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Geospatial Data Publishing Guidance

1 **1. PURPOSE**

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4 The purpose of this document is to provide Geospatial Data Publishing procedures for EPA
5 Data Project Managers, EPA GIS Developers/Analysts, and EPA GeoPlatform Online
6 Administrators or users within the EPA's GeoPlatform Data Publishing Framework.
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8 **2. SCOPE**

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10 This document describes the guidance and procedure requirements or recommendations
11 to prepare geospatial data and associated applications for publishing to EPA's GeoPlatform
12 Data Publishing Framework. This Framework includes the following: EPA GeoPlatform
13 Online (EPA GPO) and associated applications and Story Maps, GeoPlatform Hosting
14 Environment (GPHE), and data hosting components of the Environmental Dataset Gateway
15 (EDG). This document does not provide information regarding publishing to other EPA
16 environments (e.g., offices that use their own servers). Individuals using other means to
17 publish data *may* use information in this document (e.g., the best practices or checklists) as
18 a reference; however, different rules may apply to other environments outside of the EPA
19 GeoPlatform. This document also does not replace activities and requirements established
20 by Web Product Review. See EPA's [Review and Approval of Web Content website](#) for more
21 information. Web publishing approval processes are not included in this guidance.
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23 **3. AUDIENCE**

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25 This document is written for **EPA Data Project Managers** (individuals wishing to
26 understand data publishing options and benefits), **EPA GIS Developers/Analysts**
27 (individuals wishing to understand the process for publishing content), and **EPA**
28 **GeoPlatform Online Administrators** (individuals who provide guidance and authorize data
29 publication for a Program Office, Region, or Research Laboratory).
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31 **4. BACKGROUND**

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33 EPA Regions, Program Offices and Research Laboratories need cost effective and efficient
34 ways to make geospatial data available for distribution to individuals within the Agency, to
35 Agency partners, and to the public. Needs may range from relatively simple tasks such as
36 making a geospatial dataset available for download to more complex tasks such as creating
37 a web mapping application to deliver geospatial information. The process of making these
38 data available to a desired audience is referred to as "data publishing."
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40 The EPA GeoPlatform provides enterprise geospatial resources to EPA offices to meet a
41 variety of geospatial needs. EPA offices are encouraged to use GeoPlatform resources to
42 publish their geospatial data. These resources include servers and software designed to
43 handle most data preparation and distribution needs. Data publishing resources, along with
44 data reuse resources and established standard operating procedures, are collectively

45 referred to as the “**GeoPlatform Data Publishing Framework.**” The Framework is
46 supported by an experienced staff that will assist offices with data publishing requests.
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48 This document describes key principles and identifies core requirements for publishing
49 publicly available geospatial data. Within this framework, data publishers have discretion
50 and may choose from several options for providing data based on their final needs and
51 current workflow. Rather than detail each option, this document will link to additional
52 guidance and best practices documents where appropriate.
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54 Please note:

- 55 • A number of links relate to content available online – specifically through EPA’s
56 SharePoint. Some hyperlinks are only accessible to individuals with access to
57 EPA’s intranet.
- 58 • This document focuses solely on data publishing; for more information about the
59 full suite of products and services provided through the EPA GeoPlatform Data
60 Publishing Framework, please visit the [EPA GeoResources SharePoint site](#).
- 61 • All GeoPlatform users may work with other EPA groups, such as EPA’s Web
62 Coordinators, Web Workgroup, or Data Advisory Councils to ensure that published
63 data adheres to required formats or standards, where applicable. The requirements
64 for each organization may vary depending on the organization’s internal structure
65 and processes.
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67 **5. AUTHORITY**

68 EPA Memos requiring use of the EPA GeoPlatform.

- 69 • [EPA GeoPlatform memo - 2017 \(pdf\)](#) and
- 70 • [Deputy Administrator GeoPlatform memo \(pdf\)](#)

71 Also, the following acts should be adhered to for all Geospatial content:

- 72 • [Geospatial Data Act](#),
- 73 • [Evidence Based Policymaking Act](#), and
- 74 • [Enterprise Information Management Policy \(EIMP\)](#)
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77 **6. GUIDANCE**

78 **Data Publishing Options:** EPA has several options for publishing data and related
79 content. Each option has specific criteria and required steps. These criteria include
80 detailed guidance and mandatory documentation and approval processes that can be
81 found through the linked documents shown for each data publishing option.
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83 **All methods listed should begin with a data review of available content.** Review
84 existing data and services to see if content already exists within EPA. Example locations:

- 85 1) [GeoResources SharePoint Site](#)
- 86 2) [EPA GPO Gallery](#) or [SEGS Gallery](#)
- 87 3) [Enterprise Dataset Gateway](#)
- 88 4) [GeoPlatform Hosting Environment Services](#)
- 89 5) Discuss project with Program Office or Regional GIS Lead.
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91 **Records:** Your Records Liaison Officer can help you to determine the most appropriate
92 methods to capture and maintain records. For additional guidance, review either the
93 [Records web page](#) (public) or [Records contact us](#) (intranet) page.

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Method 1: [EPA GeoPlatform Online \(EPA GPO\)](#)

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This method is used for posting data and related content for public access in the EPA GPO. Using the EPA GPO for published content allows EPA users access to items shared within the organization and allows items to be shared with the public once the mandatory data publishing criteria are met. For content that does not become public, it is recommended these procedures be followed so others within the agency can fully understand the applicability of the data.

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Any public content published through ArcGIS Pro, ArcMap, or other Esri-related products must adhere to the [guidance for EPA GPO content items listed below](#).

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1. [Data Publishing Documentation Recommendations](#) (EDG Style guides)

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- a) Detailed guidance is available for [EPA Style Guide for Documenting GeoPlatform Online Content Items](#).

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2. **Data Publishing Requirements: All public content is subject to review facilitated by the [EPA GeoPlatform Dashboard](#).** Separate procedures are available for EPA Publishers or Users and for GPO Admins.

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- a) EPA Publishers: Should refer [detailed steps](#) or an interactive [Story Map](#) are available for guidance on requesting public content through the GPO Dashboard.

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- b) GPO Admins: Should refer [detailed steps](#) or an interactive [Story Map](#) are available for guidance when GPO Admins Review/Approve/Finalize published public data –

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- c) Metadata and documentation shall be published through the EDG and proper links shall be included in the metadata as described in the [EPA Style Guide for Creating ArcMap Web Service Metadata](#).

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Method 2: [GeoPlatform Hosting Environment \(GPHE\)](#)

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This option is used for posting data and related content for public or intranet-only access in the EPA GeoPlatform Hosting Environment – a cluster of public-facing servers and a second cluster with intranet-only access that is not shared with the public. This option is for hosting web services published through ArcGIS Server and for applications meeting the GPHE requirements criteria (listed below). Using the EPA GPHE, for web services and applications, provides a platform maintained and managed within the EPA environment.

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1. [Data Publishing Requirements](#)

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- a) The [GeoPlatform Hosting Environment requirements](#) includes a signed Application Security Checklist approved by both the IMO/ISO for the user's Program Office or Region.

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- 133 2. [Data Publishing Documentation Requirements](#)
- 134 a) Metadata and documentation shall be published through the EDG and
135 proper links shall be included in the metadata as described in the [EPA](#)
136 [Style Guide for Creating ArcMap Web Service Metadata](#).
- 137 3. Data Publishing Formatting and Request Process
- 138 a) Follow the link for the [Data Publishing Requirements](#)
- 139 b) For information on hosting requirements and the deployment process,
140 visit the - [GeoPlatform Hosting Environment requirements](#) page -.
- 141 c) A technical Point of Contact (POC) will be assigned to the request once
142 accepted and will assist the Requestor through the deployment process.
- 143 4. Deployment Steps
- 144 a) Services and/or Applications are provided to the POC for deployment to
145 a staging environment. Any modifications at this point will remain in the
146 staging environment until the services and/or applications are ready for
147 production.
- 148 5. Review/Approve/Finalize Published Data
- 149 a) Upon approval and signed forms from the IMO/ISO, the staging
150 services and/or applications will be deployed to production and should
151 be reviewed for completeness.

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153 **Method 3: EPA Data Download or EPA Clip N Ship through the EDG**
154 (<https://edg.epa.gov/metadata/catalog/data/data.page>)

155 To make data available for download, publishers may choose to host data on the
156 EPA Data Download site or the EPA Clip N Ship Site. Public datasets are
157 discoverable through the EDG or Data.gov and will link directly to the downloadable
158 data. Data Download allows for download of the complete dataset whereas Clip N
159 Ship allows users to specify a subset of the data.

- 160 1. Data Publishing Requests, Requirements, and Recommendations:
- 161 a. Contact the edg@epa.gov for more information on these two methods
162 of publishing data found in these documents: [Data Downloads](#) or [Clip](#)
163 [N Ship](#)
- 164 b. Data must contain appropriate metadata records hosted in the EDG.
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166 **Method 4: Story Maps**

167 The option for Story Maps is used in conjunction with Method 1 or 2. While
168 technically an application, the content used within Story Maps has additional
169 requirements for public release because of the mix of content in the Story Map
170 maps, text, images/photos, and graphs. Users must follow the instructions on the

171 Web Council Story Map page before requesting content be made public through
172 Option 1 or Option 2.

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- 174 1. The [Web Council Story Map page](#) contains detailed instructions about
175 publishing criteria and the review process.
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- 177 2. Additionally, all Story Map content items must follow the guidance for [EPA](#)
178 [GPO public content publishing](#) including EPA Publisher and User approval
179 submission and GPO Admin approval through the [EPA GeoPlatform](#)
180 [Dashboard](#)
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183 7. ROLES AND RESPONSIBILITIES

184 185 EPA GeoPlatform Roles

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187 Each of the following roles are responsible for overseeing data governance and
188 ensuring their organization meets publishing requirements for content published within
189 the EPA GeoPlatform Data Publishing Framework.

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- 191 • EPA GeoPlatform Online (GPO) Administrators ([current list of GPO](#)
[Administrators](#))
 - 192 • Data Owners (for example project managers, scientists, OSCs responsible for
193 the data), and
 - 194 • Data Publishers (Non-Administrators in the EPA GPO - for example data
195 analysts who are account holders in the EPA GPO).

196 197 EPA GeoPlatform Administrators

198 GPO Administrators are tasked as being the point of contact for content published to
199 the EPA GeoPlatform Online. GPO Administrators work with Data Publishers and
200 Data Owners to answer questions, provide guidance about GeoPlatform Online
201 content and metadata, and assist with making GeoPlatform Online content available to
202 the public. Most EPA organizations have at least one GPO Administrator. Each GPO
203 Administrator is fully responsible for the content published on behalf of their
204 organization. Each EPA Organization (Program Office or Region) will nominate one or
205 more EPA GeoPlatform Administrators who will be required to approve data published
206 to the EPA GeoPlatform Data Publishing Framework.

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208 EPA GeoPlatform Administrators will meet collectively on a monthly basis and will:

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- 210 • Review problems/issues identified with publishing processes and suggest
211 alternative approaches or solutions,
 - 212 • Raise concerns about SOPs, documentation, web forms, or other training
213 resources (or lack thereof),
 - 214 • Review rules for fair use of the EPA GeoPlatform and Data Publishing Resources,
215 and
 - 216 • Approve any necessary changes to the overall framework.

217 EPA GeoPlatform Administrators will also be responsible for ensuring content published
218 on behalf of their organization:

- 219 • Adheres to data publishing limits, formats, and guidelines required by this EPA
- 220 GeoPlatform Data Publishing Framework,
- 221 • Adheres to data publishing limits, formats, and guidelines as outlined by the Data
- 222 Publishing Owner's organization in the form of a Data Management Plan (which may
- 223 vary between EPA organizations),
- 224 • Is provided using good code development practices (for custom applications), for
- 225 example, [Federal Source Code Policy\(m_16_21\)](#),
- 226 • Is provided with full metadata documentation (data and web services),
- 227 • Is complete and releasable by signing the required Security Certificate.
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229 **EPA GeoPlatform Data Publishers**

230 EPA GeoPlatform Data Publishers are Analysts or Developers tasked with data
231 development and processing. Data Publishers work with Data Owner to develop and
232 implement the datasets and services for their organization based on the direction of
233 Data Owner. Data Publishers will perform the development, processing, and
234 deployment steps as outlined in this document, and will request that EPA GeoPlatform
235 Data Administrators and the Data Owner approve the content they publish to the EPA
236 GeoPlatform Data Publishing Framework. EPA GeoPlatform Data Publishers will:

- 237 • Create data, web services, and applications that adhere to data publishing limits,
- 238 formats, and guidelines required by the EPA GeoPlatform Data Publishing
- 239 Framework,
- 240 • Create comprehensive metadata documentation (data and web services),
- 241 contribute metadata to the EDG, and ensure that EPA GeoPlatform Online metadata
- 242 is complete (for EPA Power Users and EPA Publishers),
- 243 • Coordinate directly with the Data Owner and appropriate POCs to deploy data and
- 244 content to the selected data publishing environments,
- 245 • Oversee data and application updates across all published locations. Data
- 246 maintenance and updates are the responsibility of the publishers.
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249 **EDG Stewards**

250 The [Environmental Dataset Gateway Steward](#) acts as the central authority for a
251 Region, Program Office, or Research Laboratory's geospatial and non-geospatial
252 resources and metadata records contributed to the EDG. The EDG Steward also
253 serves as the point-of-contact for other EDG contributors within their organization that
254 require assistance through processes identified for EDG contribution. For more
255 information about the EDG, including specific information about all EDG roles, please
256 see the [EDG Governance and SOP](#) document.

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259 **8. RELATED INFORMATION**

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261 For information about logging into the EPA GPO, go to the [GeoResources SharePoint](#)
262 ["Make a Map" page](#).

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264 **9. DEFINITIONS**

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- 266 • **EPA GPO: EPA GeoPlatform Online (EPA GPO)** – EPA's instance of Esri ArcGIS
267 Online for use by EPA and affiliated staff.

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- **EPA GPHE: EPA GeoPlatform Hosting Environment (GPHE)** – A group of virtual servers in the EPA’s National Computing Center (NCC) available to the GIS Community for publishing and hosting applications, web services, and associated content not hosted in the EPA GPO environment.
 - **EPA GeoPlatform Dashboard** – A web-based interface to content in the EPA GPO with additional tools to manage content for completeness and perform administrative reviews of public items. The “Dashboard” also contains additional interfaces for managing users, licensing, EPA GPO use, and hosted services in the GPHE.
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10. WAIVERS

[504 Waiver](#)

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11. MATERIAL SUPERSEDED

[EPA GeoPlatform Publishing Workflow SOP v 1.0](#)

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12. CONTACTS

Harvey Simon, Geographic Information Officer
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