ASPRS:
A History of Measurement
(And Standards in Action)

Presented by David Stolarz, Semi-Retired
New York State Data Standards
Nassau County, NY GIS Implementation Team
ASPRS Member Since 1990
Thank You
ASPRS: The American Society for Photogrammetry and Remote Sensing

Founded in 1934

www.asprs.org
ASPRS
Volunteers Serving the Community

Over 7,000 Members Representing A Range of Geospatial Activity

96 Sustaining Member Agencies and Firms
ASPRS Divisions: Organized for Action

**LiDAR:** The Newest Division

**Professional Practices**
Licensure, Commercial Mapping Product Guidelines, Professional Services Procurement

**Remote Sensing**
Marine Applications, Climate Change, Academic Engagement

**GIS**
Glossary of Terms, Technical Sessions

**Photogrammetric Applications**
Defense, Transportation and Accuracy Standards

**Primary Data Acquisition**
Digital Imagery Guidelines, 10-Year Forecast, Unmanned Aircraft

Professional Practices Division
Review of State Licensing Laws

ASPRS : A History of Measurement
ISO TC-211 November 13, 2013
ASPRS:
Publishing The Developments

Journal: Photogrammetric Engineering and Remote Sensing (PE&RS)
Book Publisher: Over 40 Titles
Webinar Series
Regional Newsletters and Meetings
Webinars

An Overview of Mobile Mapping
Analysis and Application of Polarimetric Synthetic Aperture Radar Data
Assessing the Accuracy of GIS Information Created from Remotely Sensed Data
Basic Principles of Spatial Data Analysis
Census Data & TIGER/Line Shapefiles – Putting it All Together
Develop Successful Web Mapping Services
Internet GIS Apps for Research Projects
Elements of Orthophoto Production
Hyperspectral Remote Sensing: Phenomenology and Data Processing
Lidar Fundamentals and Applications
Lidar Mapping - Lidar for Terrain and Vegetation Mapping
Lidar Waveform: The Potential and Benefits for Topographic Mapping
Looking Above the Terrain - Lidar for Vegetation Assessment
Maximizing Information Extraction from Remote Sensor Imagery
Object-based Image Analysis
Photogrammetric Processing: Surface Model and Orthophotograph
Preparation for ASPRS Certification
Principles and Practice of Synthetic Aperture Radar
Remote Sensing of Wetlands

ASPRS : A History of Measurement

ISO TC- 211 November 13, 2013
ASPRS Committees

Awards, Bylaws, Convention Planning and Policy, Data Preservation and Archiving, Division Directors, Education and Professional Development, Electronic Communications, Evaluation for Certification, Executive, Films, Journal Policy, Membership, Memorial Address, Nominating, Professional Conduct, Publications, Standards, Strategic Planning
ASPRS: Current Standards

Horizontal Accuracy Reporting for Lidar Data
Procurement of Commercial Geospatial Mapping Products
In Situ Metric Camera Calibration
LASer (LAS) Common Data Exchange Format
Accuracy Standards for Large Scale Maps
Vertical Accuracy Reporting for Lidar Data
Guidelines for Procurement of Professional Aerial Imagery, Photogrammetry, Lidar and Related Remote Sensor-based Geospatial Mapping Services
NYC WTC Command Center

Before

After

• http://www.loc.gov/exhibits/911/images/lg-map-lidar3.jpg
Create a Map of Long Island’s Changes After Hurricane Sandy

East Meadow Public Library
NOAA Storm Mapper
http://storms.ngs.noaa.gov/storms/sandy/
Detail View of Controls
Dates, Transparency, Zoom, Pan and Download Options
Zooming In Between Parkways

Nov 4\textsuperscript{th} Flt 1 - Trying to Find Coastal Changes

Zooming Into the Bay Shoreline
Jones Beach West End 2 After
Coast Guard Station Before
Elevation Makes a Big Difference

Easy Prediction of Storm Damage
Low Elevation Merrick Before
Long Beach After
Long Beach Before
Long Beach After
Fire Island LiDAR Before

http://coastal.er.usgs.gov/hurricanes/sandy/lidar/

Image Credit U. S. Geologic Survey
Fire Island LiDAR After
http://coastal.er.usgs.gov/hurricanes/sandy/lidar/
Image Credit U. S. Geologic Survey
Fire Island LiDAR Difference

http://coastal.er.usgs.gov/hurricanes/sandy/lidar/

Image Credit U. S. Geologic Survey

May 2012 to October 2012

Elevation Change in Meters

<table>
<thead>
<tr>
<th>Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; -3.5</td>
</tr>
<tr>
<td>- .15</td>
</tr>
<tr>
<td>.15</td>
</tr>
<tr>
<td>&gt; 2.9</td>
</tr>
</tbody>
</table>

0 100 200
Fire Island Breech LiDAR Before
http://coastal.er.usgs.gov/hurricanes/sandy/lidar/
Image Credit U. S. Geologic Survey
Fire Island Breech LiDAR After

http://coastal.er.usgs.gov/hurricanes/sandy/lidar/

Image Credit U. S. Geologic Survey
Fire Island Breech LiDAR Difference

http://coastal.er.usgs.gov/hurricanes/sandy/lidar/

Image Credit U. S. Geologic Survey
Standards Make Cartography Easy

- Map the World(s) Around You
- See It Change
- Examine the Past
- Predict the Future
- Use Color and Information to Earn Higher Grades With Less Effort
NSF Fellowship
Graduate Center of the City University of New York
CUNY GK-12 ScienceNOW project
Three GIS Science Fair Projects
Left Them Jumping for Joy
Just Last Week

Girl Scouts on the Grassland Prairie of Long Island
ASPRS:
People Serving the Community

ASPRS: People from across the spectrum of the science of geospatial measurement working together to transfer their knowledge and experience into tools and techniques that improve the ability of society to continue to evolve into the future.

Thank you for the opportunity.