

**Wisconsin Department of Natural Resources  
Cooperating Technical Partner  
Mapping Activity Statement**

**Agreement WDNR-2003-01a – Redelineation of Floodplain Boundaries Using Updated Topographic Data, Ozaukee County**

In accordance with the Cooperating Technical Partner (CTP) Memorandum of Agreement dated September 14, 2001, between the Wisconsin Department of Natural Resources and the Federal Emergency Management Agency (FEMA), Mapping Activity Statement WDNR-2003-01a is as follows:

1. **Statement Objective and Scope:** The objective of this Mapping Activity is to redelineate detailed floodplain boundaries in Ozaukee County including incorporated communities. Delineations will be of the 1% and 0.2% annual chance floodplains and floodways for the following flooding sources: See Table 1 (attached). The Flood Profiles and Floodway Data Tables from the effective FIS report dated December 6, 1999, will be used, in conjunction with the effective hydraulic models, to produce these delineations. The Southeast Wisconsin Regional Planning Commission (SEWRPC) will delineate the floodplain boundaries for the 1% and 0.2 % annual chance recurrence intervals and the regulatory floodway boundaries on a digital work map based on Ozaukee County's 2-foot contour equivalent topographic data.
2. **Period of Performance:** The period of performance will be in accordance with Cooperative Agreement Article II. It is anticipated that activities in this MAS will start October 1, 2003 and end June 30, 2004.
3. **Funding/Cost-Sharing:** I
4. **Standards:** The following standards and documents are relevant to this Mapping Activity:
  - Topographic mapping used to delineate floodplains and floodways will be of adequate scale and topographic definition to provide reasonable accuracy. Planimetric features will be compatible with the base map (with respect to horizontal accuracy) selected by FEMA for Digital FIRM production. Topographic mapping taken from aerial photogrammetry or surveys will comply with the requirements of Appendix A of *Guidelines and Specifications for Flood Hazard Mapping Partners*, February 2002. Appendix A can be found at [www.fema.gov/mit/tsd/dl\\_cgs.htm](http://www.fema.gov/mit/tsd/dl_cgs.htm)
  - If the new topography does not reflect the same hydraulic characteristics as in the effective study, WDNR will evaluate the possible effect of the discrepancies on the BFE and regulatory floodway, and provide a report to the FEMA Regional Project Officer that summarizes these findings and makes recommendation. Resulting actions may delay the redelineation of some flooding sources.

- Work maps will comply with the requirements outlined in Volume 1, Section 1.4 of *Guidelines and Specifications for Flood Hazard Mapping Partners*, February 2002, which can be found at [http://www.fema.gov/mit/tsd/dl\\_cgs.htm](http://www.fema.gov/mit/tsd/dl_cgs.htm). The work maps should include the 1% and 0.2% annual chance floodplain boundaries, floodway limits, cross sections, BFE's, and Flood Insurance Rate Zone labels.
- Digital mapping submissions will comply with the requirements in Volume 1, Section 1.4 of *Guidelines and Specifications for Flood Hazard Mapping Partners*, February 2002, which can be found at [http://www.fema.gov/mit/tsd/dl\\_cgs.htm](http://www.fema.gov/mit/tsd/dl_cgs.htm).

**5. Products:** WDNR will make the following products available:

- Digital work maps, with 1% and 0.2% annual chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, BFE's, zone designation labels and all applicable base map features.
- DFIRM mapping files, in one of the GIS file and database formats specified in FEMA's DFIRM Specifications.
- Metadata files describing the DFIRM data, including the required information shown in the examples shown in FEMA's DFIRM Specifications.
- Complete set of plots of DFIRM panels showing all detailed flood hazard information at a suitable scale.
- Appropriate forms from *Revisions to National Flood Insurance Program Maps, Application/Certification Forms and Instructions (MT-2)*.

**6. Schedule and Milestones:**

**Milestone 1, Planning Phase (10-01-03 to 02-28-04)** Products for the first milestone to be provided to the FEMA Project Officer include:

- Documentation of the proposed source of topographic data, scale, contour interval, source/methodology, date of survey/data collection, vertical and horizontal datum's, and comparison of planimetric features with the Digital FIRM base map planned for use by FEMA.
- A written assessment of the appropriateness of utilizing the FIS flood profiles for this Mapping Activity.
- Annotated copies of effective FIRMs depicting proposed floodplain revisions.

**Milestone 2, Final Products (10-1-03 to 12-31-04):** Final products to be provided to the FEMA Project Officer include:

- The completed TSDN and accompanying data containing the information outlined in Section 5 of this Mapping Activity Statement.
- A QA/QC report documenting the results of the independent review of all computational and data processing procedures.
- Final products will be made available to FEMA in accordance with the Period of Performance defined in Section 2 of this Mapping Activity Statement.

7. **Certification:** The following certifications apply to this Mapping Activity (as appropriate):
- Topographic information will be certified by a registered Professional Engineer or Licensed Land Surveyor in accordance with 44 CFR 65.5(c).
  - If fill is to be considered in the mapping to raise land areas to or above the 1% annual chance flood elevation, certification of the fill will be provided in accordance with 44 CFR 65.5(a)(6) by the community's NFIP permit official, a registered Professional Engineer, or a Licensed Land Surveyor.
8. **Technical Assistance and Resources:** FEMA will provide copies of effective FIS hydraulic models, FEMA-issued Letters of Map Change (LOMCs), and archived engineering back-up data from FEMA's Mapping Coordination Contractor (MCC) or other contractors as assigned by FEMA for archive maintenance.

Specific technical and programmatic support from FEMA force contracts should be coordinated with the FEMA Project Officer. This may include a request for support in selection of data sources, selection of digital data accuracy standards, assessment of vertical data accuracy, selection of data collection methods, selection of sub-contractors, and GIS-based engineering and modeling training.

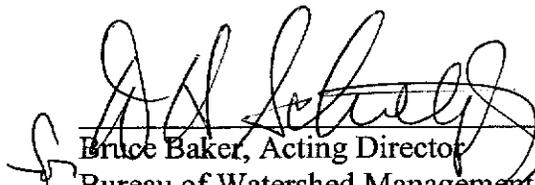
9. **Contractors:** Procurement of subcontractors using Federal funds provided as part of this Mapping Activity will comply with the requirements of 44 CFR 13.36.
10. **Quality Assurance/Quality Control (QA/QC) Procedures:** WDNR or their contractor will undertake internal QC reviews to ensure that the products described under Section 5 of this Mapping Activity Statement conform to the standards outlined under Section 4 of this Mapping Activity Statement. Additionally, an independent review for compliance with these standards will be undertaken by WDNR.

For GIS-based, automated modeling, QA/QC activities should ensure automated calculations are reasonable and in compliance with standard flood modeling and mapping approaches. WDNR will document internal QA/QC procedures to ensure all calculations and data processing were reviewed.

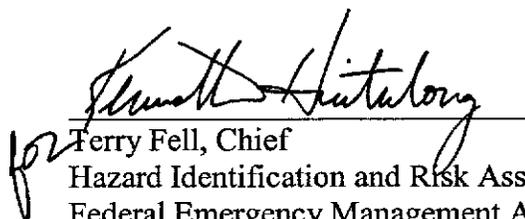
11. **Reporting:** Reporting requirements will be in accordance with Cooperative Agreement Articles V & VI. WDNR shall work with the FEMA Project Officer to establish an acceptable protocol for entry of project information into the Monitoring of Contracted Studies (MICS) database at the beginning of each project. WDNR will update MICS quarterly. If this report proves to be sufficient, the Assistance Officer may waive the written quarterly reports thereafter (reference 44 CFR Part 13.40, *Monitoring and Reporting Program Performance*). However, this shall not affect the financial reporting requirements (reference 44 CFR Part 13.41, *Financial Reporting*). The PO shall ensure that key WDNR staff have been provided access and passwords to MICS. The PO will also provide project-naming conventions for MICS. Once access is provided, MICS (including a tutorial) may be found at: <https://mics.fema.gov>.

**12. Points of Contact:** The CTP Project Manager is Alan Lulloff or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. The FEMA contacts are: Ken Hinterlong, Project Officer, and Lee Traeger, Technical Monitor.

Each party has caused this Mapping Activity Statement to be executed by its duly authorized representative.

  
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Bruce Baker, Acting Director  
Bureau of Watershed Management  
Wisconsin Department of Natural Resources

9/29/03  
Date

  
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for Terry Fell, Chief  
Hazard Identification and Risk Assessment Branch  
Federal Emergency Management Agency, Region V

September 29, 2003  
Date