USDA Geospatial Data Act Audit Questionnaire

Agency Completing the Questionnaire:	NASS
Data Theme:	Land Use - Land Cover
POC Completing the Questionnaire:	Rick Mueller - rick.mueller@usda.gov

Instructions: If the response to the question has a policy, process, or procedural guidance that covers these actions, please include the document in column E. Provide any additional or relevant comments as needed in column F.

Geospatial Data Act Reference		Question	DATA Set POC Response (Yes, No, N/A, and please explain)	Title of the documented policy/plan that governs this process	Additional Agency Comments or Information
GDA Section 759(a)(2)	**2a**	What geospatial data is shared with other federal and non-federal users and how is this information shared?	Yes, the CDL is published in the public domain upon release of NASS county estimates.	NASS disseminates the Cropland Data Layer (CDL) as a national mosiac via FTP from the NASS website @ https://www.nass.usda.gov/Research_and_Science/Cropland/Release/index.php; the NRCS Geospatial Data Gateway @ https://datagateway.nrcs.usda.gov/ the CroplandCROS portal @ https://cropcros.azurewebsites.net/ and CropScape https://nassgeodata.gmu.edu/CropScape/. NASS has an agreement with George Mason University for CropScape dissemination services via federal grant #58-3AEU-7-0080.	
	2b	Are there any interagency agreements (IAA) or memorandums of understanding (MOUs) with other federal agencies governing the sharing of data?	Yes	The CDL is used to derive market sensitive acreage estimates during the growing season and is publicly released upon completion of the growing season. NASS data sharing partnerships are generally one-way, meaning if a partner provides NASS geospatial data to include in the production of the CDL, NASS maintains that data with the same confidentiality restrictions that it does with other datasets. No sharing of any raw/collected/processed partners/respondents data are possible or allowed. NASS responds to partner inquries about collection, integration, maintenance, dissemination and preservation, albeit no access is provided to NASS IT sytems. NASS maintains an Agency level MOU with USDA/FSA for the use/sharing of confidential Common Land Unit data and sharing of this data is prohibited. The 2008 Farm Bill - Section 1619 limits sharing of FSA/CLU data. The CLU serves as the primary training dataset for the CDL production process. The CLU data is covered under NASS ADM-004 Confidentiality Certification and no CLU data is shared beyond NASS. An archive of CLU datasets are maintain onsite at NASS. NASS is a long standing partner and member of the USGS MRLC program and participates and communicates updates between groups on a quarterly, annual or as needed basis.	
	2c	Does the agency have a process to collect, maintain, disseminate and preserve its GeoSpatial data?	Yes	NASS CDL metadata is available and discoverable via data.gov. All CDL metadata is available for viewing/download @ https://www.nass.usda.gov/Research_and_Science/Cropland/metadata/meta.php. The metadata is compliant with FGDC-STD-001-1998. The CDL is published on data.gov @ https://catalog.data.gov/dataset/cropscape-cropland-data-layer Currently researching how to post CDL on Geoplatform. There are 800+ metadata records that need updating/converting to new standards. NASS has an agreement with George Mason University for CropScape dissemination services via federal grant #58-3AEU-7-0080.	

GDA Section 759(a)(3)	**3a**	What is the agencies process for promoting the integration of geospatial data from all sources? Does the agency have promotional material/plans furthering geospatial integration? If so, please provide promotional plans.		The CDL has been operational for over 14 years and has established processes annually for data ingress from multiple federal and state partners. NASS uses the following sources for updated annual inputs into CDL production - FEDERAL: USDA, Foreign Agricultural Service, Satellite Image Archive – Cost-sharing of satellite imagery inputs; USDA, Farm Service Agency – Access to their Common Land Unit (CLU) Program data for agricultural training and validation; USDA, Forest Service, Tree Canopy Layer; United States Department of Interior, Bureau of Reclamation – Use of their Lower Colorado River Water Accounting System (LCRAS) GIS data layer; United States Geological Survey, Earth Resources Observation and Science Data Center – Sharing of technical expertise, use of their National Land Cover Database (NLCD) and derivative products for non-agricultural training and validation, use of their National Elevation Dataset (NED), and use of their Imperviousness Layer Dataset; STATE - Florida Department of Agriculture and Consumer Services – Use of their Florida Statewide Agricultural Irrigation Demand (FSAID) Geodatabase; Washington State Department of Agriculture – Use of their Crop Geodatabase; Utah Division of Water Resources – Use of their Agriculture Check Polygons Program data; UNIVERSITY - Oregon State University and Jackson County, Oregon GIS Office – Use of their Orchards And Vineyard GIS Database; PRIVATE - LandIQ (private company) – Use of their California Statewide Land Use product. CroplandCROS has a developers guide published @ https://pdienterprise.azurecloudgov.us/portal/apps/sites/#/cropcros/pages/developers-guide and CropScape has a developers guide published @ https://nassgeodata.gmu.edu/CropScape/devhelp/help.html. Both CroplandCROS and CropScape serve CDL data using open API and web service protocols.	
	3b	How does the agency identify sources of geospatial data eligible for integration?		The CDL is processed and updated annually. The CDL program has been operational for over 14 years and all cooperators are contacted annually for their updated geospatial products and included into the annual update. If updated partner products are available, they are included into the production process.	
GDA Section 759(a)(4)	**4a**	Does the agency have a approved NARA Records schedule for the data sets? If so, please provide.	No	The NASS CDL is not currently in the NASS NARA schedule. NASS last performed a NARA schedule in July of 2013. We now have a NARA staff person working for NASS and are currently checking on our NARA status. The NARA staff position was unfilled the past few years.	
	4b	If the agency does not have an NARA Records schedule, what is the agencies process in complying with the draft schedules	See E17		
	4c	If the Agency does not have a record schedule approved by NARA but archives data else where, please provide an explanation and supporting documentation.			
GDA Section 759(a)(5)	**5a**	How does the Agency allocate resources to fulfill its geospatial data responsibilities (collection, production, stewardship) under related agency and FGDC activities?	Yes	The creation of the CDL and acreage estimates are to support the statistical mission of NASS. The CDL is derived and updated monthly throughout the growing season to provide independent acreage estimates of planted crop area. Deriving CDL estimates provides an independent assessment of crop acreages and serves the NASS Ag Statistics Board who are responsible for setting US production estimates. The CDL product is considered market sensitive during the growing season and is releasable as a public good upon completion of the growing season. The following materials describe the purpose and methods for NASS statistical uses of CDL acreage estimates: NASS Estimation Manual, Volume 2, Chapter 1, Section 5, Part 5.5 Remote Sensing, covers acreage estimation creation. The NASS Estimation Manual, Volume 2: Field Crops and Stocks, Chapter 4 Corn, Section 6 Estimating Procedures, Part 6.4 Forecast Season, covers monthly acreage forecasts. The NASS Estimation Manual, Volume 10 Other Reports, Chapter 5: County Estimates, Section 7, DICE covers acreage estimate weight guidance. Upon publication of NASS official county estimates, documentation & metadata are completed and the CDL is publicly disseminated.	
	5b	Describe any benefits realized and/or challenges faced by the agency within its current levels of resource allocation in meeting its geospatial responsibilities and supporting the Committee's activities.	Yes	NASS will continue to operationally produce and update the CDL at the current annual cadence of 30 meters.	

	5c	Describe any agency plans to change the current level of resource allocation and rationale for such change.	Yes	NASS is awaiting an ATO to operate within a secured Google Cloud Platform (GCP) environment. Research plans include producing higher resolution CDLs and derivative products at 10 meters. Dissemination would occur on CropScape, CroplandCROS and NRCS Data Gateway. Additional resource allocations with GCP are currently unknown.	
GDA Section 759(a)(6)	**6a**	Which ISO geospatial data standards does the Agency use?	N/A	FGDC-STD-001-1998	
	6b	Which ISO geospatial meta data standards does the Agency use?	N/A		
	6c	If not, which appropriate standards(s) is currently being used and is the Agency transtioning to ISO? If so, when?		NASS CDL metadata is available and discoverable via data.gov. All CDL metadata is available for viewing/download @ https://www.nass.usda.gov/Research_and_Science/Cropland/metadata/meta.php. The metadata is compliant with FGDC-STD-001-1998. The CDL is published on data.gov @ https://catalog.data.gov/dataset/cropscape-cropland-data-layer. NASS is working with the USDA/ARS/National Ag Library to develop a standard CDL record for GeoPlatform. Timeline is unknown since we are relying on another entity to build the structure.	
	6d	Does the Agency make metadata available through the GeoPlatform? If so, how? Please provide support.	Not yet	National Ag Library is taking lead, but we are currently researching how to post CDL data on Geoplatform. There are 800+ metadata records that need updating/converting to new standards. Just a comment, why are federal metadata records being hosted on a commercial company's website and not on a federal platform instead?	
GDA Section 759(a)(7)	**7a**	Does the agency have partnerships with federal agencies, state, tribal, and local governments, higher education, and private sector? If yes, please provide details/processes for these partnerships.	Yes	The CDL has been operational for over 14 years and has established processes annually for data ingress from multiple federal and state partners. NASS uses the following sources for updated annual inputs into CDL production - FEDERAL: USDA, Foreign Agricultural Service, Satellite Image Archive – Cost-sharing of satellite imagery inputs; USDA, Farm Service Agency – Access to their Common Land Unit (CLU) Program data for agricultural training and validation; USDA, Forest Service, Tree Canopy Layer; United States Department of Interior, Bureau of Reclamation – Use of their Lower Colorado River Water Accounting System (LCRAS) GIS data layer; United States Geological Survey, Earth Resources Observation and Science Data Center – Sharing of technical expertise, use of their National Land Cover Database (NLCD) and derivative products for non-agricultural training and validation, use of their National Elevation Dataset (NED), and use of their Imperviousness Layer Dataset; STATE - Florida Department of Agriculture and Consumer Services – Use of their Florida Statewide Agricultural Irrigation Demand (FSAID) Geodatabase; Washington State Department of Agriculture – Use of their Crop Geodatabase; Utah Division of Water Resources – Use of their Agriculture Check Polygons Program data; UNIVERSITY - Oregon State University and Jackson County, Oregon GIS Office – Use of their Orchards And Vineyard GIS Database; PRIVATE - LandIQ (private company) – Use of their California Statewide Land Use product. CroplandCROS has a developers guide published @ https://pdienterprise.azurecloudgov.us/portal/apps/sites/#/cropcros/pages/developers-guide and CropScape has a developers guide published @ https://nassgeodata.gmu.edu/CropScape/devhelp/help.html. Both CroplandCROS and CropScape serve CDL data using open API and web service protocols.	

	7b	Does the agency have a data acquisition process to build upon existing non-federal geospatial data to efficiently collect, maintain and disseminate geospatial data? If yes, please provide the acquisition process.	Yes	The CDL is used to derive market sensitive acreage estimates during the growing season and is publicly released upon completion of the growing season. NASS data sharing partnerships are generally one-way, meaning if a partner provides NASS geospatial data to include in the production of the CDL, NASS maintains that data with the same confidentiality restrictions that it does with other datasets. No sharing of any raw/collected/processed partners/respondents' data are possible or allowed. NASS responds to partner inquiries about collection, integration, maintenance, dissemination and preservation, albeit no access is provided to NASS IT systems. NASS collects data from the following state agencies on an annual basis: Florida Department of Agriculture and Consumer Services – Use of their Florida Statewide Agricultural Irrigation Demand (FSAID) Geodatabase; Washington State Department of Agriculture – Use of their Crop Geodatabase; Utah Division of Water Resources – Use of their Agriculture Check Polygons Program data. NASS also collects data from universities: Oregon State University and Jackson County, Oregon GIS Office – Use of their Orchards And Vineyard GIS Database; and lastly a private company - LandIQ (private company) – Use of their California Statewide Land Use product. NASS has three partners who distribute CDL data 1) CroplandCROS 2) CropScape and 3) NRCS Geospatial Data Gateway.	
GDA Section 759(a)(8)	**8**	Does the agency have goals and processes that allow them to use GeoSpatial information to: - make federal geospatial information and services useful to the public. - enhance operations - support decision making - enhance reporting to the public and to Congress	Yes	The CDL program is operational within NASS, providing updated remote sensing crop acreage estimates on a monthly schedule for the Ag Statistics Board. The CDL estimates are considered supplemental for decision support to the Board process. The CDL estimates are not publicly releasable. The publicly released CDL data is the best available characterization of planted crops and made publicly available after completion of the growing season. Inclusion of industry/other geospatial data enhances identification of specialty or small area crops that are not readily available or identifiable otherwise in standard federal datasets, thereby enhancing reporting and decision support for users. The CDL is publicly disseminated via the CroplandCROS and CropScape portals allowing interactive visualization and queries of the geospatial data product, using a browser, API, REST services or web mapping services. The following uses were reported to NASS from users/industry: Areas of crop expansion in the Midwest, Cropland affected by Coastal Flooding in South Carolina due to hurricanes, Yield forecasts, Climate, Land Cover, Carbon, Erosion, Biofuel, CRP lands, Urban Growth, Planning, Water Use, Crop Production, Land Management, Education, Transportation, Disaster Assessment, Environmental Risk, Yield, Crop Intensity, Research, Agribusiness, Crop Rotation, Epidemiology, Ethanol, Irrigation, Pesticides, Precision Ag, Wildlife Habitat, Change Detection, Mapping, Soil and Water, Crop Protection, Data Mining, Web Services, Condition Assessment, Land Use, Fertilizer Usage, Water Quality, Commodity, Loss of Farmland, acreage, Modeling, Biodiesel, Watersheds, inundation, and wildfire management.	
GDA Section 759(a)(9)	**9a**	Is any type of privacy information contained within the data set? If yes, summarize the kinds and amounts of privacy information.	N/A	The CDL product does not contain any confidential or private information.	
	9b	How does the agency maintain privacy and confidentiality of the data?	Yes	All NASS employess sign annual confidentiality certifications NASS form ADM-004 to comply with the law regarding the handling of PII data. The Confidentiality Certification covers Title V, 7 and 18 of US law. All handling and processing of CDL related confidential data is performed on NASS federal IT systems. The CDL product once released is a public good and all dissemination portals are not bound by confidentiality or ATO restrictions.	
	9c	What privacy and confidentiality requirements exist for the data set? (e.g., agency policies, federal policies, laws, regulations, etc.)	Yes	The CDL product once released is a public good and all dissemination portals are not bound by confidentiality or ATO restrictions.	
GDA Section 759(a)(11)	**11a**	How does the Agency search all sources, including the GeoPlatform, to determine if existing Federal, State, local, or private geospatial data meets the needs of the covered agency before expending funds for geospatial data collection?	Yes	NASS maintains an MOU with USDA/FAS to support the mission of the USDA Satellite Imagery Archive (SIA) as stipulated by the USDA Remote Sensing Coordination Committee charter. The USDA/FAS CO is responsible for performing an all sources searches for geospatial/remote sensing vendors.	
GDA Section 759(a)(12)	**12a**	Describe how many geospatial data acquisitions the agency has and how many of those are from a person receiving federal funds.	Yes	NASS has only one data acquisition annually. NASS maintains an MOU with USDA/Foreign Ag Service to support the mission of the USDA Satellite Imagery Archive (SIA) as stipulated by the USDA Remote Sensing Coordination Committee charter. All other data collected for the production of the CDL is voluntary and no federal funds are exchanged for their use.	

	12b	Describe the process through which the agency evaluates the quality of geospatial data collected and provided by a person receiving federal funds.	Yes	NASS maintains an MOU with USDA/FAS to support the mission of the USDA Satellite Imagery Archive (SIA) as stipulated by the USDA Remote Sensing Coordination Committee charter. The activities include, but not limited to, the development and management of the USDA SIA's cataloging and distribution systems as well as the facilitation of efficient imagery acquisition, processing, storage, off-loading, and delivery protocols. USDA participating agencies agree to make annual contributions of $75,000 to fund SIA activities. Funds were transfered via an Inter Agency Agreement to FAS/SIA for FY21. USDA/FAS contracting performs all procurement functions on behalf of the USDA/SIA. SIA funding in FY21 included funding the Indian Space Research Organization/Resourcesat-2 LISS III sensor that is licensed, collected, and disseminated by USGS/EROS for all US Fed Civil users and is used as an input to derive the CDL product. This dataset meets high quality image accuracy industry standards. NASS also uses the freely available Landsat 8 and Sentinel 2 a/b missions as inputs into the production process to derive the CDL product. The Landsat and Sentinel missions are operated by USGS/EROS and EU Copernicus and the imagery acquired from them is of high quality and accuracy that meets industry standards.	
	12c	Describe the agency’s processes to include: (1) formal data quality requirements in procurement vehicles (e.g., contracts, grants, etc.) for any acquired data; and, (2) which of these formal data quality requirements ensure the delivery of high-quality geospatial data.	Yes	NASS has only one data ingress acquisition annually. NASS maintains an MOU with USDA/Foreign Ag Service to support the mission of the USDA Satellite Imagery Archive (SIA) as stipulated by the USDA Remote Sensing Coordination Committee charter.	