



Billing Code 4910-9x

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

DEPARTMENT OF TRANSPORTATION

DEPARTMENT OF DEFENSE

U.S. Army Corps of Engineers

[DOT-OST-2015-0105]

Nationwide Differential Global Positioning System (NDGPS)

AGENCIES: DHS - Coast Guard, DOT - Office of the Assistant Secretary for Research and Technology (OST-R), and DOD - U.S. Army Corps of Engineers, Office of Engineering and Construction

ACTION: Notice; request for public comments.

SUMMARY: The Nationwide Differential Global Positioning System (NDGPS) service augments GPS by providing increased accuracy and integrity using land-based reference stations to transmit correction messages over radiobeacon frequencies. The service was implemented through agreements between multiple Federal agencies including the United States Coast Guard (USCG), Department of Transportation (DOT), and United States Army Corps of Engineers (USACE), as well as several states and scientific organizations, all cooperating to provide the combined national DGPS utility. However, a number of factors have contributed to

declining use of NDGPS and, based on an assessment by the Department of Homeland Security (DHS), DOT, and USACE, DHS, DOT, and USACE are proposing to shutdown and decommission 62 DGPS sites, which will leave 22 operational sites available to users in coastal areas. This notice seeks public comments on the shutdown and decommissioning of a total of 62 DGPS sites.

Termination of the NDGPS broadcast at these sites is planned to occur on January 15, 2016.

DATES: Comments and related material must reach the Docket Management Facility on or before [INSERT DATE 90 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments identified by docket number DOT-OST-2015-0105 using any one of the following methods:

(1) Federal eRulemaking Portal:

<http://www.regulations.gov>.

(2) Fax: 202-493-2251.

(3) Mail: Docket Management Facility (M-30), U.S.

Department of Transportation, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.

(4) Hand delivery: Same as mail address above, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202-366-9329.

To avoid duplication, please use only one of these four methods. See the "Public Participation" portion of the

SUPPLEMENTARY INFORMATION section below for instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: If you have questions on this notice, contact CAPT Scott Smith, Coast Guard, telephone 202-372-1545 or e-mail scott.j.smith2@uscg.mil; or James Arnold, OST-R, NDGPS Program Manager, telephone 202-366-8422 or e-mail NDGPS@dot.gov. If you have questions on viewing or submitting material to the docket, call Cheryl Collins, Docket Operations, telephone 202-366-9826.

SUPPLEMENTARY INFORMATION:

Public Participation

You may submit comments and related material regarding this proposed action. All comments received will be posted, without change, to <http://www.regulations.gov> and will include any personal information you have provided.

Submitting comments: If you submit a comment, please include the docket number for this notice (DOT-OST-2015-0105) and provide a reason for each suggestion or recommendation. You may submit your comments and material online or by fax, mail or hand delivery, but please use only one of these means. We recommend that you include your name and a mailing address, an e-mail address, or a telephone number in the body of your document so that we can contact you if we have questions regarding your submission.

To submit your comment online, go to <http://www.regulations.gov> and use "DOT-OST-2015-0105" as your search term. Locate this notice in the results and click the corresponding "Comment Now" box to submit your comment. If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit comments by mail and would like to know that they reached the Facility, please enclose a stamped, self-addressed postcard or envelope.

We will consider all comments and material received during the comment period.

Viewing the comments: To view comments, as well as documents mentioned in this notice as being available in the docket, go to <http://www.regulations.gov> and use "DOT-OST-2015-0105" as your search term. Use the filters on the left side of the page to highlight "Public Submissions" or other document types. If you do not have access to the Internet, you may view the docket online by visiting the Docket Management Facility in Room W12-140 on the ground floor of the Department of Transportation West Building, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Privacy Act: Anyone can search the electronic form of comments received into any of our dockets by the name of the

individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review a Privacy Act system of records notice regarding our public dockets in the January 17, 2008 issue of the Federal Register (73 FR 3316).

Background and Purpose

The Coast Guard (USCG) began development of the Maritime Differential Global Positioning System (MDGPS) in the late 1980s. The GPS Standard Positioning Service (SPS) lacked sufficient accuracy and timely integrity monitoring, and soon later, was unable to meet requirements for coastal and Harbor Entrance and Approach (HEA) phases of navigation found in the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) R-121 and International Maritime Organization (IMO) A.953(23) recommendations, and to support the buoy positioning mission. The differential technique used by DGPS employs the installation of navigation equipment at a precisely known location. The equipment receives the GPS signal and compares the position solution from the received signal to its known location. The result of this comparison is then generated in the form of a correction message and sent to local users via radiobeacon broadcast to improve the accuracy and integrity of GPS-derived positions. In March of 1999, the MDGPS service was certified to meet the performance standards required

for HEA navigation with its 49 geographically dispersed sites providing coverage to a number of ports and waterways in the contiguous United States, Alaska, Hawaii, and Puerto Rico. MDGPS provided improved horizontal positioning accuracy of better than 10 meters, integrity (signal accuracy and continuity of delivery checking) alarms for GPS, and MDGPS out-of-tolerance conditions within 10 seconds of detection.

In 1997, the Department of Transportation and Related Agencies Appropriations Act of 1998 (Pub. L. 105-66, section 346 (111 Stat. 1449)) authorized the implementation of the inland component of the system. As a result, 29 additional inland sites were added to the network. These sites, along with seven sites provided by the U.S. Army Corps of Engineers, became known as Nationwide DGPS (NDGPS). The USCG was designated as lead for implementation, operation, and maintenance of the service. DOT is the NDGPS sponsor and chairs the multi-agency NDGPS Policy and Implementation Team (PIT) which directs the overall management of the NDGPS system. In cooperation with DOT, DHS, and USACE, many states and scientific organizations are also beneficiaries of the DGPS system, such as the National Weather Service's Forecast System Laboratory for short-term precipitation forecasts, and the University NAVSTAR Consortium for plate tectonic monitoring.

However, a number of factors have contributed to the declining use of NDGPS. Contributing factors include: (1) USCG changes in policy to allow aids to navigation (ATON) to be positioned with a GPS receiver using Receiver Autonomous Integrity Monitoring (RAIM), which assesses the integrity of a GPS signal within the receiver; (2) increased use of Wide Area Augmentation System (WAAS) in commercial maritime applications, which uses ground-based reference stations and satellite communications to improve accuracy; (3) limited availability of consumer-grade NDGPS receivers; (4) no NDGPS mandatory carriage requirement on any vessel within U.S. territorial waters; (5) the May 1, 2000 Presidential Directive discontinuing GPS Selective Availability http://clinton4.nara.gov/WH/EOP/OSTP/html/0053_2.html; (6) continuing GPS modernization; and (7) the DOT Federal Railroad Administration's determination¹ that NDGPS is not a requirement for the successful implementation of Positive Train Control (PTC), which provides the railway system the capability to positively enforce movement authorities along railroad systems.

In April 2013, DHS and DOT published a notice in the Federal Register² announcing that DHS and DOT were in the process

¹Letter from Federal Railroad Administration to USCG dated January 29, 2013 with subject "Elimination of the Requirement for the NDGPS to support PTC mandated by the RSIA of 2008."

²78 FR 22554 (Apr. 16, 2013). The Notice was published under docket numbers, USCG-2013-0054 and RITA-2013-0001.

of analyzing the current and future user needs and requirements for NDGPS, and requesting public comment on:

- (1) The commenter's usage of NDGPS for positioning, navigation, and timing;
- (2) The impact on NDGPS users if NDGPS were discontinued;
- (3) If NDGPS were discontinued, the possible alternatives for meeting users' positioning, navigation, and timing requirements; and
- (4) Potential alternative uses for the existing NDGPS infrastructure.

The response to the 2013 notice was limited, but the responses received were well informed on the NDGPS system, its use, and current and potential applications. While a limited number of responders found the broadcast of corrections to be beneficial, no respondents reported the discontinuance of DGPS broadcast to be detrimental or harmful. Ship pilots in particular noted that DGPS can be critical in confined waterways for precise shiphandling maneuvers.

Several commenters noted that NDGPS is part of the Continuously Operating Reference Stations (CORS)³ network, which is used with GPS data to improve the precision of positioning, has value while others stated they had alternative networks

³ CORS support surveying, mapping, and related disciplines that have accuracy requirements which require the use of a relative positioning technique. CORS automatically collect and record the GPS data at known locations in support of these activities.

available. The USCG cooperates with National Oceanic and Atmospheric Administration's (NOAA) National Geodetic Survey (NGS) to supplement their network of CORS reference stations with NDGPS sites. Today, DGPS sites account for approximately 5% of the CORS network, which is comprised of more than 1,900 geodetic-grade GPS receivers. CORS is widely used by Federal, state, and non-government entities throughout the United States to provide data for 3-dimensional positioning for use in land surveys, Geographic Information Systems (GIS), Land Information Systems (LIS), and environmental management. Additionally, raw GPS data is provided to NOAA's National Weather Service from all DGPS sites for weather analysis and prediction.

A few respondents noted the broadcast signals provide non-line-of-sight benefits. Respondents suggested alternatives to NDGPS as currently implemented, such as using existing NDGPS stations to rebroadcast WAAS corrections, adding other data to the broadcast, integrating the broadcast with positioning technologies, or simply streaming data from the reference stations.

After considering the comments and based on an assessment by DHS, DOT, and USACE, we propose to shutdown and decommission 62 sites, which is planned to occur on January 15, 2016, which will leave 22 operational sites available to users in those waterway where pilots generally operate, i.e., where marine

traffic is most frequent and the need for precise marine navigation is greatest. However, it is possible for the reference stations to be transitioned to other Federal, state, and/or local agencies. Questions about potential transition of specific reference stations should be directed to the individual(s) referenced in the FOR FURTHER INFORMATION CONTACT section above.

The specific sites to be disestablished are:

Maritime Sites:

- Appleton, WA
- Biorka, AK
- Bobo, MS
- Brunswick, ME
- Cape Hinchinbrook, AK
- Cheboygan, MI
- Cold Bay, AK
- Driver, VA
- Eglin, FL
- Gustavus, AK
- Isabel, PR
- Key West, FL
- Kodiak, AK
- Kokole Point, HI

- Level Island, AK
- Lompoc, CA
- Mequon, MI
- New Bern, NC
- Penobscot, ME
- Pigeon Point, CA
- Robinson Pt, WA
- Saginaw, MI
- Sandy Hook, NJ
- Sturgeon Bay, WI
- Upper Keweenaw, MI
- Wisconsin Point, WI
- Youngstown, NY

Inland Sites:

- Albuquerque, NM
- Austin, NV
- Bakersfield, CA
- Billings, MT
- Chico, CA
- Clark, SD
- Dandridge, TN
- Essex, CA
- Flagstaff, AZ

- Greensboro, NC
- Hackleburg, AL
- Hagerstown, MD
- Hartsville, TN
- Hawk Run, PA
- Hudson Falls, NY
- Klamath Falls, OR
- Macon, GA
- Medora, ND
- Myton, UT
- Pine River, MN
- Polson, MT
- Pueblo, CO
- Savannah, GA
- Seneca, OR
- Spokane, WA
- St. Marys, WV
- Summerfield, TX
- Topeka, KS
- Whitney, NE

Inland Sites operated by the U.S. Army Corps of Engineers:

- Louisville, KY

- Millers Ferry, AL
- Rock Island, IA
- Sallisaw, OK
- St. Louis, MO
- St. Paul (Alma), MN

For more information on the NDGPS, visit the USCG's website at <http://www.navcen.uscg.gov/?pageName=dgpsMain>. Additional information on GPS, NDGPS, and other GPS augmentation systems is available in the 2014 Federal Radionavigation Plan, published by the Department of Defense, DHS, and DOT, which is also available at the USCG's website at <http://www.navcen.uscg.gov/?pageName=pubsMain>.

Request for Comments

This notice seeks public comments on the shutdown and decommissioning of a total of 62 DGPS sites, which would leave 22 operational sites available to users in coastal areas on January 15, 2016.

Graphics showing the predicted coverage before and after the proposed sites are decommissioned, and a list of the sites, is available at the USCG's NDGPS General Information website at: <http://www.navcen.uscg.gov/?pageName=dgpsMain>.

Authority

This notice is issued under the authority of 5 U.S.C. 552(a), 14 U.S.C. 81, and 49 U.S.C. 301 (Pub. L. 105-66, section 346).

Issued in Washington, DC, on August 10, 2015.

Mr. Gary Rasicot
Director of Marine Transportation Systems,
U.S. Coast Guard

Mr. Gregory D. Winfree
Assistant Secretary for Research and Technology
U.S. Department of Transportation

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