Data Remediation Checklist

A General Guide, Kansas NG9-1-1 GIS Data Remediation Project, Local Agencies

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This is a guide for what local data stewards choosing to do their own data remediation can expect from the remediation and Quality Assurance (QA) process.

1. **Review the Kansas NG9-1-1 GIS Data Model document.** The current version of the document is available for download from the [Kansas 9-1-1 Coordinating Council's GIS website](#) or at the [NG9-1-1 page on the DASC website](#). This document defines the specific requirements your data must meet before the QA process is complete.

2. **Strongly consider using the template geodatabases.** Because of all the detailed work that must go into data remediation, you are strongly encouraged to use the GIS Data Model template geodatabases (templates) for remediation and submission of the remediated data. The templates are available for download from the DASC website. There are two versions of the templates, one for data stewards whose data is in State Plane Kansas North and one for those using State Plane Kansas South. The templates have all the attribute fields, attribute domains and topological rules set up. If you load your data into them, you will have a head start on meeting all of the requirements of the Data Model standard. They will give you an advantage during QA, as well, since AOS will be using the same geodatabase templates to evaluate your data. If your data passes the topology checks you run using the template, it will also pass the topology checks AOS will run during QA. Training videos are being developed to assist anyone unfamiliar with any aspect of the template geodatabases. Specific processes that will be addressed in these videos include loading data into a geodatabase; assigning a default value for an attribute, validating a topology and topology error checking and error correction. These videos will be available online as soon as they are completed.

3. **Edit your data to address all the places where it does not meet the standard in the Data Model.** This may take a great deal of time. Remember the gap reports produced by AOS do not necessarily represent every issue that needs to be addressed. You may need to add attribute fields and populate many of them. You will need to check topology and address any errors that are identified. You may need to create new address points or move existing points. You may need to create some data layers from scratch.

4. **Check your metadata.** Review your existing metadata and make sure it is up to date. If you choose to use field names different from the recommended lists in the KS

NG9-1-1 GIS Data Model, you must detail which fields map to the recommended field names in the Attribute Description field (section 5.1.2.2) of FGDC compliant metadata for each data layer.

5. **Submit the Data to AOS.** Once you believe all issues have been addressed, it is time to submit your data to AOS for QA. It is recommended that you submit your data in the template geodatabase. No matter what format you use, all of your Phase 1 Remediation data layers should be submitted to AOS at one time. The Phase 1 data layers are:

- Road Centerlines
- Address Points
- Road Alias Table
- Authoritative Boundary layer
- ESN Boundary layer
- Emergency Service Boundary (ESB) layers. Note, the ESBs must include the following response areas, at a minimum:
    o PSAP
    o Law Enforcement
    o Fire
    o EMS
    o *Consult the Data Model document for options on how ESBs can be stored.*

6. **The QA Process.** AOS will perform several checks on your data during the QA process. It is important to note that the QA tests differ slightly from the original Gap Analysis tests. The QA tests are listed below:
- The presence of all attribute fields listed in the Data Model
- That values have been entered for mandatory and conditional attributes
- For attributes with assigned domains, values will be confirmed to be in the domain as defined in the Data Model
- Road directionality is consistent with address range (low to high)
- A random sample of road centerline segments will be checked for proper placement
- That the ESN has been appropriately populated in the road centerline and address point layers
- A random sampling of address points marked as primary will be checked for placement on the structure
- Address points will be geocoded against the road centerline. There are cases within the standard where address points need not geocode against the road centerline to be valid. Because of this AOS will report any unmatched addresses, but some may not need correction.
- That the data meets the following topological requirements
    o All submitted data is within the Authoritative Boundary polygon or polygons
    o Road centerlines do not intersect
    o Road centerlines do not have dangles except at dead ends and cul-de-sacs
    o Road centerlines do not intersect the boundaries of the ESB polygons or ESN polygons

- o That the ESN boundary layer and each ESB boundary layer completely fills the Authoritative boundary layer with no gaps and no overlaps

7. **QA Results.** If issues are identified during QA, AOS will report the details back to the jurisdiction. All issues need to be remediated and the data resubmitted to AOS for testing. If the first QA report indicates issues you do not wish to remediate locally, you can contact Scott Ekberg to begin the process of selecting a remediation vendor. Once AOS reports no issues identified during QA testing, you are finished with this stage of the project.

After QA

Getting the data ready for NG9-1-1 is only the first step. For GIS-based 9-1-1 call routing to be effective, everyone's data must be kept up to date. To help local data stewards accomplish this goal, training sessions on the specific requirements of the Data Model and data maintenance will be offered beginning in September 2014.

The next step in the NG9-1-1 GIS project is to aggregate the local data into a statewide database. Data aggregation is a big job, and a pilot project testing strategies for accomplishing that goal will be performed before a specific method is selected. The fully aggregated database will eventually be used for NG9-1-1 call routing. Until that time, the aggregated data will be used to plan, build and test the various pieces of the NG9-1-1 network.

About the MSAG

Along with reports on gaps in your GIS data, you will receive a report on inconsistencies between your MSAG and your Road Centerline layer. It is important that you research these inconsistencies and update both the MSAG and the Road Centerline to reflect the correct information. The MSAG is not a part of AOS's QA process, however. If you have questions or concerns about remediating your MSAG file, you can contact your database provider (AT&T or Centurylink, for example). You can also communicate with Scott Ekberg, who will put you in contact with a member of the GIS Subcommittee that can help you decide how to proceed.