

Dave Heineman
Governor

STATE OF NEBRASKA
DEPARTMENT OF NATURAL RESOURCES
Brian P. Dunnigan, P.E.
Director

IN REPLY TO:

October 18, 2011

Senator Barbara Boxer, Chairman
United States Senate
Committee on Environment and Public Works
Washington, DC 20510-6175

Dear Chairman Boxer and Committee Members:

I am Brian Dunnigan, Director of the Nebraska Department of Natural Resources, the state agency responsible for administering Nebraska laws pertaining to floodplain management and dam safety. Nebraska is one of the states affected by this year's flooding in the Missouri River Basin and I would like to speak with you about the cooperative response efforts of states in the basin to this year's historic flooding and unprecedented flows, as well as Nebraska's experience and response, and the U.S. Army Corps of Engineers response to the flooding.

Interstate Coordination

I would like to begin by reporting that the Governors or their representatives from eight Missouri River Basin states met with the Corps in Omaha yesterday to coordinate their efforts and actively address needed matters related to Missouri River flooding. This was not the first meeting of the group, as most of the Governors also attended an August 19 meeting in Omaha to discuss concerns related to the flood.

In that first meeting, Governors or their representatives from seven of the eight states signed a letter indicating a clear consensus that flood control must be the highest priority in operation of the Missouri River Mainstem System. It also strongly requested that the Corps thoroughly examine future management of the river in light of this year's precipitation and flooding and report to them on alternate actions to reduce future high flow events. Finally, it requested that the Corps provide recommendations for specific operational changes to afford greater future flood protection and consult with the States and Tribes in selecting and implementing any changes. In yesterday's follow-up meeting the Governors discussed opportunities to increase future flood control focus and discussed recovery priorities and coordination.

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One point that can be taken from these meetings is that the Basin's Governors are very serious about taking action to reduce the risk of future flooding and the level of future flood damages as well as address recovery priorities.

One outcome I hope to see come from future efforts is improved communication in both the spring rise situations where flooding becomes a possibility and during the emergency flood situation itself. Flooding not only has major economic, health and safety implications for our states, but involves a wide spectrum of state and local government responses where having the best possible information as soon as possible can help result in better and more cost effective decision making.

To help you better understand those state and local responsibilities, as well as what we faced, I would like to report to you on our Nebraska experience with and response to this year's unprecedented flows and flooding.

Nebraska Flood Response

I don't want to dwell on the runoff totals for the 2011 Missouri River flood event, since the Corps and others are best positioned to discuss that. I will simply note that an August 4 Corps News Release referring to runoff above Sioux City noted: *"Runoff for the calendar year is projected to reach 61.8 MAF, 249 percent of normal. The previous record of 49 MAF was reached in 1997."* While the projected runoff total represents a major increase from the previous record, the timing of the runoff was also very significant. Despite discussions on system operation, the reservoir system did provide the major benefit of reducing peak flows.

One challenging facet of the 2011 Missouri Basin flood in Nebraska occurred relatively early in the flood season when we faced major flooding challenges at opposite ends of the state. While much of the discussion on Missouri River flooding has revolved around mainstem reservoir system operation, the North Platte River in Nebraska also receives much of its inflow from the northern portion of the Rockies and ultimately flows into the Platte and then into the Missouri well downstream of the reservoir system. When Nebraska established an emergency operations center in May we were faced with the prospect of providing sandbags and securing helicopters that could provide emergency assistance and repairs at both the far western and far eastern margins of the state. The Corps provided timely assistance with those emergency needs.

We don't have a full reliable tally of damages at this time, but we have received data on over \$155 million in public infrastructure damages eligible for assistance. We had a disaster declaration for thirteen counties along the Missouri River and another three counties in the North Platte Basin at the other end of the state. Currently six highway bridges over the Missouri River from Nebraska into surrounding states are still closed, although this is due to accessibility of bridge approaches and not structural damages to the bridges themselves. In addition to damages to private structures and public infrastructure, we have significant cropland and other land

damages. With that being said, our neighbors in Iowa have a much higher amount of land in the floodplain as the bluffs are typically closer to the river on the Nebraska side of the river. In that regard we were relatively fortunate.

Corps direct assistance to the State of Nebraska and local governments during the course of the flood was substantial. This included over two million sandbags in addition to heavy bags, pumps and other assets. The Corps provided \$6.8 million in emergency contracts for risk reduction measures. Corps mitigation activities included contracts for North Platte, Dakota City, South Sioux City, Bellevue and Omaha. Much of that involved levee related work.

U.S. Army Corps of Engineers Flood Response

I believe any assessment of Corps response to this year's flooding needs to take into account the unprecedented nature of the flows and the overall long term benefits operation of the Missouri River Mainstem system has brought to our basin. The Corps operates a complex system with eight authorized purposes and many of its decisions are dependent upon operational criteria in its master manual. This is not an easy task. The new data and viewpoints generated by the flooding have not only deepened our commitment to flood control in Nebraska but have provided information that will need to be considered by the Corps as they manage the river in the future.

Overall, our experience with Corps activities during the flood was positive. I contacted our Nebraska Emergency Management Agency Director on his experience and he indicated that the Corps had been very responsive and that they had experienced no problems with the Corps. We generally received invaluable assistance from Corps personnel and are very appreciative of its assistance on levees and emergency mitigation. We do have some suggestions for future Corps activity and hope to work with the Corps as they assess the 2011 flood and examine how it might affect future operational options. Some of those suggestions I have already detailed when discussing the activities and requests of the eight state governors. Some additional relatively more technical suggestions include the following:

- I would like to reemphasize my earlier suggestion and examine options for improved communications with the Corps during the spring and flood situations.
- I suggest the Corps work diligently to see flood control storage is available at beginning of upcoming runoff seasons. There is a need to further discuss options for reducing flood risk in the upcoming 2012 season. Can the System be operated by either keeping the storage on March 1st below the 56.8 MAF, or keeping the 56.8 MAF for a longer period, or a combination of both to provide some insurance for flood control in 2012? On March 1st this year system storage was at 57.6 MAF approximately 0.8 MAF into the annual flood control zone. When feasible, an effort should be made to more fully examine the effect of different operational criteria on potential future flood damage reductions and

other authorized purposes. We are also very supportive of current Corps damage assessment and repair activities.

- There is a need to incorporate data from 2011 flood into all analysis and decision making in as timely a manner as practicable. The five inflow scenario simulations presented in the draft 2011 -2012 Annual Operating Plan use the 1898 – 2006 historical period to derive inflows. It is uncertain why the period was not updated to include the remaining years through 2011. We recognize that 2011 is not yet over, but it would be possible to project the final months. I suggest that if practicable, the Corps consider updating the period this year rather than waiting until next year.
- I would suggest the Corps examine options for considering wet and dry cycle influence and Weather Service long-range outlooks in conjunction with their future runoff projections. In the most recent years we have been in a wet cycle in terms of runoff and that combined with high water levels in the system and damages that have occurred bring a heightened sense of concern to the 2012 season. In some situations the Corps may need to consider adjusting releases before winter conditions limit flexibility.

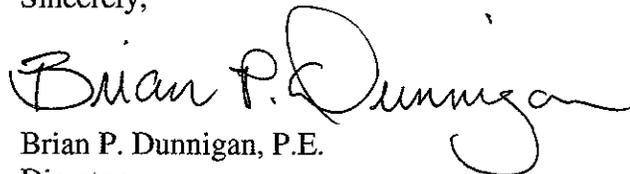
I would suggest the Corps consider simulating 1% or 2% flood recurrence intervals to assist in assessing consequences of extreme runoff levels.

Overall, it is very important that the Corps address the Governors' request to thoroughly examine future management of the river in light of this year's precipitation and flooding, and report to them on alternate actions to reduce future high flow events.

Closing Remarks

While a thorough examination of the 2011 Missouri Basin flood will likely identify some areas where different actions could have been taken, the most important controllable outcome is how we incorporate new data and perspectives into future decision making in terms of both mainstem system operation and how those of us in the basin prepare and respond. In Nebraska, it has resulted in a strengthened focus on flood control as a system priority. We look forward to working with the Corps of Engineers as they reexamine activities and options in light of the new information and basin priorities.

Sincerely,



Brian P. Dunnigan, P.E.
Director