



OES' HAZUS-MH DATA STANDARDIZATION PROJECT: TOOLS

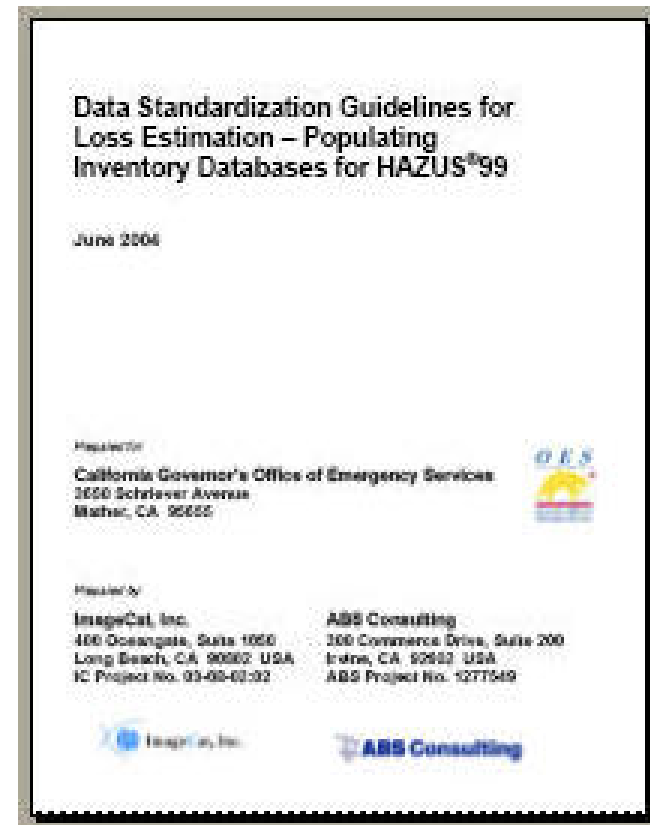
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SoCal HAZUS Users Group
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HAZUS Data Standardization Project Background

- Sponsored by CA OES. Conducted Jointly by ABSG Consulting Inc. and ImageCat Inc.
- Products are tools and guidelines for enhancing data for use in HAZUS.
- The products are aimed at facilitating a comprehensive and standardized approach to loss estimation throughout CA.
- Currently in 2nd phase of project, focused on HAZUS-MH.

Phase One Guidelines

- “Data Standardization Guidelines for Loss Estimation – Populating Inventory Databases for HAZUS®99” (June, 2004)
- Guidelines & Appendices Available for download @ www.HAZUS.org (or Google “HAZUS data standardization”)



Online at http://www.hazus.org/BAHUG/Reference_Info.htm



Phase Two Tasks & Products

- Data review for ~10 pilot communities
- Data enhancement for 2 pilot communities
- Pilot Study Report
- Updated guidelines for HAZUS-MH
- **Data Enhancement Tools**
- Calibration Study for San Simeon EQ

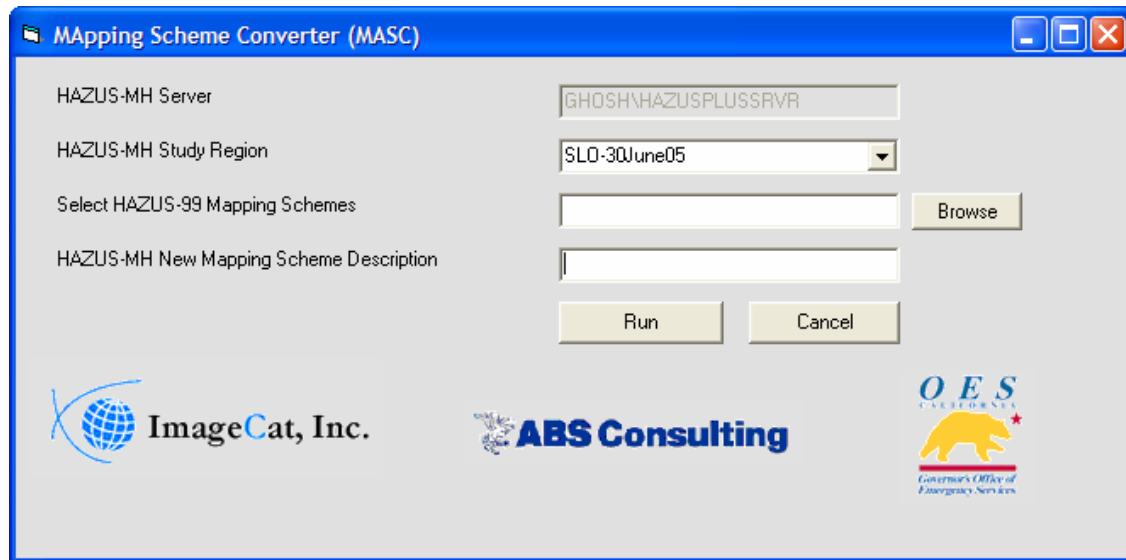
HAZUS-MH Data Enhancement Tool Set

- MaSC – Mapping Scheme Converter – allows the user to import edited mapping schemes* in HAZUS-99 (.DBF) format into HAZUS-MH.
- BIRT – Building Inventory Replacement Tool – allows the user to perform Level 1 and Level 2 inventory data updates in HAZUS-MH.

* Mapping schemes indicate, for a given occupancy, the percent distribution of building square footage across the different model building types

MaSC

- Stand alone tool - no additional software needed.



Recommended uses:

- Update the default mapping schemes to better reflect the distribution of building heights (default = 100% low-rise)
- Update the default mapping schemes to better reflect the distribution of particularly vulnerable structures (e.g., URM, NDCF, tilt-up).

Building Inventory Replacement Tool

- Requires Microsoft Access 2002 (or 2003)
- Allows the user to update census tract-based inventory data stored in an existing HAZUS-MH MR-1 Earthquake* Study Region.
- Updates can be made at two levels of detail:
 - “Level 1” updates require no additional data.
 - “Level 2” updates allow the user to replace square footage and building count data with user generated data derived from assessor’s data (or other sources).

BIRT is designed to work on HAZUS-MH “Earthquake Only” Study Regions, and is not configured to work on HAZUS-MH Flood Study Regions, or Multi-Hazard Study Regions (with both earthquake and flood).

BIRT DIALOG BOX

Building Inventory Replacement Tool (B.I.R.T.)

File Edit View Insert Format Records Tools Window Help

HAZUS-MH Machine: earth\HAZUSPLUSRVR HAZUS-MH Study Region: SanLuisObispoCA_ Refresh

Assessor's MDB: C:\Documents and Settings\hseilgson\Desktop Browse

Level 1 Modifications MAKE ALL SELECTIONS BEFORE PROCESSING DATA

Update Replacement Cost
Do you want to update the default Replacement Cost Model (Building replacement cost per square foot by HAZUS occupancy)? Yes No HAZUS-MH RES1 [\$/SF]:

Update Means Location Cost Factor
Do you want to update the Means Location Factor applied to the Replacement Cost Model? Yes No

Update Contents Value Model
Do you want to update the default Contents Value Model (Percent of Structure Value)? Yes No

Typical Square Footage per Building
Do you want to update the default typical building size used to derive Building Count? Yes No

Level 2 Modifications

Square Footage Replacement Data
Do you have replacement Square Footage data (building square footage in thousands of feet, by HAZUS occupancy, by tract)? Yes No **Total Square Footage** Assessor: HAZUS-MH:

Replace Building Count
Do you have replacement Building Count data (building count, by HAZUS occupancy, by tract)? Yes No **Total Building Count** Assessor: HAZUS-MH:

PROCESS DATA NOW

Form View NUM

File Location Data

Level 1 Updates

Level 2 Updates

BIRT Level 1 Updates:


1. HAZUS-MH replacement cost model *used to generate building exposure (\$) values by census tract and occupancy.*
2. HAZUS-MH location factors *used to generate building exposure (\$) values by census tract and occupancy.* The location factors may also be used project future costs.
3. The HAZUS default model for contents value, estimated as a percent of building replacement value.
4. The HAZUS-MH default model for typical building size by occupancy, *used to derive building counts from square footage data.*

NOTE: BIRT uses the latest HAZUS cost model & location factors (HAZUS-MH MR-2, 2005 cost models) to allow the user to update HAZUS-MH MR-1 values (2002 cost models) to the latest available model.

It is strongly recommended that when using BIRT to update from MR-1 baseline (2002) to MR-2 baseline (2005), that all the four Level 1 updates be completed at the same time. That is, these four updates should be done as a “suite” of updates.

BIRT Level 2 Updates:

- Allow the user to replace square footage and building count data within an existing HAZUS–MH MR- 1study region with data derived from assessor’s data (or other sources).
- The user must provide a Microsoft Access database containing tables named “ASSR_hzBldgCountOccupT” and/or “ASSR_hzSqFootageOccupT”. Each table must be of the same format provided in the sample database included with BIRT, and must provide data for each census tract represented in the user’s study region of interest.
- Guidelines for how to develop this data are included in the associated Guidelines Document.



Special Note: HAZUS MR-2

- BIRT has not been tested for compatibility with HAZUS MR-2, which has yet to be released (scheduled for ~end of March) – however, the databases accessed by BIRT are not scheduled for any changes...

Project Schedule

- Project concludes March 31, 2006
- Products (Guidelines document, Tools, and Tool Instructions) will likely be made available through the HAZUS.ORG website and/or the OES website (www.oes.ca.gov). May also be Distributed at the DRC/1906 EQ Conference in SF in April.