

## Idaho Geodetic Control Technical Working Group (GC-TWG)

### DRAFT Recommendation of a Statewide Spatial Reference System for Idaho's GIS Community Relative to NATRF 2022

Based upon discussions at monthly meetings beginning in June 2018, the Geodetic Control Technical Working Group (GC-TWG) recommends the spatial reference system described below be adopted as the statewide spatial reference system for the state of Idaho. This system will supersede Idaho Transverse Mercator NAD83 (IDTM83), following release of the North American Terrestrial Reference Frame (NATRF) by the National Geodetic Survey (NGS) in 2022.

#### Idaho Transverse Mercator 2022

PROJCS[NATRF2022 and/or its resulting datum/geoid]

Meridian: PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433]]  
Projection: PROJECTION["Transverse\_Mercator"]  
1. PARAMETER["False\_Easting",4250000.0]  
2. PARAMETER["False\_Northing",1000000.0]  
3. PARAMETER["Central\_Meridian",-114.0]  
3. PARAMETER["Scale\_Factor",0.9996]  
4. PARAMETER["Latitude\_Of\_Origin",42.0]  
5. UNIT["Meter",1.0]]

#### Explanation of Parameters

Transverse Mercator is currently in use in Idaho and functions very well for geospatial applications. No changes are required or recommended.

1, 2: The false easting and false northing parameters have been carefully calculated to eliminate the error caused by an incorrect application of this reference system relative to IDTM83, IDTM27 (the predecessor of IDTM83), and the Idaho State Plane Coordinate System (SPCS). In the event one of these reference systems is incorrectly applied during either a *projection* or *definition* process, the resulting geospatial data will be clearly offset visually indicating the error to the GIS specialist.

3. This is a standard scale factor identical to that used in IDTM83.

4. The latitude of origin effectively acts as the southern border between Idaho and Nevada/Utah. This parameter will remain unchanged from previous statewide systems used in Idaho

5. A coordinate system measured in meters is standard for nearly all GIS applications and is identical to that currently used in IDTM83.

If adopted as the standard for the State of Idaho, use of IDTM2022 will be encouraged and expected by all state agencies and institutions from that point in time. Existing geospatial data that uses a different reference system (e.g., IDTM83) will not need to be re-projected into IDTM2022 to comply with the standard as the correct *definition* of the reference system will accommodate differences within the GIS software itself (e.g., Esri's ArcGIS).