U.S. Geological Survey
3D National Topography Model Data Collaboration Announcement (DCA) for 3D Elevation Program (3DEP)

3DEP-B: Instructions for Creating 3DEP Defined Project Area and Tile Delivery Scheme

For background information on the Defined Project Area (DPA) see the "Collection" and "Tiles" sections of the 3D Elevation Program (3DEP) Lidar Base Specification available at: https://www.usgs.gov/3dep/lidarspec

3DEP lidar data must follow a set of collection requirements to achieve a consistent national dataset. These requirements include:

1. The DPA must be the Area of Interest (AOI) plus a 100-meter buffer.
2. Data collection is required for the full extent of the DPA.
3. All products must be produced to 3DEP and Task Order requirements up to the edge of the DPA and no further.
4. Project deliverables will be delivered in the coordinate reference system(s) (CRS) and tiling scheme of the applicant's choosing.
5. The CRS used must be registered with the European Petroleum Survey Group (EPSG).
6. Where a project area covers multiple CRS zones, USGS requires that projects be split into subareas appropriate for each zone.
7. All tile indices must be clipped to the DPA.

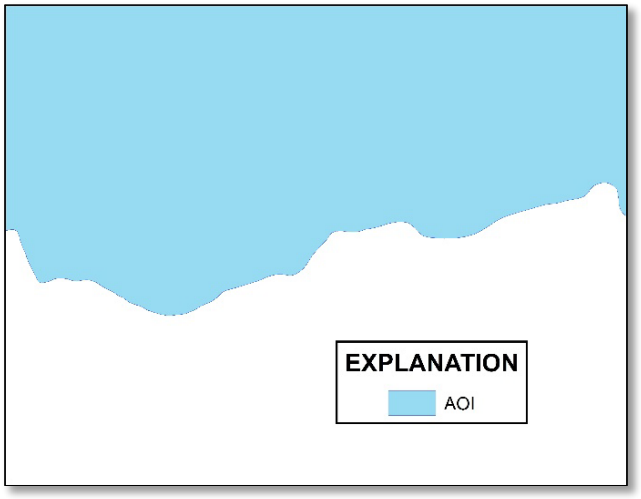
I. Select Tiling Scheme and Coordinate Reference System

3DEP Data Collaboration Announcement (DCA) project deliverables will be delivered in the coordinate reference system(s) (CRS) and tiling scheme of the applicant's choosing. The CRS must be registered with the European Petroleum Survey Group (EPSG). Where a project area covers multiple CRS zones, USGS requires that projects be split into subareas appropriate for each zone.

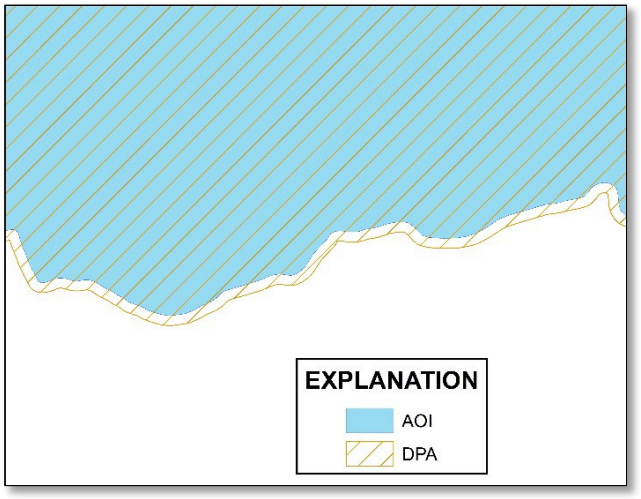
II. Geoprocessing Steps

Step 1. Create the AOI using a CRS recognized and published by the EPSG. The boundary must be created in the same CRS it will be delivered in.

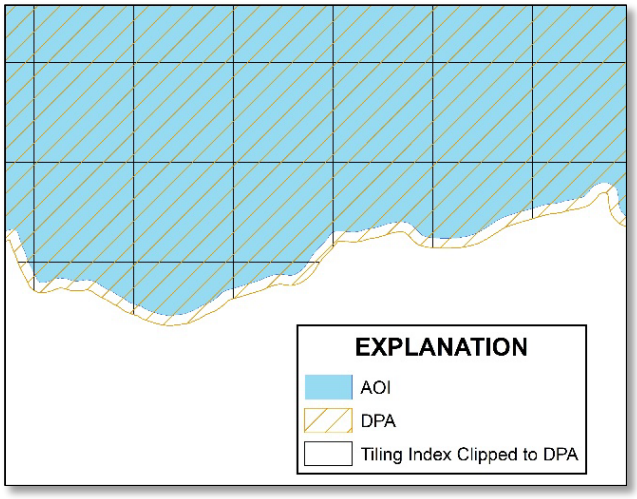
Each project must be processed and delivered in a single CRS, except in cases where a project area covers multiple CRSs such that processing in a single CRS would introduce unacceptable distortions in part of the project area. In such cases, the project area is to be split into subareas appropriate for each CRS.



Step 2. Buffer the AOI by 100-meters to create the DPA. The 3DEP data processing workflow requires that all project boundaries include this buffer.



Step 3. Choose or create a single non-overlapping project tiling scheme. The tiling index must be created in the same CRS as the DPA. If the DPA does not completely fill full tiles, the tiling index must be clipped to the DPA. If the project is split into more than one sub-area to accommodate multiple CRS, tiles must overlap by one column or row where the two CRS join.



III. Alignment with Existing 3DEP Data

For project areas that are adjacent to existing lidar surveys that meet 3DEP specifications, the project boundary should align with the adjacent data before the 100-meter buffer is applied. The final DPA should have 100-meters of overlap with the existing neighboring lidar survey. The small amount of repeat coverage is required for 3DEP data processing workflows and eliminates any slivers and gaps between projects. The 3DEP data acquisition team will review the DPA to identify adjacent existing lidar surveys and will adjust the project boundary as needed.