

NYSMPO: JOINT SAFETY & GIS WORKING GROUPS
UTICA NY
JUNE 3, 2011

Meeting Summary

Attending:

- Andrew Sattinger (NYSDOT Safety Group, ALIS manager)
- Sandy Misiewicz CDTC
- Teresa LaSalle, CDTC
- Monica Rusko, PDCTC
- Emily Dozier, PDCTC
- Matt VanSlyke, HOCTS
- Jeff Quackenbush, HOCTS
- John Sterbentz, BMTS
- Mike Perry, ECTC
- Kim, GBNRTC
- Hector Boggio, GBNRTC
- Erin Tylutki, HOCTS
- Harry Miller, HOCTS
- Jason DeShaies, SMTC
- E Hassett, SMTC

ALIS Workshop

Workshop under development since ALIS went live for MPOs last year. NYSDOT is working on a project to improve/enhance ALIS and its usefulness to MPOs; delivery next year. Effective use of crash data requires linkage between safety and GIS staff, which does not always occur at MPOs; and with NYSDOT Main Office and Regions.

Andrew Sattinger (NYSDOT)

Provided background on the development of ALIS, the manual coding of MV 104s by NYSDMV and the inherent loss of some data accuracy. Note that SIMS is still the database for ALIS but is limited to the state system only. NYSDOT has also applied for a grant to evaluate linking the AIS and SIMS into one database. Also note that new average crash cost tables are available from NYSDOT on their website.

A computer module is used within NYSDMV to process the crashes which are then entered into the AIS and transferred to NYSDOT each night. Data is kept back to 1987; scanned police crash reports to 2003.

Demonstrated LESQR and QRA applications within ALIS.

Location Editing, Simple Query, and Reporting System:

Noted potential of MPO on-line access to crash reports, so they will not have to request through Region or police agency. Confirmed use of same street layer as TRACS, so crashes entered in that system by police will have accurate location data and noted LESQR has a default buffer built in around a crash (7

meters). Since crashes are constantly being added to ALIS, some from months earlier, static databases in an off-line GIS are problematic because they do not include the added crashes. Location editing is currently limited to NYSDOT engineers. They can edit crash locations themselves. Static databases would miss these changes.

Query, Report, and Analysis Application:

Noted no traffic volume, therefore no crash rates; hoped for in future upgrade. Demonstrated various query structures. Sliding scale: NYSDOT uses 3/10 of a mile as a standard. Same as what they use to calculate PILs in SIMS. The statistical filter is the key within QRA to ID the hot spots because the percentage of accidents compared to the total can be reviewed, a tool that can be used as a network screen.

Currently limited to county level query's in QRA, may be changed as a part of the upgrade.

Question: is there documentation on creating query structures for specific applications? Refer to ALIS on-line documentation.

MPO Demonstrations of ALIS Applications

HOCTS [VanSlyke, Tylutki]: Application involved a small subarea with crash history, police and public works agencies unsure of appropriate countermeasures. General query to retrieve crash records, then do analysis in ARCMAP; sorted crashes by type, used scalable pie charts to visualize crash types and numbers at each location. They use the integrate tool that moves the individual crashes related to a specific intersection to a single point. Useful for decision makers to see these distributions. They also use the .pdf reports within ALIS (spreadsheet table) to go to the police departments to talk about what they are seeing.

CDTC [Misiewicz, Lasalle] TIP project example. Still learning how to do regional scale analysis (data available only by county in QRA). Use county data from GTSC, supplement with QRA (not always confident with QRA results). CDTC then develops ARCMAP crash data display for each TIP project.

CDTC also has access to SIMS data. They use multiple databases to verify crash data. Sattinger: NYSDOT staff does that too; looking to fix in ALIS update.

For roundabout analysis, use a polygon to buffer around the roundabouts within QRA, add a point and then can buffer around it to query for all the related crashes. A spatial query is best for roundabouts.

For new street configurations/intersections (i.e. SPUI's, new road alignments, etc.), need to get the reverse milepoint layer from NYSDOT to do the analysis within GIS.

If the MPOs find errors in the roadway configurations, send roadway corrections to Andrew Sattinger or Kevin Hunt at NYSDOT to fix the road layers.

Question: Would there be value in developing a uniform methodology for identifying HALs across MPOs? SWG has discussed screening methods. Idea floated to perhaps have a webinar for additional ALIS training with to develop the workflows for network screening.

Further discussion on the role of MPOs in safety analysis when they do not do engineering (so cannot develop countermeasures and potential candidate projects). Suggested that there is a continuum from program development to project. Most MPOs would use ALIS data at the program development end to identify problem locations that may lead to projects. Those MPOs develop relationships with NYSDOT Regions and local government road owners to do project development work at identified locations.

ECTC [Mike Perry]. Elmira self maintained data base from MV 104s. Required manual cleanup. Discontinued in 2007. Did not include NYSP records. They give frequency data to local cops to undertake enforcement efforts.

John Sterbentz BMTS. Developed crash rates for Federal Aid roads off the state system. They use LESQR path tools to get a total number of crashes for specific segments of roadway for a 3 yr period. Each segment has a unique segment ID. Use the GIS route ID as a proxy for a reference marker. Can't currently query ALIS on the GIS route ID. Consult with R9 strategic tool to ID segments that may merit further study.

The rate is calculated for each segment but there may be some duplication at intersections of different segments. Should be viewed as a relative measure. Can pick a polygon and it won't duplicate crashes that are already in the viewbox. Traffic counts are input for each segment in the GIS. Need the sufficiency file to begin with and then can add to it. BMTS will eventually be migrating the database to use the RIS data platform.

The location coding is being done in a way that the NYSDMV often checks the first option on one of their coding screens which is leading to inaccuracies. State police are required to location code. Ramps are not being picked up for intersection crashes correctly all the time.

Hector Boggio GBNRTC. Safety Analysis Application. Regional level screening of entire region for crash events, rates. They are still querying on the legacy node numbers and had to reverse geocode their crash data. Use a detailed map for their TIP project analysis that shows important projects in important places and includes a safety benefit related to a rate.

Next Steps

Follow up with NYSDOT on 1) MPO access to scanned crash reports, 2) QRA manual (even if it's not updated), 3) Scalability project and 4) Training webinar for ALIS queries in the QRA module to support MPO network screening efforts. Begin to develop processes for network screening.