FGDC CAP Grant – Category 5: Data Stewardship for the National Map

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Project Title: Building Data Stewardship for *The National Map* and the
                                        NSDI

Report Type: Interim Report

Organization: Michigan Center for Geographic Information

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Collaborating Organizations:
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Data Themes: Transportation

Project Narrative

a. Describe the project; its tasks, highlights, challenges, and accomplishments.
    What are your approaches to overcoming impediments to participation in *The
    National Map*? Based on your experience what would you recommend for
    implementation and development for project success (technical, institutional and
    organizational)?

    *The Michigan Center for Shared Solutions and Technology Partnerships (CSSTP)
    manages the Michigan Geographic Framework (MGF) program. The MGF is the
    mechanism for maintaining the State of Michigan's core enterprise spatial assets.
    Managed as a statewide, seamless, topologically-integrated base map, it includes a
    complete transportation network. The MGF is designed to promote cross-boundary
    collaborative partnerships among all levels of government to allow highly efficient and
    effective data maintenance. The MGF provides a centralized place to store and maintain
    the transportation network. This reduces duplicated efforts and thus creates significant
    cost savings. In addition, it creates common, standardized, product-enabling data-
    sharing and communications within the Geographic Information Standards (GIS)
    community. CSSTP has made great progress in developing a standardized base map,
    sharing data and collaborating in data maintenance. Over and above current successes,*

there are many opportunities this grant will allow CSSTP to explore, expand, and document.

At present, the MGF is managed and maintained in two platforms: ESRI coverage and Microsoft Visual FoxPro. FoxPro was developed in the late 1990's and has helped MGF grow into a stable program. Releasing products on an annual schedule, the program has been identified as a State of Michigan enterprise application. The current system is built on outdated technology, which the MGF has outgrown. CSSTP is in the process of moving the MGF into an Oracle Spatial 11g topology data model with an ERDAS ADE internet-editing environment. As a by-product of the migration, CSSTP wishes to capitalize on the potential role that local agencies could play in helping edit and update the MGF.

There are two main goals for this grant. The first is to identify the processes, procedures and tools necessary for increased local participation in the MGF program. The second is to promote the benefits of the collaboration for all levels of government. Specifically, this grant will be used to perform the following activities:

- *Survey the MGF user community*
- *Categorize the user community into capability groups*
- *Identify requirements for interfacing between the MGF and each group*
- *Create design plans, processes and procedures to standardize distribution of MGF changes*

The findings from the research done during this grant period will directly feed the development of the tools and procedures in new MGF editing environment. This grant will hold CSSTP accountable to the local data steward to meet their requirements. In addition, it will allow CSSTP to focus on this critical component for the growth and long-term sustainability of the MGF.

b. Describe the data connect provided to *The National Map*. Are there any use restrictions? Are your map services and data documentation (metadata) registered in Geospatial One-Stop? What is the status of maintaining, updating and serving themes of data that are included in The National Map? Based on your perspective and project experience describe user requirements for a national level spatial data infrastructure.

The data will not experience any degrading and has no restrictions. The MGF is available for free public consumption through the CSSTP Geographic Data Library website: http://www.mcgi.state.mi.us/mgdl/. However, it is not registered to the Geospatial One-Stop. The MGF transportation network is updated continuously and released on an annual schedule. Currently, there is not a formal arrangement for providing updates to the National map, but this is an area that we would like to improve through this grant.

Based on CSSTP's experience in data sharing between the State of Michigan and local Governments, we have found that the two years is the most time intensive. During this time period a data sharing agreement has to be created and the two centerline models must be reconciled. Both agencies must commit to the partnership or it will not succeed.

In addition, it must be a win-win situation. Win-lose and win- break even situations are not acceptable.

Once the centerlines have been reconciled, we have found the there must be a mechanism to communicate change. Both agencies often have business requirements and updates that change their centerline files. We have found that a primary key is the most efficient communication tool. However, there needs to be a protocol established to identify changes to the primary key value. The Michigan Geographic Framework maintains a primary key linear referencing system (LRS) for the transportation network. When the LRS values are changed, a "transaction" record is recorded. This allows us to migrate the primary keys of the connected dataset and link to the new MGF. However, this adds some complexity when editing to ensure that primary keys are not copied or removed during an editing session.

c. Describe the operational capability to maintain and update data through periodic updates of data made available to *The National Map*

The Michigan Geographic Framework (MGF) has dedicated editing staff to maintain the transportation network. If updates and changes were made to the National Map, and communicated to CSSTP, the changes would be integrated into the MGF and released to the public with the following annual delivery.

d. Discuss the issues, difficulties, and challenges (technical, institutional, and organizational) that were encountered. Do you need assistance? If so, what type of assistance do you need?

Procurement of Contractual Services to conduct listening sessions and write a marketing plan has proved to be difficult within our state's current economic strife. However, we are working hard to push on with our Department of Management of Budget. As a result, we feel the project, though delayed, is still deliverable on-time.

e. Describe your relationship and issues with the USGS. Has a formal ongoing agreement been established to provide data to *The National Map*? Describe your plans for follow-on activities. What are the terms and mutual commitment of resources? Please attach copy of written agreement if available.

Currently, there is not a formal data sharing agreement or local stewardship between CSSTP and USGS for the transportation network. We would like to provide transportation changes to the National Map. CSSTP is the local data steward for the National Hydrological Dataset (NHD).