



JAN 24 2023

Dr. Howard Veregin and Mr. Richard Kleinmann
Co-Chairmen
Wisconsin Spatial Reference System 2022 Task Force
State Cartographer's Office
University of Wisconsin-Madison
550 North Park Street
Madison, Wisconsin 53706

Re: Request for Exceptions for Wisconsin LDPs

Dear Dr. Veregin and Mr. Kleinmann,

This letter is in response to your email dated November 8, 2019, to Michael Dennis, the National Geodetic Survey (NGS) SPCS2022 Project Manager, regarding additional exceptions to the State Plane Coordinate System of 2022 (SPCS2022) Procedures for zones in Wisconsin. The request is in addition to the exception already granted in a letter to you dated September 20, 2019, allowing for zone width of less than 50 km.

NGS is actively working to create an SPCS2022 that is rigorously defined and internally consistent. Although the previous request disturbs the consistency of SPCS2022, it was granted because NGS recognized that the Wisconsin Coordinate Reference System (WISCRS) has been in use for decades and is defined in multiple commercial software packages and publicly available databases. Because of the WISCRS history, large investment of resources, widespread implementation, and concurrence of Wisconsin stakeholder groups, the additional two exception requests are also approved. Therefore, NGS grants a total of three exceptions to SPCS2022 Procedures, as follows:

1. No minimum zone size requirement (Procedures §6.e)
2. Latitude and longitude origins can be specified to fractional arcseconds (Procedures §6.f.iii)
3. Projection axis scale can be specified to more than 6 decimal places (Procedures §6.f.iv)

Approval of the above exceptions is granted with the explicit understanding that no modifications of NGS software, programs, or processes will be required. Specifically, to ensure full compatibility with the double-precision computations used in NGS map projection algorithms, your defining parameters cannot exceed 14 digits of numerical precision. The intent of the exceptions is to allow Wisconsin to define SPCS2022 zones using the same origin latitude and longitude and projection axis scale as published for existing WISCRS zones in *Wisconsin*



Coordinate Reference Systems, 2nd edition (https://www.sco.wisc.edu/wp-content/uploads/2017/07/WisCoordRefSys_June2015.pdf).

Thank you for contacting NGS with your exception requests. We hope that approval of the three requested exceptions meets the needs of the Wisconsin geospatial community for SPCS2022. Upon review with Wisconsin stakeholders, please submit your final request and proposal forms to NGS.SPCS@noaa.gov. If you have additional questions, please contact our SPCS2020 Project Manager, Michael Dennis, at michael.dennis@noaa.gov.

Sincerely,



Juliana P. Blackwell
Director



cc: John Ellingson, NGS Regional Geodetic Advisor
Michael Dennis, SPCS2022 Project Manager
Alan Vonderohe, WSRS2022 Task Force Technical Focus Group Chair
Glen Schaefer, WSRS2022 Task Force Technical Focus Group Vice Chair