

Of great interest - especially to ALASKA GPS and GIS users

Joel Cusick, NPS, Anchorage, AK: Projections and Datums Presentation Feb 2013

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There is much confusion on what datum is assumed and what datum transformations are used inside GPS processing software. This presentation addresses the confusion within the 3 main GPS enabled workflows in the National Park Service.

1. The reliable, trusted Garmin PND, usually the first location aware device on the scene.
2. The mapping grade submeter GPS suite. Represented by the Trimble mapping devices providing not only submeter solutions, but tying mapping and surveying projects together in a common National Spatial Reference frame.
3. Lastly, the ArcPad software workflows, often found in a plane, or on an ATV providing instant GIS layer creation where ever you are.

We will explore shifters between WGS84 and NAD83 reference datums popular in the software today, and will hopefully guide you thru an often confusing, array of translators taking you back and forth. As this title slide shows, we hope you won't get run over by the GPS crew this summer who THINKS they are in one reference frame, while you as a GIS manager ASSUMES they are in another reference frame.

This confusion causes pain and suffering when metadata is not passed between the field and office.

**UPDATE 2014 : You may also wish to view**  
**NGS Videos on Geodetic Datums!**

- [What are Geodetic Datums?](#) ☐☐☐
- [How Were Geodetic Datums Established?](#) ☐☐☐
- [What is the Status of Today's Geodetic Datums?](#) ☐☐☐
- [What's Next for Geodetic Datums?](#)