Geospatial Data Management Plan

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HOUSTON-GALVESTON AREA COUNCIL

Data Analytics and Research Department

Prepared in cooperation with the

Texas Commission on Environmental Quality

under the authorization of the Texas Clean Rivers Act

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Introduction

The Data Management Plan (The Plan) outlines the standard policies and procedures for data management within the Houston-Galveston Area Council (H-GAC) Data Analytics and Research (DAR) Department. The Plan covers the management of both tabular (non-geographic) and spatial (geographic) datasets. Its primary purpose is to ensure the efficient access and maintenance of these datasets within the DAR Geospatial/Geographic Information Systems (GIS) environment.

GIS technology provides a systematic means to capture, manipulate, analyze, store and display spatially referenced data. GIS supports a wide variety of applications ranging from site assessments, environmental planning, urban planning, and spatial analysis to support organizational strategies. In general, GIS supports the overall departmental goals of guiding regional planning, enhancing the quality of the region's natural environment, and public education through outreach programs. The DAR GIS team supports various programs within the H-GAC through data development, spatial analysis, geospatial applications development, cartography in support of departmental goals.

The Plan is considered a dynamic working document which responds to changing technology, funding, staffing, and project requirements. Consequently, the Plan is reviewed annually and amended as needed.

Geospatial Services

The following section explains the geospatial services provided by the H-GAC DAR GIS team as it relates to the sharing of data, development of geospatial applications, cartography, and underlying GIS resources. The DAR GIS team is responsible for the development of data and sharing of many publicly viable datasets, developing geospatial applications, cartography, and coordination of maintenance of underlying geospatial hardware and software for H-GAC.

The DAR GIS team maintains a centralized geospatial warehouses (Global SDE and C&E SDE), cloud-based data sharing platform, an online mapping platform for web-based geospatial applications (Mapping Application), and an FTP download site (Data Clearinghouse). The SDEs utilize ESRI's ArcSDE software running on a Microsoft SQL Server RDBMS. The cloud-based data sharing platform, ArcGIS HUB (H-GAC Regional Data Hub) is used ArcGIS online and delivers data sharing and site creation capabilities. The mapping application uses ESRI's ArcGIS.com & ArcGIS Server platform running on .NET. The Data Clearinghouse is an FTP server (h-gac.sharefile.com) that provides DAR with storage space where it can post publicly available datasets for downloading. The SDEs, Mapping Application, and Data Clearinghouse platforms are installed by the H-GAC Data Services department (Data Services), with Data Services maintaining only the lower-level technology components such as the physical hardware, software installation, and low-level server and RDBMS functions. All upgrades

and maintenance are coordinated by the DAR GIS Manager. All geospatial content stored in the SDEs, the Data Clearinghouse, and Mapping Application, are the responsibility of the DAR GIS staff. However, other departments such as Data Service and Transportation departments maintain some of the other GIS data such as transportation and 911 address and stored in a separate SDE that everybody in H-GAC has access to them. A detailed schematic of the geospatial technical architecture and how the various systems are interconnected can be found in the *System Architecture* section below.

Data Sharing

The Global and C&E SDE serves as the primary internal repository for geospatial data, metadata, and other information relevant to the activities and goals of the DAR department. GIS manger and database administrator within DAR GIS program are provided *Editor* access to data in the SDEs. All other users have only viewer access to data in the SDEs. H-GAC staffs without *Editor* access to the SDE server can access a copy of the geospatial data through a network drives that houses imported versions of the original SDE data to develop GIS layers for project specific editing. This system ensures that the original formatting of geospatial data on the SDEs remains unchanged. All user access privileges are assigned by the DAR GIS Manager based upon business needs, GIS skills, and role within the organization. No users outside of the DAR department have editor level access to any GIS data in the SDEs, and in some instances there are datasets that are viewable by only some department GIS users (such as restricted Clean Rivers program data is only viewable to users from Community and Environmental Planning department). Instructions for connecting to the SDEs are provided to authorized users.

Datasets determined to be viable for publication to the public are published to the H-GAC Regional Data Hub (The ArcGIS online Hub site - https://gishub-h-gac.hub.arcgis.com/), thereby allowing the general public widespread access to this information via the internet. Members of the public may view metadata and download any of the datasets that are posted to the Hub site. In some instances, these datasets are used in web-based interactive mapping applications and can be accessed online via the Mapping Server's services directory, or accessible via the Data Clearinghouse for downloading. The data sharing for downloading through the Data Clearinghouse is facilitated through H-GAC's ShareFile system. All public DAR GIS data, applications, cartographic products, and the DAR map services directory can be accessed via "Regional Data, Imagery and Research" section under "Programs and Services" of the H-GAC website. A screenshot of the website can be found in Appendix 7.

Geospatial Applications

The DAR department has made a strategic decision to incorporate internet-based mapping applications into its deliverables for many programs and projects. Before, the results of most

projects consisted of a large-format map printed on a plotter up to 48”x36” in diameter. This form of cartography, although still useful in many settings, did not allow programs to communicate results to the public or external organizations that had an interest in our analysis results. By taking results from DAR projects and coupling this with base map data and imagery, DAR has been able to share the results of projects to a far greater audience and has created opportunities whereby map layers published on the DAR mapping server can be utilized in other organizations mapping applications.

Currently there are two platforms upon which DAR provides web-based mapping solutions.

The first platform is based on the JavaScript programming technology, and all mapping applications developed using this platform run on various operational systems including Windows, MacOS, ISO, and Android. This platform is intended to provide users with a graphics rich user interface where the map can be navigated, layers turned on/off, and information obtained on each feature. In some instances, features have links to additional resources such as photos of monitoring stations, external websites, and detailed reports. This mapping application allows the users to display its information on different screen-size devices including desktops, laptops, tablets, and mobile phones.

The second platform utilizes the capabilities of the ArcServer and Arcgis.com platform to allow users to directly access map layers published on the mapping server. This method of delivery is called ‘streaming’ and allows end users access to individual map layers and geoprocessing tools published on the server. Typical users of this method of delivery are other GIS users using ArcGIS Pro/ArcMap GIS, where they can connect directly to our ArcServer platform for read-only access and view our map layers. Other instances where Arcgis.com’s users may utilize this method are where they include our map layers in their own mapping applications.

Mapping and Cartographic Products

The DAR department produces a variety of static cartographic maps for the region because of project activities and for general usage. To facilitate the sharing of these maps in an electronic format, DAR has placed maps with their respective topics under “Programs and Services” section of the homepage as shown in Appendix 7.

System Resources

System Architecture

The DAR department uses an integrated architecture to support the development, analysis, and dissemination of spatial information. The diagram below illustrates this system architecture at a high level. The goal of the overall system is to allow for a streamlined

workflow to develop/maintain data, optimize the data for use in online applications, and the consumption of applications via multiple platforms.

Currently the DAR GIS platform supports sharing of geospatial data via ArcGIS Hub and ArcServer mapping server platform. These allow end users internally or externally to consume map layers and geoprocessing tools via GIS desktop, mobile, tablet, or interactive applications.

In some instances, applications are configured with public feedback and volunteer GIS workflows that allow the DAR GIS team to obtain information for the public on various geographic features in the region. This public feedback loop allows DAR to investigate feedback and verify its validity prior to incorporating the information into the data warehouse.

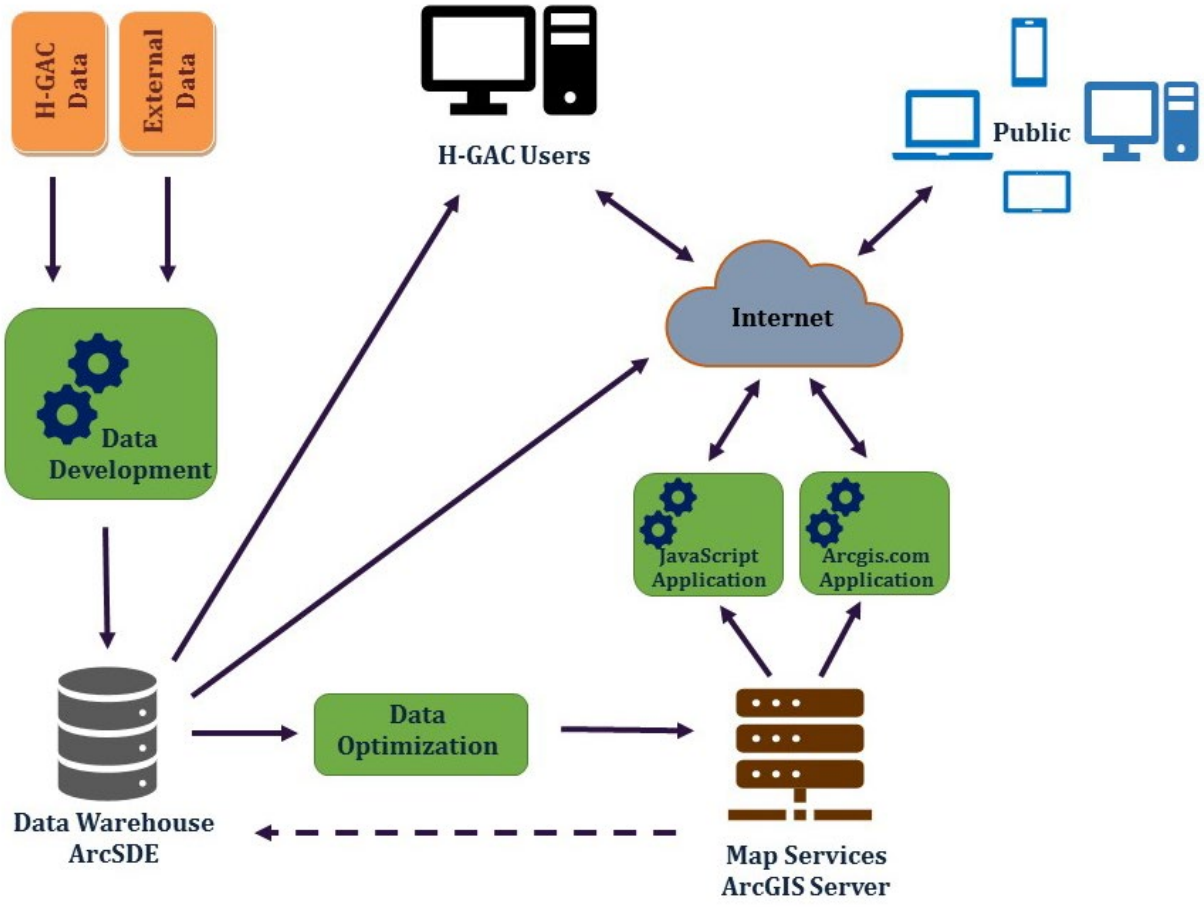

Figure 1: H-GAC Geospatial System Architecture

Hardware

The configuration of the hardware used by staff that performs GIS and data Management work is a distributed network. This network consists of several PC's which are connected to

central file servers. The department also uses a central web mapping server for online mapping applications.

A complete listing of departmental hardware is found in Appendix 3.

Software

The DAR department relies upon the H-GAC Data Services department (Data Services) for its end user workstation configuration, installation, and maintenance. Each workstation for users comes with the Microsoft Office software package which includes Outlook (e-mail), Word (word processing), Excel (spreadsheets), PowerPoint (presentations), and in some instances Access (desktop database) should the user require desktop database capabilities. Each workstation is pre-configured and setup to operate within the H-GAC internal network and has access to central servers for file storage.

The DAR GIS staff utilizes ESRI's ArcGIS 10.6.1 and ArcGIS Pro 3.0.3 platforms for all geospatial analysis and mapping needs. In addition, as needed, the staff also utilizes the SAS and ENVI software platforms for further analysis and data development as deemed necessary. SAS is used for statistical analysis and modeling of tabular data. Whereas ENVI is used for remote sensing data processing and analysis. The ESRI ArcGIS 10.6.1 and ArcGIS Pro 3.0.3 platforms include integrated Python programming capabilities, which allows for the creation of programming scripts or batch programs to improve efficiency and documentation of processes. The Python programming language is an Open-Source platform and is freely distributable.

The software products currently used to accomplish the department's data management objectives are listed in Appendix 4.

Programming Languages

Programming services will be provided on an as needed and resource available basis. All programming efforts will follow a standard procedure from needs assessment, program planning, development and testing, to refinement and documentation. The principal programming languages to be used in task automation and project customization will depend on the nature of the need and the current state of the technology. At this time, all web-based GIS applications are developed using the ESRI ArcGIS Server platform, and user interface components to that platform are developed using the ESRI JavaScript API. Automated data development and analysis workflows utilize the Python programming language, and the SAS programming platform as needed.

Data

Department staff members will be consulted annually to determine priority needs for data management. Based on this consultation, specific data sets will be acquired or further

developed for the various program areas represented in the department. The current list of department-specific data sets is shown in Appendix 5.

A separate database lists all datasets regularly obtained from external sources, contact information, as well as the frequency of the datasets' availability, and their cost. This database is developed using Microsoft Excel and is available to the DAR GIS team for tracking when updates to dataset may be available.

Personnel

The Data Management staff will be responsible for the maintenance and development of the SDE, mapping server, geospatial applications, Regional GIS Data Hub page, and Data Clearinghouse. These data management responsibilities cover a wide range from original data creation, acquisition and integration, data archiving and distribution. Additional responsibilities include enhancing the geographic extent, feature attributes, and metadata of the datasets.

The DAR GIS team is comprised of 25 full-time GIS and data analysis professionals. The DAR GIS team supports all programs across the H-GAC, which include Clean Rivers/Water Quality, Sustainability, Economic Development, Solid Waste, Ped/Bike, Socio-Economic Modeling, Transportation, Public Services, Human Services, and special projects.

H-GAC's Data Services Department plays an indirect role in the implementation and maintenance of The Plan. The Data Services Department is responsible for managing the underlying hardware and network upon which DAR stores GIS data and implements GIS-based applications.

Training

Training for all users of the system is a critical part of The Plan. DAR staff directly responsible for data management will attend conferences, seminars, and software/hardware training courses as needed. H-GAC users of the system will be trained and/or receive technical support by the DAR GIS Manger and other subject matter experts.

Budget

Budgetary requirements to sustain data management efforts will be reviewed annually.

Data Maintenance, Manipulation, and Use

Quality Assurance/Quality Control

QA/QC is designed to standardize screening, documentation, entry, output, analysis, correction, and updating of data in the system. QA/QC will document those responsible for data and system maintenance.

Data Limitations

Prior to the integration of data within the SDEs and posting to the Data Clearinghouse, a review of the data set will be completed to determine predefined data limitations such as missing values, different sampling frequencies, multiple measurements, analytical uncertainty, censored or unavailable data, and duplicated data with existing data sets.

After reviewing the data set, a report will be generated which records any errors detected and any corrections that may be necessary. Data input validation, such as topological validation to ensure spatial relationships between features (e.g., non-overlapping polygons and correct line intersections), and attribute validation to check for out-of-range values or incorrect formats, are also incorporated to ensure the understanding of the limitations of the datasets.

Data Development Protocol

The DAR GIS staff works to update existing dataset, acquire new data, and perform geospatial analysis in support of various H-GAC programs. All new data generated from the result of an analysis is a candidate to be stored not only in the SDE as a new dataset, but also as a layer with a mapping application should the need arise. All data development and analysis are done internally to H-GAC, and at times leverages outside resources such as consultants, other non-profits whom H-GAC is partnering with.

The DAR GIS staff uses a hybrid approach to conducting geospatial analysis. Much of the analysis being performed may need to be re-processed later as new versions of datasets become available, or as inputs to the analysis models are updated themselves. Thus, to minimize the time spent re-running analysis models, the DAR GIS staff utilizes the ESRI ArcGIS platform in conjunction with SAS and Python to develop repeatable and documented workflows. This approach saves more time than interactive methods whereby a user must remember the process to follow, and then execute each step in the analysis independently.

For version control, DAR adopts a systematic approach by appending the year to the end of the layer names. This ensures a clear, chronological record of changes and updates, allowing for easy tracking of different versions of the datasets. For example, a model parcel layer from 2022 would be labeled as Model_Parcels_2022, while a similar dataset from the following year would be named Model_Parcels_2023. This method streamlines the management of datasets across multiple years and ensures consistency throughout the project lifecycle.

Documentation related to data management efforts such as system evolution, structure, and procedures for use will be compiled and made available for the end user. Documentation will be made available online and in hard copy format.

Data Input

Standard conventions for data input will be determined on a per project and/or individual data set basis. To ensure Year 2000 Compliance, all data sets with date/time fields will include a four-digit year (YYYY). Either of the following formats will be used: International Standard Date notation where the date field is represented as MM/DD/YYYY (Month/Day/Year), or an ordinal format where the date field is represented as YYYYDDD.

Data Dictionary

A department-specific list of all data available in the SDE can be found in Appendix 5.

Metadata

Metadata is data about the original source, quality, content, history, condition, and other characteristics of the geospatial data. All GIS datasets generated by H-GAC have been fully documented as per Federal Geographic Data Committee (FGDC) compliant metadata and follow Content Standards for Digital Geospatial Metadata (CSDGM) for all geospatial data. Similarly, data obtained from outside sources and used by H-GAC will include FGDC-compliant metadata from the source agency. Datasets without a known history and documented quality will be identified as provisional and used only when noted as such. The diagram below illustrates elements of the CSDGM standards. This standard is applied to all Point, Line, Polygon, Raster, and Tabular data that are stored in the SDEs. The DAR GIS data manager and/or point of contact (designee) has the authorized access to edit/change the metadata when a new dataset is created or updated in the SDEs. Metadata for each dataset in the DAR SDE is stored with the datasets and can be viewed by GIS users via their GIS desktop software. Any data provided for public download via the Data Clearinghouse also has a metadata html page that can be viewed via internet browsers.

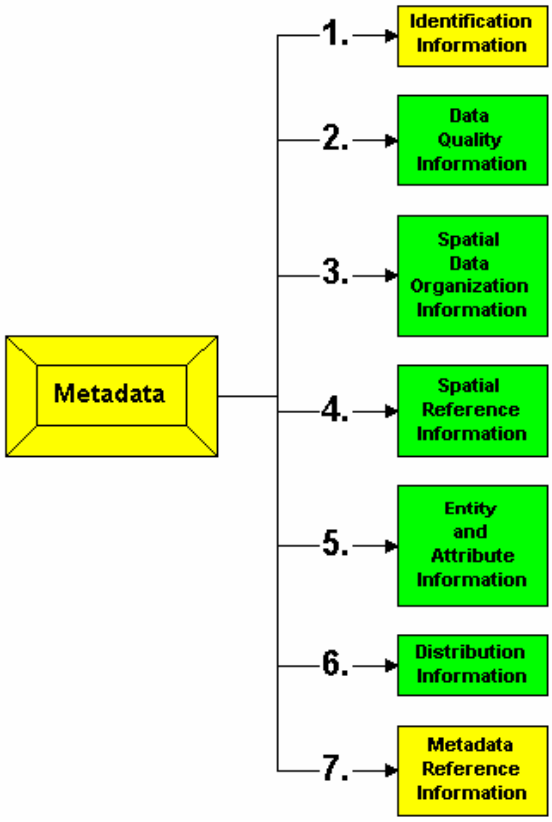

Figure 2: Elements of CSDGM Standards

Data Conversion

Data to be imported into the SDEs from hard copy, digital or by manual data entry, will follow a uniform conversion protocol to comply with the structure of current data sets. The type of data being converted will determine the protocol. All data is stored in ESRI geodatabase format within the SDEs, and when posted to the Data Clearinghouse the data is stored in the ESRI File Geodatabase file format, unless there is a specific requirement to provide the data in another format such as Shapefile or GIS Coverage.

Coordinate Systems

The Texas Stateplane Coordinate System, North American Datum 1983 (NAD83) will be the standard for geographic data at H-GAC. This coordinate system is based on the Cartesian coordinate system, or rectangular coordinates. When receiving geographic data from other sources the data will be transformed into the Stateplane Coordinate System to ensure compatibility with current data sets.

Ensuring consistency in coordinate systems and projections across layers prevents misalignment issues. When publishing mapping services for use in web-based GIS mapping applications, the Web Mercator Auxiliary Sphere projection is used for all Data Frame

projections. However, the underlying GIS data within these mapping services still use the Texas Stateplane Coordinate System, North American Datum 1983 (NAD83) projection.

Data Validation

Data Quality Control

When data is received from any source, documentation will be created to include the source name, date received, format of data and a brief description of the contents. Data will be loaded onto the system from the media received and a review of the data will be made along with any corrections being made to the source documentation. An analysis will be made to determine the means of data entry into the system whether it is only a stand-alone database, a number of linked tables, or a geographic database. The data will be converted to the appropriate format for integration with the current system whether it is a conversion into MS Access, Excel, SAS, or ESRI ArcGIS. The data will be visually examined to determine its validity and accuracy. Error handling techniques like flagging and reporting issues during data processing help alert users to problems requiring manual intervention, while methods such as interpolation can handle missing data. Duplication detection and removal are important to avoid redundancy. In cases where errors are detected, manual correction through editing tools can be applied, while version control is useful for tracking changes and allowing rollbacks to earlier, error-free versions. If the data is invalid it will be corrected (if possible) by incorporating above techniques and the data will be incorporated into the SDEs, and then if applicable, posted to the Data Clearinghouse and used in conjunction with existing data. A QA/QC report of all procedures and a detailed description of how the data was incorporated into the current system (from the date received to the date of integration) will be generated.

Equipment Quality Control

All printers, workstations, and server hardware and operating systems are maintained by the Data Services department, unless otherwise noted in Appendix 3.

Genealogy

Upon receipt of data from outside sources, all data will be screened for integrity and completeness. After the preliminary evaluation of the data, a log of the data source, type and completeness is created and maintained with the associated data. A description of the data and the responsible personnel are documented.

Migration/Transfer

A copy of every DAR generated GIS dataset will be housed in the SDEs which DAR GIS staff manage the contents and structure of datasets. The underlying hardware and network connections for the SDEs are maintained by the Data Services Department. Datasets that are

of public interest will be placed in the Data Clearinghouse for public access. Transfer from the SDEs to the Data Clearinghouse will occur on an as needed basis following department QA/QC measures and is handled by the DAR GIS team.

Data Security & Access

Data placed on the Data Clearinghouse will be available to those with Internet browsing and/or FTP capability. Data requests for non-public data from other agencies and the public will be evaluated on an individual basis. When the data requests are received, a preliminary evaluation of the deliverable will be determined and a timeline and cost if applicable will be provided to the requesting agency or individual.

GIS and tabular data will be secure through directory permissions. H-GAC will employ Firewall or Proxy Server Technology to filter and severely restrict access to internal networks and database systems. Virus protection will be implemented to ensure system and data integrity.

Archives/Backup

Each week the DAR GIS team runs a schedule backup program to store a copy of all SDE datasets on a portable hard drive with resides in a secure location within the H-GAC office. In addition, Data Services backs up and archives SDE data and server configuration at regular intervals.

Disaster Recovery

In the event of a disaster, the DAR department will have access to all SDE data which is stored on the portable hard drive. The DAR GIS team will restore or provide needed data to GIS users from this portable hard drive until such as time that Data Services can restore the SDEs onto either a new server or a temporary server.

Appendices

Appendix 1 Data Source Information Sheet

Data Title:

Source Agency:
Contact:
Title:
Address
Phone:

Data Description:
Data source:
Date created:
Accuracy:
Media:
Data items:

Description of data:

Format (specify what software)
Map:
Tabular:
Image:
Text:

Retrieval Procedure:

Command(s):

Appendix 2 Data Log Sheet

Date received: _____

Report Prepared by: _____

Source Name and Phone: _____

Format: _____

Media: _____

Check the following steps to determine the validity of the data:

1. What is the extent of the geographic area? _____
_____

2. Structure (Circle One) Vector Raster

3. Scale? _____

4. Projection and Datum? _____

1. Do any of the key fields have missing values? If so which parameters have missing values? Yes ___ No ___
_____
_____
_____

2. Any known duplicate records? Yes ___ No ___

Appendix 3 Hardware

FTP Server
h-gac.sharefile.com

Mapping Application Servers

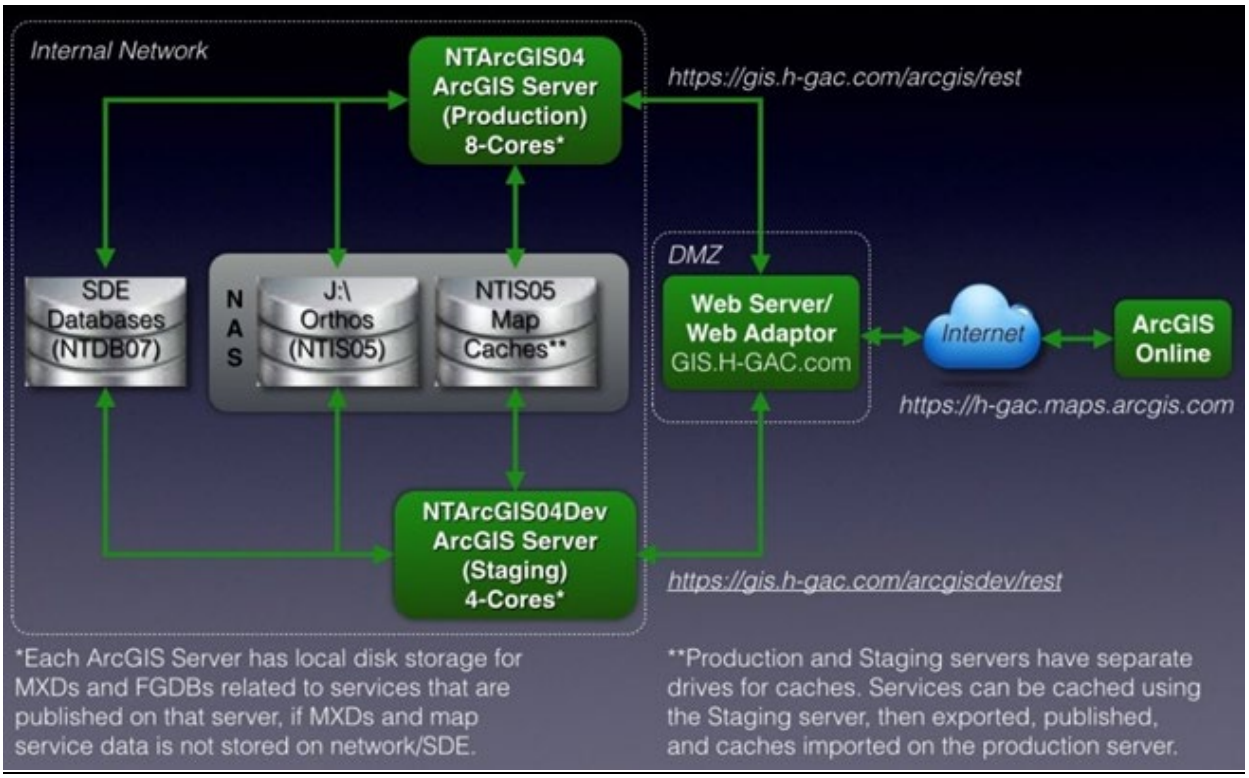

Figure 3: H-GAC ArcGIS Enterprise Architecture

Desktop PC (Primarily used for GIS analysis)

O/S Version	Manufacturer	Model	Memory	CPU Name
10.0.22631.3737	Dell Inc.	Precision 3660	32 GB	12th Gen Intel Core i7-12700
10.0.19045.4529	ASUS	System Product Name	128 GB	13th Gen Intel Core i9-13900KF
10.0.19045.4412	ASUS	System Product Name	128 GB	13th Gen Intel Core i9-13900KF

10.0.19045.4529	ASUS	System Product Name	128 GB	AMD Ryzen 9 7950X 16-Core Processor
10.0.19045.4529	Dell Inc.	OptiPlex 5060	16 GB	Intel Core i7-8700 CPU @ 3.20GHz
10.0.19045.4529	Dell Inc.	OptiPlex 5070	16 GB	Intel Core i7-9700 CPU @ 3.00GHz
10.0.19045.4529	Dell Inc.	Precision Tower 3620	64 GB	Intel Xeon CPU E3-1245 v6 @ 3.70GHz
10.0.19045.4529	Dell Inc.	OptiPlex 5070	16 GB	Intel Core i7-9700 CPU @ 3.00GHz
10.0.19045.4529	Dell Inc.	OptiPlex 7070	32 GB	Intel Core i7-8700 CPU @ 3.20GHz
10.0.19045.4529	Dell Inc.	OptiPlex 7070	32 GB	Intel Core i7-9700 CPU @ 3.00GHz
10.0.19045.4529	Dell Inc.	Precision Tower 3620	16 GB	Intel Xeon CPU E3-1245 v6 @ 3.70GHz
10.0.19045.4529	Dell Inc.	OptiPlex 7070	32 GB	Intel Core i7-9700 CPU @ 3.00GHz
10.0.19045.4529	Dell Inc.	OptiPlex 5040	16 GB	Intel Core i7-6700 CPU @ 3.40GHz
10.0.19045.4529	Dell Inc.	OptiPlex 7070	64 GB	Intel Core i7-9700 CPU @ 3.00GHz
10.0.19045.4529	Dell Inc.	OptiPlex 5070	16 GB	Intel Core i7-9700 CPU @ 3.00GHz
10.0.19045.4529	ASUS	System Product Name	64 GB	12th Gen Intel Core i7-12700KF
10.0.19045.4529	Dell Inc.	Latitude 5520	16 GB	11th Gen Intel Core i5-1145G7 @ 2.60GHz
10.0.19045.4529	Dell Inc.	Latitude 5530	16 GB	12th Gen Intel Core i7-1265U
10.0.19045.4529	Dell Inc.	OptiPlex 7070	32 GB	Intel Core i7-9700 CPU @ 3.00GHz
10.0.19045.4529	Dell Inc.	OptiPlex 5070	16 GB	Intel Core i7-9700 CPU @ 3.00GHz
10.0.19045.4529	Dell Inc.	OptiPlex 7070	32 GB	Intel Core i7-9700 CPU @ 3.00GHz
10.0.19045.4529	Dell Inc.	Precision 3630 Tower	16 GB	Intel Xeon E-2186G CPU @ 3.80GHz

10.0.19045.4529	Dell Inc.	Precision 7560	32 GB	11th Gen Intel Core i5-11500H @ 2.90GHz
10.0.19045.4529	Dell Inc.	Precision 7820 Tower	32 GB	Intel Xeon Silver 4114 CPU @ 2.20GHz
10.0.22631.3737	Dell Inc.	Precision 5570	32 GB	12th Gen Intel Core i9-12900H

Plotters, Printers and Scanners

HP Designet T920 Postscript Plotter

- This plotter is used by all H-GAC staff for large format printing of maps and schematics.

Appendix 4 Software

Geographic Information Systems (GIS)

ESRI ArcGIS (ver 10.6.1) – Computer mapping and database manipulation capable of using ArcView, ArcInfo, and ArcEditor licenses as needed.
ArcGIS Pro 3.0.3 – Geospatial data analysis and visualization
ESRI ArcGIS Server (ver 10.2, SP3) – Internet Mapping Application Server.
ESRI ArcSDE (ver 10.2, SP1) – Spatial data warehouse.
ENVI Remote Sensing Data Analysis Package – Harris Geospatial

Data Management

Microsoft Access (365) - Relational Database.
SQL Server (2012) - Relational Database.

Programming

Microsoft Visual Studio – Web Mapping Development Tool.
Web AppBuilder for ArcGIS (ver 1.8) – Web-based GIS application development tool
SAS (ver 9.4) – Data development and statistical analytics.
Python 3.1.2 - Python Programming language for data analysis

Office Productivity Software

Microsoft Office 365 - Word, Excel, Access, PowerPoint, publisher, InfoPath and Outlook.

Graphics and Desktop Publishing

Adobe Illustrator (ver 8.01) – Graphics
Adobe Photoshop (ver 5.0) – Graphics
Camtasia Studio (ver 7.0) – Screen capture and video tutorial production

Operating Systems
Windows 10 Pro - PC working environment/Operating System
Windows 2012 & 2016 - Server Operating Systems

Appendix 5 Data List

H-GAC Spatial Data Warehouse (CE SDE) Dataset

Dataset Name	**Geometry Type**
CE.CE_ADMIN.ActivityPopulation_2000	Polygon
CE.CE_ADMIN.Employment_2000	Polygon
CE.CE_ADMIN.HouseholdPopulation_2000	Polygon
CE.CE_ADMIN.Intersection_2000	Polygon
CE.CE_ADMIN.Job_HH_Ratio_2000	Polygon
CE.CE_ADMIN.HGAC_13_County_CRP_Monitoring_Stations_2008	Point
CE.CE_ADMIN.HGAC_13_County_CRP_Monitoring_Stations_2010	Point
CE.CE_ADMIN.HGAC_13_County_CRP_Monitoring_Stations_2011	Point
CE.CE_ADMIN.HGAC_13_County_CRP_Monitoring_Stations_2012	Point
CE.CE_ADMIN.HGAC_13_County_CRP_Monitoring_Stations_2013	Point
CE.CE_ADMIN.HGAC_13_County_CRP_Monitoring_Stations_2014	Point
CE.CE_ADMIN.HGAC_13_County_CRP_Monitoring_Stations_2015	Point
CE.CE_ADMIN.HGAC_13_County_CRP_Monitoring_Stations_2016	Point
CE.CE_ADMIN.HGAC_13_County_CRP_Monitoring_Stations_2017	Point
CE.CE_ADMIN.HGAC_13_County_CRP_Monitoring_Stations_Historical	Point
CE.CE_ADMIN.HGAC_15_County_CRP_Monitoring_Stations_2019	Point
CE.CE_ADMIN.HGAC_15_County_CRP_Monitoring_Stations_2020	Point
CE.CE_ADMIN.HGAC_15_County_CRP_Monitoring_Stations_2021	Point
CE.CE_ADMIN.BGs_2014	Polygon
CE.CE_ADMIN.Census_Places_2014	Point
CE.CE_ADMIN.Census_Tracts_2014	Polygon
CE.CE_ADMIN.Counties_2014	Polygon
CE.CE_ADMIN.Zips_2014	Polygon

CE.CE_ADMIN.BGs_2015	Polygon
CE.CE_ADMIN.BGs_Vulnerable_2015	Polygon
CE.CE_ADMIN.Census_Places_2015	Polygon
CE.CE_ADMIN.Census_Places_pt_2015	Point
CE.CE_ADMIN.CEnsus_Tracts_2015	Polygon
CE.CE_ADMIN.Counties_2015	Polygon
CE.CE_ADMIN.Places_poly_2015	Polygon
CE.CE_ADMIN.Zips_2015	Polygon
CE.CE_ADMIN.BGs_2016	Polygon
CE.CE_ADMIN.BGs_Veterans_2016	Polygon
CE.CE_ADMIN.BGs_Vulnerable_2016	Polygon
CE.CE_ADMIN.Counties_2016	Polygon
CE.CE_ADMIN.Counties_TX_Veterans_2016	Polygon
CE.CE_ADMIN.ISDs_2016	Polygon
CE.CE_ADMIN.Places_poly_2016	Polygon
CE.CE_ADMIN.Places_pt_2016	Point
CE.CE_ADMIN.Tracts_2016	Polygon
CE.CE_ADMIN.Zips_2016	Polygon
CE.CE_ADMIN.BGs_2017	Polygon
CE.CE_ADMIN.BGs_Vulnerable_2017	Polygon
CE.CE_ADMIN.Congressional_Districts_115th_ACS_2017	Polygon
CE.CE_ADMIN.Congressional_Districts_2017	Polygon
CE.CE_ADMIN.Counties_2017	Polygon
CE.CE_ADMIN.ISDs_2017	Polygon
CE.CE_ADMIN.Places_poly_2017	Polygon
CE.CE_ADMIN.Places_pt_2017	Point
CE.CE_ADMIN.Tracts_2017	Polygon
CE.CE_ADMIN.Zips_2017	Polygon
CE.CE_ADMIN.ACS_Housing_Counties_2017	Polygon
CE.CE_ADMIN.ACS_Housing_Places_2017	Polygon
CE.CE_ADMIN.ACS_Housing_Tracts_2017	Polygon
CE.CE_ADMIN.BGs_2018	Polygon
CE.CE_ADMIN.BGs_Vulnerable_2018	Polygon
CE.CE_ADMIN.Congressional_Districts_2018	Polygon
CE.CE_ADMIN.Counties_2018	Polygon
CE.CE_ADMIN.ISD_2018	Polygon
CE.CE_ADMIN.Places_poly_2018	Polygon
CE.CE_ADMIN.Places_pt_2018	Point
CE.CE_ADMIN.TexasStateHouse_2018	Polygon
CE.CE_ADMIN.TexasStateSenate_2018	Polygon

CE.CE_ADMIN.Tracts_2018	Polygon
CE.CE_ADMIN.Zips_2018	Polygon
CE.CE_ADMIN.BGs_2020	Polygon
CE.CE_ADMIN.BGs_Vulnerable_2020	Polygon
CE.CE_ADMIN.Congressional_Districts_2020	Polygon
CE.CE_ADMIN.Counties_2020	Polygon
CE.CE_ADMIN.ISDs_2020	Polygon
CE.CE_ADMIN.Places_poly_2020	Polygon
CE.CE_ADMIN.Places_pt_2020	Point
CE.CE_ADMIN.TexasStateHouse_2020	Polygon
CE.CE_ADMIN.TexasStateSenate_2020	Polygon
CE.CE_ADMIN.Tracts_2020	Polygon
CE.CE_ADMIN.Zips_2020	Polygon
CE.CE_ADMIN.BGs_2021	Polygon
CE.CE_ADMIN.BGs_Vulnerable_2021	Polygon
CE.CE_ADMIN.Congressional_Districts_2021	Polygon
CE.CE_ADMIN.Counties_2021	Polygon
CE.CE_ADMIN.ISDs_2021	Polygon
CE.CE_ADMIN.Places_poly_2021	Polygon
CE.CE_ADMIN.Places_pt_2021	Point
CE.CE_ADMIN.TexasStateHouse_2021	Polygon
CE.CE_ADMIN.TexasStateSenate_2021	Polygon
CE.CE_ADMIN.Tracts_2021	Polygon
CE.CE_ADMIN.Zips_2021	Polygon
CE.CE_ADMIN.BGs_2022	Polygon
CE.CE_ADMIN.BGs_Vulnerable_2022	Polygon
CE.CE_ADMIN.Congressional_Districts_2022	Polygon
CE.CE_ADMIN.Counties_2022	Polygon
CE.CE_ADMIN.ISDs_2022	Polygon
CE.CE_ADMIN.Places_poly_2022	Polygon
CE.CE_ADMIN.Places_pt_2022	Point
CE.CE_ADMIN.TexasStateHouse_2022	Polygon
CE.CE_ADMIN.TexasStateSenate_2022	Polygon
CE.CE_ADMIN.Tracts_2022	Polygon
CE.CE_ADMIN.Zips_2022	Polygon
CE.CE_ADMIN.County_LEHD_09_17	Polygon
CE.CE_ADMIN.County_LEHD_2018	Polygon
CE.CE_ADMIN.HEX_H1M_09_17	Polygon
CE.CE_ADMIN.HEX_H1M_LEHD_2018	Polygon
CE.CE_ADMIN.Place_LEHD_09_17	Polygon
CE.CE_ADMIN.Place_LEHD_2018	Polygon

CE.CE_ADMIN.Tract_LEHD_09_17	Polygon
CE.CE_ADMIN.Tract_LEHD_2018	Polygon
CE.CE_ADMIN.BZ_Model_Predictions_v2018	Polygon
CE.CE_ADMIN.CH_Model_Predictions_v2018	Polygon
CE.CE_ADMIN.FB_Model_Predictions_v2018	Polygon
CE.CE_ADMIN.GV_Model_Predictions_v2018	Polygon
CE.CE_ADMIN.HR_Model_Predictions_v2018	Polygon
CE.CE_ADMIN.HR_Model_Predictions_v2018_p1	Polygon
CE.CE_ADMIN.HR_Model_Predictions_v2018_p2	Polygon
CE.CE_ADMIN.HR_Model_Predictions_v2018_p3	Polygon
CE.CE_ADMIN.LB_Model_Predictions_v2018	Polygon
CE.CE_ADMIN.MG_Model_Predictions_v2018	Polygon
CE.CE_ADMIN.WA_Model_Predictions_v2018	Polygon
CE.CE_ADMIN.HGAC_13_County_OSSF_Permits	Point
CE.CE_ADMIN.HGAC_13_County_OSSF_Permits_2017	Point
CE.CE_ADMIN.HGAC_13_County_OSSF_Permits_2018	Point
CE.CE_ADMIN.HGAC_13_County_OSSF_Permits_2019	Point
CE.CE_ADMIN.HGAC_13_County_OSSF_Permits_2020	Point
CE.CE_ADMIN.HGAC_13_County_OSSF_Permits_2021	Point
CE.CE_ADMIN.HGAC_14_County_OSSF_Unpermitted_2022	Polygon
CE.CE_ADMIN.HGAC_14_County_OSSF_Unpermitted_2023	Polygon
CE.CE_ADMIN.HGAC_15_County_OSSF_Permits_2022	Point
CE.CE_ADMIN.HGAC_15_County_OSSF_Permits_2023	Point
CE.CE_ADMIN.Census_Tracts	Polygon
CE.CE_ADMIN.Nine_SQM_Grid	Polygon
CE.CE_ADMIN.One_SQM_Grid	Polygon
CE.CE_ADMIN.Transportation_Analysis_Zones_2954	Polygon
CE.CE_ADMIN.Transportation_Analysis_Zones_5217	Polygon
CE.CE_ADMIN.Census_Tracts_1	Polygon
CE.CE_ADMIN.Nine_SQM_Grid_1	Polygon
CE.CE_ADMIN.One_SQM_Grid_1	Polygon
CE.CE_ADMIN.Transportation_Analysis_Zones_2954_1	Polygon
CE.CE_ADMIN.Transportation_Analysis_Zones_5217_1	Polygon
CE.CE_ADMIN.Forecast_Census_Tracts	Polygon
CE.CE_ADMIN.Forecast_H3M	Polygon
CE.CE_ADMIN.Forecast_TAZ2954	Polygon
CE.CE_ADMIN.Forecast_TAZ5217	Polygon
CE.CE_ADMIN.Current_Future_Land_Use	Polygon
CE.CE_ADMIN.Forecast_Census_Tracts_2017	Polygon
CE.CE_ADMIN.Forecast_H3M_2017	Polygon

CE.CE_ADMIN.Forecast_TAZ5217_2017	Polygon
CE.CE_ADMIN.Current_Future_Land_Use_2018	Polygon
CE.CE_ADMIN.Forecast_Census_Tracts_2018	Polygon
CE.CE_ADMIN.Forecast_H3M_2018	Polygon
CE.CE_ADMIN.Forecast_TAZ5217_2018	Polygon
CE.CE_ADMIN.HGAC_13_County_Service_Area_Boundaries	Polygon
CE.CE_ADMIN.HGAC_13_County_Service_Area_Boundaries_2013	Polygon
CE.CE_ADMIN.HGAC_13_County_Service_Area_Boundaries_2014	Polygon
CE.CE_ADMIN.HGAC_13_County_Service_Area_Boundaries_2015	Polygon
CE.CE_ADMIN.HGAC_13_County_Service_Area_Boundaries_2017	Polygon
CE.CE_ADMIN.HGAC_13_County_Service_Area_Boundaries_Domestic_2018	Polygon
CE.CE_ADMIN.HGAC_15_County_Service_Area_Boundaries_2019	Polygon
CE.CE_ADMIN.HGAC_15_County_Service_Area_Boundaries_2020	Polygon
CE.CE_ADMIN.HGAC_15_County_Service_Area_Boundaries_2021	Polygon
CE.CE_ADMIN.HGAC_15_County_Service_Area_Boundaries_2022	Polygon
CE.CE_ADMIN.HGAC_15_County_Service_Area_Boundaries_2023	Polygon
CE.CE_ADMIN.MS4_Permitted_Areas_2018	Polygon
CE.CE_ADMIN.HGAC_13_County_Soils_2010	Polygon
CE.CE_ADMIN.HGAC_13_County_Soils_2012	Polygon
CE.CE_ADMIN.HGAC_13_County_Soils_2018	Polygon
CE.CE_ADMIN.HGAC_13_County_Soils_2021	Polygon
CE.CE_ADMIN.Closed_Landfill_Inventory	Point
CE.CE_ADMIN.HHW_Centers	Point
CE.CE_ADMIN.Landfill_Areas	Polygon
CE.CE_ADMIN.Landfills	Point
CE.CE_ADMIN.Recycling_and_HHW_Centers	Point
CE.CE_ADMIN.Recycling_Centers	Point
CE.CE_ADMIN.Texas_Stream_Team_Monitoring_Sites_2016	Point
CE.CE_ADMIN.Texas_Stream_Team_Monitoring_Sites_2018	Point

CE.CE_ADMIN.Texas_Stream_Team_Monitoring_Sites_2020	Point
CE.CE_ADMIN.Texas_Stream_Team_Monitoring_Sites_2022	Point
CE.CE_ADMIN.Texas_Stream_Team_Monitoring_Sites_2024	Point
CE.CE_ADMIN.HGAC_13_County_Wastewater_Outfall_Domestic_2018	Point
CE.CE_ADMIN.HGAC_13_County_Wastewater_Outfall_Domestic_2019	Point
CE.CE_ADMIN.HGAC_13_County_Wastewater_Outfall_Domestic_2020	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_2017	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_2019	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_2020	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_2021	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_2022	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_2023	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_Domestic_2021	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_Domestic_2022	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_Domestic_2023	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_Historical	Point
CE.CE_ADMIN.HGAC_15_County_Wastewater_Outfalls_Pre2017	Point
CE.CE_ADMIN.ACE_HEX_2017	Polygon
CE.CE_ADMIN.Apartment_Input	Point
CE.CE_ADMIN.Barker_and_Addicks_Reservoir_Watersheds	Polygon
CE.CE_ADMIN.BlueMap_ActivityPopulation	Polygon
CE.CE_ADMIN.Cedar_Bayou_Watershed_Project_Monitoring_Sites	Point
CE.CE_ADMIN.Clean_Rivers_Public_Feedback	Point
CE.CE_ADMIN.COH_Plats_2018_2020_feb	Polygon
CE.CE_ADMIN.Critical_Facilities_2022	Point

CE.CE_ADMIN.CRP_Project_Areas	Polygon
CE.CE_ADMIN.Galveston_Bay_Estuary_Program_Watersheds	Polygon
CE.CE_ADMIN.Harris_County_FCD_Sub_Watersheds	Polygon
CE.CE_ADMIN.Harris_County_FCD_Watersheds	Polygon
CE.CE_ADMIN.Harris_County_Zones_58	Polygon
CE.CE_ADMIN.HGAC_8_County_Bikeway_Needs	Polyline
CE.CE_ADMIN.HGAC_8_County_Bikeways	Polyline
CE.CE_ADMIN.HGAC_8_County_Comprehensive_Plan_2010_pts	Polyline
CE.CE_ADMIN.HGAC_8_County_Eco_Types	Polygon
CE.CE_ADMIN.HGAC_8_County_G025M	Polygon
CE.CE_ADMIN.HGAC_8_County_G1	Polygon
CE.CE_ADMIN.HGAC_8_County_G10	Polygon
CE.CE_ADMIN.HGAC_8_County_G1M	Polygon
CE.CE_ADMIN.HGAC_8_County_PedBike_Improvement_Areas	Polygon
CE.CE_ADMIN.HGAC_8_County_PedBike_Improvement_Locations	Point
CE.CE_ADMIN.HGAC_8_County_Pedestrian_Pathways	Polyline
CE.CE_ADMIN.HGAC_8_County_Sector_25	Polygon
CE.CE_ADMIN.HGAC_8_County_Water	Polygon
CE.CE_ADMIN.HGAC_13_County_ACS_2015_Blockgroup_summary	Polygon
CE.CE_ADMIN.HGAC_13_County_ACS_2016_Blockgroup_summary	Polygon
CE.CE_ADMIN.HGAC_13_County_Airports	Point
CE.CE_ADMIN.HGAC_13_County_Brownfield_Sites	Point
CE.CE_ADMIN.HGAC_13_County_Closed_Landfill_Inventory	Point
CE.CE_ADMIN.HGAC_13_County_CRP_DO_Stations	Point
CE.CE_ADMIN.HGAC_13_County_Districts	Polygon
CE.CE_ADMIN.HGAC_13_County_Ecological_Mapping_System_TPWD_2015	Polygon
CE.CE_ADMIN.HGAC_13_County_Farmland	Polygon
CE.CE_ADMIN.HGAC_13_County_Federal_Aid_Roads	Polyline
CE.CE_ADMIN.HGAC_13_County_FoodWaste_Composters	Point
CE.CE_ADMIN.HGAC_13_County_G1M	Polygon
CE.CE_ADMIN.HGAC_13_County_G3M	Polygon
CE.CE_ADMIN.HGAC_13_County_G5M	Polygon
CE.CE_ADMIN.HGAC_13_County_Grocery_Stores	Point
CE.CE_ADMIN.HGAC_13_County_Landfill_Areas	Polygon

CE.CE_ADMIN.HGAC_13_County_Landfill_Areas_Historical	Polygon
CE.CE_ADMIN.HGAC_13_County_Landfills	Point
CE.CE_ADMIN.HGAC_13_County_Landfills_Historical	Point
CE.CE_ADMIN.HGAC_13_County_Libraries	Point
CE.CE_ADMIN.HGAC_13_County_LMI_BlockGroup_2015	Polygon
CE.CE_ADMIN.HGAC_13_County_LMI_Places_2015	Polygon
CE.CE_ADMIN.HGAC_13_County_Mobile_Home_Parks_FEMA	Point
CE.CE_ADMIN.HGAC_13_County_MS_Building_Footprints_2015	Polygon
CE.CE_ADMIN.HGAC_13_County_Opportunity_Zones	Polygon
CE.CE_ADMIN.HGAC_13_County_Parks	Point
CE.CE_ADMIN.HGAC_13_County_Parks_2024_poly	Polygon
CE.CE_ADMIN.HGAC_13_County_Plats	Polygon
CE.CE_ADMIN.HGAC_13_County_Recycle_Centers	Point
CE.CE_ADMIN.HGAC_13_County_Superfund_NPL_Sites	Polygon
CE.CE_ADMIN.HGAC_13_County_Superfund_NPL_Sites_Pts	Point
CE.CE_ADMIN.HGAC_13_County_Transmission_Lines_FEMA	Polyline
CE.CE_ADMIN.HGAC_15_County_Aquifer_Recharge_Zones	Polygon
CE.CE_ADMIN.HGAC_15_County_Basins	Polygon
CE.CE_ADMIN.HGAC_15_County_Bio_Monitoring_Sites	Point
CE.CE_ADMIN.HGAC_15_County_CRP_Lakes	Polygon
CE.CE_ADMIN.HGAC_15_County_CRP_Stream_End_Points	Point
CE.CE_ADMIN.HGAC_15_County_CRP_Streams	Polyline
CE.CE_ADMIN.HGAC_15_County_NHDPlus_Streams	Polyline
CE.CE_ADMIN.HGAC_15_County_NHDPlusV2_Catchment_Boundary	Polygon
CE.CE_ADMIN.HGAC_15_County_Water_Detailed_2018	Polygon
CE.CE_ADMIN.HGAC_15_County_Watershed_Insets	Polygon
CE.CE_ADMIN.HGAC_15_County_Watershed_Signs	Point
CE.CE_ADMIN.HGAC_15_County_Watersheds	Polygon
CE.CE_ADMIN.HGAC_Bastrop_Bayou_Sub_Watersheds	Polygon
CE.CE_ADMIN.HGAC_CRP_Watersheds	Polygon
CE.CE_ADMIN.HGAC_Lakes_AUs_2016	Polygon
CE.CE_ADMIN.HGAC_Lakes_Segments_2016	Polygon
CE.CE_ADMIN.HGAC_Other_CRP_Monitoring_Stations	Point

CE.CE_ADMIN.HGAC_Region_WWTF_Outfalls_FY17	Point
CE.CE_ADMIN.HGAC_Streams_AUs_2016	Polyline
CE.CE_ADMIN.HGAC_Streams_Segments_2016	Polyline
CE.CE_ADMIN.Houston_Bcycle_Stations_2018	Point
CE.CE_ADMIN.LivableCenters	Polygon
CE.CE_ADMIN.LivableCenters_pt_2021	Point
CE.CE_ADMIN.LivableCenters_Recommendations	Polyline
CE.CE_ADMIN.Model_Buildings_2017	Point
CE.CE_ADMIN.Model_Buildings_2017_events	Point
CE.CE_ADMIN.Model_Buildings_2020	Point
CE.CE_ADMIN.Model_Buildings_2022	Point
CE.CE_ADMIN.Model_Buildings_2023	Point
CE.CE_ADMIN.Model_Parcels_2017	Polygon
CE.CE_ADMIN.Model_Parcels_2020	Polygon
CE.CE_ADMIN.Model_Parcels_2022	Polygon
CE.CE_ADMIN.Model_Parcels_2023	Polygon
CE.CE_ADMIN.Montgomery_County_Zones_4	Polygon
CE.CE_ADMIN.NOAA_HighRes_Error_Check	Polygon
CE.CE_ADMIN.NOAA_HighRes_LandCover_ErrorCheck	Polygon
CE.CE_ADMIN.Region_Critical_Urban_Freight_Corridors_2023	Polyline
CE.CE_ADMIN.TCEQ_AU_Line_2020	Polyline
CE.CE_ADMIN.Texas_Coastal_Zone_Boundary	Polygon
CE.CE_ADMIN.Texas_Impairment_Streams_2008	Polyline
CE.CE_ADMIN.Texas_Impairment_Waterbodies_2008	Polygon
CE.CE_ADMIN.The_Woodlands_Pathways	Polyline
CE.CE_ADMIN.TMDL_Watersheds	Polygon
CE.CE_ADMIN.TPWD_13_County_LWRCRP_conservation_and_recreation_lands	Polygon
CE.CE_ADMIN.USFWS_15_County_Wetlands_2018	Polygon
CE.CE_ADMIN.USGS_Stream_Gauges_2009	Point
CE.CE_ADMIN.USGS_Stream_Gauges_2010	Point
CE.CE_ADMIN.USGS_Stream_Gauges_2012	Point
CE.CE_ADMIN.USGS_Stream_Gauges_2017	Point
CE.CE_ADMIN.Watershed_Based_Plans_2021	Polygon
CE.CE_ADMIN.Clean_Rivers_Public_Feedback__ATTACH	Related Table
CE.CE_ADMIN.HGAC_8_County_Forecast_Cities_h	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_Cities_v	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_Counties_h	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_Counties_v	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_G1_h	Table

CE.CE_ADMIN.HGAC_8_County_Forecast_G1M_h	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_G1M_v	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_G10K_h	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_G10K_v	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_G025M_h	Table
CE.CE_ADMIN.HGAC_8_COUNTY_FORECAST_LU_G1_H	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_RAZ_h	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_RAZ_v	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_Region_v	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_TAZ_h_2003	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_TAZ_v_2003	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_Tracts_h	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_Tracts_v	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_Zip_Codes_h	Table
CE.CE_ADMIN.HGAC_8_County_Forecast_Zip_Codes_v	Table
CE.CE_ADMIN.HGAC_13_County_Airports_ParcelIDs	Related Table
CE.CE_ADMIN.HGAC_13_County_Ecological_Lands_2018	Raster
CE.CE_ADMIN.HGAC_13_County_Libraries_Parcel_Xref	Related Table
CE.CE_ADMIN.HGAC_13_County_Parks_Awards	Related Table
CE.CE_ADMIN.HGAC_13_County_Parks_Features	Related Table
CE.CE_ADMIN.HGAC_13_County_Parks_Parcels	Related Table
CE.CE_ADMIN.HGAC_15_County_CRP_Impairments	Table
CE.CE_ADMIN.HGAC_15_County_Land_Cover_2015_10_Class	Raster
CE.CE_ADMIN.HGAC_15_County_Land_Cover_2018_10_Class	Raster
CE.CE_ADMIN.HGAC_15_County_Land_Cover_2020_15_Class	Raster
CE.CE_ADMIN.NLCD_Imperviousness_2016	Raster

H-GAC Spatial Data Warehouse (Global SDE) Dataset

Dataset Name	Geometry Type
Global.GLOBAL_ADMIN.GCR911ECD_Counties_Coastline	Polygon
Global.GLOBAL_ADMIN.GCR911ECD_Counties_Political	Polygon
Global.GLOBAL_ADMIN.HGAC_City_Boundaries	Polygon
Global.GLOBAL_ADMIN.HGAC_City_Council_District_Boundaries	Polygon
Global.GLOBAL_ADMIN.HGAC_City_ETJ_Boundaries	Polygon
Global.GLOBAL_ADMIN.HGAC_City_Ordinance_Areas	Polygon
Global.GLOBAL_ADMIN.HGAC_Commissioner_Precincts	Polygon
Global.GLOBAL_ADMIN.HGAC_Counties_Coastline	Polygon
Global.GLOBAL_ADMIN.HGAC_Counties_Coastline_15C	Polygon
Global.GLOBAL_ADMIN.HGAC_Counties_Coastline_Boundary	Polygon
Global.GLOBAL_ADMIN.HGAC_Counties_Coastline_Boundary_15C	Polygon
Global.GLOBAL_ADMIN.HGAC_Counties_Political	Polygon
Global.GLOBAL_ADMIN.HGAC_Counties_Political_15C	Polygon
Global.GLOBAL_ADMIN.HGAC_Counties_Political_Boundary	Polygon
Global.GLOBAL_ADMIN.HGAC_Counties_Political_Boundary_15C	Polygon
Global.GLOBAL_ADMIN.HGAC_Election_Precincts	Polygon
Global.GLOBAL_ADMIN.HGAC_State_House_Districts	Polygon
Global.GLOBAL_ADMIN.HGAC_State_Senate_Districts	Polygon
Global.GLOBAL_ADMIN.HGAC_Tax_Increment_Reinvestment_Zones	Polygon
Global.GLOBAL_ADMIN.HGAC_US_House_Districts	Polygon
Global.GLOBAL_ADMIN.HGAC_Voting_Tabulation_Districts	Polygon
Global.GLOBAL_ADMIN.Texas_Area_Codes	Polygon
Global.GLOBAL_ADMIN.Texas_Coastline_Boundary	Polygon
Global.GLOBAL_ADMIN.Texas_COG_Boundaries	Polygon

Global.GLOBAL_ADMIN.Texas_Counties_Coastline	Polygon
Global.GLOBAL_ADMIN.Texas_Counties_Political	Polygon
Global.GLOBAL_ADMIN.Texas_Election_Precincts	Polygon
Global.GLOBAL_ADMIN.Texas_Political_Boundary	Polygon
Global.GLOBAL_ADMIN.Texas_State_House_Districts	Polygon
Global.GLOBAL_ADMIN.Texas_State_Senate_Districts	Polygon
Global.GLOBAL_ADMIN.Texas_US_House_Districts	Polygon
Global.GLOBAL_ADMIN.US_State_Boundaries	Polygon
Global.GLOBAL_ADMIN.World_Country_Boundaries	Polygon
Global.GLOBAL_ADMIN.HGAC_BlockGroups_1990	Polygon
Global.GLOBAL_ADMIN.HGAC_BlockGroups_2000	Polygon
Global.GLOBAL_ADMIN.HGAC_BlockGroups_2010	Polygon
Global.GLOBAL_ADMIN.HGAC_BlockGroups_2020	Polygon
Global.GLOBAL_ADMIN.HGAC_Blocks_2000	Polygon
Global.GLOBAL_ADMIN.HGAC_Blocks_2010	Polygon
Global.GLOBAL_ADMIN.HGAC_Blocks_2020	Polygon
Global.GLOBAL_ADMIN.HGAC_Metropolitan_Statistical_Area	Polygon
Global.GLOBAL_ADMIN.HGAC_Places_2000	Polygon
Global.GLOBAL_ADMIN.HGAC_Places_2000_Pts	Point
Global.GLOBAL_ADMIN.HGAC_Places_2010	Polygon
Global.GLOBAL_ADMIN.HGAC_Places_2010_Pts	Point
Global.GLOBAL_ADMIN.HGAC_Places_2020	Polygon
Global.GLOBAL_ADMIN.HGAC_Places_2020_Pts	Point
Global.GLOBAL_ADMIN.HGAC_RAZ	Polygon
Global.GLOBAL_ADMIN.HGAC_Tracts_1970	Polygon
Global.GLOBAL_ADMIN.HGAC_Tracts_1980	Polygon
Global.GLOBAL_ADMIN.HGAC_Tracts_1990	Polygon
Global.GLOBAL_ADMIN.HGAC_Tracts_2000	Polygon
Global.GLOBAL_ADMIN.HGAC_Tracts_2010	Polygon
Global.GLOBAL_ADMIN.HGAC_Tracts_2020	Polygon
Global.GLOBAL_ADMIN.HGAC_Urban_Areas_1990	Polygon
Global.GLOBAL_ADMIN.HGAC_Urban_Areas_2000	Polygon
Global.GLOBAL_ADMIN.HGAC_Urban_Areas_2010	Polygon
Global.GLOBAL_ADMIN.HGAC_Urban_Areas_2020	Polygon
Global.GLOBAL_ADMIN.HGAC_Zip_Codes_2000	Polygon
Global.GLOBAL_ADMIN.HGAC_Zip_Codes_2002	Polygon
Global.GLOBAL_ADMIN.HGAC_Zip_Codes_2005	Polygon
Global.GLOBAL_ADMIN.HGAC_Zip_Codes_2010	Polygon
Global.GLOBAL_ADMIN.Texas_BlockGroups_1990	Polygon

Global.GLOBAL_ADMIN.Texas_BlockGroups_2000	Polygon
Global.GLOBAL_ADMIN.Texas_BlockGroups_2010	Polygon
Global.GLOBAL_ADMIN.Texas_BlockGroups_2020	Polygon
Global.GLOBAL_ADMIN.Texas_Blocks_2000	Polygon
Global.GLOBAL_ADMIN.Texas_Blocks_2010	Polygon
Global.GLOBAL_ADMIN.Texas_Tracts_1990	Polygon
Global.GLOBAL_ADMIN.Texas_Tracts_2000	Polygon
Global.GLOBAL_ADMIN.Texas_Tracts_2010	Polygon
Global.GLOBAL_ADMIN.Texas_Tracts_2020	Polygon
Global.GLOBAL_ADMIN.Texas_Urban_Areas_2000	Polygon
Global.GLOBAL_ADMIN.Texas_Urban_Areas_2010	Polygon
Global.GLOBAL_ADMIN.Texas_Zip_Codes_2005	Polygon
Global.GLOBAL_ADMIN.Texas_Zip_Codes_2010	Polygon
Global.GLOBAL_ADMIN.DataAxle_Businesses_2022	Point
Global.GLOBAL_ADMIN.DataAxle_Businesses_2023	Point
Global.GLOBAL_ADMIN.DataAxle_Businesses_Nix_2021	Point
Global.GLOBAL_ADMIN.DataAxle_Businesses_Nix_2022	Point
Global.GLOBAL_ADMIN.DataAxle_Businesses_Nix_2023	Point
Global.GLOBAL_ADMIN.DataAxle_Businesses_Pre_2021	Point
Global.GLOBAL_ADMIN.DataAxle_Businesses_Pre_2022	Point
Global.GLOBAL_ADMIN.DataAxle_Businesses_Pre_2023	Point
Global.GLOBAL_ADMIN.DataAxle_Businesses_Suspect_2021	Point
Global.GLOBAL_ADMIN.DataAxle_Businesses_Suspect_2022	Point
Global.GLOBAL_ADMIN.DataAxle_Businesses_Suspect_2023	Point
Global.GLOBAL_ADMIN.DataAxle_Consumers_2021	Point
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Global.GLOBAL_ADMIN.DataAxle_Consumers_2023	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_2014	Point

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Global.GLOBAL_ADMIN.InfoGroup_Businesses_2016	Point
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Global.GLOBAL_ADMIN.InfoGroup_Businesses_2019	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_2020	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Nix_2015	Point
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Global.GLOBAL_ADMIN.InfoGroup_Businesses_Nix_2017	Point
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Global.GLOBAL_ADMIN.InfoGroup_Businesses_Nix_2019	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Nix_2020	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Pre_2018	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Pre_2019	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Pre_2020	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Suspect_2014	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Suspect_2015	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Suspect_2016	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Suspect_2017	Point
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Global.GLOBAL_ADMIN.InfoGroup_Businesses_Suspect_2019	Point
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Suspect_2020	Point

Global.GLOBAL_ADMIN.InfoGroup_Consumers_2014	Point
Global.GLOBAL_ADMIN.InfoGroup_Consumers_2015	Point
Global.GLOBAL_ADMIN.InfoGroup_Consumers_2016	Point
Global.GLOBAL_ADMIN.InfoGroup_Consumers_2017	Point
Global.GLOBAL_ADMIN.InfoGroup_Consumers_2018	Point
Global.GLOBAL_ADMIN.InfoGroup_Consumers_2019	Point
Global.GLOBAL_ADMIN.InfoGroup_Consumers_2020	Point
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Global.GLOBAL_ADMIN.HGAC_Schools	Point
Global.GLOBAL_ADMIN.Texas_Education_Service_Regions	Polygon
Global.GLOBAL_ADMIN.Texas_School_Districts	Polygon
Global.GLOBAL_ADMIN.Texas_Senate_Board_of_Education_Districts	Polygon
Global.GLOBAL_ADMIN.HGAC_1_Degree_Quad	Polygon
Global.GLOBAL_ADMIN.HGAC_7point5_Minute_Quad	Polygon
Global.GLOBAL_ADMIN.HGAC_15_Minute_Quad	Polygon
Global.GLOBAL_ADMIN.HGAC_Contours_2_Feet	Polyline
Global.GLOBAL_ADMIN.HGAC_Contours_5_Feet	Polyline
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Global.GLOBAL_ADMIN.HGAC_Lambert_Grid_Product	Polygon
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Global.GLOBAL_ADMIN.HGAC_LiDAR_Grid_2018_Full_Extent	Polygon
Global.GLOBAL_ADMIN.HGAC_LiDAR_Grid_2018_HCFCD_Extent	Polygon
Global.GLOBAL_ADMIN.HGAC_LiDAR_Spot_Elevation	Point
Global.GLOBAL_ADMIN.HGAC_Buy_Active_EndUsers	Point
Global.GLOBAL_ADMIN.HGAC_Buy_PO_EndUsers	Point
Global.GLOBAL_ADMIN.Galveston_Bay_Surge_MOM	Polygon
Global.GLOBAL_ADMIN.Gulf_Of_Mexico	Polygon
Global.GLOBAL_ADMIN.HGAC_Dams	Point
Global.GLOBAL_ADMIN.HGAC_Floodplains_DFIRM_Q3_2010	Polygon
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Global.GLOBAL_ADMIN.HGAC_Floodplains_NFHL_2020	Polygon
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Global.GLOBAL_ADMIN.HGAC_HUC_04_Subregions	Polygon
Global.GLOBAL_ADMIN.HGAC_HUC_06_Basins	Polygon
Global.GLOBAL_ADMIN.HGAC_HUC_08_Subbasins	Polygon
Global.GLOBAL_ADMIN.HGAC_HUC_10_Watersheds	Polygon
Global.GLOBAL_ADMIN.HGAC_HUC_12_Subwatersheds	Polygon
Global.GLOBAL_ADMIN.HGAC_Levees	Polyline
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Global.GLOBAL_ADMIN.HGAC_Major_Rivers	Polyline
Global.GLOBAL_ADMIN.HGAC_Major_Rivers_15C	Polyline
Global.GLOBAL_ADMIN.HGAC_Reserviors	Polygon
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Global.GLOBAL_ADMIN.HGAC_Texas_Coastal_Vignette	Polygon
Global.GLOBAL_ADMIN.HGAC_Water	Polygon
Global.GLOBAL_ADMIN.HGAC_Water_15C	Polygon
Global.GLOBAL_ADMIN.HGAC_Water_Detailed	Polygon

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Global.GLOBAL_ADMIN.Texas_HUC_06_Basins	Polygon
Global.GLOBAL_ADMIN.Texas_HUC_08_Subbasins	Polygon
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Global.GLOBAL_ADMIN.Texas_HUC_12_Subwatersheds	Polygon
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Global.GLOBAL_ADMIN.HGAC_Hurricane_Evacuation_Routes	Polyline
Global.GLOBAL_ADMIN.HGAC_Hurricane_Evacuation_Zip_Codes	Polygon
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Global.GLOBAL_ADMIN.HGAC_Hurricane_Ike_Observations	Point
Global.GLOBAL_ADMIN.HGAC_Hurricane_Ike_Storm_Surge_Model	Polygon
Global.GLOBAL_ADMIN.HGAC_Hurricane_Ike_Track	Polyline
Global.GLOBAL_ADMIN.Texas_Hurricane_Evacuation_Routes	Polyline
Global.GLOBAL_ADMIN.HGAC_Beach_Access_Points	Point
Global.GLOBAL_ADMIN.HGAC_NWR_Areas	Polygon
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Global.GLOBAL_ADMIN.HGAC_Wastewater_Outfalls	Point
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Global.GLOBAL_ADMIN.Texas_National_Parks	Polygon
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Global.GLOBAL_ADMIN.Texas_TCEQ_Regions	Polygon
Global.GLOBAL_ADMIN.Texas_TFT_Adoption_Sites	Point
Global.GLOBAL_ADMIN.CoH_Public_Libraries	Point

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Global.GLOBAL_ADMIN.HGAC_Career_Offices	Point
Global.GLOBAL_ADMIN.HGAC_CoH_Council_Districts_UI_Claims	Polygon
Global.GLOBAL_ADMIN.HGAC_Commissioner_Precincts_UI_Claims	Polygon
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Global.GLOBAL_ADMIN.HGAC_Counties_UI_Claims	Polygon
Global.GLOBAL_ADMIN.HGAC_Counties_UI_Claims_TWC	Polygon
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Global.GLOBAL_ADMIN.HGAC_Gulf_Coast_ETPS	Point
Global.GLOBAL_ADMIN.HGAC_Hire_Red_White_and_You_Employers	Point
Global.GLOBAL_ADMIN.HGAC_Parole_Offices	Point
Global.GLOBAL_ADMIN.HGAC_Re_Entry_Resources	Point
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Global.GLOBAL_ADMIN.HGAC_Workforce_Solutions_Offices	Point
Global.GLOBAL_ADMIN.HGAC_Workforce_Solutions_VR_Offices	Point
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Global.GLOBAL_ADMIN.Brazos_Transit_District_Park_and_Rides	Point
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Global.GLOBAL_ADMIN.Connect_Transit_Bus_Routes	Polyline
Global.GLOBAL_ADMIN.Connect_Transit_Bus_Stops	Point
Global.GLOBAL_ADMIN.Conroe_Transit_Bus_Routes	Polyline
Global.GLOBAL_ADMIN.Conroe_Transit_Bus_Stops	Point
Global.GLOBAL_ADMIN.Fort_Bend_Transit_Bus_Routes	Polyline
Global.GLOBAL_ADMIN.Harris_County_Transit_Bus_Routes	Polyline
Global.GLOBAL_ADMIN.HGAC_Transit_Stops	Point
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Global.GLOBAL_ADMIN.Island_Transit_Bus_Stops	Point
Global.GLOBAL_ADMIN.Metro_BRT_Lines	Polyline
Global.GLOBAL_ADMIN.Metro_Bus_Routes	Polyline
Global.GLOBAL_ADMIN.Metro_Bus_Stops	Point
Global.GLOBAL_ADMIN.Metro_LRT_Lines	Polyline
Global.GLOBAL_ADMIN.Metro_LRT_Stations	Point
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Global.GLOBAL_ADMIN.Metro_Park_and_Rides	Point
Global.GLOBAL_ADMIN.Metro_Transit_Centers	Point
Global.GLOBAL_ADMIN.The_Woodlands_Township_Bus_Routes	Polyline
Global.GLOBAL_ADMIN.HGAC_Airport_Runways	Polygon
Global.GLOBAL_ADMIN.HGAC_Airport_System	Point
Global.GLOBAL_ADMIN.HGAC_Ariport_Boundaries	Polygon
Global.GLOBAL_ADMIN.HGAC_Art_of_Transportation	Point
Global.GLOBAL_ADMIN.HGAC_Bike_Ped_Network_8C	Polyline

Global.GLOBAL_ADMIN.HGAC_Flex_Zones	Polygon
Global.GLOBAL_ADMIN.HGAC_FM_Roads	Polyline
Global.GLOBAL_ADMIN.HGAC_Highway_Milemarkers	Point
Global.GLOBAL_ADMIN.HGAC_Major_Roads	Polyline
Global.GLOBAL_ADMIN.HGAC_Major_Roads_15C	Polyline
Global.GLOBAL_ADMIN.HGAC_MSWF_Managed_Lanes	Polyline
Global.GLOBAL_ADMIN.HGAC_MSWF_Traffic_Management_Strategies	Point
Global.GLOBAL_ADMIN.HGAC_Navigable_Waterway_Lines	Polyline
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Global.GLOBAL_ADMIN.HGAC_Sidewalks_Preliminary	Polyline
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Global.GLOBAL_ADMIN.HGAC_Southeast_Harris_Intersection_Profiles	Point
Global.GLOBAL_ADMIN.HGAC_Southeast_Harris_Proposed_Ped_Bike_Facilities	Polyline
Global.GLOBAL_ADMIN.HGAC_Southeast_Harris_Transit_Feasibility_Study_Hexagons	Polygon
Global.GLOBAL_ADMIN.HGAC_State_Highways	Polyline
Global.GLOBAL_ADMIN.HGAC_TAZ_2954	Polygon
Global.GLOBAL_ADMIN.HGAC_TAZ_5217	Polygon
Global.GLOBAL_ADMIN.HGAC_Texas_Highways	Polyline
Global.GLOBAL_ADMIN.RGMP_HGAC_Freight_Network	Polyline
Global.GLOBAL_ADMIN.RGMP_RTP2045_Intersection_Interchange_Projects	Point
Global.GLOBAL_ADMIN.RGMP_RTP2045_Roadway_Projects	Polyline
Global.GLOBAL_ADMIN.HGAC_StarMap_Addresses	Point
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Global.GLOBAL_ADMIN.HGAC_StarMap_ZipCodes	Polygon
Global.GLOBAL_ADMIN.Strava_Bike_Usage_2017	Polyline
Global.GLOBAL_ADMIN.Strava_Bike_Usage_2018	Polyline

Global.GLOBAL_ADMIN.Strava_Bike_Usage_2019	Polyline
Global.GLOBAL_ADMIN.Strava_Bike_Usage_2020	Polyline
Global.GLOBAL_ADMIN.InfoGroup_Businesses_Nix_2014	Table
Global.GLOBAL_ADMIN.HGAC_15_County_Land_Cover_3x3_Mode_Filtered_2008	Raster
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Global.GLOBAL_ADMIN.HGAC_15_County_Land_Cover_10_Class_2015	Raster
Global.GLOBAL_ADMIN.HGAC_15_County_Land_Cover_10_Class_2018	Raster
Global.GLOBAL_ADMIN.HGAC_15_County_Land_Cover_10_Class_Roads_2008	Raster
Global.GLOBAL_ADMIN.HGAC_15_County_Land_Cover_15_Class_2020	Raster
Global.GLOBAL_ADMIN.HGAC_15_County_Land_Cover_15_Class_2022	Raster
Global.GLOBAL_ADMIN.HGAC_15_County_Land_Cover_Merged_6_Class_2008	Raster
Global.GLOBAL_ADMIN.HGAC_DEM_10m	Raster
Global.GLOBAL_ADMIN.HGAC_Hillshade	Raster
Global.GLOBAL_ADMIN.HGAC_Hurricane_Ike_Salt_Burn_Gulf_Coast	Raster
Global.GLOBAL_ADMIN.HGAC_Hurricane_Ike_Storm_Surge_Model_Raster	Raster
Global.GLOBAL_ADMIN.HGAC_Imperviousness_2001	Raster
Global.GLOBAL_ADMIN.HGAC_Imperviousness_2004	Raster
Global.GLOBAL_ADMIN.HGAC_Imperviousness_2006	Raster
Global.GLOBAL_ADMIN.HGAC_Imperviousness_2008	Raster
Global.GLOBAL_ADMIN.HGAC_Imperviousness_2011	Raster
Global.GLOBAL_ADMIN.HGAC_Imperviousness_2013	Raster
Global.GLOBAL_ADMIN.HGAC_Imperviousness_2016	Raster
Global.GLOBAL_ADMIN.HGAC_Imperviousness_2019	Raster
Global.GLOBAL_ADMIN.HGAC_Imperviousness_2021	Raster

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Global.GLOBAL_ADMIN.HGAC_Land_Cover_2008_17_Class	Raster
Global.GLOBAL_ADMIN.HGAC_Land_Cover_2011_15_Class	Raster
Global.GLOBAL_ADMIN.HGAC_Land_Cover_2011_22_Class	Raster
Global.GLOBAL_ADMIN.HGAC_Land_Cover_2013_15_Class	Raster
Global.GLOBAL_ADMIN.HGAC_Land_Cover_2016_15_Class	Raster
Global.GLOBAL_ADMIN.HGAC_Land_Cover_2019_15_Class	Raster
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Global.GLOBAL_ADMIN.HGAC_Land_Cover_Change_1996_to_2010	Raster
Global.GLOBAL_ADMIN.HGAC_Land_Cover_Change_2001_to_2019_12_Class	Raster
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Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_2012	Raster
Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_2013	Raster
Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_2014	Raster
Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_2015	Raster

Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_2016	Raster
Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_2017	Raster
Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_2018	Raster
Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_2019	Raster
Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_2020	Raster
Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_2021	Raster
Global.GLOBAL_ADMIN.HGAC_Tree_Canopy_Change_2011_to_2016	Raster
Global.GLOBAL_ADMIN.Texas_Terrain_Color_Map	Raster

C&E Non-Spatial Data

Ambient Surface Water Quality Monitoring
Wastewater Self-reporting Data
Parcel-Based Land Use, Attributes, and Valuation (9 counties)
Census Data

Appendix 6 Data Dictionary

Data Dictionary Houston-Galveston Area Council Community and Environmental Planning Department

General Information		
Thematic Layer Name		
Feature Class		
Topology		
Table Name		
Data Source		
Report Prepared by		
Phone	Fax	E-Mail

Attribute Table				
Variable	Begin Column	Item Name	Alternate Name	Item Definition

Data History
Source Agency
Originating Date

Originating Scale

Status Information
Percentage Complete
Planned Completion Date
Geographic Extent
Planned Enhancements
Known problems or limitations

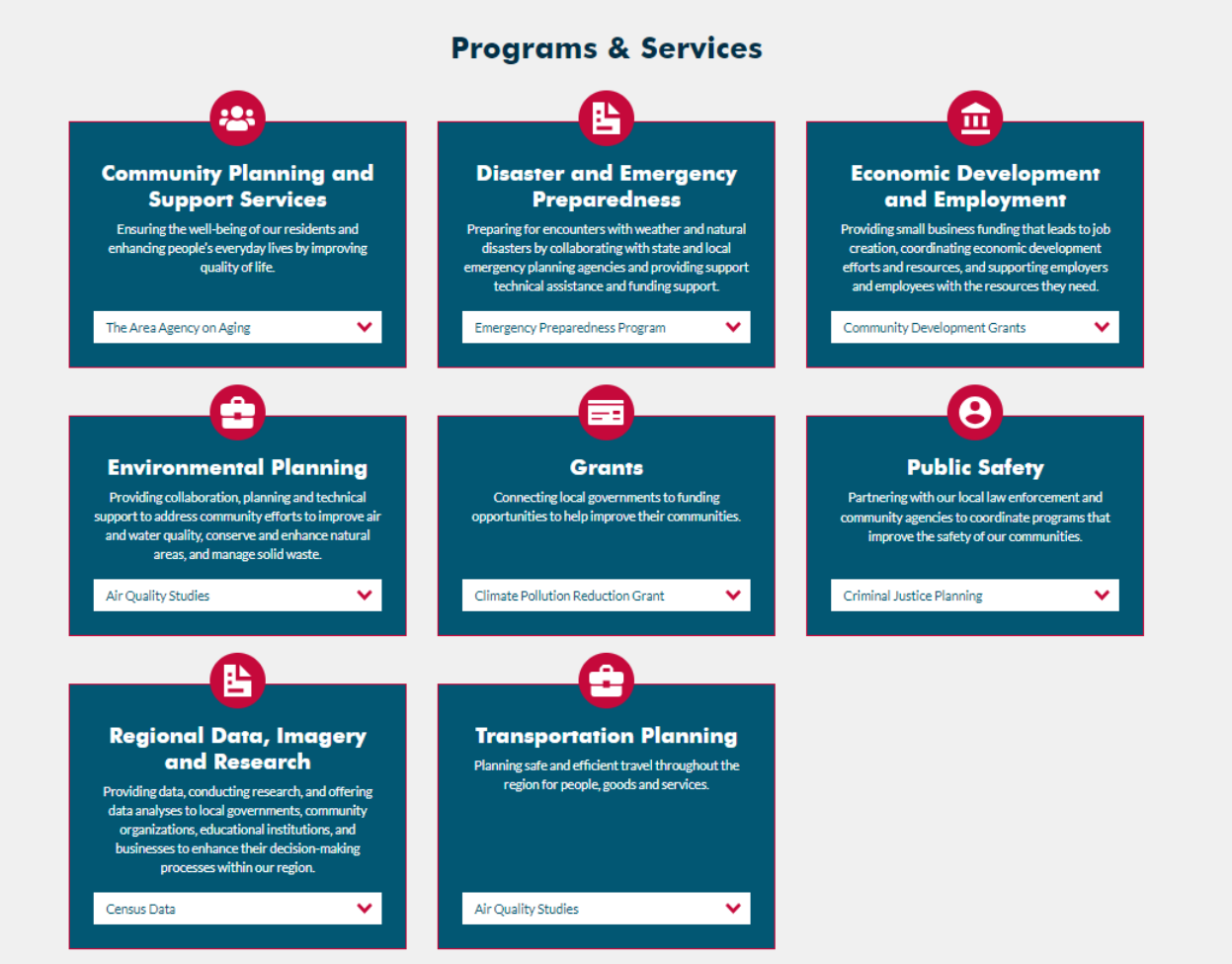
Maintenance Information
Maintaining Office/Division/Section
Contact Name
Contact Telephone Number
Type of updates performed
Frequency of Updates

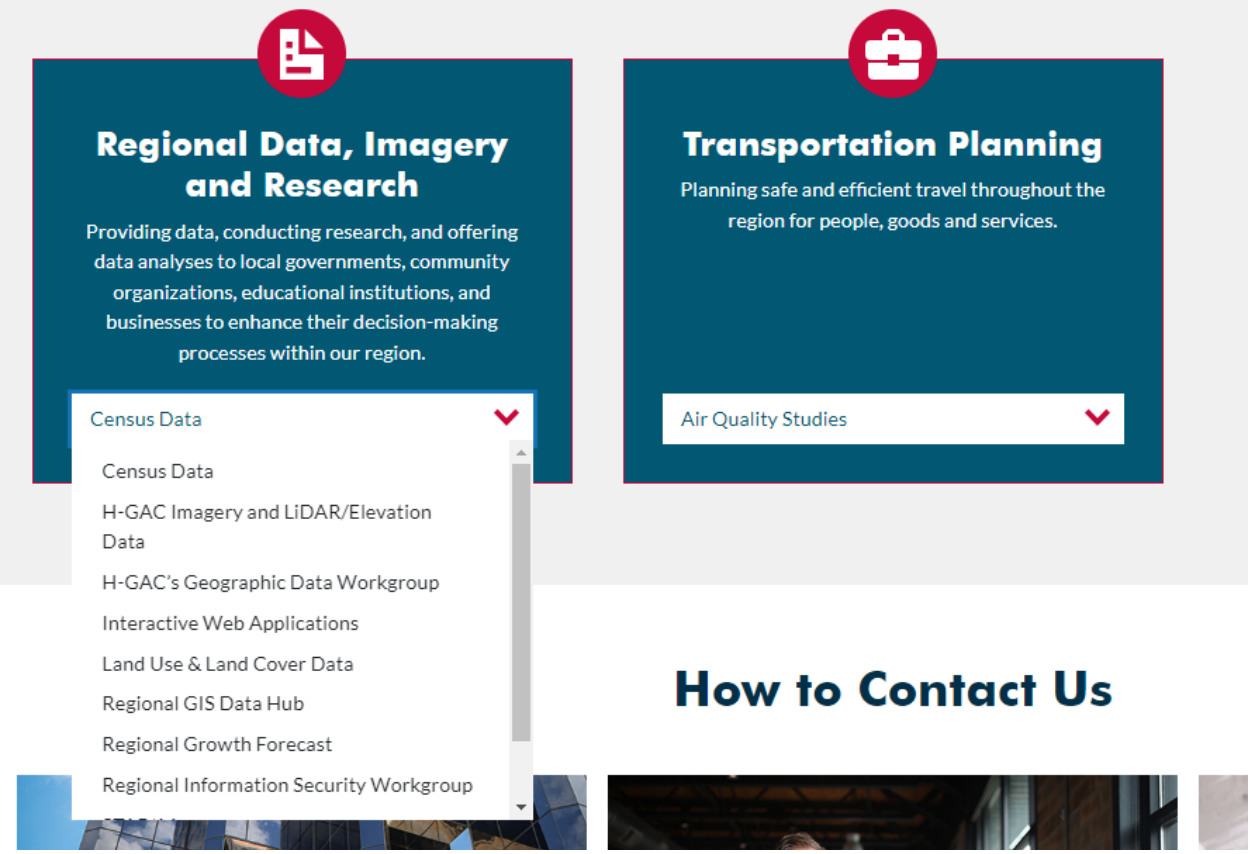
Data Format Information
Data Format
Software/Version
Number of features/records
Total File Size

Projection
Geographic Projection:
Spheroid:
Zone:
Datum:
Units:
Fips Zone:
Quadrant:
X Shift:
Y Shift:
1st Standard Parallel:
2nd Standard Parallel:
Central Meridian:
Lat. of Projection Origin:
False Easting:
False Northing:

Additional Documentation
Quality Assurance Quality Control
Attribute Reports Available
Additional Documentation Available

Appendix 7 H-GAC GIS Data and Mapping Applications




Regional Data, Imagery and Research
Providing data, conducting research, and offering data analyses to local governments, community organizations, educational institutions, and businesses to enhance their decision-making processes within our region.
Census Data
Census Data
H-GAC Imagery and LiDAR/Elevation Data
H-GAC's Geographic Data Workgroup
Interactive Web Applications
Land Use & Land Cover Data
Regional GIS Data Hub
Regional Growth Forecast
Regional Information Security Workgroup
Transportation Planning
Planning safe and efficient travel throughout the region for people, goods and services.
Air Quality Studies
How to Contact Us