

Police and Public Crowdsourcing Reporting – A 2017 Esri SAG Award Winner

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City of Newark, DE

Outline

- ▶ Project History
- ▶ “Pieces”
- ▶ Demonstration
- ▶ City Maps Gallery

History

- ▶ Idea originated with Newark's IT and the Newark Police Department (NPD)
 - ▶ Looking for user-friendly, Web-based citizen reporting tool
 - ▶ Report non-emergency traffic concerns easily
 - ▶ Pilot study - press release, NPD and City's social media feeds (reached 4,000+ people)
 - ▶ ['Technically Delaware'](#) and ['Newark Post'](#) published short online articles in August/September 2016
- ▶ Believed to be the first of its kind in the mid-Atlantic region
- ▶ Gained Esri's attention
 - ▶ Notified of SAG award spring 2017
 - ▶ Singled out during SAG award ceremony

Implementation Reasons

- ▶ Leverage latest GIS Web technologies to connect with citizens in real time
 - ▶ Reach tech-savvy audience
- ▶ Augment traditional phone call and mail-in surveys
- ▶ Allow anonymous reporting of concerns
- ▶ Shift and focus NPD resources in areas needing more enforcement
- ▶ Quantify observations for more informed decision-making

Crowdsource Reporter and Manager

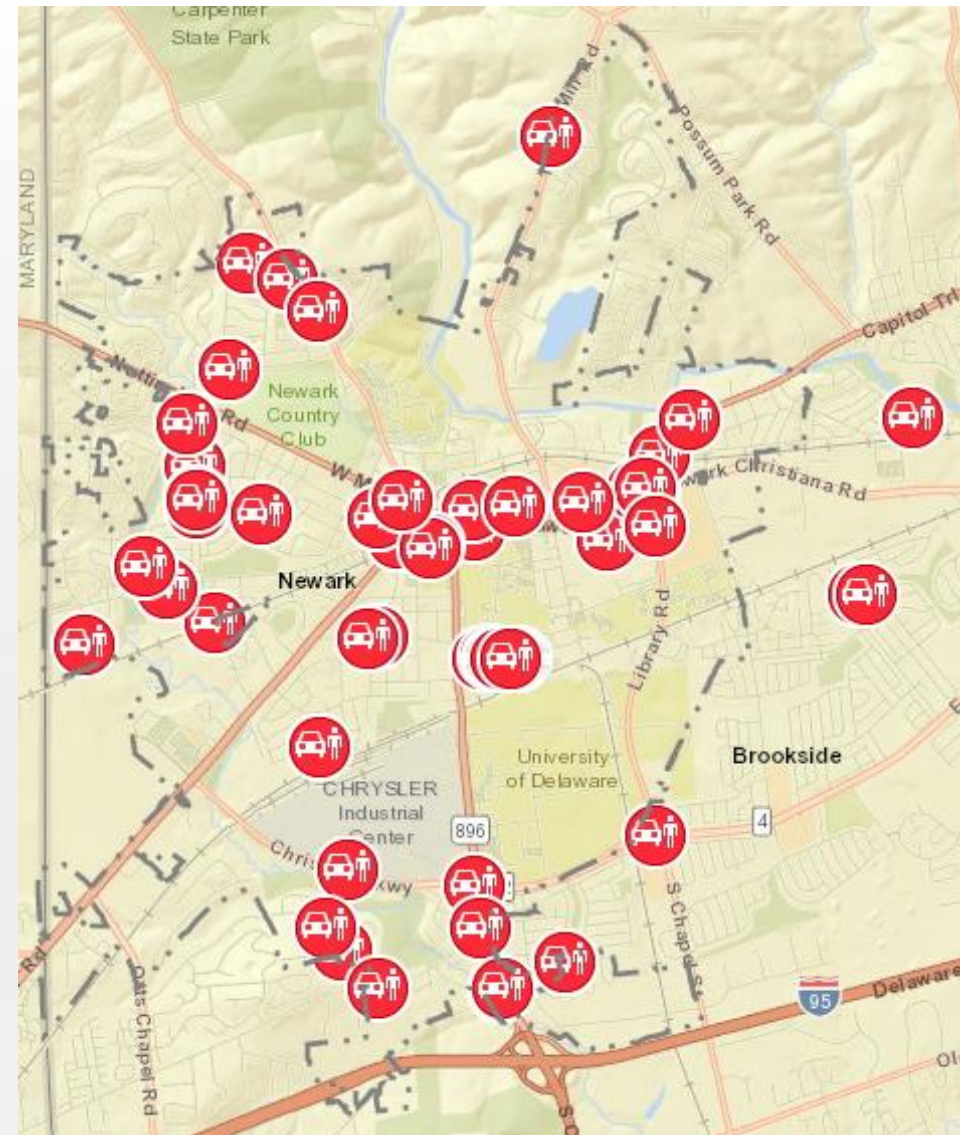
- ▶ Employed Esri's Crowdsource Reporter and Manager solutions
- ▶ Configured Reporter - a non-emergency concern, when observed, vote on concern
 - ▶ Public facing
- ▶ Configured Manager – facilitate resourcing to address concerns
 - ▶ Internal facing

Fields

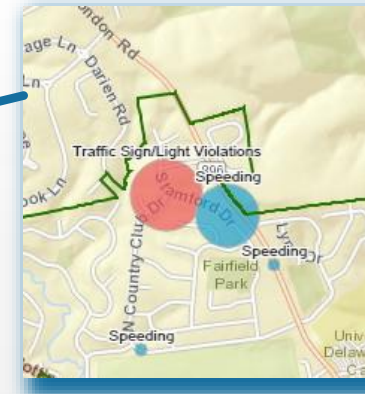
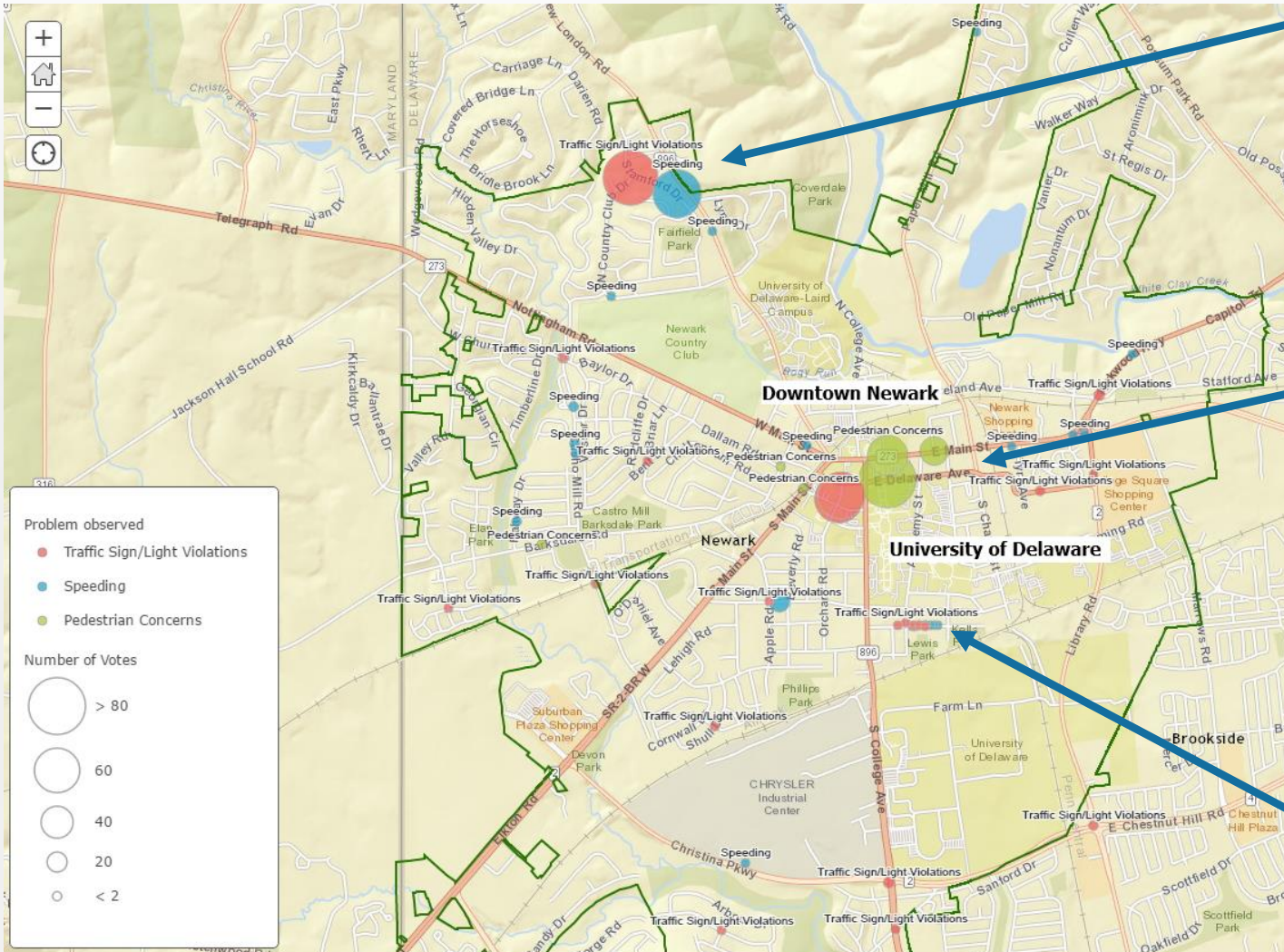
- ▶ Non-emergency traffic concerns
 - ▶ Speeding
 - ▶ Traffic sign/light violation (failure to stop)
 - ▶ Pedestrians (failure to use cross walk)
- ▶ Observed
 - ▶ Morning Commute (4am to 9)
 - ▶ Morning (9 to noon)
 - ▶ Afternoon (noon to 4)
 - ▶ Evening (4pm to 7)
 - ▶ Night (7 to 4am)
- ▶ Comments and Contact
- ▶ Attachments (e.g., photo)

Results – Pilot Study

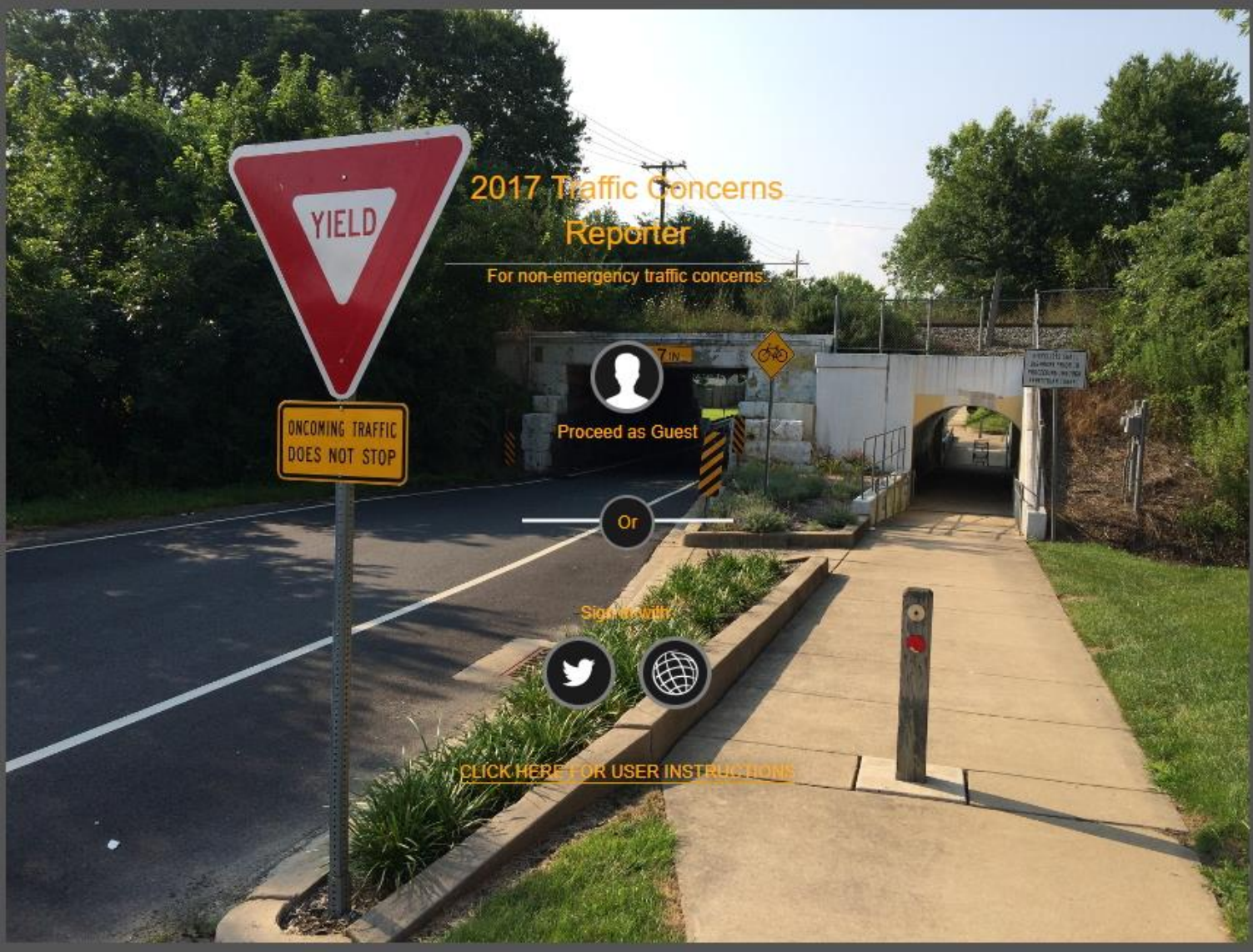
- ▶ Three-day pilot study – August 23-25, 2016
- ▶ 76 concerns reported, 550 votes on the concerns
- ▶ Quantify data
 - ▶ Type and # observations, time of day
 - ▶ Prioritize projects and resources
 - ▶ Increase NPD enforcement in concern areas
 - ▶ Lobby for funding, e.g., to improve/add controlled crosswalks



Results – Pilot Study



Current Version



Current Version – Reporter (public facing)

NEWARK DELAWARE
2017 Traffic Concerns Reporter
Sign In ?

2017 Non-Emergency Concerns

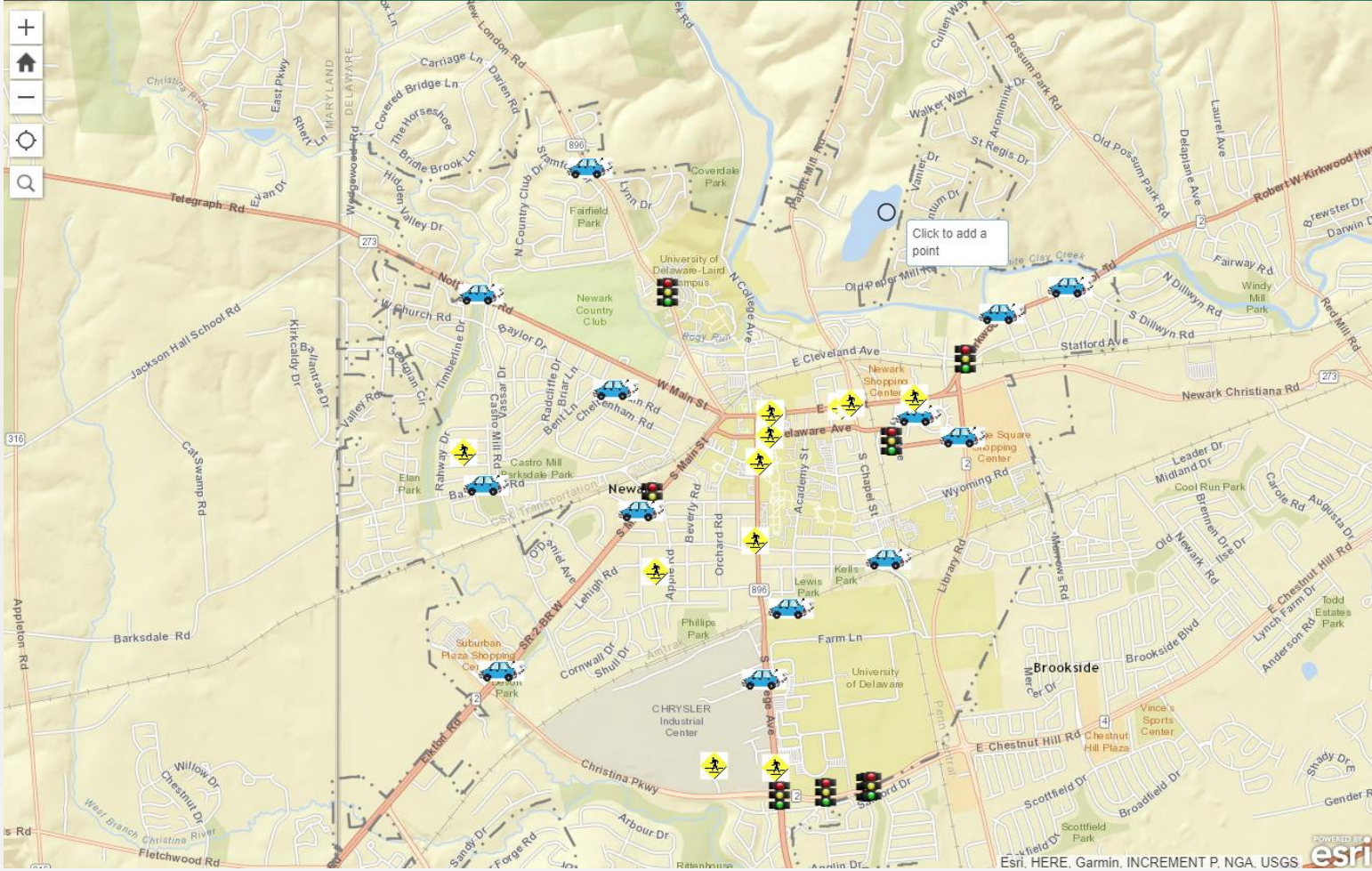
Non-emergency traffic concerns	0
Non-emergency traffic concerns	2
Non-emergency traffic concerns	1
Non-emergency traffic concerns	1
Non-emergency traffic concerns	0
Non-emergency traffic concerns	4
Non-emergency traffic concerns	1
Non-emergency traffic concerns	0
Non-emergency traffic concerns	0
Non-emergency traffic concerns	2
Non-emergency traffic concerns	0
Non-emergency traffic concerns	2
Non-emergency traffic concerns	0
Non-emergency traffic concerns	0
Non-emergency traffic concerns	0
Non-emergency traffic concerns	0

[+ Click to begin your report](#)

Current Version – Reporter (public facing)



2017 Traffic Concerns Reporter



2017 Non-Emergency Concerns

Non-Emergency Concerns
Non-Emergency Concern Observed (required)

Pedestrian Concerns

Time Concern Observed
Morning Commute (4:00AM - 9:00AM)

Comments
Person swimming in Newark Reservoir

Name (Optional)

Record creation date (required)
August 04, 2017

Concern Location
Click the map to draw the location.

Phone (Optional)

Enter an address to search

Photos
Browse

Email (Optional)

Report It Cancel

Record creation date (required)
August 04, 2017

Concern Location
Click the map to draw the location.

Crowdsource Manager (internal facing)



2017 Non-Emergency Concerns							1 selected / 34 records
OBJECTID	Non-Emergency Concern Obser	Time Concern Observed	Location	Number of Votes	Comments	Public View	
34	Pedestrian Concerns	Morning Commute (4:00AM - 7:00AM)			Person swimming in Newark Reservoir		
33	Traffic Sign/Light Violation	Morning Commute (4:00AM - 9:00AM)			East bound driver on Route 4 ran the red		
32	Speeding	Morning Commute (4:00AM - 9:00AM)					
31	Pedestrian Concerns	Morning Commute (4:00AM - 9:00AM)					
30	Pedestrian Concerns	Evening (4:00PM - 7:00PM)			A student darted across Main Street from		
29	Speeding	Morning Commute (4:00AM - 9:00AM)					
28	Pedestrian Concerns	Afternoon (12:00PM - 4:00PM)		1	Student walked across South College Av		
27	Speeding	Morning Commute (4:00AM - 9:00AM)			Often cars accelerate along East Delawa		
26	Pedestrian Concerns	Evening (4:00PM - 7:00PM)			A large dog has left a MAJOR pedestria		

Non-emergency traffic concerns

OBJECTID 33

Non-Emergency Concern Observed Traffic Sign/Light Violation

Time Concern Observed Morning Commute (4:00AM - 9:00AM)

Location

Number of Votes

Comments East bound driver on Route 4 ran the red light at the entrance to Robscott Manor. Driver did not slow down and was talking on a cell phone.

Public View

Name

Phone



Crowdsource Manager



2017 Traffic Concerns Manager

Settings Search Refresh Help Jay Hodny ▾

2017 Non-Emergency Concerns

2 selected / 34 records

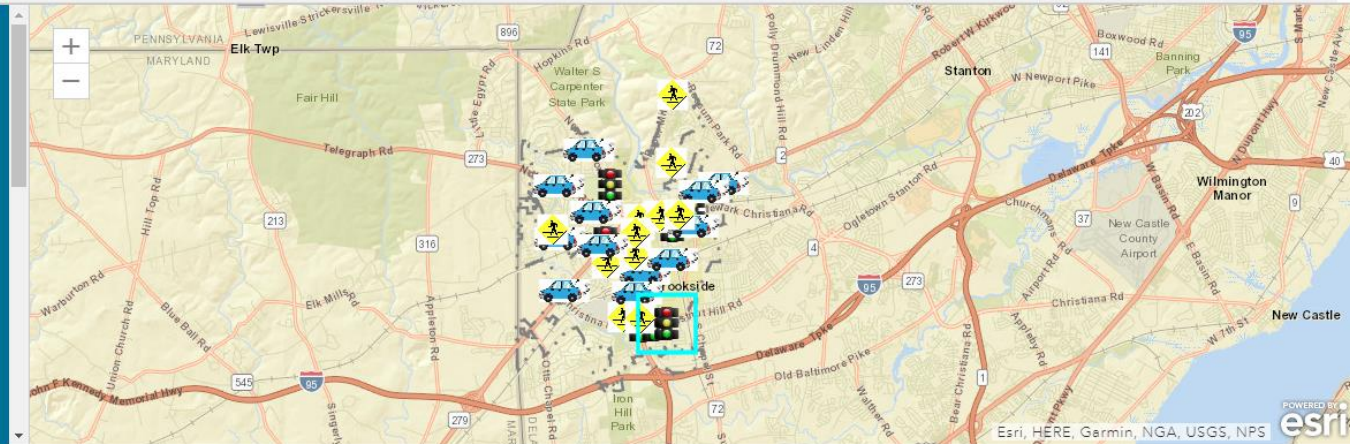
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Public View
Yes ▾

Status
Opened ▾

Assigned To

Action Taken



Conclusions

- ▶ Pilot study was an overwhelming success
- ▶ Deployment of NPD resources in areas of concern caused decline
- ▶ Implementing and testing improvements
 - ▶ e.g., list spells out the concern
- ▶ Improved data visualization
 - ▶ e.g., “hot spots” on multiple variables
- ▶ Expanding list of concerns
 - ▶ e.g., bicycles
- ▶ Decision on path forward

Credit given where it is due.....

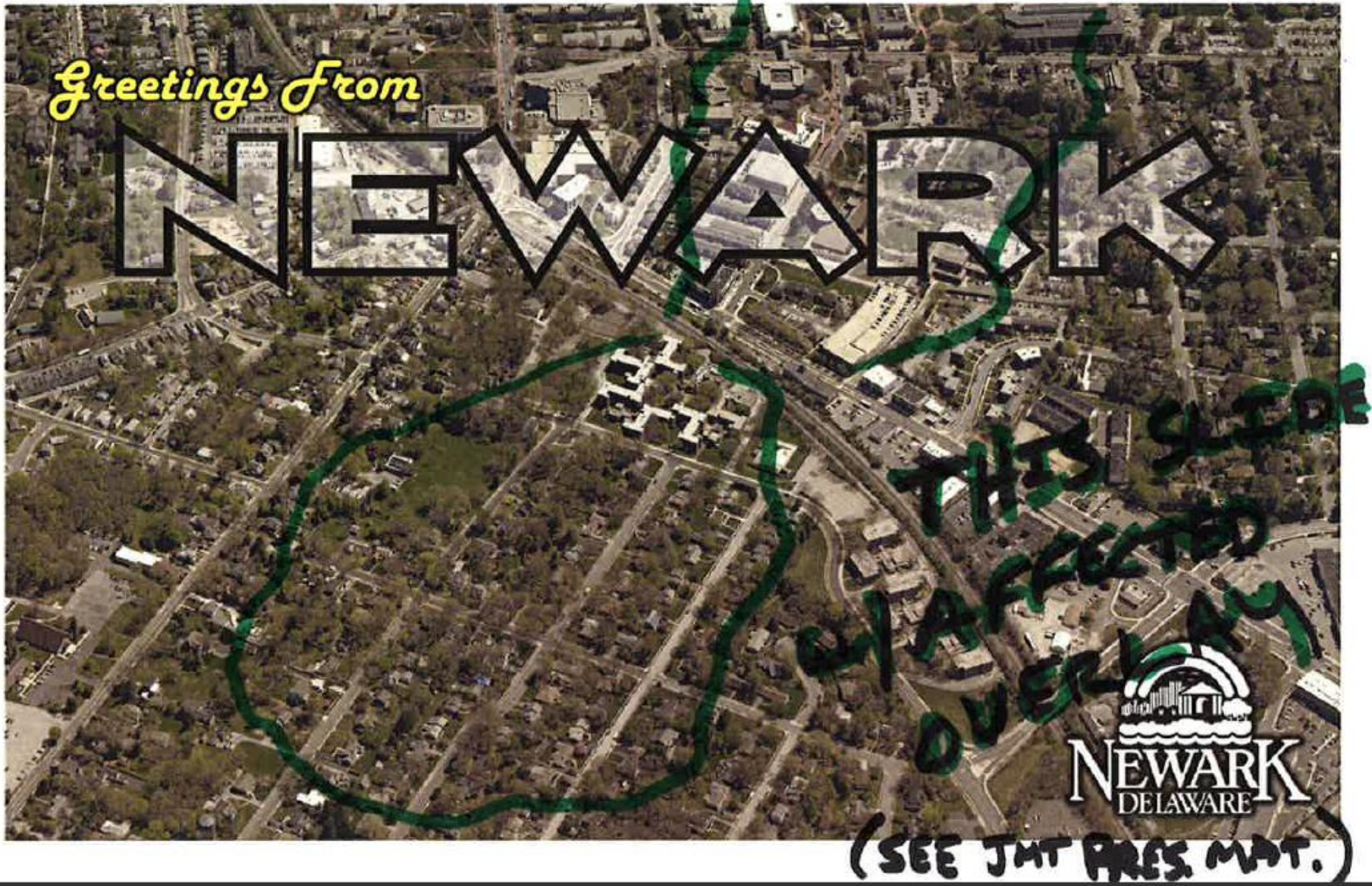
- ▶ Roberto DeDeus (City IT)
- ▶ James Spadola (NPD)

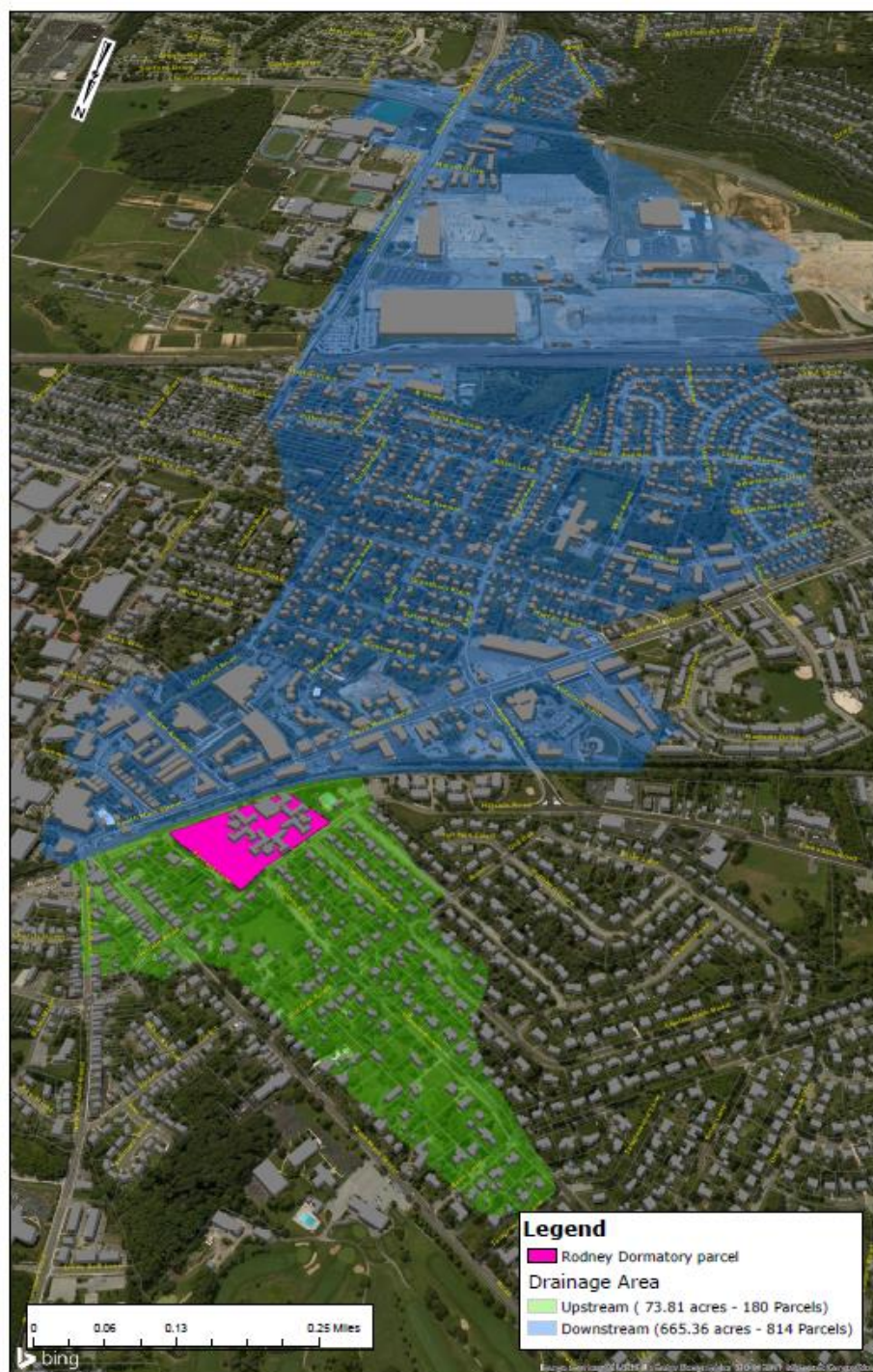
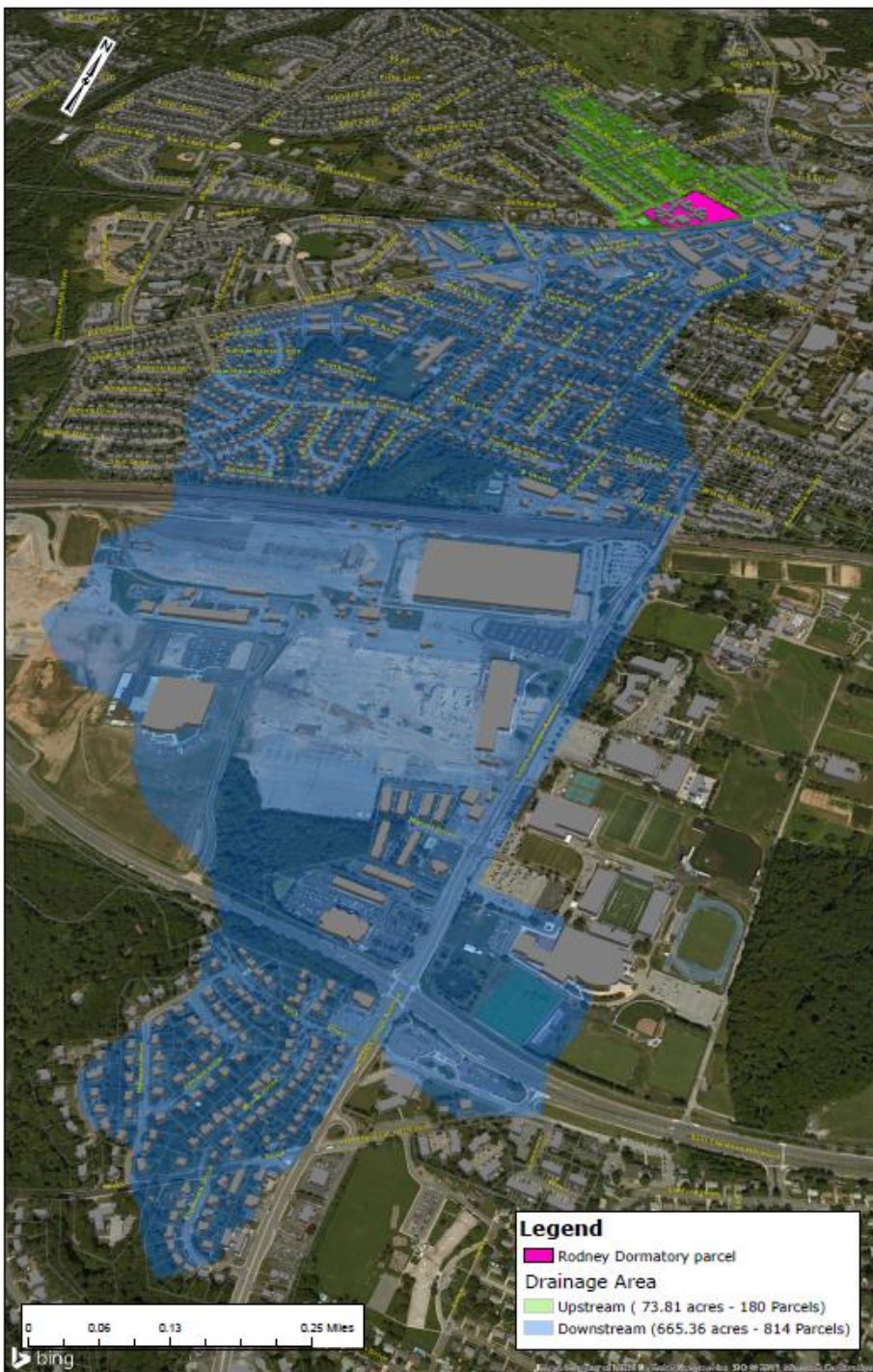
- ▶ [Reporter Demonstration](#)
- ▶ [Manager Demonstration](#)

- ▶ [City Maps](#)
- ▶ UD Rodney Dormitory complex

UD - Rodney Dorms

- ▶ University of Delaware dormitory complex closed
- ▶ Possible stormwater runoff pond and city park
- ▶ Using ArcPro 2.0 and Scene to map watershed above and below dorm complex
 - ▶ Bing imagery, USGS Water Resources StreamStats website, building footprint (extrude)
- ▶ Long-term goal is to build out the City of Newark in 3-D
 - ▶ Need lidar help





Thank you!

► Questions?

