



## 2017 Award Nomination

\*Please email completed form to [nygis77@gmail.com](mailto:nygis77@gmail.com)

**Date:** 9/8/2017

**Category:**

- Lifetime Achievement
- Individual Contribution to the Profession
- GIS Champion
- You Tube Sensation
- UAV Innovation
- Geospatial Applications Program (*skip to entry form below*)

**Nominee (please include name, address, phone, and email)**

**Submitted by (please include name, address, phone, and email)**

**Sector:**

- Local Government
- State Government
- Tribal Government
- Private (For Profit)
- Private (non-Profit)
- Academic

**Functional Area:**

- Transportation
- Urban Planning
- Emergency Response
- Environmental
- Infrastructure
- Other (please note)
- Operations \_\_\_\_\_

**Narrative Description of Contribution.** (Attach separate file or pages as necessary. Please refer to the Narrative Guidance for additional information on the narrative description.)



# 2017 NYS Geospatial Applications Awards Competition Entry Form

Please use the below template to submit your entry for the **2017 NYS Geospatial Applications Awards Competition**. By entering the competition, you grant permission for the NYSGIS Association to publish and publicize your entry. Click [here](#) to view the 2016 submissions.

## Required Information

**Sponsoring Organization:** City of Rochester

**Stakeholder/Participant List (by Organization):**

City of Rochester Department of Environmental Services  
City of Rochester Department of Information Technology  
City of Rochester 311

**Title:** PlowTrax

**Abstract:** PlowTrax is a real-time application that tracks the progress of Rochester's snow removal operation.

**Statement of the Problem:**

Snow removal in Rochester, NY is a complex operation. The City has up to 150 vehicles plowing over 500 miles of city streets, a mix of city-owned and contracted plows, and snowfall of about 8 feet a year. Ensuring that every street gets plowed has historically been a difficult task, with numerous streets remaining unplowed. Unplowed streets are a safety hazard and a life/property risk, and stranded residents are sometimes very vocal about their displeasure. The City's Operations Department desired a way to track the progress of the snow removal operation, to:

- Ensure that all streets had been plowed
- Convey to the public the status of the operation
- Allow for better communication with our snow inspectors
- Coordinate messaging with our 311 call center.

**Response to the Problem:**

The City's IT/GIS group used components from Esri's ArcGIS Platform to create a real-time application that included the following:

1. A **public-facing web application**, using responsive design, that shows the status of the operation and the last time a street was plowed.
2. Real-time streaming of two different AVL systems into ArcGIS **GeoEvent Server**, and real-time spatial analysis of the data.
3. ArcGIS **Operations Dashboard** in the snow team office, to track completion by plow route, and to show un-plowed streets.
4. **Collector for ArcGIS**, loaded on 4G/LTE enabled iPads, used by a team of snow inspectors in the field to confirm completion of in-question streets.

**Results:**

Highly Positive.

PlowTrax has almost eliminated the problem of missed streets. It has dramatically improved communication between the snow team, the snow inspectors, and the 311 call center.

PlowTrax also gets heavy usage by the public during snow events. For example, during the March 13<sup>th</sup> to 16<sup>th</sup> 2017 event, the public-facing application had **11,809 sessions and 8,533 users**.

We've also gotten quite a bit of favorable press, excellent social media response, and a "thumbs up" in the local newspaper.

**Return on Investment/Cost-Benefit Analysis.**

We are still completing the Cost/Benefit Analysis – waiting on some numbers from Operations.

**Key Participants: (Name, Organization, Title)**

- Karen St. Aubin, City of Rochester DES, Director of Operations
- Arleen Hyland, 311 Call Center Manager
- Michael Ross, City of Rochester IT, GIS Coordinator
- Michael Herr, City of Rochester IT, GIS Engineer
- Michael Staples, City of Rochester DES, GIS Analyst
- Thimas Bell, City of Rochester DES, Technology Specialist

**URL (if applicable):**

It's not snowing right now, so you can't see it live, but here's a short video of the public-facing application: <https://youtu.be/MW4lcp8atGI>

**Contact Information:**

Name	Phone #	Email
Michael Ross	(585) 428-6103	mike.ross@cityofrochester.gov

***Deadline & Submission Information***

**The deadline for entries is Friday, September 8th, 2017.** Please email this completed template to the NYSGIS Awards Committee at [nygis77@gmail.com](mailto:nygis77@gmail.com), with "**GIS Applications: [Name of Submitting Organization]**" in the message Subject line.

Thank you for your submission and Good Luck!