
Using Interactive Digital Storytelling to Engage the Public in Watershed Planning

(The Lake Charlevoix Story)



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Presentation Overview

- Charrettes & Public Visioning
- Virtual Methods of Public Engagement
- Lake Charlevoix GSI Project
 - Project Overview
 - ESRI StoryMap Example
 - Survey123 Results
- Lessons Learned

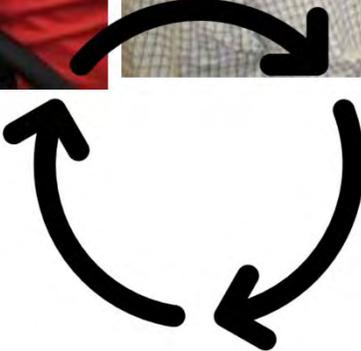
Charrette



Assets, Weaknesses,
Barriers, & Connections

Future “Visions”

Preferred Alternative



Concepts and Visioning



Visioning Board



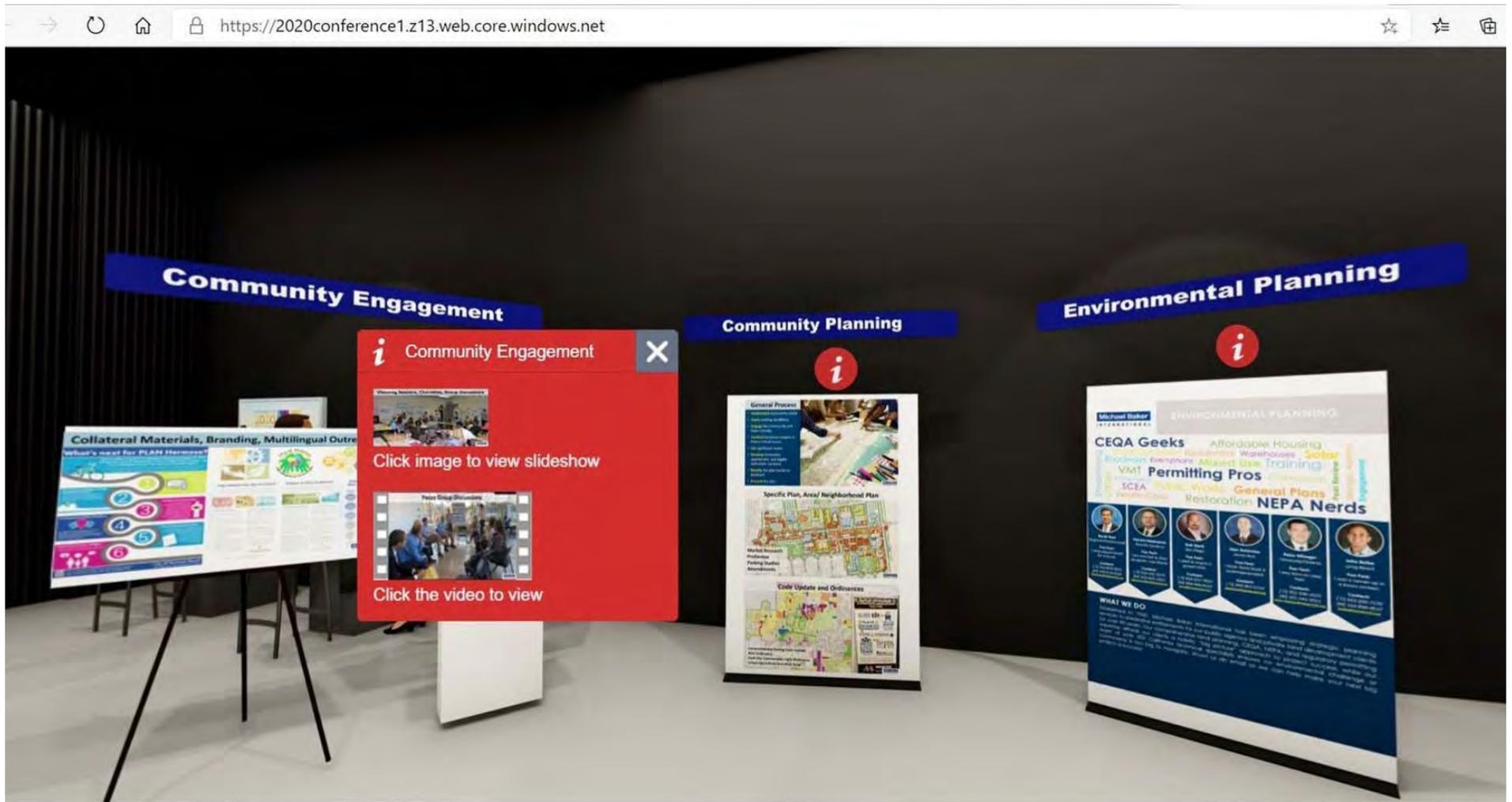
Dot Voting



Actual CoVID “Charrette” Photo



Virtual Room



Online Engagement - Platforms

- Facebook/Social Media
- Mural
- ESRI Storymaps

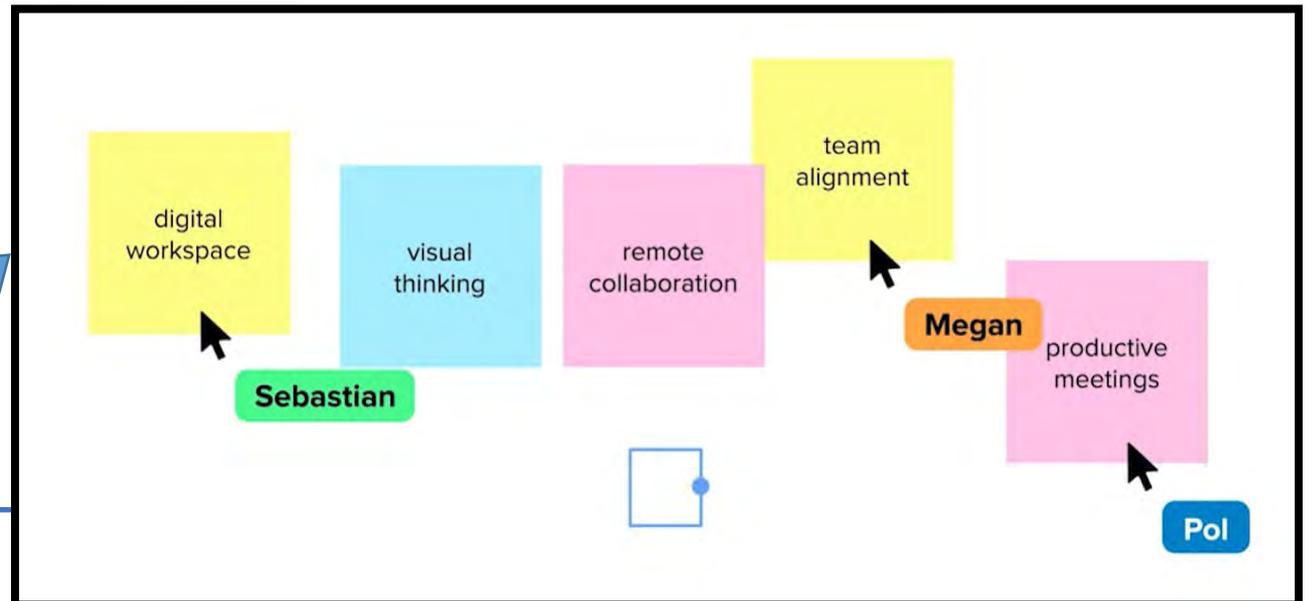
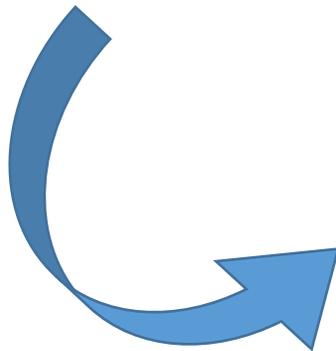
- Miro
- CivicInsight
- CrowdGauge
- SessionLab



Mural

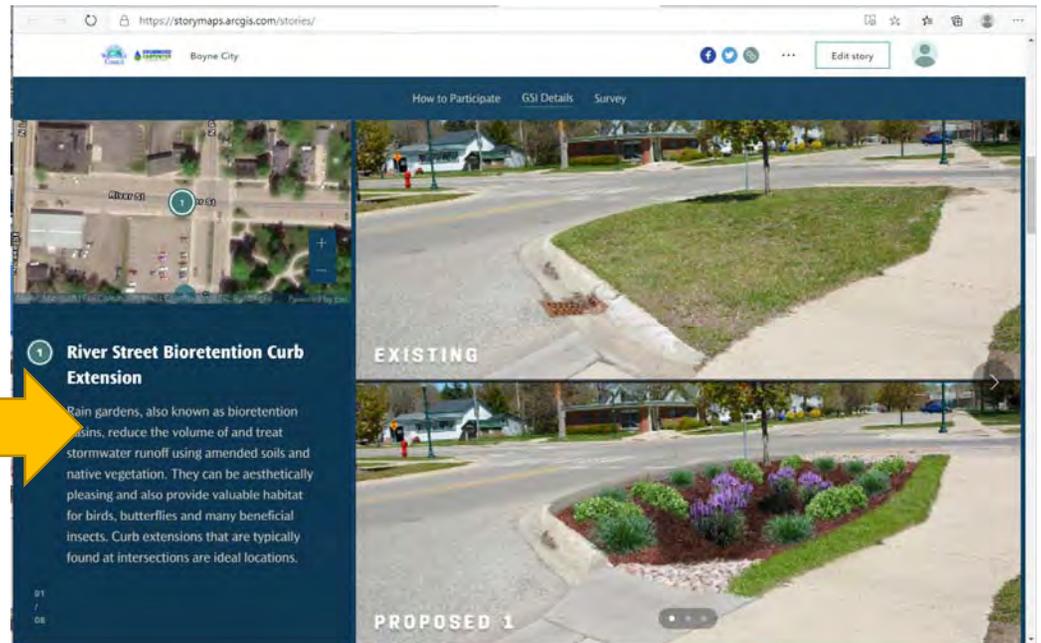


- “Sticky” notes
- Comments & Sketches
- Photo & Video
- Support



Esri StoryMaps

- Users Directed Through Project
- Photo & Video
- Interactive Maps
- Embedded Surveys (Esri Survey123)



Lake Charlevoix Watershed GSI Implementation Project



Goal – Preserve and protect the high quality of the Lake Charlevoix Watershed with Green Stormwater Infrastructure.

Tasks – Community Engagement, Planning, Visioning, Modeling & Conceptual Cost Estimating



Lake Charlevoix Watershed

Charlevoix
2,499 people

East Jordan
2,350 people

Boyne City
3,750 people

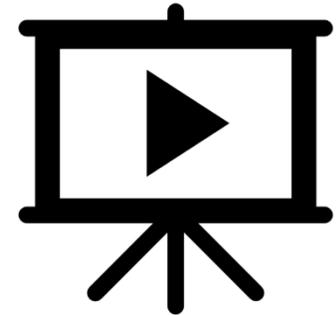


DA = 332 sq. miles
SA = 917,200 acres

3rd Largest Lake in Michigan

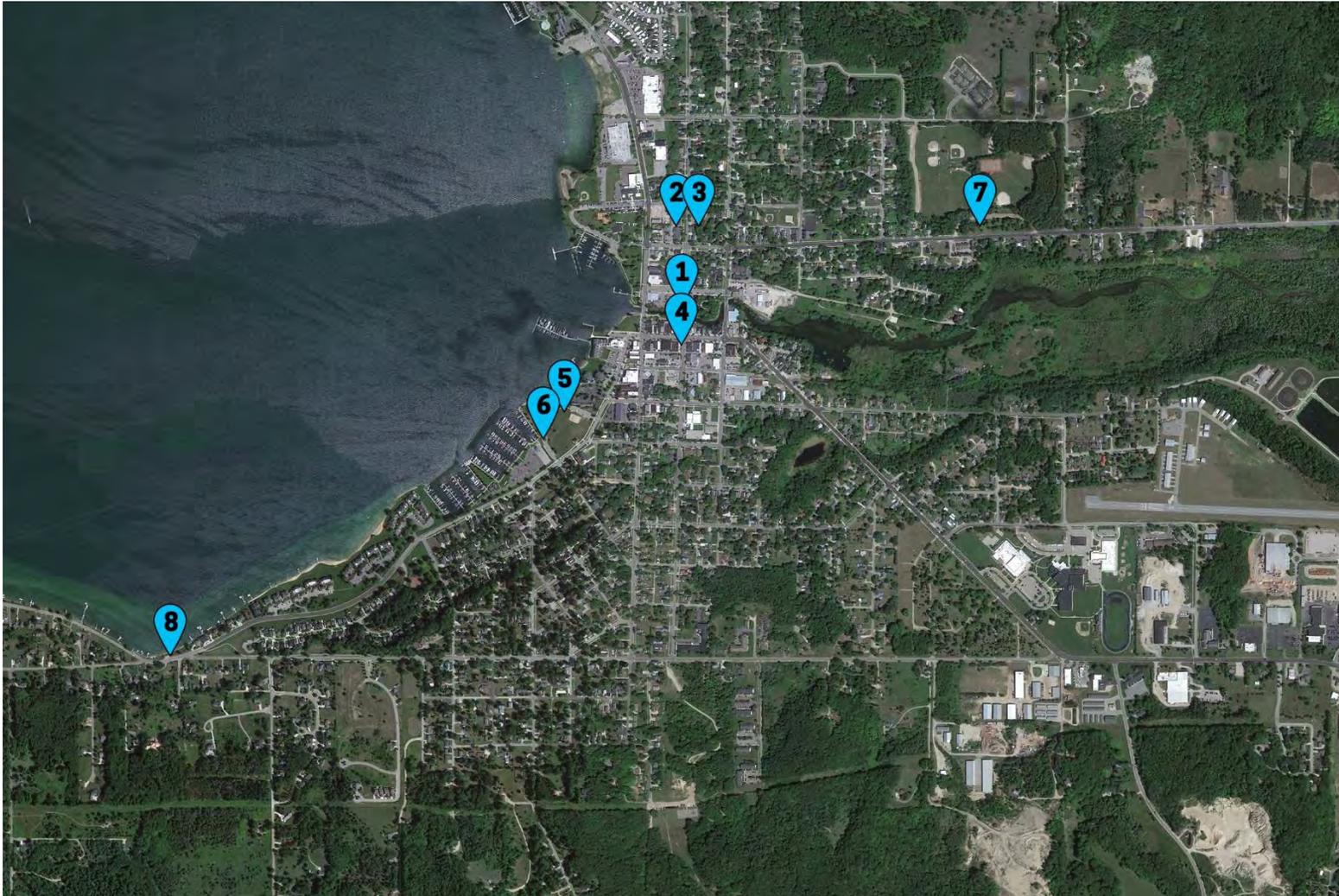
Green Stormwater Infrastructure

- Bioretention Cells/Rain Gardens
- Vegetated Swales and Bioswales
- Planter Boxes
- Street Trees and Tree Box Filters
- Infiltration Galleries or Swales
- Permeable Pavement

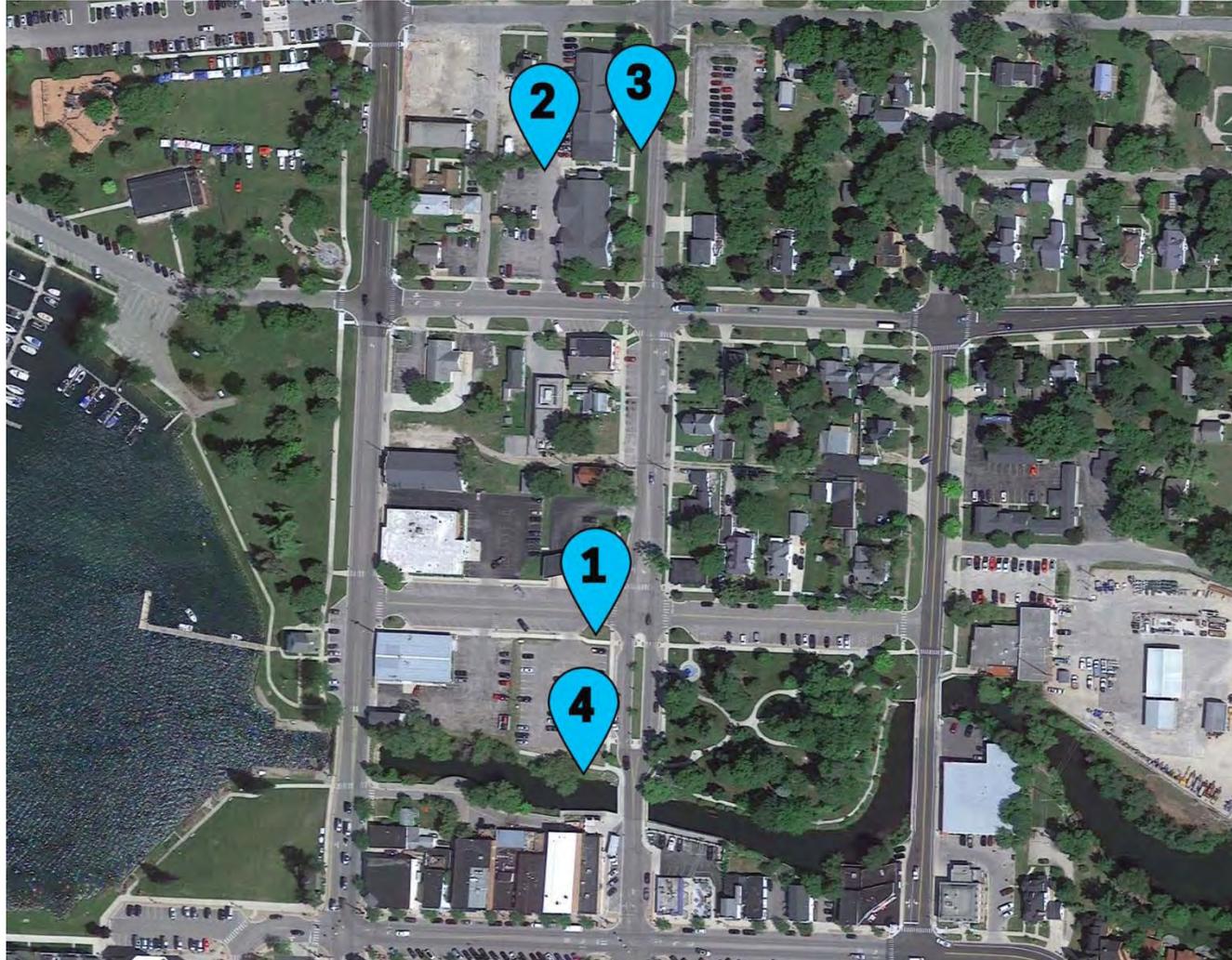


Boyne City

Boyne City



Downtown (Sites 1 - 4)



1 - Bioretention Curb Extension - Existing



1 - Bioretention Curb Extension - Proposed



2 - Green Alley - Existing



2 - Green Alley - Proposed



3 - Roadside Swale - Existing



3 - Roadside Swale – Proposed A



3 - Roadside Swale – Proposed B

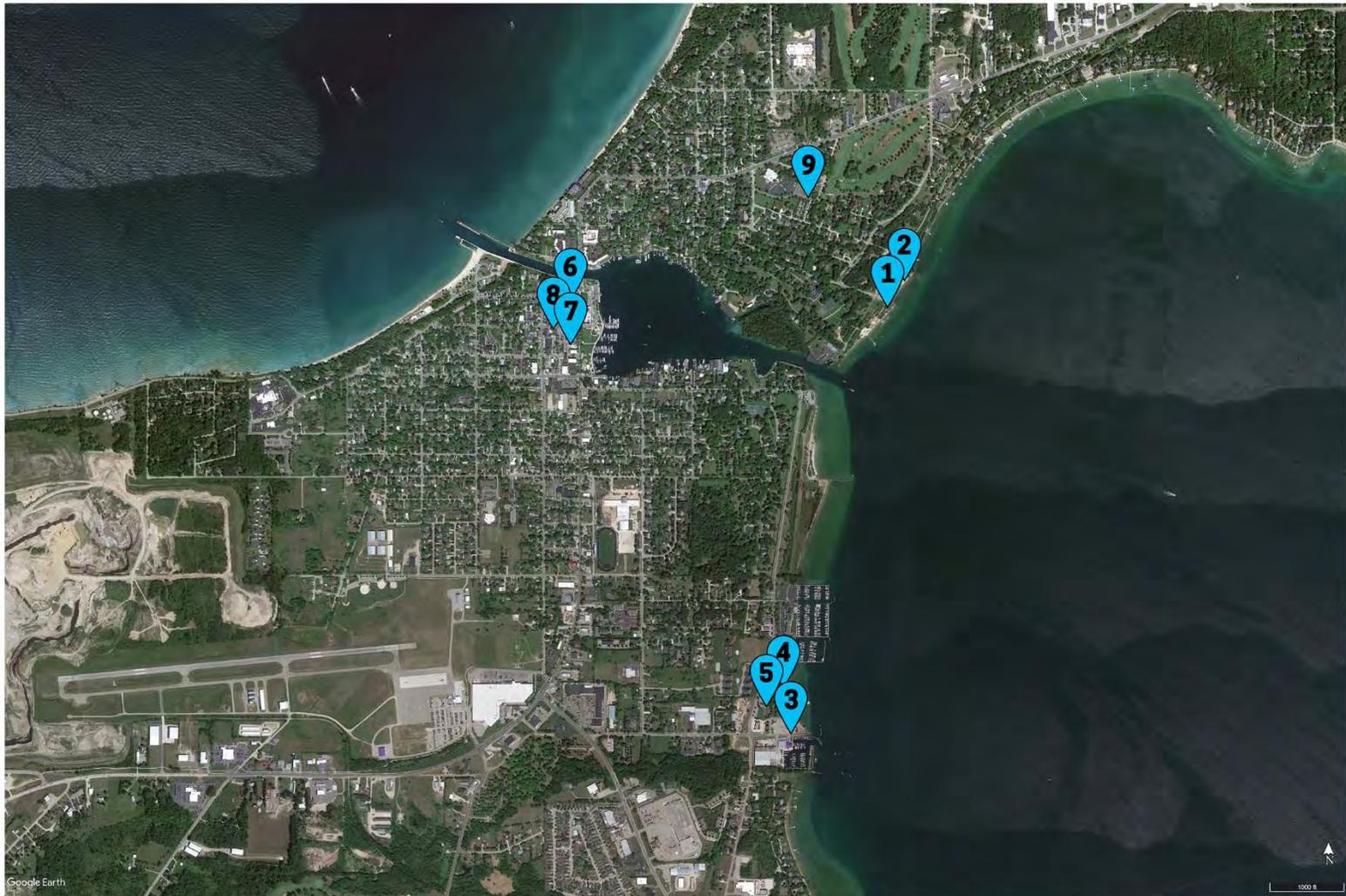


3 - Roadside Swale – Proposed C

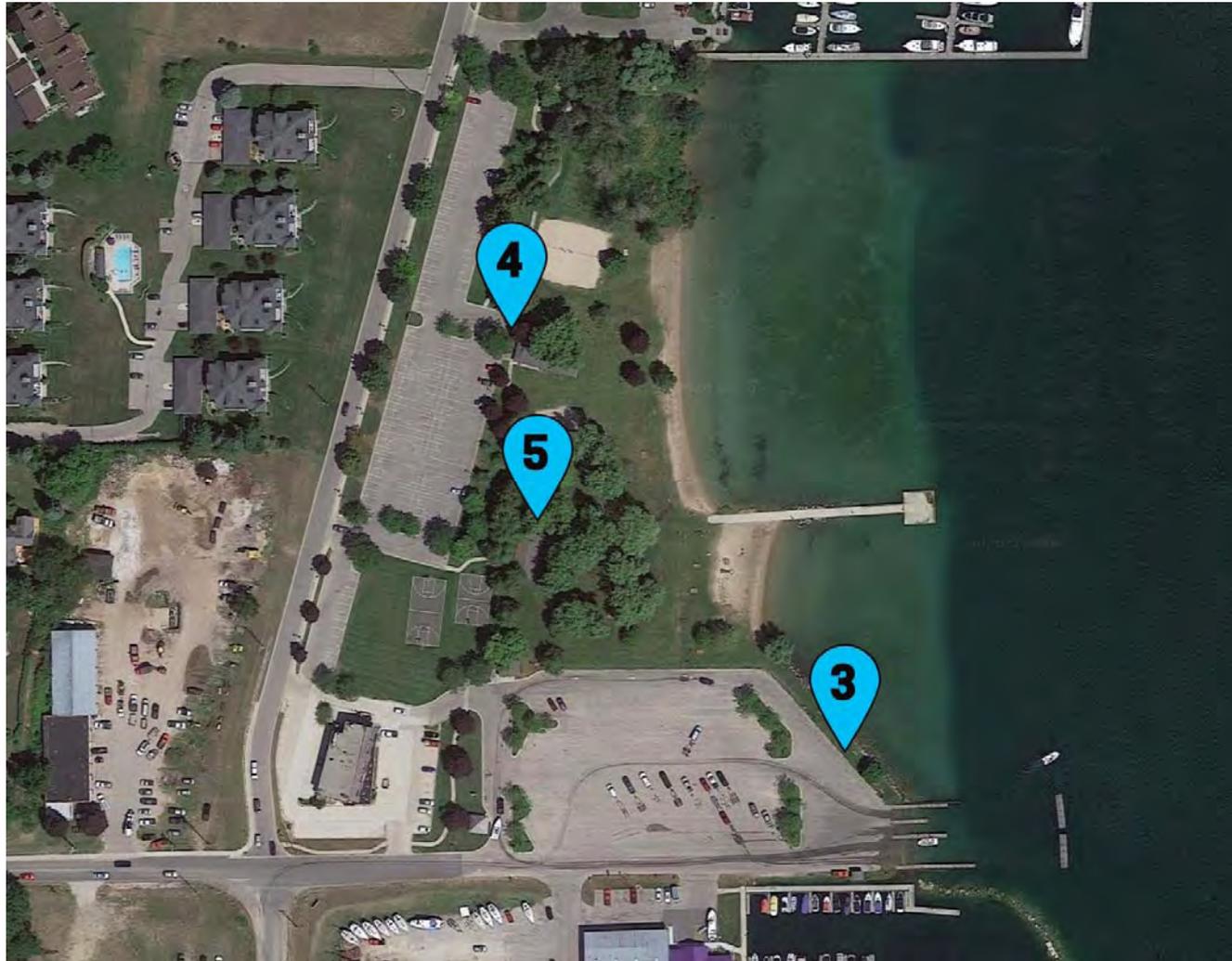


Charlevoix

Charlevoix



Ferry Beach & Boat Launch (Sites 3-5)



3 - Ferry Beach Boat Launch Shoreline - Existing



3 - Ferry Beach Boat Launch Shoreline – Proposed A



3 - Ferry Beach Boat Launch Shoreline – Proposed B



3 - Ferry Beach Boat Launch Shoreline – Proposed C



5 - Ferry Beach Wetland - Existing



5 - Ferry Beach Wetland - Proposed



Downtown (Sites 6-8)



6 - Downtown Stormwater Planter Boxes - Existing



6 - Downtown Stormwater Planter Boxes - Proposed



7 - Downtown Bioretention - Existing

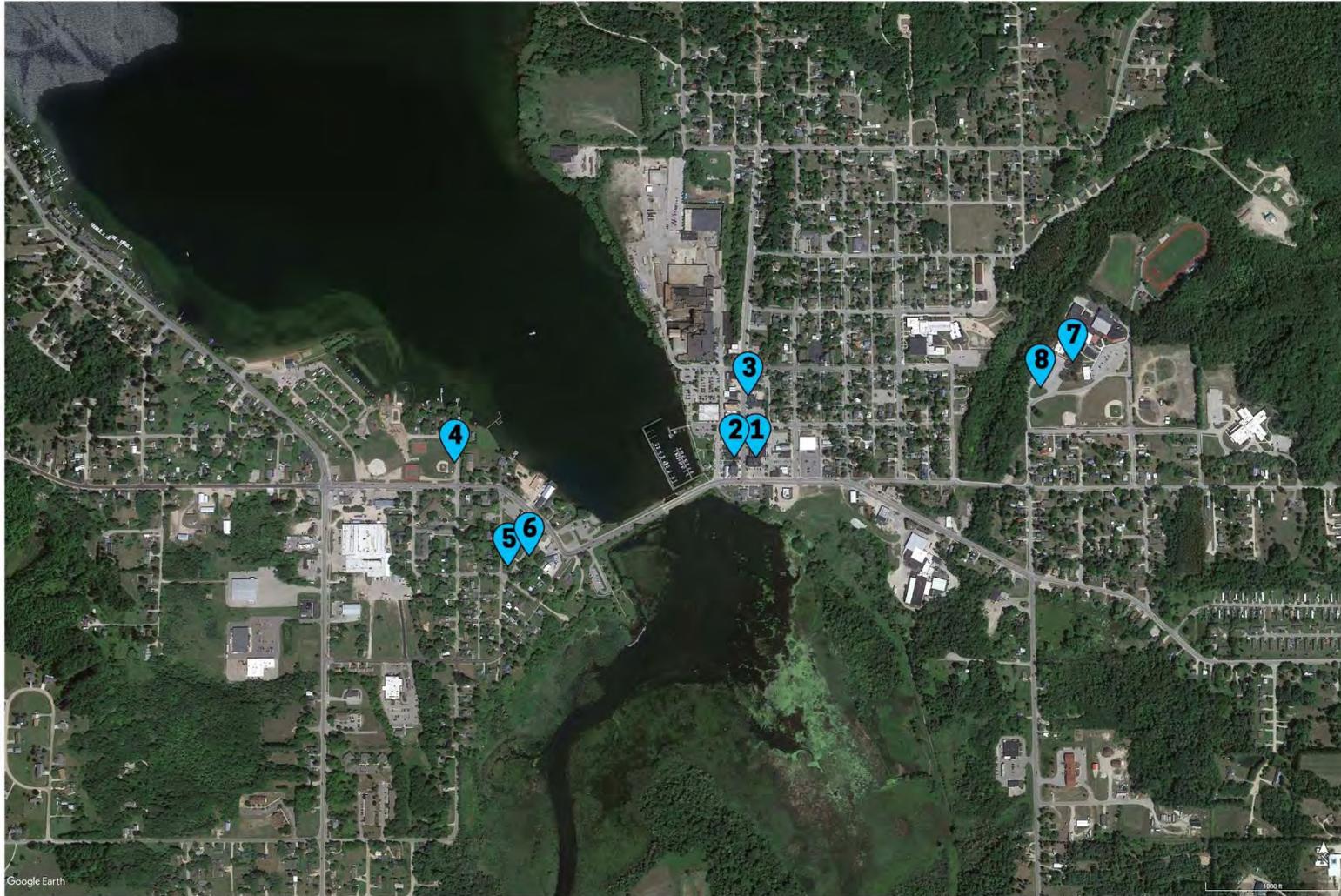


7 - Downtown Bioretention - Proposed



East Jordan

East Jordan



Downtown (Sites 1-3)



1 - Downtown Bioretention Crosswalk - Existing



1 - Downtown Crosswalk Bioretention - Proposed



2 - Downtown Stormwater Tree Boxes - Existing



2 - Downtown Stormwater Tree Boxes - Proposed



2 - Downtown Stormwater Tree Boxes - Proposed



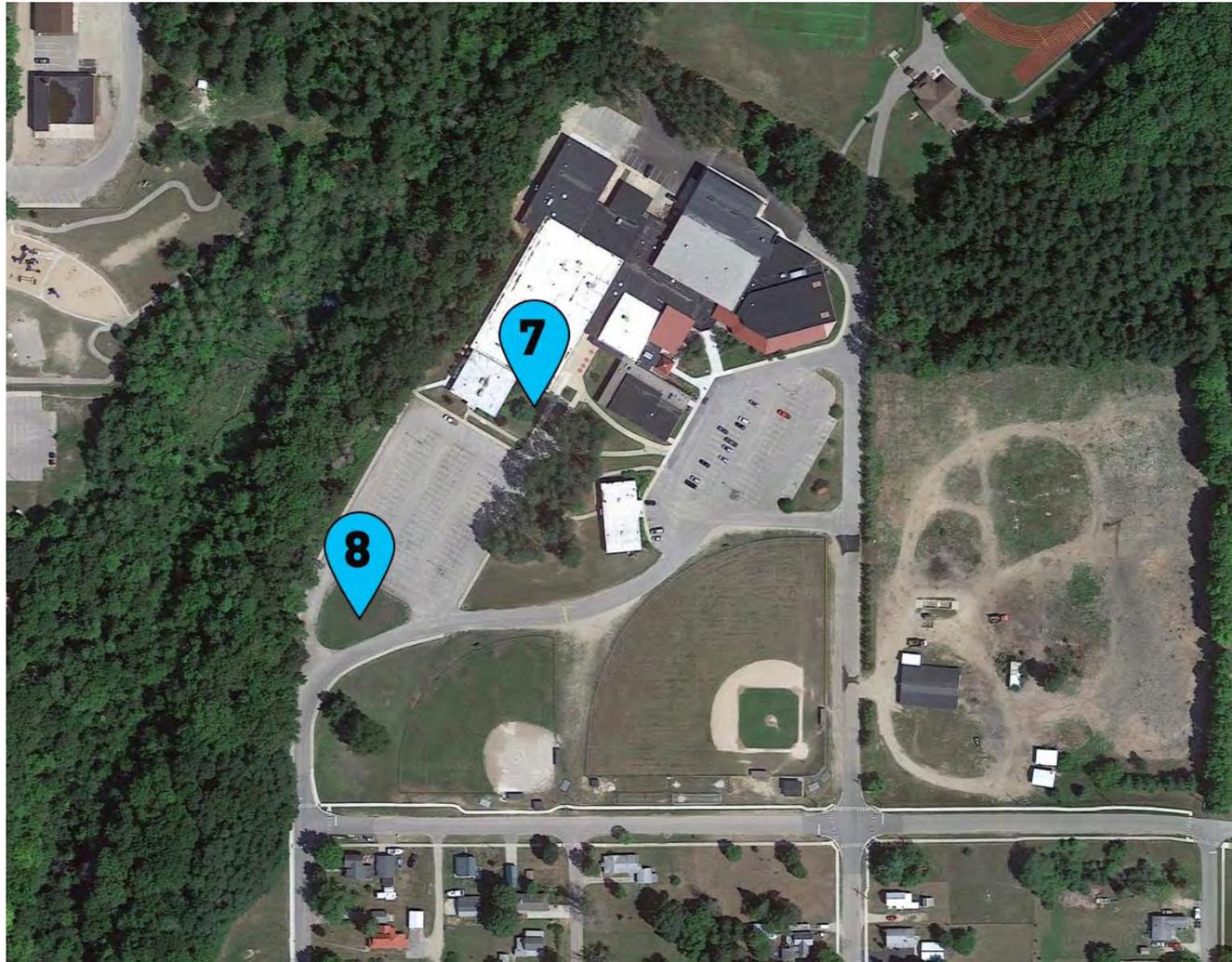
3 - Downtown Bioretention - Existing



3 - Downtown Bioretention - Proposed



East Jordan Schools (Sites 7 & 8)



7 - East Jordan Schools Rain Garden - Existing



7 - East Jordan Schools Rain Garden - Proposed



8 - East Jordan Schools - Existing



8 - East Jordan Schools – Proposed A



8 - East Jordan Schools – Proposed B



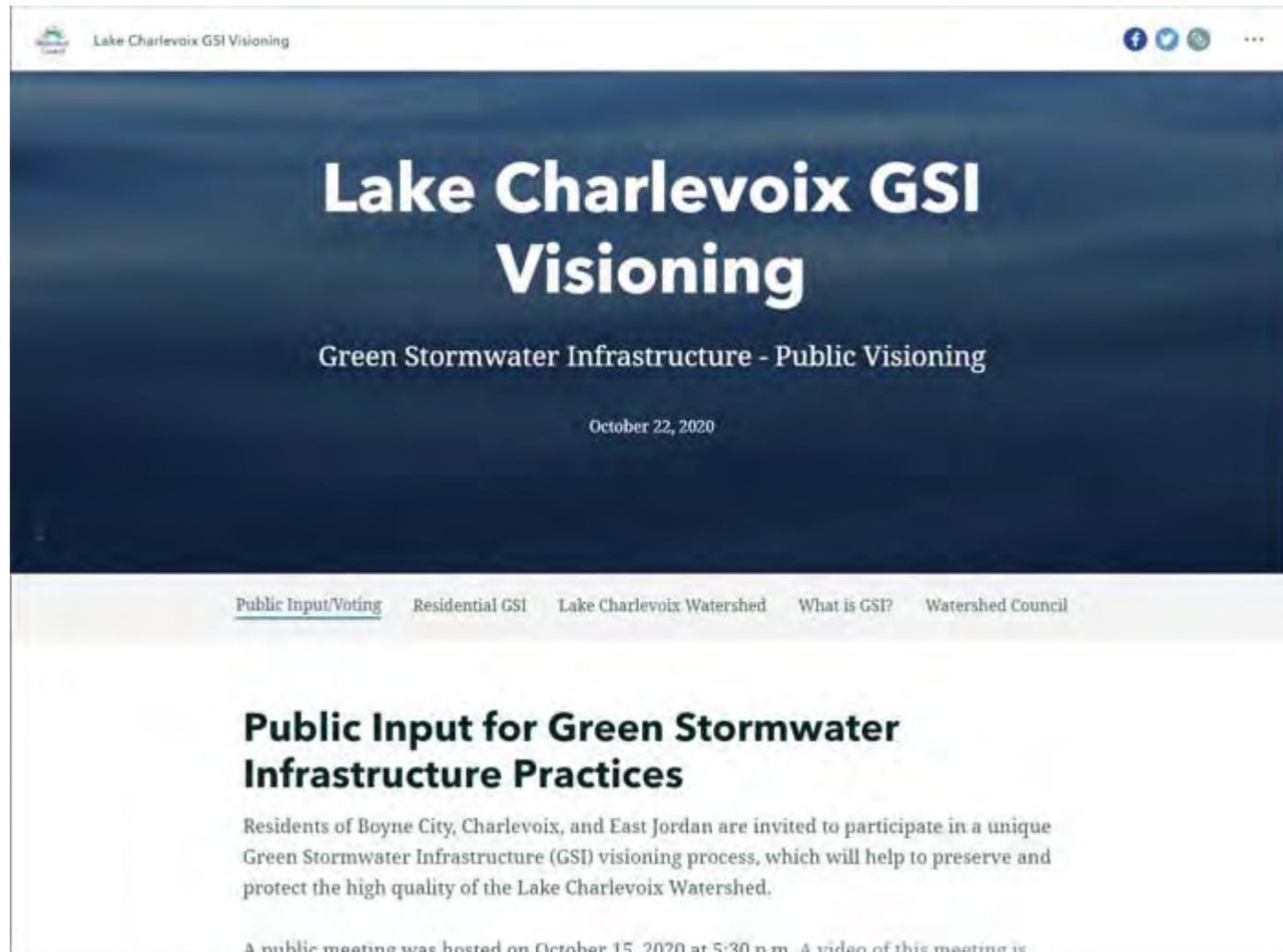
8 - East Jordan Schools – Proposed C



Example ESRI StoryMap East Jordan

ESRI StoryMap – Live Demo

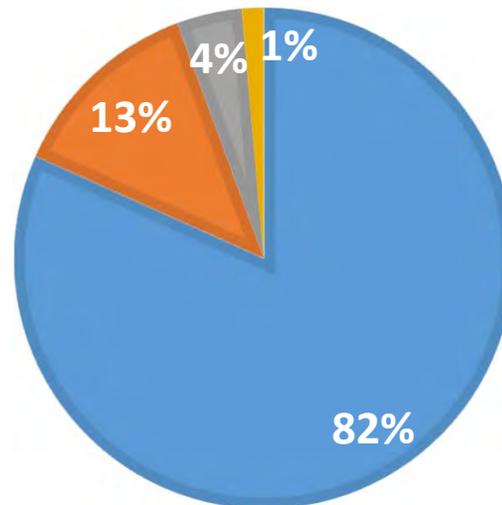
Link: <https://arcg.is/OiWbz5>



Participants

EAST JORDAN GSI SURVEY

■ Live or Work ■ Nearby Community/Visitor ■ Vacation ■ Other



- Limited submissions to one per browser
 - Internet cookies
 - Geolocation/IP address

Embedded Survey



	Proposed 8A	Proposed 8B	Proposed 8C	None
8 - East Jordan Shools Maple Street Entrance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Types of Questions

Drop Down List

What best describes your connection to Charlevoix?
Please help us understand your involvement in the community.

Text Box

Drag and Drop Ranking

Rank the GSI concepts.
Drag and drop to rank the concepts in order of what you want to see implemented.

- 1 - Depot Park Curb Cut Rain Garden
- 2 - Depot Park Piped Rain Garden
- 3 - Ferry Beach Boat Ramp Shoreline
- 4 - Ferry Beach Parking Lot Bioretention

Single Choice Grid

	I love it!	I like it	I like the concept, but dislike the location	I dislike the appearance, but not the concept	I do not like anything about this concept
1 - Depot Park Curb Cut Rain Garden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2 - Depot Park Piped Rain Garden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Likert

Do you want to see more Green Stormwater Infrastructure (GSI) in Charlevoix?

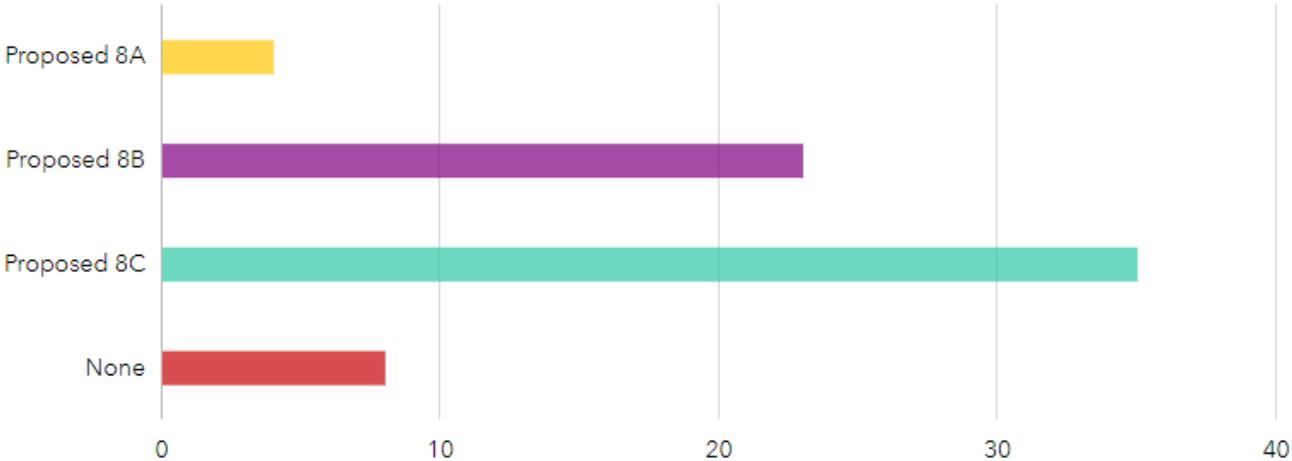
Strongly disagree Disagree Neutral Agree Strongly agree

Results



8 - East Jordan Shools Maple Street Entrance

Column Bar Pie Map



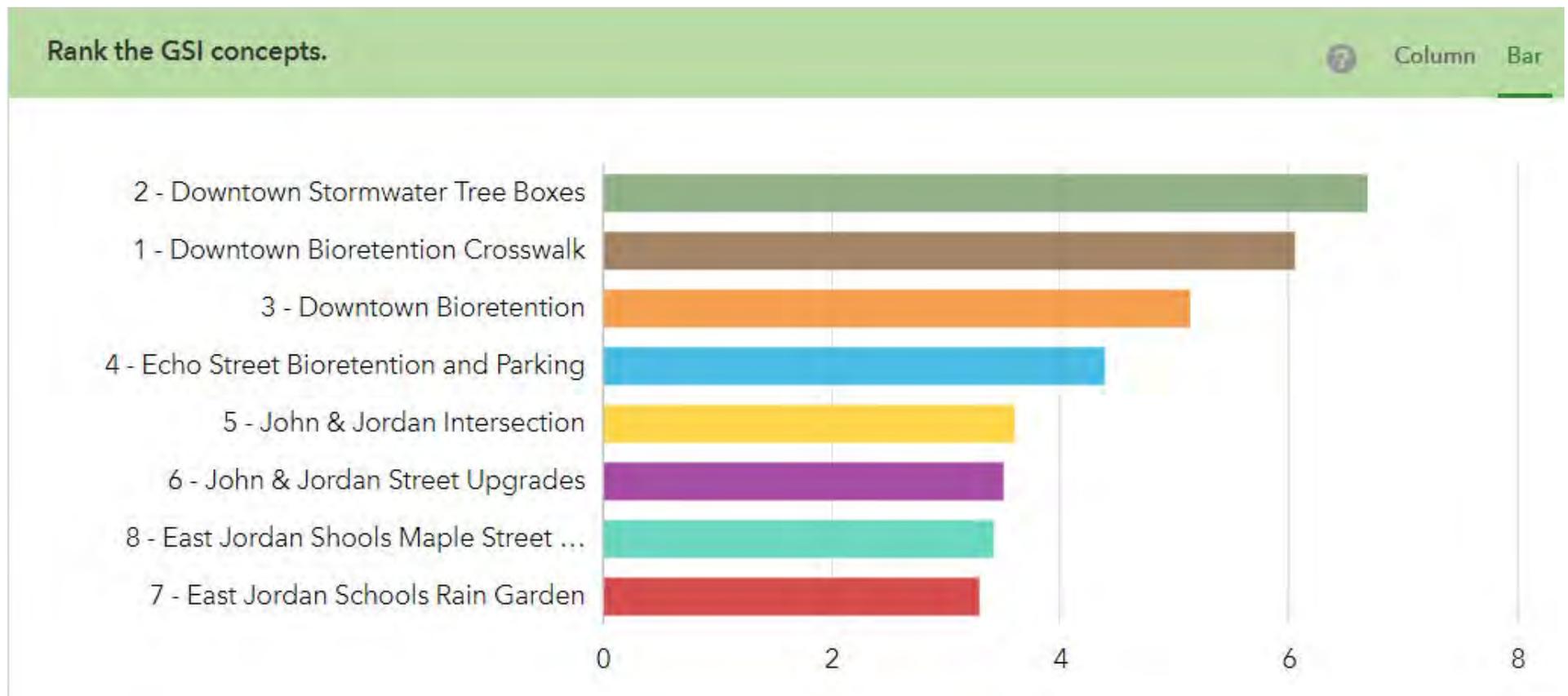
[Hide table](#)

Empty categories [Sort](#)

Answers	Count	Percentage
Proposed 8A	4	5.63%

Drag and Drop Ranking

- Weighted Average Results
- Results Need Filtering
- Difficult for Phone Users

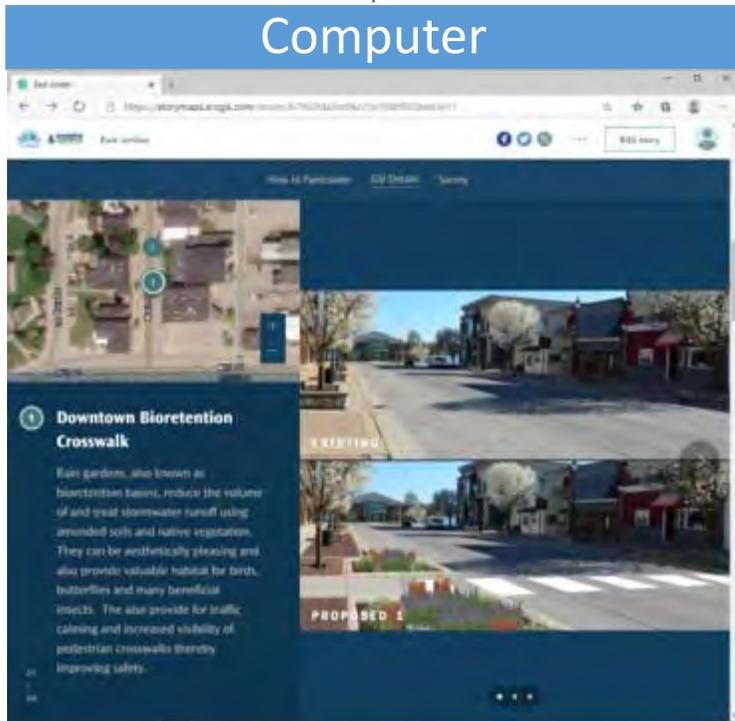


Lessons Learned

How are users accessing the data?

Virtual Media Access

Computer



Tablet

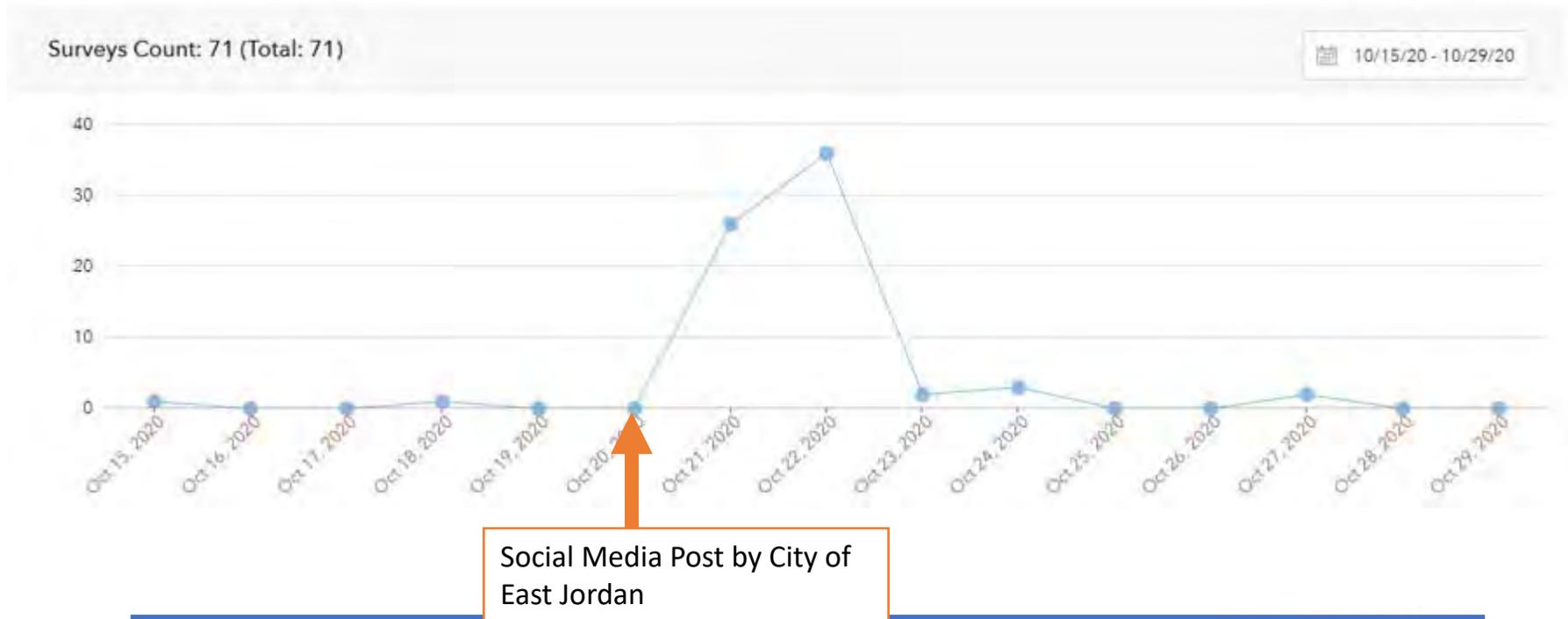


Phone



Power of Social Media and Social Diffusion

- Population 2,350
 - 71 survey participants (As of Oct 29)
 - 3% Participation in online survey
 - Survey still active Oct 15 - Dec 1
- FB Page followers: 3,110 people



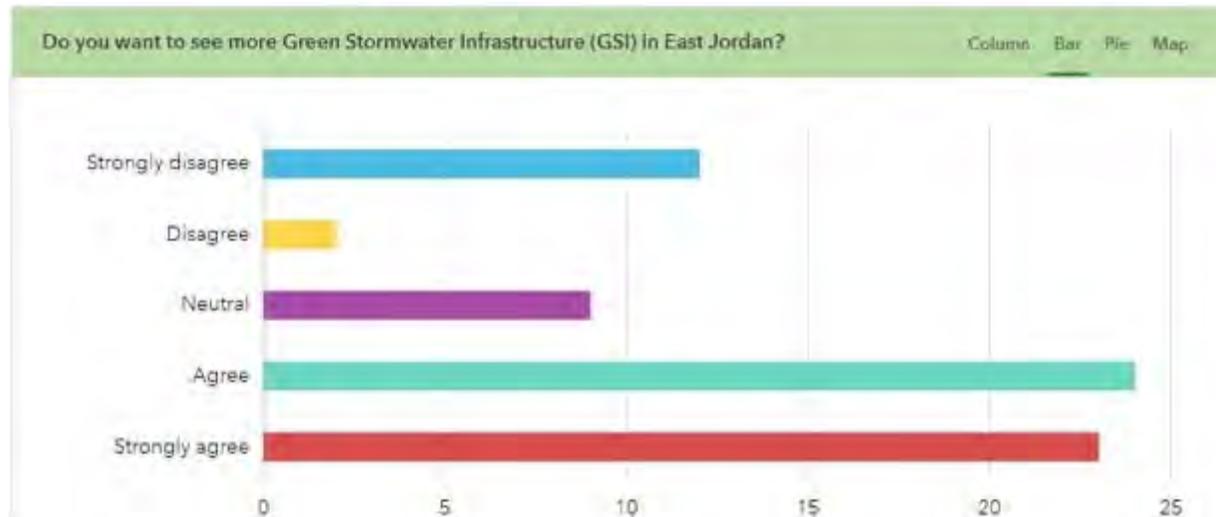
Online vs In-Person Civility

- Trained Facilitators/Moderators
- Vocal Minority & Silent Majority
- Respect



Comments in Context

“It's a beautiful idea, but right now our town needs other things. The gardens are nice, but unrealistic. This is not the year to "beautify" EJ, and the lake is fine. Too many are struggling. This plan is insulting to all those struggling.”



“We are not as concerned with these little upgrades as we are with our road quality, sidewalk quality, removal of EJ foundry, and other much needed projects.”

Questions?