

Memorandum for: All Interested Parties

From: Jeff Olsen, N/NGS4

Subject: Changes to the Blue Book since April, 2000

Changes are implemented via the website, <http://www.ngs.noaa.gov/FGCS/BlueBook/>. Dates of posting to that website are shown in parentheses.

1. The web site was revised to include a section for superseded chapters, annexes, etc. (10/9/01)
2. New ellipsoid height datum codes F and G were added to the *86* record of chapter 2. (1/15/01)
3. A statewide state plane coordinate zone, KY1Z for Kentucky, was added in Annex B. (1/28/02)
4. Contributors were added to Annex C as needed (on-going). The Contributor Code for "USGLO" was changed from "US Government Land Office" to "US General Land Office". (date not tracked)
5. Point-of-contact information was revised to be current in Annexes K (7/19/02) and L (12/20/01).
6. Solution Coordinate Reference System Codes 20-22 were added to Annex N. (5/6/02)
7. The D-file description format defined in Annex P became the standard. Chapter 3 defining the former Unified description format was moved to the Superseded section. (1/1/2002)
8. Add a precise ephemeris reference frame (G1150, code 23) to Annex N. (11/21/02)

Items 9-23 were posted to the website March 13, 2003:

9. Update Volume I cover page with March, 2003 date.
10. Replace references to Chapter 3 with Annex P.
11. Make first 6 columns of each data record in chapter 2 optional. Chapter 6 still under consideration.
12. Refer to GPS in chapter 1 as a type of survey project in addition to classical.
13. Delete chapter 1 references to magnetic tape as storage medium; add CD as storage medium.
14. Restore chapter 1 diagrams on pp.4 and 5.
15. Revise preface to add reference to web address; delete reference to retired individual.
16. Revise Table of Contents to reflect superseded Annexes and publication of current Annexes on the web; revise page references to Chapters 1 & 2 as needed to accommodate revisions in those chapters.

17. Replace diagram on p. 2-52a showing measurement to L1PC with one showing ARP. Revise the text references to L1PC with ARP on pp. 11 and 52. See #25 below.
18. Delete chapter 2 references to *90* record.
19. Delete chapter 2 references to elevations in *80* record.
20. Revise chapter 2 introductory text of *86* record to require ellipsoid heights for GPS projects.
21. Add chapter 2 Orthometric Height Datum Codes AS, NM & PR for tidal datums in *86* record.
22. Add chapter 2 reference to GRS80 ellipsoid under Ellipsoid Height Datums in *86* record.
23. Delete format diagrams in Chapter 2 and Annex N.
End of items posted to web site on March 13, 2003.
24. Add Geoid Height Code V to chapter 2 *86* record. (10/24/03)
25. Restore L1PC temporarily in chapter 2 as the surface to which GPS antenna height measurements are referenced. (10/28/03) See #17 above and #32 below.
26. Add Geoid Height Codes W and X to table in *86* record. (1/6/04)
27. Add Precise Ephemeris Reference Frame Igb 2000 [IGb 00], code 24, to Annex N. (1/23/04)
28. Revise Annex N to include the I record, per document describing changes between 1998 and 2000 bluebook versions (overdue change). (8/9/04)
29. Revise Annex F code 243 from "NA3000 Digital Level" to "NA3000, NA3003, or DNA03 Digital Levels". (9/7/04)
30. Revise Annex F code 246 from "DINI10" to "DINI10, DINI11, or DINI12 Digital Levels". (9/7/04)
31. Revise Annex F code 395 to be a catch-all for non-invar bar-code rods. (9/7/04)
32. Revise chapter 2, pages 11, 52 and 52a, to replace references to measurement to L1PC with references to measurement to ARP. (9/7/04) See #25 above.
33. Substitute typed and updated versions of chapters 5 and 6 for the scanned versions. The updates reflect such things as changes in technology (e.g., 9-track tape no longer used for data storage) and changes to various fields (e.g., century added to date in *20* record for Y2K compliance; PID and lat/long in *30* record). (11/24/04)
34. Restore the L1PC in chapter 2 as the surface to which GPS antenna height measurements are referenced. (12/23/04).

See #17, 25 and 32 above. Discussion as to including the height of the Antenna Reference Point (ARP) above the mark in the NGS data base is continuing. In the meantime, the approach taken in # 17 and 32 above, re-defining cc 25-29 of the *27* record to store the ARP height rather than the L1PC height, was finally conclusively rejected. The ARP height may in the future be stored in another part of the *27* record, such as cc 56-60.

35. Revise Annexes K and L to update reporting procedures and storage media. (7/19/05)

36. Enable ARP height in cc 56-60 of the *27* record per discussion in # 34 above. Either ARP height or L1PC height is now acceptable in the *27* record. Both are also acceptable in a given record. (9/2/05)

37. Add Topcon level instrument model AT-G2 to Annex F code 240. (9/15/05)

38. Add Web-based services for GPS data submission offered by NGS to Annex L as acceptable alternative to existing guidelines for submitting GPS data. (1/10/06)

39. Changes to three pages:

Replace *71* by *72* record, remove *83* and *84* records in list on p. 2-2.

Add '1' to 'Allowable Error Codes' for Interferometric Positioning in table on p. 2-37.

Add reference ("See table on p. 2-85") for Ellipsoid Height Datums in format list on p. 2-83. (3/17/06)

40. Revise Annexes K and L to replace individuals as points of contact for submitting data by general telephone number for Observations and Analysis Division. (6/15/06)

41. Add Precise Ephemeris Reference Frames ITRF 05 and IGS 05, codes 25 & 26, to Annex N. (3/15/07)

42. Add Geoid Height Codes Y = GEOID06 & Z = USGG2006 in Volume I, chapter 2. (6/14/07)

43. Revise Annex F: modify code 238 to apply to all models of Sokkisha/Sokkia Precise Compensator Level; add code 399 for Sokkia/Sokkia Invar (Bar-Code) Rod (11/19/07)

44. Restore Records *83* and *84* and *90* to list of Horizontal Observation Data Set Records on p. 2-2 (discontinued records). (3/3/08)

45. Add Records *91*, *92* and *93* to above Data Set Records on p. 2-2 and to main body of text on pp. 87-89. (3/3/08)

46. Chapter 2: Revise title of *82* record to include "and other dependent mark" (3/12/09)

47. Annex L: p.2, replace "WDESC" and "WDDPROC" by "WinDesc"; p.3: revise procedures for constrained adjustment in that MODGEE is not to be run any more (3/12/09)

48. Chapter 2: add VI as Virgin Islands vertical datum of 2009 on p. 85 (4/16/09)

49. Chapter 2: add 1 and 2 as codes for USGG2009 and GEOID09 respectively on p. 85 (10/2/09)
50. Annex N: Add new Solution Coordinate Reference System Code 27 for IGS08 (5/2/11)
51. Annex L: Remove reference to Station Visibility Diagrams (11/10/11)
52. Chapter 2: Add Geoid Height Codes 3 = EGM08, 4 = USGG2012, and 5 = GEOID12 to p. 2-85 in Volume I, Chapter 2. (5/14/12)
53. Annex N: add end-of-use dates to reference frame codes 16, 17, 24 and 27 on p. N-6. Add new Solution Coordinate Reference System Code 28 for IGB08 (11/2/12)
54. Chapter 2, *91*, *92* and *93* records: re-characterize first field from PID to sequence number; re-characterize last field from blanks to comment; revise introductory wording at top of each record. *91* and *92* records: revise Accuracy Scaled Code. (12/12/12)
55. Chapter 2, p. 2-85, replace Geoid Model 12 indicated by Code 5 by 12A. (12/12/12)
56. Annex L, various changes to accord with updated Adjust Guidelines. (12/12/12)
57. Annexes E & G, revise the first two paragraphs because of changes for local and network accuracies. Move existing Annexes E & G to the Superseded section. (12/26/12)