MS4 Mapping – Request for Proposals - Addendum

Questions and Answers

GENERAL QUESTIONS / CONTRACT / PROPOSAL CONTENTS

Q: In consideration of timing of the responses from proposal questions, would the CNY RPDB consider extending the proposal due date by one or two weeks to allow for incorporation of feedback into the consultant's submittals?

- **YES**: Given the amount of information being provided by way of this document, the RFP schedule will be modified as follows:

Addendum responding to questions:	**5/06/2024**
Proposal submission deadline:	**5/23/2024, 4:00 PM EST**
Expected award date:	6/14/2024
Expected contract start date:	7/21/2024
Anticipated contract length:	18 months

Q: How many sewersheds are anticipated as needed to be mapped?

- Our current inventory does not include any delineated sewersheds. We estimate that on the order of 5,000 to 7,000 sewersheds will need to be delineated. Ideally, we would prefer to see sewershed delineation identified in proposals as a separate task with its own cost estimate.

Q:

Q: The ad for this opportunity in the New York State Contract Reporter indicates a total MWBE participation goal of 30% and a total Service-Disabled Veteran-Owned Business Contracting Goal of 6%. Can you clarify which types of certifications you will accept for this project? Also, are you looking for county-specific certifications, or will state or other certifications also be accepted? What are your certification requirements for MWBE and DBE status? Will you accept WBENC certification for WBE and/or NYS Unified Certification Program certification for DBE?

- Only firms certified by Empire State Development's Division of Minority and Women's Business Development can be utilized to meet MWBE participation goals on State contracts. (https://dec.ny.gov/about/doing-business)
- Information on becoming certified through the DMWBD is available online at: https://esd.ny.gov/doing-business-ny/mwbe
- To qualify as a Service-Disabled Veteran-Owned Business, the business must first be certified by New York State's Division of Service-Disabled Veterans' Business Development. (https://veterans.ny.gov/service-disabled-veteran-owned-businesses#:~:text=New%20York%20State%20maintains%20a,%2DDisabled%20Veterans'%20Business%20Development)

- Information on becoming a certified Service-Disabled Veteran-Owned Business is available online: https://www.ny.gov/services/become-certified-service-disabled-veteran-owned-small-business

Q: What information should be included on the "price sheets"? Do you want to see a task breakdown with total hours, labor categories, and rates?

- No specific format or template is required for the price sheets, but a strong proposal will include:
    - Task breakdown with total hours and staff expected to be utilized per task
    - Labor categories
    - Hourly rates by position
- Proposals are expected to include an overall cost estimate for all proposed work.

Q: Would CNY RPDB please provide a copy of the referenced terms and conditions for this contract?

- The CNY RPDB's Standard Professional Services Agreement template ensures compliance with state, federal, and local regulations, specifies insurance requirements, and otherwise describes how the contract will be administered. An example of a contract template will be provided but note that the CNY RPDB reserves the right to alter the terms of the final contract as needed.

Q: Please confirm that the CNY RPDB and MS4s understand that the timeline of the proposed Syracuse Urbanized Area MS4 System Mapping contract (07/01/2024 + 18 months) would put the permittees beyond some of the milestones noted in GP-0-24-001.

- A coalition-wide inventory necessitates a longer timeline than an inventory for an individual municipality. The CNY RPDB will be in discussion with the NYS DEC to ensure that municipalities are not penalized for delays associated with this comprehensive, coalition-wide system inventory.

Q: Is it anticipated that the resources available are sufficient to fully complete mapping all features in the entire MS4 area?

- Because this project includes the completion of an inventory of facilities across a large geographic area, the CNY RPDB acknowledges that the precise scope of this project is difficult to estimate. If the fieldwork component of the inventory is significantly above the level anticipated by resource estimates, the selected consultant, the CNY RPDB, and the CNY Stormwater Coalition will discuss alternatives and priorities.

Q: Can the CNY RPDB provide any insight on the budget available for the MS4 Mapping Project as part of the response to questions?

- The goal of this RFP is to encourage firms to explore innovative partnerships and to recommend innovative approaches to accomplish the tasks needed to comply with New York State's permit requirements. We are interested in seeing proposals that provide realistic cost estimates, preferably based on past experience with similar projects.

Q: Please confirm that proposal submission is only electronic (via email PDF to Aaron McKeon), and that a mailed hard copy is not required.

- Correct: a mailed hard copy is not required. Proposals must be submitted electronically via email to: amckeon@cnyrpdb.org

Q: Will the consultant be leaned upon to provide interpretation of the requirements of MS4 Permit NYS GP-0-24-001?

- The consultant is not expected to have expertise with the terms of the MS4 General Permit. The CNY RPDB and Stormwater Coalition members will provide information on the terms of the permit as it relates to data collection and development of the inventory. However, the ideal consultant will be familiar with municipal separate storm sewer system infrastructure, how system components are connected, and what measurements in the field are critical to developing a complete system inventory.

Q: Is the client expecting the awarded firm to analyze and add upon the existing stormwater database to meet requirements under NYS GP-0-24-001 other than those requirements related to the existing stormwater database? For example, will the integration of permit programs such as TMDL, enforcement tracking, monitoring, SWPPP, & Good Housekeeping be incorporated into the resultant database and data capture? Is the consultant only responsible for related permit activities as outlined in Section 6.III.C of the RFP versus activities listed under the NYS GP-0-24-001 Part IV.D.1 & .2.

- The consultant is not expected to participate in long-term permit implementation, but development of the asset management system should include the ability for system operators to integrate inspection information and monitoring, as well as enforcement tracking.

Q: Please provide "Stormwater Systems: Uniform Mapping Protocol" - a manual developed by the Herkimer-Oneida Counties Comprehensive Planning Program (Attachment 2) referenced in Section 7 of the RFP.

- This will be provided to firms that submitted questions / EOIs and will be uploaded to the CNY RPDB's website as soon as is feasible. This is intended to be a resource, rather than a prescriptive document; it contains helpful information on how similar MS4 infrastructure inventories have been compiled.

Q: The RFP indicates training materials as a deliverable. Does the client anticipate hands-on, in person training for client stakeholders?

- Hands-on, in-person training is not a requirement. Training materials may take many forms, including printed/PDF materials, online documentation, virtual meetings, etc. The goal of this deliverable is to ensure that the CNY RPDB and Stormwater Coalition members are able to access all of the asset management system's features in the long-term.

Q: Will Per Diem costs, such as travel, lodging, meals be allowed? If so, please provide details on limitations and restrictions.

- Proposals should include all costs that are proposed to be billed to the contract with the CNY RPDB. Travel is an eligible cost under this contract. The CNY RPDB's standard contract does not include a rate for per diem or lodging; reimbursement levels can be discussed as part of the contract development process as needed. Useful guidelines for travel costs in New York State are available at: https://bsc.ogs.ny.gov/meals-lodging.

Q: Do you have a list of other firms that are interested in this opportunity for team-up?

- The CNY RPDB has not been contacted by any firms that have expressed an interest in advertising their availability for a joint application.

EXISTING DATA

See the "Existing Data – Expanded Summary" at the end of this RFP Addendum.

Q: Does the CNY RPDB have an estimate in man-hours for how long it should take to complete the gap analysis?

- The gap analysis is anticipated to be a relatively minor component of the project, i.e., on the order of 10% - 15% of total project resources.

Q: Following completion of the gap analysis will the successful bidder then complete all necessary work identified in the gap analysis under the main contract or will new contract terms be negotiated to complete the identified work?

- The gap analysis is envisioned as the first stage in data collection, rather than as a separate step in the inventory process. A single contract will be used for all tasks.

Q: Will GPS verification be required for all existing elements of the inventory?

- See the "Existing Data – Expanded Summary" at the end of this RFP Addendum.
- Existing stormwater inventory data is of four kinds:
    1. Data that has already been field verified utilizing sub-meter GPS equipment and that includes all of the measurements needed to develop a complete system inventory.
    2. Data that has been field verified using GPS equipment but does not include all the measurements needed to develop a complete system inventory.
    3. Data points whose locations have been approximated using aerial photos and does not include field measurements.
    4. Other system inventories (e.g., on paper, in CAD, etc.).

    Data in Category 1 does not need to be field verified. Data in categories 2 and 3 will need field measurements. Data in Category 4 will need to be assessed for its accuracy and completeness.

Q: Do all municipalities have existing mapping? What is the quality of it (GPS, images, inspections, etc.)?

- Not all municipalities have mapping. The quality of existing mapping varies. The online map (https://bit.ly/3MzT4Z3) provides most of the current information for the Central New York MS4. See the "Existing Data – Expanded Summary" at the end of this RFP Addendum.

Q: For the initial inventory review, in what format is the existing data? Is the data in GIS format, paper or hard-copy, unreferenced CAD files, etc.?

- See the "Existing Data – Expanded Summary" at the end of this RFP Addendum.

Q: In review of the Syracuse Urbanized Area RFP, we noticed that surveys were compiled during the summer of 2022. To get a good understanding of your fields data collection needs, could we review the forms identifying the gaps for each municipality?

- These inventories are provided as an attachment. However, it should be noted that these surveys are only a rough guide to each municipality's inventory. The online map (https://bit.ly/3MzT4Z3) is a better source of information on the amount of information that has been collected for each municipality.

Q: The table included in the References section indicates mapping at some level has been completed in 23 of the 29 municipalities. Has all static mapping been digitized in those municipalities? If not, approximately how many maps may need to be digitized? Of the remaining 6 municipalities how many static maps may need to be digitized, if any?

- See the Existing Data – Expanded Summary section, below. The bulk of the existing data is in digital formats and does not to be scanned in. As-built drawings (typically on paper) may be available for some portions of the area to be inventoried: to date, as-builts have not been utilized to generate inventory data.

ARCGIS / Data Hosting

Q: Will users need to make changes in the dashboard or can ArcGIS Online (AGOL) training be provided? Will municipalities have their own AGOL accounts?

- We would like to see proposals that provide a range of options for municipalities. We would like to see proposals that provide a range of options for municipalities.

Q: Will the GIS data be hosted on a single AGOL instance or is the CNY RPDB seeking to have multiple ArcGIS Online instances, one for each municipality? Does the CNY RPDB envision that the AGOL deliverables be developed, hosted, and maintained by the consultant through the CNY RPDB ESRI AGOL Environment or hosted and maintained by consultant AGOL Environment?

- We anticipate a single ArcGIS Online instance. We envision that the deliverables will be developed by the consultant but be hosted and maintained through the CNY RPDB ESRI AGOL Environment.

Q: Who manages the service if all stakeholders utilize a single service?

- The CNY RPDB will coordinate and manage online services for all Stormwater Coalition members.

Q: Will an enterprise ESRI geodatabase be used to store the results of the field collected data or do you use file geodatabases? Does CNY RPDB have access to ArcGIS Server and an ArcGIS Enterprise Geodatabase (SDE). If so, what are the versions?

- Neither ArcGIS Server nor Enterprise GIS are available to store data; information will be stored in file geodatabases.

Q: Currently how many ArcGIS Online licenses are available for each of the following license types?

- The CNY RPDB currently has Named User ArcGIS Pro Basic & ArcGIS Business Analyst Web licenses. If additional licensing is needed to accomplish the goals of the project that should be included in proposals. Additional ArcGIS Online licenses have not been needed to administer the current online database. Additional licenses can be an option in the proposed inventory solution.

Q: Do you anticipate the need to edit the MS4 infrastructure in the field using a mobile application or in the office using a web browser? Do you anticipate needing to edit the attribution only, or geometry and attribution?

- We will need the ability to do both field collection/editing via a mobile application and data editing in the office.
- It is possible that we will need to edit all data fields.

Q: Do you anticipate requiring any custom functionality, tools, or widgets to be developed beyond what is currently available on the Central New York Stormwater Features web application?

- As stated in the RFP, we are looking for a firm or team of firms that can develop a complete asset management system, including:

  o Municipal dashboards, to allow individual municipalities to review and update system data.
  o Field Editor update capabilities.
  o Data access privileges, with data quality control measures.

Q: What are the security and privacy requirements for your ArcGIS Online content?

- Currently, the CNY Stormwater Coalition's MS4 inventory is available to the public via AGOL. In the future, it may be desirable to exclude public viewing of this data; that is not currently a concern. Public editing of / commenting on data should not be permitted.

Q: Does the client have experience managing AGOL content, such as hosted feature services, web maps, dashboards, and web mapping applications?

- The CNY RPDB has some experience hosting and managing AGOL data. Developing hand-off materials will be part of this project, to ensure that the CNY RPDB can continue to manage this inventory in the long term.

Q: Are consultants able to work with offline versions of the database with a database reconciliation and post process in place?

- Yes: as long as there is a data reconciliation plan to ensure that changes / edits made offline can be reconciled with the CNY RPDB's existing dataset, consultants will be able to work with and edit data offline.

Q: Please define "Complete georeferenced inventory" from Section 8.1 Deliverable in the RFP.

- A complete georeferenced inventory for any given municipality will include the elements listed under "Data Collection" in the RFP (Section 6.1.III.c.iii), although, as noted in this addendum, #8, a complete inventory of privately-owned post-construction SMPs is not required, and entrance to private property will not be an element of this project. Additionally, Items #9 - #12 can be identified using readily available public databases, such as online parcel data. The focus of the complete georeferenced MS4 inventory should be based on the NYS DEC's "MS4 Mapping Worksheet", which categorizes inventory elements as "Basic", "Intermediate", and "Advanced".

Fieldwork / Data Collection

Q: Are stormwater as-built plans available for review? Does the client anticipate the selected consultant to retrieve as-built plans, and if so are as-builts available digitally?

- In most cases, as-builts are not available for stormwater systems. In many cases, these systems were developed piecemeal over decades. In some cases, particularly for new subdivisions, as-builts may be available. This inventory will involve coordinating with multiple municipalities, each of which has its own system for tracking infrastructure.

Q: Is the expectation for field crews to use a sub-meter grade hand-held GPS unit or a mobile device such as a phone or tablet to collect the spatial features?

- The expectation is for field crews to collect data with sub-meter accuracy, presumably utilizing a handheld GPS unit, or other device that can achieve this accuracy (such as a handheld device linked to an external GPS receiver).

Q: Collection in private areas? County roads? Reservations / forests?

- Private areas:
    - No collection that requires entering private property will be allowed under this contract.
- County roads:

- o Onondaga County highway facilities in the MS4 area will be included in this inventory. Prior to the start of fieldwork, the consultant and the CNY RPDB will define areas on county roads where traffic volumes and/or speeds make data collection impractical without traffic control precautions.
- Reservations / forests:
  - o Property and infrastructure owned either by New York State or private not-for-profits will not be included in this inventory. Infrastructure on County-owned parks within the area to be mapped (e.g., portions of Jamesville County Beach) will be inventoried.

Q: Will the inventory be required to verify interconnections from all municipalities to each other?

DEC's MS4 permit requires that the MS4 inventory identify interconnections in the MS4 system. The MS4 permit defines an "interconnection" as: any point of stormwater discharge from pipes, ditches, and swales, as well as other points of concentrated flow, where the MS4 Operator's MS4 is discharging to another MS4 or private storm sewer system. Areas of sheet flow which drain to another MS4 or private storm sewer system are not considered interconnections.

Q: Geographic coverage: Are there areas that combine sanitary and storm sewer? Would you be able to provide these areas that are combined? What portions of Syracuse need to be inventoried?

- The City of Syracuse has two separate stormwater systems, each covering different parts of the city: a traditional MS4, in which stormwater flows directly to outlet structures that discharge into creeks, and a Combined Sewer Overflow (CSO) system, in which stormwater enters the sanitary sewer system. Only the portions of the City that are not in the CSO system will be inventoried as part of this project. A map showing the approximate location of CSO areas is attached: the areas in the City shown in white on this map provide a rough estimate of the area that will need to be inventoried in the city.

Q: Is full data collection also required in the outlined MS4 Additionally Designated Area?

- Mapping is required in the Automatically Designated MS4 area.
- Mapping is also required in the portions of the Additionally Designated Area that are included in the TMDL Watershed for MS4 (the Onondaga Lake Watershed).

Q: Will outfall and manhole inspections be required?

- Outfall inspections are not required, and no fieldwork will be required to inventory the locations of outfalls in Onondaga County. Outfall locations in the Oswego County communities (Phoenix, Hastings, and Central Square) and the Town of Sullivan in Madison County will need to be inventoried.
- Manholes that are part of the MS4 system will need to be inventoried.

Q: Does CNY RPDB want to capture distance from rim to invert?

- Yes: this measurement is critical to developing a complete system inventory.

Q: Will any of the municipalities be participating in the field data collection? Especially if we must lift lids? If so, are there hour / time restrictions for the field work?

- Proposals should proceed under the assumption that municipal staff will <u>not</u> be available for support with field data collection.

Q: Do the communities have special structure covers or markings on the storm manholes, such that they can easily be identified from the surface, or are you expecting the consultant to remove the cover to determine the structure type?

- No. There is no way to distinguish manholes that are part of the MS4 system from other manholes without opening them.

Q: Field development of piping requires manhole opening - will this be possible? Does CNY RPDB expect the consultant to lift manholes/grates to gather information about pipe material, pipe diameter, flow direction?

- Proposals should be developed with the expectation that contractors will be responsible for opening manholes and catch basins as necessary to gather information to complete the inventory. The CNY RPDB will facilitate communication between the contractor and roadway / infrastructure owners to ensure that roadway owners are aware that contractors will be conducting these inventories.

Q: Will traffic control be provided in congested or dangerous areas?

- Proposals should be prepared on the assumption that contractors will provide their own traffic control (i.e., traffic cones, flashing lights on vehicles, safety vests, etc.). In most cases, it is expected that the infrastructure to be inventoried will either be on the roadway shoulder or on low volume roads, and sufficiently removed from the traveled way to allow staff to safely conduct an inventory. Personal safety will be the highest priority: the CNY RPDB and the contractor will discuss areas with high traffic volumes and/or speeds prior to the inventory.

Q: The RFP states "However, the CNY RPDB has made a preliminary desktop survey of the largest and most densely populated areas in Central New York that have yet to be inventoried at the field level. Based on this review, we estimate that approximately 10,000 individual features need to be inventoried in the field (see the infrastructure and data collection parameters defined in Section 6.III.c, above)." Does this imply that approximately 10,000 additional features need to be collected not counting the approximately 15,000 already collected according to the report of existing MS4 features on page 9?

- This initial estimate of 10,000 points was intended to provide an estimate of the points that would need to be visited in the field and measured. Upon further analysis, it is clear that this estimate was low. See the Existing Data – Expanded Summary section, below. This table provides a summary of the kinds of data that are currently available through previous inventories. In addition to taking measurements and completing information for the Existing Data, the consultant will need to complete fieldwork for areas that currently do not have an inventory. In the absence of existing inventories, the best approximation for the amount of

fieldwork necessary in each municipality is considered to be the "Street Miles Not Yet Inventoried" column of this table, since stormwater infrastructure covered by the MS4 permit is typically found on roadways and neighborhood streets.

Q: Does the CNY RPDB have an estimate in man-hours for how long it should take to complete the necessary fieldwork?
- No. Resources to complete the necessary fieldwork will vary based on consultants' familiarity with stormwater infrastructure and with conducting MS4 inventories, and based on the level of efficiency and organization applied to this task.

Q: Will the winning firm be required to inspect "Privately owned/operated post-construction SMPs"? If so, will the local agencies provide notice to the site owners of the pending inspection and accompany with winning firm's personnel to conduct these inspections? How many "Privately owned/operated post-construction SMPs" exist in each agency?
- Conducting surveys and inspections on private property is <u>not</u> a component of this process. To the extent that privately owned/operated post-construction SMPs can be observed and inventoried from the public right-of-way or other public property, they should be included in the inventory. Proposals are not required to develop a methodology for the completion of this component of the MS4 inventory.

Q: Can a complete and detailed list of the following be provided per agency? Retail and wholesale plant nurseries (including big box stores), commercial lawn care facilities, golf courses, commercial or industrial yard waste storage areas (e.g., yard waste composting and disposal areas).
- The selected contractor will be responsible for including these facilities' parcels in the spatial inventory of MS4 facilities (i.e., mapping them) –inspections will not be required at these locations. A variety of widely available data sources can be utilized to identify these locations, including internet search engines and publicly available parcel based property class codes (e.g., https://ocfintax.ongov.net/Imate/index.aspx).

Q: Can you provide the number of assets each municipality has estimated that need to be collected? For example, the City of Syracuse shows that 387 catch basins have been completed for the MS4 inventory, but how many catch basins/culverts/manholes/infiltration basins are there in total?
- One of the difficulties of scoping this project is that it is impossible to know how many assets have not been collected in each municipality. As the Existing Data – Expanded Summary section shows, for several of the villages the inventory is nearly complete. For other jurisdictions, such as the Town of Salina, we know that approximately 2,388 points will need to be visited in the field to obtain additional information (i.e., invert depths, number of connections, outflow direction, etc); this represents the majority (but not all) of the infrastructure that needs to be inventoried. Without additional fieldwork, it is not known how many more points need to be collected.

Existing Data – Expanded Summary

A number of questions asked about the availability of existing data, the majority of which is available via the existing online map (https://bit.ly/3MzT4Z3). The following summary is provided to clarify the status of the existing MS4 infrastructure inventory.

Outfalls

ONONDAGA COUNTY

Most of the MS4 area in Central New York is in Onondaga County. Town and village outfall inspections are conducted by the County's Soil and Water Conservation District (https://www.ocswcd.org/) through an MOU with Onondaga County's Department of Water and Environment Protection. The City of Syracuse conducts its own outfall inspections; most City of Syracuse outfalls have been mapped. Roughly 95% of all outfalls in Onondaga County have been geolocated and will not need additional field verification.

OSWEGO & MADISON COUNTIES

In Oswego and Maidson Counties, individual municipalities are responsible for their own outfall inspections. Previous inventories have geolocated many of these, but additional fieldwork will be necessary to ensure that all outfalls are identified.

Catch Basins, Manholes, Drop Inlets

The existing data on catch basins, manholes, and drop inlets can be grouped into four categories:

1. Infrastructure geolocated using sub-meter GPS equipment, including measurements (e.g., invert depths) and photographs. In most cases, these points will not need to be field verified as part of this inventory. **Estimated category total: 8,270**
2. Infrastructure geolocated using sub-meter GPS equipment that does not include measurements. These points will need to be field verified, with measurements taken in the field. **Estimated category total: 5,111**
3. Infrastructure geolocated using aerial photography or other means of estimating locations. **Estimated category total: 11,511**
4. Other inventories conducted at the municipal level and not included in the CNY RPDB's online inventory. The Village of Baldwinsville is the only municipality in this category: its infrastructure has been mapped utilizing CAD software. Baldwinsville is not within the Onondaga Lake TMDL.

The table below provides a summary of the existing data, categorized by these four types.

Municipality	Inventory Overview	Total Square Miles in Area to be Mapped*	Features Inventoried by GPS	Type 1: Features with Data	Type 2: Features w/o Data	Type 3: Geolocated Features (not using sub-meter GPS)	Street Miles Not Yet Inventoried**
Village of Baldwinsville	There is a complete inventory of the Village's stormwater infrastructure in CAD, completed by the Village's engineer several years ago. Baldwinsville is outside of the Onondaga Lake Watershed, but within the MS4 area.	3.2	N/A	N/A	N/A	N/A	21.3
Town of Camillus	Most of the features in the Town of Camillus have been geolocated; most points will need to be revisited and measured.	28.2				9800	40.5
Village of Camillus	Most of the village is complete.	0.4	162	159	3		0.0
Village of Central Square	Other than a couple of outfalls, very little of the village has been inventoried	1.6	0	0	0		9.3
Town of Cicero	Missing Bridgeport area, the sliver south of 81 & east of North Syracuse, and the Route 11 corridor up to Rt. 31. Roughly half of collected points still need measurements.	19.6	1623	1081	542	31	72.6
Town of Clay	Very little has been mapped. Rough estimate is 2K - 3K catch basins needed. Most missing points have been geolocated via aerials.	22.9	1247	1160	87	1,180	37.5
Town of DeWitt	Areas that have not been inventoried: area north of I-90; Carrier Circle area; Widewaters; southern part of Town	27.4	1105	924	181	-	105.0
Village of East Syracuse	Most of the village has been inventoried.	1.6	370	337	33	-	1.5
Village of Fayetteville	Most of the village has been inventoried.	1.7	523	370	153	-	
Town of Geddes	Quite a bit still needed in Geddes	10.1	308	241	67	-	38.7
Town of Hastings	Nothing - but it's a narrow sliver of the town that's in the mapping area	4.4			0	-	19.0
Town of LaFayette	Western part of Town is unmapped; LaFayette is a relatively rural town.	24.7	29	13	16	-	32.5
Village of Liverpool	Other than a couple of blocks of Oswego Street, it looks like the village is covered	0.8	668	323	345	-	0.4
Town of Lysander	Most of the Town needs to be inventoried.	13.1	0	0	0	500	35.8
Town of Manlius	Town's western edge needs to be inventoried.	15.6	159	145	14	-	79.7
Village of Manlius	Good coverage	1.7	462	437	25	-	0.4
Town of Marcellus	A few clusters have been mapped - most of the town remains unmapped	31.0	91	89	2	-	44.3
Village of Marcellus	Most points have been GPS'd, but more than a third of those points have little data behind them	0.6	285	183	102	-	0.2

Municipality	Inventory Overview	Total Square Miles in Area to be Mapped*	Features Inventoried by GPS	Type 1: Features with Data	Type 2: Features w/o Data	Type 3: Geolocated Features (not using sub-meter GPS)	Street Miles Not Yet Inventoried**
Village of Minoa	No elements inventoried	1.2	0	0	0	-	13.3
Village of North Syracuse	Point coverage is good and nearly 70% of all points have detailed data	2.0	540	368	172	-	0.9
Onondaga County	Unclear how many miles of County road need to be inventoried. Onondaga County roadway area is included in municipal totals.	N/A					
Town of Onondaga	Entire town is in the watershed - mostly unmapped.	61.1	450	347	103	-	155.8
Village of Phoenix	Coverage is very good - village nearly complete	1.3	191	184	7	-	0.9
Town of Pompey	Excellent coverage of the small portion of the Town that's in the MS4 area	1.5	311	308	3	-	1.4
Town of Salina	Very few points have detailed data	14.7	2574	186	2388	-	37.2
Village of Solvay	Very few points have detailed data	1.6	450	57	393	-	5.1
Town of Sullivan	Shoreline / Bridgeport area is good; area north of 90 needs to be inventoried.	3.6	223	209	14	-	10.0
City of Syracuse	Most of the City's stormwater runs into the CSO system, which does not need to be mapped. Much of the infrastructure in the MS4 area has been geolocated; roughly half of all geolocated points will need to be measured in the field.	25.6	829	429	400	-	N/A
Town of Van Buren	Eastern edge looks good; southern part of town might need work	9.2	781	720	61	-	20.2
TOTALS		**327**	**13,381**	**8,270**	**5,111**	**11,511**	**762**

*Total area of the municipality included in the MS4 Automatically Designated Area and in the portion of the MS4 Additionally Designated Area that overlaps with the Onondaga Lake Watershed (TMDL Watershed for MS4). This area reflects the total area to be mapped, regardless of how much of the municipality has been inventoried.

**This street length represents the length of streets in the Area to be Mapped, minus street segments that have been included in previous inventories (Type 1, Type 2, or Type 3). Since most stormwater infrastructure is attached to roadways, this represents the best available estimate of the "area" still needing to be inventoried.