downtown business district and VCSU.**

By conducting our Phase 1 buy-out program, Valley City's **dependence on sandbags and Hesco containers would be almost eliminated.** Sandbag Central is an excessive drain on our community, especially Valley City High School and VCSU students.

Thebuy-out program represents the **first step we can take to protect the greater community and enable permanent flood protection.**

The ND State Water Commission is analyzing placing permanent flood protection in the buy-out areasand this report should be available in the February 2012 timeframe.

These buy-outs will provide an efficient path for emergency clay levee operations until permanent flood protection is constructed with assistance of State and/or Corps funding.

INVESTMENT COST: $3,600,000

SCOPE: 32 structures along the river's edge including 27 single-family homes, 4 apartment buildings and 1 commercial building

Medium-Term: (18 – 36 months):

Phase 2 Buy-out Program, Protect VCSU and Downtown Business District:

VISION:

- **Conduct Phase 2 of home buy-outs**
- **Protect university district**through a series of flood walls and permanent clay levees along College Street and 5th Ave, SW
- **Protect downtown business district**with a permanent clay levee along 4th St, SW and 4th St, SE and a flood wall along Main Street
- **Address erosion concerns**along Main Street and College Street and other priority areas

INVESTMENT COST: $19,850,000

SCOPE:

	University District	**Downtown District**
Phase 2 buy-outs:	$1,350,000	---
Permanent clay levees:	$3,500,000	$3,000,000
VCSU flood wall:	$5,000,000	---
Main Street flood wall:	---	$4,000,000
Storm sewer modifications:	$2,000,000	$1,000,000
Total	**$11,850,000**	**$8,000,000**

Long-Term: (36+ months):

Permanent Flood Protection as Envisioned by Corps and ND State Water Commission

VISION:

- Continue with buy-outs as necessary to support permanent flood protection not already covered in Phase 2 above.
- Construct clay levees where determined feasible by Corps and/or ND State Water Commission
- Implement necessary improvements to storm sewer system

INVESTMENT COST: $20,000,000 - $30,000,000

SCOPE: The necessary measures as identified in the Corps Feasibility Study and ND State Water Commission analysis. This phase requires more analysis and engineering to firm-up costs.

Valley City's Key Asks of the State of North Dakota:

Immediate Needs (2011 – 2012):

1. **$3,600,000 for Phase 1 buy-outs**necessary to mitigate and prepare for future flooding exacerbated by Devils Lake and prolonged wet cycle. Several property owners want to be bought-out now to avoid a 2012 spring flood. **All of the 32 Phase 1 buy-out candidates agree to be bought-out in 2012** assuming a fair offer currently based on 110% of city assessed value prior to 2009 flood damage.
2. **$325,000 - $550,000 to cover 100 percent**funding of Valley City's 50 percent**local cost-share with the Corps on a pending Feasibility Phase**. The final cost estimate of the Corps Feasibility Study is expected to be available in December 2011.
3. ND State Water Commission to complete analysis of placing permanent flood protection where Phase 1 buy-outs occur.
4. Strong state support to **fast-track upstream retention on the Sheyenne River's main stem near Cooperstown** as identified by Moore Engineering. We would request that the **ND State Water Commission fund the engineering for the feasibility phase.**

Upcoming Needs (2012 – 2014):

1. **$8,850,000 – $11,850,000 to protect the VCSU district of Valley City**inclusive of Phase 2 buy-outs, permanent clay levees along 5th Ave, SW and parts of College Street, flood walls along College Street and necessary storm sewer modifications. The ND State Water Commission is studying this much-needed investment currently except the storm sewer modifications.
2. **$8,000,000 to protect the downtown business district** through a series of clay levees along 4th St, a flood wall and erosion protection along Main Street and necessary storm sewer modifications.
3. Begin construction of **Sheyenne River upstream retention**project if state-funded feasibility study determines it to be a viable project.

Future Needs (2014 and beyond):

1. **$20,000,000 - $30,000,000** to implement additional measures as identified by the ND State Water Commission analysis and Corps Feasibility Study. **Early engineering estimates determined an extensive permanent flood protection solution for Valley City would cost $40,000,000 to $50,000,000 with approximately $20,000,000 - $23,000,000 of it being consumed in Phases 1 and 2** as detailed above. These estimates do not include investments in upstream retention.