
2012

COMMITTEE ON NATURAL RESOURCES

NEBRASKA LEGISLATURE

LR 495

Interim Study Report

**Interim Study to Examine the Flood Control Needs of
Omaha and the Greater Omaha Metropolitan Area**

ONE HUNDRED-SECOND LEGISLATURE

SECOND SESSION

NATURAL RESOURCES COMMITTEE MEMBERS

Senator Chris Langemeier, Chairperson

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LR 495

NATURAL RESOURCES COMMITTEE DECEMBER, 2012

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 - LAURIE ZOOK, HDR ENGINEERING
 - MICHAEL SOTAK, FYRA ENGINEERING
 - GORDON ANDERSON, CITY OF OMAHA
 - MARK STURSMA, CITY OF PAPIILLION
 - PAUL WOODWARD, OLSSON ASSOCIATES
 - JOHN WINKLER, PAPIO-MISSOURI RIVER NRD
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MEMORANDUM

TO: NATURAL RESOURCES COMMITTEE MEMBERS
FROM: SEN. CHRIS LANGEMEIER, CHAIRMAN
DATE: DECEMBER, 2012
SUBJECT: LR 495

As you know, the Natural Resources Committee held a public hearing on October 9, 2012, at the Papio-Missouri River Natural Resources District office, to receive testimony on LR 495. This interim study resolution was introduced by Sen. Heath Mello of Omaha to review the metropolitan area's flood control needs and the role the natural resources districts (NRDs) play in meeting those needs. This memo provides an overview of the information the committee received at the hearing, including presentations, to which there are links on the index page above, that provide more detailed content.

Background

The risk of flooding is high in the Omaha metropolitan area, evidenced through a number of studies conducted since the mid-1960s when extensive flooding in the Papillion Creek Watershed resulted in significant losses to the area. At that time, the U.S. Army Corps of Engineers developed a plan for flood control reservoirs in the Papillion Creek Watershed that included 21 proposed dams throughout the 402 square mile watershed in Washington, Douglas, and Sarpy Counties. Five dams (Cunningham, Zorinsky, Standing Bear, Candlewood, and Wehrspann Lakes) were built by the Corps, and two more were constructed by the Papio-Missouri River NRD.

In 2001, the Papillion Creek Watershed Partnership (PCWP) was created to address issues related to water quality and stormwater quantity by establishing regionally common goals and standards for the watershed through 2040, according to the Partnership's official mission statement. The PCWP is comprised of a group of cities (Omaha, Bellevue, Bennington, Boys Town, Gretna, La Vista, Papillion and Ralston), Douglas and Sarpy Counties, and the Papio-Missouri River NRD.

Improved stormwater management within the Papillion Creek Watershed has been the ongoing objective of the PCWP since its formation.

Flooding Threats

Sen. Mello invited testifiers to the hearing to provide technical information, including representatives from the Papio-Missouri Natural Resources District, the local governing bodies of Omaha, Papillion, Sarpy County and Bellevue, and engineering firms involved with flood control projects in the metropolitan area. Much of the testimony focused on current flood threats and the projects that are being utilized to address them.

According to testifiers, there are two major flood threats: the Papillion Creek Watershed, and the Missouri River. Urbanization of these areas increased the amount of runoff that has been managed by floodplain management, levees, reservoirs and conservation practices. The problem is that growth is expected to continue. In fact, engineers have estimated that within the next 30 to 40 years a majority of the land in the watershed will be developed. The message at the hearing was that time is running short for flood control improvements within the watershed. According to Laurie Zook of HDR Engineering, current measures will not meet future needs, and increased urbanization has added to already serious flood and water quality concerns. More dams need to be built and a watershed plan needs to be followed.

Options for Addressing the Threats

Ms. Zook explained the need for low-impact development methods (LIDs) to the committee (which include landscape features, drainage methods, bio-retention, pervious pavement) and how floodplain boundaries could be improved with proper watershed management. An additional goal of watershed management is to decrease the floodplain boundaries to remove homes and businesses from areas where there is a high flood risk. The flood control methods used must be recognized by the Federal Emergency Management Agency (FEMA), which develops the maps designating floodplains on which flood insurance requirements are based.

In 2009, the Papillion Creek Watershed Partnership (PCWP), with input and feedback from stakeholders and the public, formulated a Watershed Management Plan. The PCWP recommends structural (dams) and non-structural measures (LID strategies). This plan consists of strategies for water quality improvements, low-impact development and the design and construction of 12 water quality basins and 15 regional detention basins to provide early flood protection to the city of Omaha and surrounding areas. It is estimated that it would cost \$376 million, in 2010 dollars, for the implementation of the watershed plan. Under the plan, projects have been prioritized based on their flood reduction benefits to surrounding areas. Current projects include:

- Damsite 15A, a 225-acre lake, is to be located on the North Branch of West Papillion Creek in Douglas County near 168th and Fort Street.
- WP-5, a 133 acre lake, will be located in Sarpy County near 126th and Cornhusker Road.

Additionally, the Papio-Missouri River NRD is working with FEMA on levee accreditation of R613 and R616, which are potential floodplain areas along the Missouri River.

Non-metropolitan Citizen Perspective

A representative from the 600-member Papio Valley Preservation Association (PVPA) testified that residents are concerned about the use of condemnation for these projects on their land, particularly when the development that caused the problems did not occur in rural areas of the district. The PVPA holds that there is not adequate rural representation on the NRD's board of directors, and believe that surrounding counties do not partner with the Papio-Missouri River NRD because they disagree with the project plans and that there are other flood control methods that could be utilized rather than building new dams, including encouraging builders to be more efficient and consider flooding in their planning.

Follow-up

At this time, there are no plans to address this specific issue in legislation. The committee plans to stay informed on the Papillion Creek Watershed Partnership's progress.