DOW GIS Standards and Definitions

- **Horizontal Accuracy Statement**: GPS coordinates must have a horizontal accuracy of plus or minus 6.67 feet or better as required by 78a.55(i)3(ii) and all points need to be in NAD 83 and must be reported to 5 decimal places.
- **Shapefile Uploads**: Must be the same name and contain the following files extensions:
  - DBF
  - PRJ
  - SBN
  - SBX
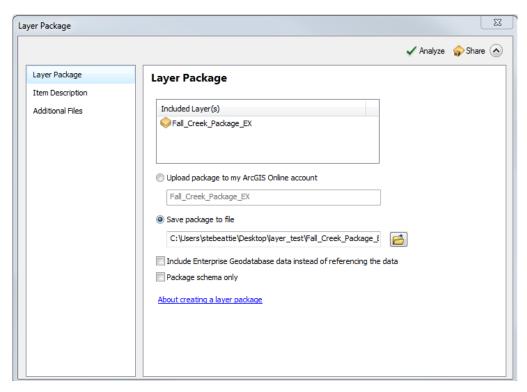 - SHP
  - SHX
- **Directional Survey Shapefile**:
  - Attributes: X in Decimal Degrees, Y in Decimal Degrees, Z in Ft and in actual depth from surface (surface is 0 and sign convention is negative for all subsurface values)
  - Standard: Geographic Coordinate Systems NAD 83 **OR** Projected Coordinate Systems NAD 83 StatePlane Pennsylvania South FIPS 3702 (US Feet) / NAD 83 StatePlane Pennsylvania North FIPS 3701 (US Feet)
  - Frequency of Survey Points (this will determine how many points are in the shapefile):
    - Vertical Section: Every 100ft or less
      - If any anticipated deviations prior to the kickoff point add sufficient survey points to define trajectory of wellbore
    - Kickoff Point to Bottom Hole: 30ft to 50ft (operator's discretion)
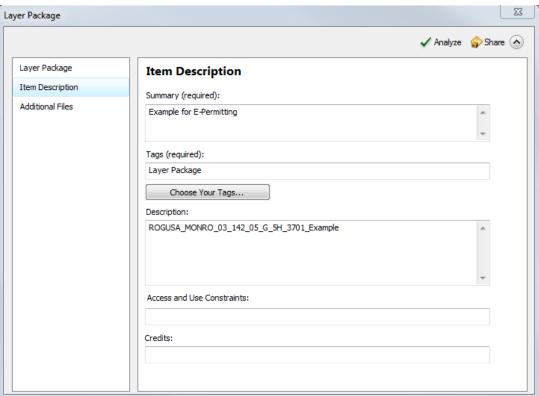 - Data Size Limit: Directional Survey Shapefiles should not contain more than 1,000 survey points
- **Interested Parties Shapefile**:
  - Attributes: See Guidance Document
  - Standard: Geographic Coordinate Systems NAD 83 **OR** Projected Coordinate Systems NAD 83 StatePlane Pennsylvania South FIPS 3702 (US Feet) / NAD 83 StatePlane Pennsylvania North FIPS 3701 (US Feet)
- **Layer Package Upload**: Should contain the following files:
  - LPK
- **Layer Package**:
  - Standard: It must be projected with the appropriate Coordinate Systems (Figure 1):
    - NAD 83 StatePlane Pennsylvania South FIPS 3702 (US Feet)
    - NAD 83 StatePlane Pennsylvania North FIPS 3701 (US Feet)
  - Setup:
    - Layer Package must be saved to a file with an appropriate name of 25 characters or less
    - Leave "Include Enterprise Geodatabase data instead of referencing data" and "Package schema only" unchecked
    - Fill out Item Summary and Tags with what you deem appropriate.
    - Additional Files is not applicable

Layer Package

✓ Analyze 🔶 Share ⌃

Layer Package
Item Description
Additional Files

Layer Package

Included Layer(s)
🔶 Fall_Creek_Package_EX

○ Upload package to my ArcGIS Online account

> Fall_Creek_Package_EX

● Save package to file

> C:\Users\stebeattie\Desktop\layer_test\Fall_Creek_Package_E   📁

☐ Include Enterprise Geodatabase data instead of referencing the data

☐ Package schema only

About creating a layer package

Layer Package

✓ Analyze 🔶 Share ⌃

Layer Package
Item Description
Additional Files

Item Description

Summary (required):

> Example for E-Permitting

Tags (required):

> Layer Package

Choose Your Tags...

Description:

> ROGUSA_MONRO_03_142_05_G_5H_3701_Example

Access and Use Constraints:

Credits:

- Guidance Language for Layer Package Features:
  - Under the new electronic DOW permit process, DEP will be requesting that operators submit a GIS layer package consisting of spatial features (shapefiles) from pages 1 and 3 of the plat. To facilitate the review process, DEP has created a guidance list of features to assist operators as they create their layer packages. This guidance includes naming conventions, preferred GIS geometry types, regulation requirements and background information regarding why permit staff would like to see these features. This guidance is only for applicable features on the plat and it is understood not all features will be used. If there are other features that the operator determines would be essential for DEP review, they can add those to the layer package. To clarify, this applies only for naming conventions and types for features in the layer package. Symbology, style and labeling may be developed at the operator's discretion, provided the layer package is easily interpreted. With respect to the suggested naming conventions, the precise names provided need not be used by the operator; but derivatives should be close enough that DEP staff will clearly understand which features are being described (e.g., Access Road versus Access Rd.; or Surface Hole Location versus SHL). It is not required that the operator follow this guidance, but it is recommended, as it will allow DEP staff to review permits more efficiently and require less communication between parties.
- **Additional Shapefiles**:
  - Standard: It must be projected with the appropriate Coordinate Systems (Figure 1):
    - NAD 83 StatePlane Pennsylvania South FIPS 3702 (US Feet)
    - NAD 83 StatePlane Pennsylvania North FIPS 3701 (US Feet)
  - Attributes: Operator's discretion
  - List of Shapefiles (see guidance document for geometry type)
    - Access Road for the permit (mandatory)
    - Limit of Disturbance for the permit (mandatory)
    - Well Pad for the permit (mandatory)

Figure 1: Shows a map of the two State Plane Coordinate System zones, showing the counties that make up each zone.

- **Shapefile Definitions**:
    - *Directional Survey*: Shape format is POINT. A shapefile that spatially depicts the location of individual survey points derived from the anticipated and as-drilled position of a wellbore and utilizing standards mentioned in this document.
    - *Interested Parties*: Shape format is POINT. A shapefile that spatially depicts all interested parties required to be notified according to applicable laws and regulations. Please see "Interested Parties Guidance" and "Layer Package Guidance" for additional information.
    - *Access Road*: Shape format is LINE. A shapefile that spatially depicts the access road to the well pad.
    - *Limit of Disturbance*: Shape format is POLYGON. A shapefile that spatially depicts the (LOD) of the well site. If the site is stabilized, show the original LOD, for purposes of technical review and coordination with public resources.
    - *Well Pad*: Shape format is POLYGON. A shapefile that spatially depicts the outline of well pad on the plat.

- **Plat PDF Upload Requirements**
    - A PDF of the plat will be a required upload attachment. This will be a copy of the plat used for notification to interested parties. This plat must be the same information contained within the Plat Layer Package that is submitted as well.
    - The PDF version will contain the traditional "paper plat" Page1 (surface features), Page 2 (surface owner, water supplies, etc.), Page 3 Wellbore Path (If deviated, horizontal), Page 4 (Cross-section). Please Note that the Cross-Section will be submitted as part of the Plat pdf file in ePermitting and NOT as a separate file as was done in eWell.