Responses to False Information on the Diversion Project

March 2013

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1. Retention / Distributed Storage will eliminate the need for the upstream staging area.	Distributed storage will not eliminate the need for the Storage Area of the Fargo-Moorhead (FM) Area Diversion Project. The current and recommended plan includes 215,000 acre feet of retention directly upstream of the project. This is the most effective and efficient retention, which is necessary to mitigate for the downstream impacts that were associated with previous diversion options. To be effective at reducing peak floods at Fargo-Moorhead, retention must be located in the "early" or "middle" drainage area of the Red River Valley, which is basically along the Red River south of Fargo-Moorhead in Cass, Clay, Richland, and Wilkin counties. Modeling performed by the U.S. Army Corps of Engineers, Houston Engineering, and Moore Engineering estimates that 400,000 to 600,000 acre feet of retention upstream of the diversion would be required to replace the 215,000 acre feet of retention included in the recommendation. In addition, Local Water Resource Districts in North Dakota have completed a sensitivity analysis for the 2009 flood event on the Wild Rice River that demonstrated how distributed storage is not a viable option to replace the storage component of the diversion channel. Modeling showed that if this option were pursued for the Wild Rice River, nearly all of the distributed storage would need to be placed in eastern Richland County. Additionally, even if this occurred, the distributed storage would not be enough to replace the storage required for the diversion channel. These results could also be applied to other tributaries and Wilkin County. Therefore, the direct impacts to Richland and Wilkin Counties would be much greater with distributed storage than with the current recommendation. Additional upstream retention could help reduce the frequency of use of the Fargo-Moorhead (FM) Area Diversion Project. The Red River Basin Commission recommends construction of a diversion to endure a successful 500-year flood fight, supplemented by retention. The Diversion Authority has pledged $25 Million to upstream retention projects that demonstrate this benefit.

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2. The Staging Area is not needed (land immediately south of Fargo is better used as staging area).	The staging area is required to mitigate the downstream impacts that were associated with previous diversion options. The downstream impacts associated with the previous plan extended into Canada and would have impacted more structures and more land than upstream staging. The current upstream staging location minimizes the number of residential properties that are impacted by the project, and is the best technical solution. If the staging area was moved north to other areas it would impact more residential properties, than are being impacted by the current proposal. The Post-Feasibility study examined moving the staging area north of the confluence of the Wild Rice and Red River. It was concluded that moving the staging area north would impact approximately 170 more residential properties than the current proposed location as more rural developments exist closer to Fargo. It was determined that the staging area will impact the same area regardless of its location (FRP: 33,930 ac, Preferred alignment: 32,523 ac, VE13 Option C: 32,383 ac).
3. Staging Area will be a dead zone (farm land out of commission, no growth allowed in that area). Project will create a total dead zone for the Kindred School District.	The Staging Area will not be a dead zone. Farming will continue in the staging area. The staging area will only operate under flood events larger than a 10-year event, which means there is a 1 in 10 chance in any year that the staging area would be used. This means that, on average, 9 in 10 years, the staging area would not be used. In addition, in the 10 percent chance that the staging area is used, the additional duration of flooding would be approximately a maximum of 5.5 days. As stated in Appendix G Real Estate, page 6, of the FEIS, in areas with less than one foot of flooding for the one-percent chance (100-year) event (approximately 3,486 acres), future residential development would be allowed if raised above the 0.2 percent chance (500-year) event elevation. With the project designed to allow farming to continue and with a ring levee around Oxbow, Bakke and Hickson, effects on the tax base to the Kindred School District is estimated to be minimal. The project would not create a total dead zone for the district.
4. This project only benefits Fargo.	92 percent of Cass County residents (more than 138,000 people) will benefit from this Project.

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	This project benefits the vast majority of Cass County. Once the Diversion is built, the Cass County cities of Oxbow, Briarwood, Prairie Rose, Frontier, Wild Rice, Horace, Reile's Acres, Harwood, West Fargo, and Fargo will no longer be threatened with flooding. In addition, Clay County including the cities of Moorhead and Oakport will receive benefits from the Project.
5. This project is only to protect Fargo's growth in the floodplain. ("Fargo land grab") (Diversion channel location was chosen based on this - farther south than the MN alignment).	The Diversion alignment was selected for technical and policy reasons. The design intent was to benefit as much existing development as possible, while minimizing overall impacts to the floodplain and the environment, while at the same time, minimizing costs. The southern diversion alignment was located to keep flood water out of the Rose Creek watershed by capturing overland flows south of Fargo, to stay south and west of the existing Sheyenne River Diversion control structure at Horace, ND and to include Horace on the benefitted side. The alignment continues due east to minimize the length and cost of the southern embankment and to reduce the long term risk to the benefited communities. The diversion outlet was located downstream of the mouth of the Sheyenne River to maintain natural drainage within the benefitted area. The channel alignment north and west of Harwood, ND was adjusted to avoid Drain 13, as requested in a petition from local landowners. In general, to the extent possible, the alignment avoids existing structures and crosses rivers and major roads and railroads at right angles. The City of Fargo follows all Federal floodplain management and flood insurance program rules and has actually adopted rules for development that exceed what is required under Federal and State law. The project was designed to provide benefits to the existing infrastructure and not for future development. A small amount of future development was included in the economic analysis, consistent with Corps policy, based on current growth rates, all future development was assumed

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	to be constructed consistent with Federal and State law above the one percent chance (100-year) floodplain, and represents a small portion of the economic benefits.
6. Farmers won't be treated fairly. They will only get $800/acre payment and won't be able to get insurance.	Title III of the Federal statute entitled Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), as amended, imposes certain requirements on the acquisition of property for federally funded projects. Federal processes will be followed to acquire real estate interests (fee title or easements) for the project. The draft Agriculture Impacts Mitigation Plan covers **flowage easements** and **crop insurance** and defines ways to compensate landowners for the impacts of water retention from the Diversion Project's operation. **Flowage Easements** Flowage easements required will follow the Federal Process. • A flowage easement would give the Diversion Authority the legal ability to retain water temporarily on land. • Value of a flowage easement on an individual property will follow Federal/USACE process and will be determined by appraisal. Factors that will be considered are depth, duration, and frequency of additional flooding and highest and best use of the property. • Corps policy defines a flowage easement as a one-time payment made at the time that the easement is acquired, currently estimated in 2020. • Appraiser may consider future impacts including delayed planting, yield loss, debris, and limitations to future land use, resulting from operation of the Project. • Values of flowage easement will vary depending on the location of the property, magnitude of impacts, and future risks to the property. • Flowage easements will allow for farming to continue on properties, however development will be limited. • The Corps' Feasibility Study estimated Ag flowage easements at 25 percent of land costs – this is an average, the actual value will be adjusted to reflect current valuation of each property when easements are acquired.

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	Crop Insurance • There is a 90 percent chance that the staging area will not be used in any given year, and for the 10 percent chance that the staging area will operate in any year, additional flooding will exist for approximately a maximum of 5.5 days beyond existing conditions. • Federal crop insurance will apply if a crop can be planted before the established late planting dates. • The Diversion Authority intends to provide a supplemental risk policy. The draft policy provides equivalent crop insurance coverage as growers have today. • The risk policy will cover prevent plant scenarios where Project operation would prohibit planting. • The risk policy would also cover damages caused by project operation to planted crops (summer impacts). • The Diversion Authority will base its risk policy on federal crop insurance programs administered by the Risk Management Agency (RMA)/USDA. • RMA policies and procedures will be used to define insurance coverage for damages caused by the Diversion Project. • The Diversion Authority intends to contract with an independent insurance provider to administer the coverage and damage adjustment process. • The Diversion Authority will explore self-insurance vs. supplemental insurance through a provider.
7. This project hasn't looked at all the options. There is a better plan out there.	All viable options have been considered and no evidence has been presented by any party that demonstrates otherwise. A three-year study led by the Corps of Engineers, including local engineering firms, found that a diversion was the only concept that could significantly reduce flood risk in the Fargo, ND-Moorhead, MN area from flood events larger than the 2009 event. A diversion channel is the safest and most robust flood risk reduction option available because no matter the size of the flood, a diversion channel will provide some benefits. When floods exceed the capacity of levees and dams, the results can be catastrophic. A number of

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	alternatives, including levees and water retention, were analyzed before a diversion channel was recommended. The Fargo area lacks high ground to begin and end levees, and that limits the potential levee height. As such, the largest cost-effective levee plan could only be certified up to the two-percent chance (50-year) event. This alternative was estimated to cost $900 Million (for 50-year protection) left an intolerable level of remaining risk, so the levee alternative was dropped from consideration as a stand-alone alternative. For greater levels of protection, a ring levee would have to be built around the cities of Fargo and West Fargo, ND, making this option cost prohibitive. Flood storage was also considered. Water resource managers in the Red River Basin estimated in the Fargo-Moorhead and Upstream Feasibility Study that up to a total of 400,000 acre-feet of flood storage (or 40,000 acres covered with 10 feet of water) could be constructed at various locations upstream of Fargo-Moorhead at a cost of approximately $600 Million. Such a system of storage sites would reduce the 100-year flood crest at Fargo by less than two feet. The proposed diversion would reduce the 100-year flood stage in Fargo by 12.4 feet. As such, the risk reduction provided by retention does not even come close to matching that offered by a diversion channel. The Corps will continue to seek ways and consider input on how the impacts of the project can be minimized. The ideas will be evaluated based upon project benefit, project cost, imposed risk, function, bid-ability, constructability, operability & environmental impacts. The federally recommended plan meets these conditions and is the only path forward that will provide reliable and robust flood protection to the FM Area. Any remaining impacts caused by the project will be mitigated appropriately following federal rules as a minimum.

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8. Drainage west of alignment will back up on farm land.	Drainage will be similar to what occurs now in most areas and will likely be improved for events smaller than a one-percent chance (100-year) event. Detailed local drainage plans have been developed for channel reaches currently under design and will be developed for future reach designs. Drainage features of the Diversion Project will include drainage channels constructed parallel to and outside of the Excavated Material Berms (EMBs) for the entire length of the project. The purpose of the drains is to pick up drainage off of the EMBs as well as local drainage approaching the project from either side. The project will be designed to minimize impacts to tributaries, especially for smaller, more frequent flood events. The design goal is to not change the one-percent chance (100-year) floodplain outside of the diversion. The project will include measures to capture and direct flows along the tieback levees to the diversion channel.
9. The Diversion Authority and Corps of Engineers haven't allowed for public input.	The Diversion Project has been studied for over three years and over 50 public meetings have been held in that time, including monthly Diversion Authority board meetings made up of publicly elected officials from Cass and Clay County; along with the Cities of Fargo, West Fargo and Moorhead. During the Feasibility Study, the Corps responded to over 1,600 pages of comments made by approximately 430 Agencies and members of the public. In addition, there have been numerous neighborhood meetings where property owners within the staging area were invited to attend, listen, and ask questions. During the feasibility phase 51 public meetings have been held to inform and gather input from November 2008 to June 2011. Nine public meetings have also been held to specifically address upstream concerns from December 2010 to January 2013. The Diversion Authority and Corps of Engineers have also conducted small group meetings with individuals impacted by the construction and operation of the Diversion and will continue to do so in order to mitigate impacts and ease other concerns. The project website www.FMDiversion.com

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	also offers a transparent look at all the documentation used by elected officials to make their decisions and allows the ability for the public to ask questions and receive answers.
10. Minnesota doesn't need this project.	In recent flood planning meetings, the Mayor of Moorhead indicated that if the river goes to 38 feet, Moorhead will need 33,000 sandbags. In addition, Moorhead would require 1,000,000 sandbags to provide protection for a 42.5 foot flood. Minnesota, and Moorhead in particular, will receive significant benefits as a result of this project. The Diversion Project will reduce the City's flood risk for extreme events beyond the limits of recent and planned flood mitigation projects. Although the planned level of protection in most areas within the City is certifiable to the current FEMA 100-year event, it is not certifiable to the USACE 100-year event. The Diversion Project is complementary to Moorhead's recent and planned improvements, provides a higher level of certifiable protection, and will result in only minimal effort for a 500-year event flood fight. The Diversion Project also provides benefits to the entire Fargo-Moorhead Metropolitan Area, resulting in benefits to much more than just Fargo and Moorhead.
11. The Sponsors/Corps made up data (hydrology used to define the new 100-year flood, funky economics).	No data was made up for this study, and all information and data has been reviewed by independent experts. In addition, all information has been publically provided and there has been no indication that information was made up. The Corps and FEMA are not in disagreement over the proposed project, and in the future FEMA and the Corps will base their information on the modeling completed by the Corps as part of the FM Area Diversion Project. The primary difference between the current Corps and FEMA numbers is that the FEMA hydrology dates back to the later 1970s, while the Corps hydrology is up to date. In addition the Corps worked with national experts (EOE) to include the analysis of wet and dry

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<tr><td></td><td>periods into the analysis; although this work was included the results were not significantly different than if the traditional method of utilizing the entire period of record (POR) was used. The information for both is reflected in the table below. It is anticipated that either the USACE EOE or POR will be adopted by FEMA in the future for floodplain mapping purposes.

<table>
<tr><th>Event</th><th>RRN Discharge (cfs) at USGS Gage at Fargo, ND</th></tr>
<tr><td>100-year FEMA</td><td>29,300</td></tr>
<tr><td>100-year USACE EOE</td><td>34,700</td></tr>
<tr><td>100-year USACE POR</td><td>33,000</td></tr>
<tr><td>500-year FEMA</td><td>50,500</td></tr>
<tr><td>500-year USACE EOE</td><td>61,700</td></tr>
<tr><td>500-year USACE POR</td><td>66,000</td></tr>
<tr><td></td><td></td></tr>
<tr><td>1997 Historic</td><td>28,000</td></tr>
<tr><td>2009 Historic</td><td>29,500</td></tr>
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</td></tr>
<tr><td>12. Since the opponents' area/location of Staging Area has never flooded, opponents are currently safe from all future floods.</td><td>Determining if something is safe and free of hazards is dependent on each person perspective of the situation. The people along the gulf coast felt they were "protected" until Katrina hit. The people in Minot, ND felt they were "protected" until snow melt and rainfall event (estimated to be a 450-year event) overwhelmed the system and they were flooded.

The same situation is probably present with the area within the staging area and the residents feeling "protected" because they haven't been flooded. At some point, an event will happen that the people living in the area have never experienced. To aide in predicting the potential of an event, the Corps develops hydrologic and hydraulic computer models, calibrated to historical events, to predict flood levels for future event based upon various flood frequencies. Armed with</td></tr>
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	the knowledge of the possible future events, which is based upon sound engineering and science principles, action plans can be developed to reduce the risks to the population. The 2009 flood of record crested at 40.8 feet at the Fargo Gage, which based upon the computer modeling is approximately a two-percent chance (50-year) event. The 2009 flood threatened nearly the entire metro area with a complete disaster situation. Based upon modeling, the 100-year event would increase the gage level to 42.5 feet and would impact the area greater than a 50-year event. A 500-year event would increase the gage level once again and impact a greater area. In conclusion, just because someone hasn't experienced a "big" flood doesn't mean the probability of the "big" flood doesn't exist.
13. The Project includes a 50,000 acre pool/reservoir	The upstream 100-year inundation with the Project in place is 50,750 acres of which 32,602 acres would already be flooded under existing conditions (without a Project in place). The 100-year inundation within the Staging Area with the Project in place is 32,600 acres of which 15,600 acres would already be flooded under existing conditions.
14. Upstream is not against the Project, just the dam part.	The upstream coalition has stated that they are not against the Project but instead are against the upstream staging part of the Project. They do believe that the Fargo-Moorhead area is in need of permanent flood protection, but do not support upstream staging. The diversion channel and upstream staging are one in the same and the overall project would not be feasible without the diversion channel and the upstream staging. Upstream staging is required to efficiently move the excess water from the Red River into the diversion channel. Without the upstream staging, the diversion channel would not efficiently convey the water around the Fargo-Moorhead metro area.
15. The Project cost of $1.78 Billion will	The cost estimate for the FM Area Diversion Project was conservatively developed. Lessons learned from other Corps projects such as Grand Forks/East Grand Forks, Roseau and

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double by the time it is constructed.	Wahpeton/Breckenridge were incorporated by completing more technical research and analyses during the Feasibility Study. Conservative decisions were made and a contingency of 26 percent (or $360 Million) was applied to account for unknowns. In addition, as noted previously, the Diversion Authority recently completed an updated cost estimate for all project components. The updated cost estimate validated a total project cost of $1.78 Billion. This estimate included current land cost valuations, all cost savings associated with recent design changes and a $200+ Million program contingency. Regarding cost escalation, to date, approximately $100 Million in cost savings have been identified. We anticipate being able to drive additional cost savings through detailed design of additional project elements. As noted, however, time is the enemy for large infrastructure projects, such as the FM Area Diversion Project. It is important to note that for the Grand Forks/EGF project, the 1998 cost estimate was $350.5 Million and the cost at completion in 2012 was $380 Million, an 8.4 percent increase that is below the rate of inflation for that timeframe. The Grand Forks/EGF project has prevented more than $1 Billion in damages. In addition, the Wahpeton/Breckenridge projects cost approximately $66 Million and have prevented more than $133 Million in damages, resulting in a 200 percent rate of return on investment.
16. The massive aqueduct structures cost estimates are questionable and have only been constructed in Europe. They must be designed to carry all the river flow at peak spring flood levels.	Substantial design and analysis was performed during the Feasibility Study (FEIS) to determine that the aqueduct structures are feasible, the most appropriate for the application, and to a level of detail to develop the “not likely to be exceeded” cost estimate, which includes a 26 percent contingency. Design information developed during the FEIS can be found at: http://www.fmdiversion.com/eis_consultants_report.asp. The aqueducts will be a bridge-type structure, approximately 50 feet wide by 20 feet high. In comparison, an adjacent highway bridge required across the diversion will be approximately 38

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	feet wide by 21 feet high. The North Platte Nebraska Hydro Power Project includes an aqueduct structure. In times of flood, the aqueduct structures will NOT carry all of the river across the diversion channel. They will pass approximately the two-year flow (1,700 cfs); the remaining river flow will be passed through the spillway to the diversion channel. The US Army Corps of Engineers have the skills, ability and experience to design the structures required for this project. These attributes are fully supported by the various centers of expertise (ex: US Army Cold Regions Research and Engineering Laboratory) available to St. Paul District for this project. USACE has designed and constructed more complex and expensive structures than what is being proposed for the FMM Project; an example being those required for the project in New Orleans and for locks and dams.
17. Construction of levees to 42.5 feet will provide adequate protection for the City of Fargo.	The 42.5 foot level of protection is equivalent to approximately 50-year protection that is not certifiable, which is simply an insufficient level of protection for the City of Fargo. Certifiable flood protection is needed to avoid costly flood insurance. Levees alone are not feasible to provide the required level of protection. The City of Fargo is working diligently to construct levees in town where feasible. All of the in-town levees are complimentary to the FM Area Diversion Project and will help reduce the need for emergency flood protection measures such as sandbags.
18. Fargo chose to place the diversion on the North Dakota side and the Army Corps preferred the Minnesota side.	The Corps must identify the National Economic Development (NED) plan which is the plan that provides the greatest net national economic benefit consistent with protecting the Nation's environment. The NED plan was a 40,000 cubic feet per second (cfs) diversion channel on the Minnesota side. The Corps can recommend a different plan for construction, which was a 35,000 cfs diversion channel on the North Dakota side. The North Dakota diversion channel protects from the effects of six rivers (Red, Wild Rice, Sheyenne, Maple, Rush, Lower Rush) and provides benefits

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	to more people and infrastructure than the Minnesota diversion (the benefits to Fargo were similar with both plans). This recommendation was approved at the highest level of the Corps of Engineers.