METRO STORMWATER GEODATA PROJECT
POLYGON FEATURES

Second Meeting: 8-28-2018
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BUSINESS NEEDS PER POLY

• **NEED 1.1**  Feature attributes & standards to be maintained to fulfill Stakeholder needs
  - Identify the needs being presented in order to develop a stormwater model that satisfies those needs of the audience - Polygons anybody?

• **NEED 2.3**  Cartographic representation
  - How will this look on the map? - will a lake look like a lake? Poly for visual?

• **NEED 2.7**  Ability to apply to consumer applications such as 311, ‘See-Click-Fix’, etc.
  - How will polygons be utilized in such applications – will it be a general public audience? Poly for visual?

• **NEED 2.8**  Ability to incorporate in data in public education initiatives
  - Will polygons be desired for educational programs – more general public consumption? Poly for visual?

• **NEED 5.1**  Identifying inundation and flood prone areas
  - Representation of flood prone areas to better manage and prepare for water events - Polygons for area analysis?

• **NEED 5.4**  Watersheds and sub-watershed boundaries
  - DNR has a suit of boundaries, but at a catchment/waterbody scale they are automated and not well QAQCed. Polygons for visual and area analysis?
BACK TO 2010

• Polygons not present in the 2010 model
• Report recommends that for the purpose of directionality, polygons be excluded
  - “polygons, lines that close on themselves (to represent structures such as manholes or flared end sections), and annotation features are not allowed in standardized data” (8.4)
• Poly to Point for data transfers
  - The 2010 report includes instruction on data exchange, with all Polygon features being converted to Points
• Is that still the case?
  - So given the methodology of the 2010 model – Do we incorporate any Polygon features?
WHAT’S GOING ON IN WASHINGTON?

STATE D.O.T. THAT IS...

• Yes, Washington DOT does have Polygon features

• Features given as Polys include
  • Dispersion Area – areas designated by having met the State requirements for a natural or engineered dispersion
  • Drainage Area – land surface area contributing to runoff at specified point within the system
  • Monitoring Site – area being monitored as defined by the State’s Environmental Services office
  • Roadside Slope – areas typically involved in a BMP. Also represented as Lines.
  • Stormwater Pond – ponds involved in the treatment and flow control with extent at max level. Also represented as Points.
  • Stormwater System – network of stormwater elements that direct the flow to a primary discharge point

• Referencing rules on Routing with Polygons
  - Washington DOT outlines the rules surrounding the creation of artificial points and lines for routing
ONE APPROACH WE DISCUSSED

- Include stormwater/water management related datasets that do not have a authoritative regional source.

- Include stormwater/water management related datasets where dimensional area is critically important for interpretation. (pond, rain garden, underground infiltration YES; manhole, swirl separator NO.)

- Datasets like watershed organization boundaries, cities, and impaired water information can be pulled in from the geospatial commons as reference when needed, or related through key fields.
POTENTIAL POLYS

- Stormwater system areas
- Inundation / flooding areas
- Drainage areas (subwatershed scale)
MSGP GROUP FEEDBACK, PLEASE

So with some of the ambiguity surrounding the use of polys, our team asks:

• How does the larger group feel about including any polys in the model?
• If so, which ones should we focus on?
• What is an appropriate scale for features we do include (if any)?
  Large pond vs “stormwater puddle”

For features that will remain represented only as points, we should have a discussion on the dimensional attributes to include in lieu of polygon representation.
POLYGON TEAM QUESTIONS

• Should any jurisdictions be addressed simply through the field of another feature? I.e. what if the feature point 'stormwater structure' had a field city (w/domain), and a field county (w/domain)?

• If we incorporate basins, what do you think about the point model? What do we want to modify?

• How would 'contributing drainage area' fit into all this - if at all? Poly? Field to another feature?

• What should our final features be?
GROUP QUESTIONS

• What would be an ideal delineation of what is to be represented via polygon feature vs point when it comes to surface water bodies? Lakes, ponds, and wetlands - yes? What about detention ponds? Size relevant?

• Are BMPs too varied, extensive, and complex to try and compile into a single feature class? - Would the components of that BMP exist in multiple features of different types?

• Identify 'authoritative data sources' per feature item? Will an index of sorts referencing the 'authoritative data sources' per item be created and utilized? I.e. A surface water boundary (poly) as provided by a specific organization (data owner)

• Standardize datums and projections? Metadata? Feature class attribute(s)?

• What is the ID format going to look like?

• What does “inundation/flooding areas” even refer to? Not a rehash of FEMA floodplain. Is there any definitive framework we could put around this that would lead to consistency from community to community?