

### Overview

These lists were supplied by NSGIC members from March through July 2014. The goal was to document the various business functions of state, local, and federal government authorities. We focused on the business uses of Address Point data; i.e. valid addresses located by x-y coordinate points. Enterprise systems will need to meet all of these needs. Members were invited to do the following:

- comment on this document and its individual listings
- add business functions to the list
- edit existing entries to be more clear
- provide alternative agency names to match local practice or terminology. Format: original/alternative

Additional business functions can be added by others.  
Contact Will Craig ([wrcraig@umn.edu](mailto:wrcraig@umn.edu)), Russell Provost ([Russell.provost@maryland.gov](mailto:Russell.provost@maryland.gov)), or Gene Trobia ([estrobia@gmail.com](mailto:estrobia@gmail.com))

### Contents by Column

<b>Col A - Agency Name</b>	Agency responsible for a particular task.
<b>Col B - Business Function Name</b>	A short name that describes the activity. Not necessarily the formal name used in particular state or local government. One function per row.
<b>Col C - Spatial Function</b>	This field provides information how the address data is processed to meet this business need. D - Delivery Point. Get a product or service to a particular location S - Service Area. Point-in-Polygon. Find all addresses within a given service area OR determine which service area this address point is inside. V - Validate Address. Ensure that a given address exists A - Analysis of multiple address points to assist in reporting, resource allocation, or policy analysis
<b>Col D - Purpose</b>	Short statement about purpose of the function.
<b>Col E - Author/Editor</b>	Who wrote or edited this text? They can provide details on entries that are either unclear or fascinating For contact information see the Membership Directory under the People dropdown menu at <a href="http://www.nsgic.org">www.nsgic.org</a>

## Local Government Business Needs

Local Government Agency	Business Function Name	Spatial Function D - Delivery point S - Service area V - Validate address A - Analysis	Purpose	Author
"9-1-1"	Emergency Call Routing Function	S	Addresses of landline telephones must be assigned geographic coordinates in order to route calls to the appropriate PSAP (9-1-1 Call Center)	Craig (MN)
"9-1-1"	Emergency Evacuation	A	Comprehensive set of addressed locations to notify residents and occupants in case of evacuation (phone, door-to-door checks, etc.)	Lowry (CO)
"9-1-1"	Emergency Response	D	Get police / fire / ambulance to emergency incident	Craig (MN)
"9-1-1"	Emergency Call Location	D	Latitude/Longitude (GPS) values of incoming cellular calls are used to find the closest address point location to route public safety personnel to the caller's location.	White (RI)
Addressing Authority	Master Address DB	V	Centralized, authoritative address management for applications	Sewash (NC)
Addressing Authority	Address change notification	V	Streamline workflows = cities must notify many organizations about a new/changing address.	Kotz (TC)
Assessor	Property Assessment	A	Assessment of addressed structures and complexes on properties	Lowry (CO)
Assessor	Property Accounting	A	Proxy parcel boundaries	Lowry (CO)
Central Services	Customer Service	D	Used for customer complaints to determine location of damage to citizens property	Provost (MD)
Clerk of Courts	Jury Selection	A/V	Assists with setting up jury pools for the court system within municipalities and counties.	De Troye (SC)
Clerk and Recorder	Record-keeping	V	Recordations, motor vehicle records	Lowry (CO)
Department of Aging	Transportation	D	Determine location of seniors during emergency event for dialysis and other medical needs.	Provost (MD)
Economic Development	Economic development	A	Determine areas for potential demands, identify opportunities, determine infrastructure needs	Lowry (CO)
Employment	Community outreach	A		Lowry (CO)
Environmental Quality	Well Tracking	D	Map the locations of private/public potable water wells	Provost (MD)
Health Department	Sewer permitting	D	Construction approval and monitoring health compliance	Lowry (CO)
Health Department	Record-keeping, community health	D/A	Vital records; target communities for outreach; epidemiology, track health code violations	Lowry (CO)
Health Department	Food safety	D	Provide notice to citizens regarding the health and safety of retail food establishments	Lowry (CO)
Housing Authority	Housing services planning	A	Identify community subsidized housing needs, siting, demography	Lowry (CO)
Human services	Adoption and foster care	V		Lowry (CO)
Planning/zoning/building	Airport Planning	A	Supports airport planning and decision support for airport expansions and runway alignment. Supports airport land acquisition and easement projects	De Troye (SC)
Planning/zoning/building	Business Regulation	S/A	Regulating businesses based on proximity to schools, churches and parks	Paulus (WA)
Planning/zoning/building	Permit Tracking	D	Track the lifecycle of construction/building permits.	Provost (MD)

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Planning/zoning/building	Code enforcement	D	Visit and track compliance to municipal land use and related codes	Lowry (CO)
Planning/zoning/building	Zoning notification	S	Mail to all residences within x distance from a zoning change - inc sub-addresses	Kotz (TC)
Planning/zoning/building	Floodplain Management	A	Determining flood risk by proximity to and/or inclusion flood plains	Lowry (CO)
Planning/zoning/building	Monitor Land Use Change	A	Identifying change = new development and redevelopment	Kotz (TC)
Planning/zoning/building	Carrying Capacity	A	Used to help determine existing density and determine potential build out.	Provost (MD)
Planning/zoning/building	Building inspection allocation/routing	D/A	Allocate inspection call locations and provide optimal routing for building inspectors	Steve (AZ)
Planning/zoning/building	Outreach Planning	D/A	Used for analysis to plan effective outreach to different groups	De Troye (SC)
Police Department	Crime hot spots	A	Map hot spots to plan personnel deployment (cops on dots)	Craig (MN)
Police Department	Sexual offender public notification	V	Sex offenders database	Lowry (CO)
Police Department		A	Locations of registered child care facilities	Lowry (CO)
Police Department/Public safety	Burn permits	V	online application validates against address point	Fashoway (MT)
Police Department/Public safety	Death Reporting	S	Reporting whether a death has occurred inside or outside of city limits	Paulus (WA)
Public transit	Bus Routing	A	determine address point numbers within a distance of a transit route, help to analyze customer base	Fashoway (MT)
Public transit	Bus Routing	D	current transit offers curb to curb service, validate and identify address point	Fashoway (MT)
School Board	School Attendance Assignment	S	Provide notice to citizens regarding assigned school districts	Provost (MD)
School Board	School Attendance Assignment	A	Intradistrict school assignment and distribution (population and ethnic balance)	Lowry (CO)
School Board	School Registration	S/V	Student registration / self-service (statewide application)	Sewash (NC)
School Board	School Bus Routing	A	Plan bus routes to minimize travel times, vehicles used, and walk distances.	Craig (MN)
Storm drainage permitting	Environmental Management	D	Assessing impervious surface run-off fees and associating per address	Lowry (CO)
Streets/Utilities	Project Management	A	Capital improvement planning and tracking	Lowry (CO)
Treasurer	Tax notification	V	Mail tax assessments	Lowry (CO)
Utilities	Service call	D/V	identify location for service call	Fashoway (MT)
Voter registration	Register a new voter	V	Confirm that application address matches approved list	Craig (MN)
Voter registration	Precinct Assignment	S	Automated voters the appropriate precinct/ballot after initial registration or change of address or reprecincting	?
Voter registration	Ballot distribution	V	Mail voter ballots	Lowry (CO)
Water utility	Meter repair	D	Deploy staff to fix a faulty meter	Craig (MN)

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Water utility	Billing	D/V	Bills are sent to meter address locations (multiple meters and addresses in same building, addresses could have different street names for buildings on street corners)	White (RI)

## State Government Business Needs

Agency	Business Function Name	Spatial Function D - Delivery point S - Service area V - Validate address A - Analysis	Purpose	Author
NG911 Statewide	Emergency Call Routing Function	S	Addresses of landline telephones must be assigned geographic coordinates in order to route	Craig (MN) - Smith
NG911 Statewide	Emergency Evacuation	A	Comprehensive set of addressed locations to notify residents and occupants in case of	Lowry (CO) - Smith
NG911 Statewide	Emergency Response	D	Get police / fire / ambulance to emergency incident	Craig (MN) - Smith
NG911 Statewide	Emergency Call Location	D	Latitude/Longitude (GPS) values of incoming cellular calls are used to find the closest address	White (RI) - Smith
Agriculture	Licensing	D/S/V/A	Delivery of licenses to holders. Determining inspection areas. Validating addresses for delivery	Ross (MN)
Agriculture	Compliance	S/V/A	Determining inspection areas. Initial point for facility locations. Analysis of trends.	Ross (MN)
Agriculture	Marketing	V/A	Initial point for Minnesota Grown locations. Analysis of trends.	Ross (MN)
Broadband	Broadband access	S	Getting access to underserved communities or single residences	Rogers (WY)
Common to all	Asset management	S	Mapping locations of offices, equipment, supplies, etc.	Rogers (WY)
Corrections	Offender Community Reentry	S/V/A	Ensure that valid addresses are entered for returning prisoners; track the number and	Ross (MN)
Courts	Offender address V&V	D/V	Verify offender-provided addresses for court documents	Sewash (NC)
Education	School bus routing	D/A	Efficient school bus routing given student addresses	Rogers (WY)
Education	Student placement	S/A	Identifying which school students should attend given residence, analyzing local school' take	Rogers (WY)/
Employment	Employment reports	S/A	Location of employment sites (not headquarters)	Craig (MN)
Employment	Worker residence	S	Home city or tract of employees, with tie to place of employment	Craig (MN)
Employment	Matching Job Seekers to Job	S	Proximity searches (e.g. within 35 miles) can be used to filter job opportunities for job seekers if	Granberg (UT)
Employment	Matching training opportunities to	S	Target training opportunities to where unemployment is higher or where companies are actively	Rogers (WY)
Family Services	Foster Kids	S	Determine where to place foster kids so they can stay in the same school	Rogers (WY)
Health	Vital Statistics	S	Report births and deaths by city and county	Craig (MN)
Health	Distance to providers	A	Determine distance patients are from health care providers	Rogers (WY)
Health	Health advisories	A	Monitor and report major health issues as they arise	Craig (MN)
Health	Locate disease occurrence	A	Identify clusters of major diseases for statistical analysis (e.g. epidemiology)	Provost (MD)
Health	Special Needs Registry	D	Voluntary registry for people with special needs located using statewide address points	White (RI)
Health	Track Immunizations	V/A	Validating addresses of patients that receive immunizations, analysis.	Ross (MN)
Health	Well Management	V/A	Validating addresses of wells that are drilled, analysis.	Ross (MN)
Health		D/S/V	Locate those who receive Medicaid and assure they are within State	Lowry (CO)
Health		A	Locate those who may be eligible for health care coverage	Lowry (CO)
Housing	Housing subsidies	S	Report state housing subsidies by city and county	Craig (MN)
Housing and Finance	Public housing services	D/S/V	Analysis for location of Public housing, verification of residents or potential residents,	Ross (MN)
Human Services	State and Local Services	A/D/S	Identify clusters of clients and plan/analyze/select service providers (ex. Meals on Wheels)	Craig (MN)
Human Services	Examination of relationships by	D/S/A	Examine statistical relationships, both descriptive and inferential, using geographic-based tools,	Ross (MN)

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Human services	Health care accessibility	D/S/A	Determine recipient availability to health care services	Ross (MN)
Human Services				Lowry (CO)
IT	Business Analytics	V/A	Support for analysis across business databases	Sewash (NC)
IT	Address V&V	D/S/V	Address V&V services to non-spatial applications	Sewash (NC)
IT / Health	Quality Analytics	V/A	When dealing with millions of addresses in a dynamic system the quality of the address location	Vanhook (AL)
IT / Location Based Services	Place as a data type	D/V/A	In the advancing of location aware systems (like Google) Place(s) have become a moving target	Vanhook (AL)
Legislature	Constituent comments	V	Confirm that a submitted comment come from a person legislator represents	Craig (MN)
Licensing Boards	Licensing and certification	S/V	License, registrations, and certifications for contractors, veterinarians, and other professions	Ross (MN)
National Guard	Emergency response	D	Direct troops to emergency location; identify places to protect as sentinels	Craig (MN)
Natural Resources	Hunting Enforcement	A	Helps indicates where certain hunting activities can and can't take place using structure locations	De Troye (SC)
Natural Resources	Permitting	D/A	Assists with agricultural and NPDES permitting reviews	De Troye (SC)
Natural Resources	Wildland fire	D/A	Wildland fire response, planning	Fashoway (MT)
Natural Resources	Fishing/Hunting license administration	D/V	Verify addresses of submitted applications. Mail renewal notices.	Craig (MN)
Natural Resources	Park reports and planning	A	Identify residential location of users of each state park	Craig (MN)
Natural Resources	Park and camping reservations	A	Verify residential location of users of each state park	Ross MN
Natural Resources/EQ	Facility Registry	D/S/V/A	EPA facility registry, cross-referencing among programs	Sewash (NC)
Planning/zoning/building	Airport Planning	A	Supports airport planning and decision support for airport expansions and runway alignment. Supports airport land acquisition and easement projects	De Troye (SC)
Planning/zoning/building	Outreach Planning	D/A	Used for analysis to plan effective outreach to different groups	De Troye (SC)
Planning	Parcel boundary maintenance	V	Identify location of land ownership records with missing X/Y coordinates	Provost (MD)
Planning	Population Analysis & Reporting	S/A	Aggregating confidential client data to census tracts and other geography for population analysis and reporting	Paulus (WA)
Planning	Business Regulation	S/A	Regulating businesses based on proximity to schools, churches and parks	Paulus (WA)
Public Safety	Drivers License administration	D/V	Verify addresses of submitted applications. Mail renewal notices.	Craig (MN)
Public Safety	Automobile license administration	D/V	Verify addresses of submitted applications. Mail renewal notices.	Craig (MN)
Public Safety	Liquor & Gambling license administration	D/V	License application and renewal	Craig (MN)

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Agency	Business Function Name	Spatial Function D - Delivery point S - Service area V - Validate address A - Analysis	Purpose	Author
Public Safety	Sex Offender Registry	D/V	Current location of level 3 sex offenders	Craig (MN)
Public Safety	emergency Management	D/S/V	Locations of facilities, assets, resources	Ross (MN)
Public Safety	8-1-1 Call Before You Dig Centers	S	Determine location of planned excavation or ground disturbing construction activities so that utility marking services can be appropriately notified	Granberg (UT)
Public Service Commission	Utility outages	S	Determine which residences are affected by utility outages	Rogers (WY)
Revenue	Sales tax administration	S	Determine appropriate local sales tax for at point of delivery sales (mail/internet/local delivery)	Craig (MN)
Revenue	Streamline sales tax	S	Some states may find it worthwhile to go beyond the standard zip+4	Craig (MN)
Revenue	Sales tax reports	A	Report total sales by tract and city	Craig (MN)
Revenue	Income tax administration	V/D	Verify addresses of individuals and families	Craig (MN)
Revenue	Property tax administration	A	Identify differences between the assessed value and prices paid for recent sales	Craig (MN)
Revenue	Vehicle tax administration	S/V	Calculate tax assessment for vehicle tax	Sewash (NC)
Secretary of State	Precinct location finder	S	Direct voters to the proper polling location	Craig (MN)
Tourism	Location of recreation assets	D/S/V	Locations of recreations sites activities places of interest, hotel/motel/BB, etc. Proximity search and routing	Ross (MN)
Transportation	Crash reports	A	Locate and report accidents	Craig (MN)
Transportation	Airport proximity	S	Determine if residences are too close to airport runways	Rogers (WY)
Transportation	Facility management	D	Managing, operating and improving the state's transportation facilities	Provost (MD)
Veterans Administration	Veterans services	D/S/V	Aligning veterans with services, verification of home address	Ross (MN)

## Federal Government Business Needs

Agency	Business Function Name	Spatial Function D - Delivery point S - Service area V - Validate address A - Analysis	Purpose	Author
US Census	Population census and demographics	V/A	Decennial enumeration of US population; Current Surveys; population/location-based allocation of federal funds, mailing, personal visit, survey sample frame, visualization and analysis, Maintaining Master Address File	Arabas (OR)
FEMA		D/V/S/A	Determine cost and need for Individual Assistance after natural and man-made disasters	Lowry (CO)
US Red Cross		D/V/S/A	"We use parcel, address and flood plain information initially to give our management an estimate of the possible residential damage in the area. The Situational Awareness maps and reports we create help our management use our donor's contributions more effectively by better estimating the number of Disaster Assessment and Client Casework volunteers to deploy. Without GIS data, we have counted the number of roof tops from online images to estimate the number of residence that might have been damaged. This process is very time consuming and does not provide a good estimate where the damage is widespread and/or in heavily treed areas.	Lowry (CO) via Diane Ambrose of the American Red Cross
NIFC		S/A	Wildland Fire Decision Support System	Lowry (CO)
Bureau of Ocean Energy Management, Office of Research and Methodology		V/A	regulatory/enforcement	Irby (Census Bureau)
Centers for Disease Control and Prevention, Office of Research and Methodology		V/A	mailing, personal visit, survey sample frame, emergency response, regulatory/enforcement, visualization and analysis, surveillance activities, licensure,	Irby (Census Bureau)
Consumer Financial Protection Bureau		A	fraud mitigation, risk assessment	Irby (Census Bureau)
Department of Defense, Office of Deputy Under Secretary of Defense, Installations & Environment		D/V/A	mailing, emergency response, visualization and analysis, facility management	Irby (Census Bureau)



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Department of Homeland Security/Federal Emergency Management Agency, National Response Framework, National Preparedness System, and Presidential Policy Directive (PPD) 8: National Preparedness		D/V/A	Preparedness and planning, Situational awareness, Analytics and assessments (e.g. damage assessments, exposure and impact assessments, etc.), Decision making, Resource allocation, staging, and deployment; Provisioning of services to disaster survivors and public entities; incident response such as survivor identity validation and eligibility, individual housing assistance, and public assistance, geospatial damage assessments (and possible grant assistance); Insurance studies; search and rescue	Irby (Census Bureau)
Department of Housing and Urban Development, Policy Development & Research		D/V/S/A	mailing, survey sample frame, emergency response, regulatory/enforcement, visualization and analysis	Irby (Census Bureau)
Department of the Interior, U.S. Fish and Wildlife Service		D/V/A	mailing, personal visit, emergency response, regulatory/enforcement, visualization and analysis, property inventory of buildings	Irby (Census Bureau)
Federal Housing Finance Agency		A	match transactions for the purpose of estimating FHFA's suite of house price indexes	Irby (Census Bureau)
General Services Administration, Office of Governmentwide Policy; Office of Real Property Asset Management		D/V/A	emergency response, regulatory/enforcement, visualization and analysis, asset management, project management, data collection	Irby (Census Bureau)
Library of Congress		D/A	mailing, visualization and analysis	Irby (Census Bureau)

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National Geospatial Intelligence Agency, Office of Chief Information Officer		D/A	emergency response	Irby (Census Bureau)
National Oceanic and Atmospheric Administration, Office of Response and Restoration		D/A	Emergency response and post-disaster cleanup management	Irby (Census Bureau)
National Oceanic and Atmospheric Administration, National Marine Fisheries Service		V/A	Permit management and verification	Irby (Census Bureau)
U.S. Geological Survey		D/A	emergency response, visualization and analysis	Irby (Census Bureau)
United States Department of Agriculture, Natural Resources Conservation Service, National Soil Survey Center, NGMP		D/V/A	emergency response, visualization and analysis, office locations and for FFATA/FAADS reporting	Irby (Census Bureau)
USPS	mail delivery and operations management	D/V/A	analyze the volume of their mail base and more precisely optimize their carrier routes.	Irby (Census Bureau)
Veterans Administration, Office of Policy and Planning		D/A	visualization and analysis, policy development and planning for delivery of services	Irby (Census Bureau)