## Evaluation of NWS Twin Cities, MN Products and Services During the 2010 Spring Flood

Responses to this survey are completely voluntary.

- 1. What is your affiliation?

   \_\_\_\_\_\_Federal Government
   \_\_\_\_\_\_\_State Government
   \_\_\_\_\_\_County Government

   City Government
   Other \_\_\_\_\_\_\_
- 2. How important is hydrology and weather information in determining your daily activities?
  - \_\_\_Very Important
  - \_\_Important
  - \_\_\_Somewhat Important
- 3. How important was hydrology and weather information to your responsibilities prior to and during in the flood.
  - \_\_\_Very Important
  - \_\_Important
  - \_\_Somewhat Important
- 4. Did you attend a NWS flood outlook briefing or use the Probabilistic Flood Outlook products, prior to the flood.
  - <u>Yes</u> No
- 5. If yes, were you able to make decisions and plans based on the Flood Outlooks? If so, what decisions were you able to make and what were the impact of those decisions?
- 6. What technologies do you use to access weather and hydrology information from the National Weather Service? (Check all that apply)
- \_\_\_ Emergency Managers Weather Information Network (EMWIN)
- Interactive Weather Information Network (IWIN)
- \_\_\_\_NWS Twin Cities Main Website (<u>http://water.weather.gov/ahps2/index.php?wfo=mpx</u>)
- \_\_\_\_NWS MN Flood Briefing Webpage (<u>http://www.crh.noaa.gov/mpx/?n=springflooding</u>)
- \_\_\_ NWSChat
- \_\_\_\_AHPSMobile/iNWS website (http://ahpsmobile.wrh.noaa.gov/ or

http://inws.wrh.noaa.gov/)

- \_\_NWS Emails and Briefings
- RSS Feeds
- \_\_\_ NOAA Weather Radio (NWR)
- \_\_NOAAPORT
- <u>Commercial Weather Information Vendor</u>

7. Rank your preferred method of accessing hydrology and weather information both prior to and during this flood event. (1 being the most preferred followed by 2, etc...)

| Method                         | Prior To The Flood | During the Flood |
|--------------------------------|--------------------|------------------|
| WFO Twin Cities Website        |                    |                  |
| AHPSMobile/iNWS website        |                    |                  |
| Webinars (as needed)           |                    |                  |
| Emails briefings/notifications |                    |                  |
| Call the WFO NWS Twin          |                    |                  |
| Cities Office                  |                    |                  |
| NWSChat                        |                    |                  |
| NOAA Weather Radio             |                    |                  |
| Weather Information System     |                    |                  |
| (EMWIN, IWIN,                  |                    |                  |
| NOAAPORT, Comm.                |                    |                  |
| Vendor)                        |                    |                  |
| Other Media Sources (T.V. /    |                    |                  |
| Radio, etc)                    |                    |                  |
| Other Methods                  |                    |                  |

If you used "other methods" to accessing hydrology and weather information, could you elaborate?

8. If you used the MN Flood Briefing webpage

(<u>http://www.crh.noaa.gov/mpx/?n=springflooding</u>), did it provide you the supplemental information, in addition to the NWS AHPS pages (<u>http://water.weather.gov/ahps2/index.php?wfo=mpx</u>), you needed to make flood related decisions? If not, what additional information would have been of value to include in this webpage.

9. A blend of Webinars and Email briefings were used provide information during the flood. Did you attend a NWS Flood Webinar Briefing and/or use the Flood Briefing Emails, during to the flood?

<u>Yes</u> No

- 10. If yes, was this approach effective?
- \_\_\_\_Prefer the blend of webinars and Email briefings
- \_\_\_\_Prefer Email briefings only

\_\_\_\_Prefer Webinars only

Please elaborate if you had any specific comments regarding your response.

11. Regarding the Webinars and Email briefings, what decisions did you make or reconsider with the information you gained from these briefings? Were the impacts of these decisions of significance?

12. Was there additional information that you needed for key decisions that was not provided via the traditional weather and hydrology products or via the webinars and briefings? If so, what was that additional information?

- 13. How reliable was the hydrology and weather information provided by WFO Twin Cities?
  - \_\_\_\_Very Reliable
  - Reliable
  - Somewhat Reliable
- 14. How timely was the hydrology and weather information provided by WFO Twin Cities?
  - \_\_\_\_Very Timely

Timely

Somewhat Timely

| Product                | Very<br>Satisfied | Satisfied | Neutral | Dissatisfied | Very<br>Dissatisfied | Not<br>Applicable<br>(N/A) |
|------------------------|-------------------|-----------|---------|--------------|----------------------|----------------------------|
| <b>River Flood</b>     |                   |           |         |              |                      |                            |
| Warnings               |                   |           |         |              |                      |                            |
| Areal Flood            |                   |           |         |              |                      |                            |
| Warnings for           |                   |           |         |              |                      |                            |
| Ice Jams               |                   |           |         |              |                      |                            |
| Areal Flood            |                   |           |         |              |                      |                            |
| Warnings for           |                   |           |         |              |                      |                            |
| Non Forecast           |                   |           |         |              |                      |                            |
| Point River            |                   |           |         |              |                      |                            |
| Flooding               |                   |           |         |              |                      |                            |
| Flash Flood            |                   |           |         |              |                      |                            |
| Warnings for           |                   |           |         |              |                      |                            |
| Ice Jams               |                   |           |         |              |                      |                            |
| Flash Flood            |                   |           |         |              |                      |                            |
| Warnings               |                   |           |         |              |                      |                            |
| (other                 |                   |           |         |              |                      |                            |
| situations)            |                   |           |         |              |                      |                            |
| <b>River or Areal</b>  |                   |           |         |              |                      |                            |
| Flood Watches          |                   |           |         |              |                      |                            |
| Spring Flood           |                   |           |         |              |                      |                            |
| Outlooks               |                   |           |         |              |                      |                            |
| Hazardous              |                   |           |         |              |                      |                            |
| Weather                |                   |           |         |              |                      |                            |
| <b>Outlook</b> (either |                   |           |         |              |                      |                            |
| Text or                |                   |           |         |              |                      |                            |
| Graphical)             |                   |           |         |              |                      |                            |
| General                |                   |           |         |              |                      |                            |
| Weather                |                   |           |         |              |                      |                            |
| Forecasts              |                   |           |         |              |                      |                            |

## 15. How satisfied were you with WFO Twin Cities products during the flood in following areas:

16. NWS Twin Cities used a broader areal flood warning, in addition to the River Point Flood Warnings, to convey the full extent of flooding along the larger river systems (specifically the Minnesota, Mississippi and Crow Rivers). Information such as road closures was included in the product. Was this strategy of issuing a broader areal flood warning helpful?

\_Yes \_\_No

If the broader warning was helpful, was the road closure information in the warning appropriate or would referencing MNDOT's 511 website as well as a generic statement of "Please refer to your local County Website for possible road closures." be a better approach? Also, do you have suggestions for other information to include in a broader areal flood warning?

17. Do you have suggestions as to how NWS Twin Cities can improve its hydrology related products or services (respond to those that apply)

Webinar Briefings

Email briefings

**River Outlook Information** 

**River Forecast Information** 

Flood Warnings due to Ice Jams

River Flood Warnings for rivers do not receive River level forecasts (hydrographs) or are not near a River Forecast Point.

NWSCHAT (either NCRFC-Agencies Chat or MPXChat)

One-on-one conversation with NWS staff for information

18. Sharing of information not only from the NWS to Decision Makers but also from Decision Makers to the NWS in real-time was a key component to this event. What are some of the best/easiest methods for you to provide this information to the NWS?

19. What is your overall satisfaction with WFO Twin Cities' products and services?
Very satisfied
Satisfied
Neutral
Dissatisfied
Very Dissatisfied
If you are dissatisfied, why?

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