Engaging Anglers and Managing Ponds with ArcGIS Hub and Operations Dashboard

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GIS Analyst

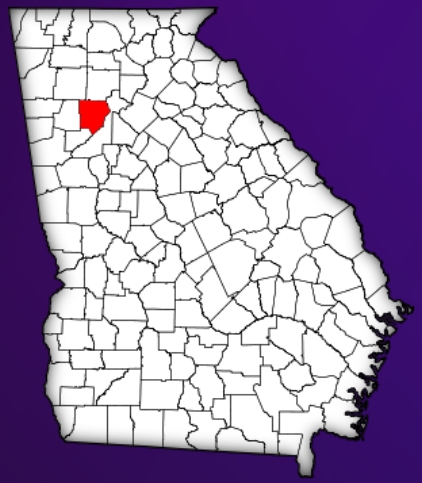
Cobb County PARKS

Introduction

Cobb County PARKS

Cobb County PARKS

- Metro Atlanta
- Population (2019): 760, 141
- 90 Park Properties
- 6,000+ Acres



Cobb County, GA

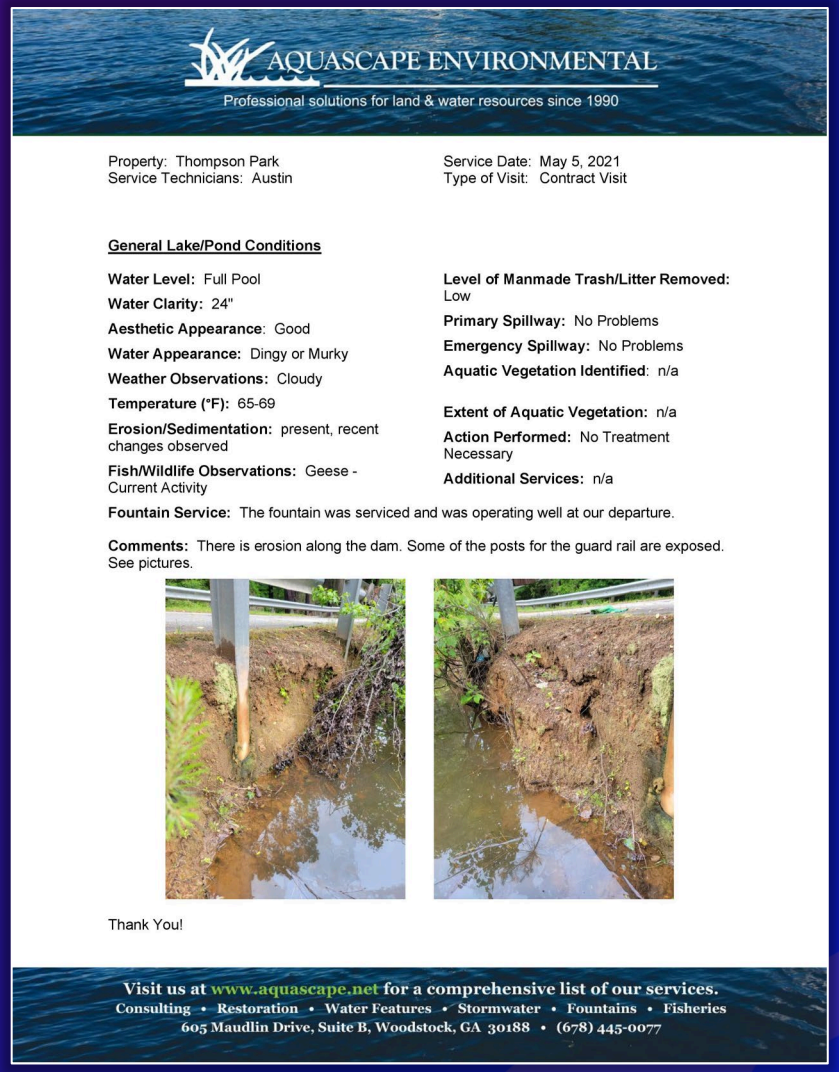
Pond Management

Where we were… and where we are now

Pond Management – Where we *were*

- Paper-based maintenance reports
- Occasional restocking
- Electrofishing analyses for larger ponds

- PARKS Pond Goal: To create an efficient, data-driven maintenance resource for park ponds while engaging Cobb residents to participate in the conservation of a valuable natural resource.



AQUASCAPE ENVIRONMENTAL

Professional solutions for land & water resources since 1990

Property: Thompson Park
Service Technicians: Austin

Service Date: May 5, 2021
Type of Visit: Contract Visit

General Lake/Pond Conditions

Water Level: Full Pool
Water Clarity: 24"
Aesthetic Appearance: Good
Water Appearance: Dingy or Murky
Weather Observations: Cloudy
Temperature (°F): 65-69
Erosion/Sedimentation: present, recent changes observed
Fish/Wildlife Observations: Geese - Current Activity

Level of Manmade Trash/Litter Removed: Low
Primary Spillway: No Problems
Emergency Spillway: No Problems
Aquatic Vegetation Identified: n/a

Extent of Aquatic Vegetation: n/a
Action Performed: No Treatment Necessary
Additional Services: n/a

Fountain Service: The fountain was serviced and was operating well at our departure.

Comments: There is erosion along the dam. Some of the posts for the guard rail are exposed. See pictures.

Thank You!

Visit us at www.aquascape.net for a comprehensive list of our services.
Consulting • Restoration • Water Features • Stormwater • Fountains • Fisheries
605 Maudlin Drive, Suite B, Woodstock, GA 30188 • (678) 445-0077

Pond Maintenance Report

EBENEZER PARK POND
Electrofishing
ALUMACRAFT
GA 0714 PH

Pond Management – Where we are *now*

- New Pond Signage (QR code links to Hub Site)
- PARKS Pond Hub Site (Public Pond Informational Site)
- Fishing Survey
- Cartegraph-Ops Dashboard Integration

‘Smart’ Pond Signs

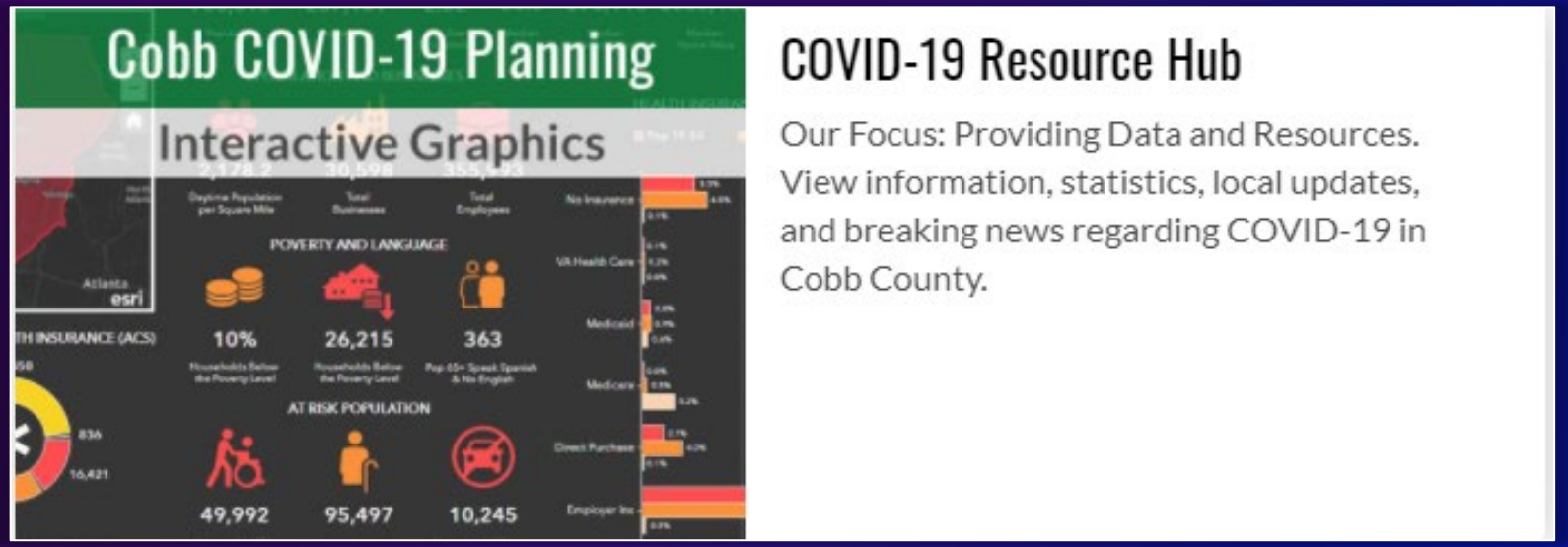
- Fishing status inserts
  - Catch & Keep
  - Catch & Release
  - Closed
- Creel Limits
- QR Code links to PARKS Ponds Hub Site

PARKS Pond ArcGIS Hub

Informational Resource for Cobb residents

ArcGIS Hub

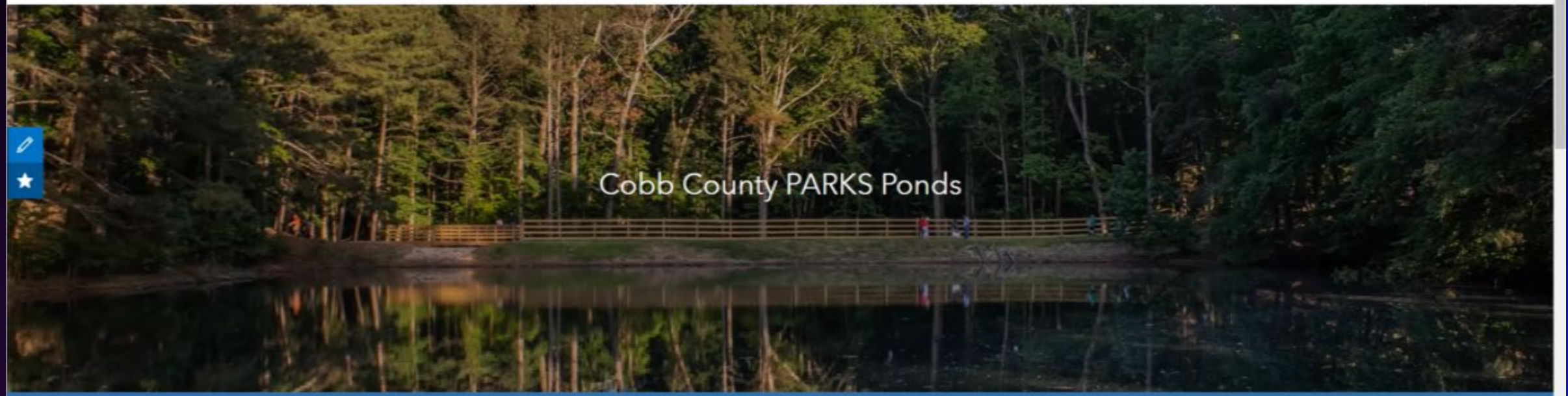
- Community engagement platform
- Aggregates spatial resources around a specific topic



Cobb County PARKS Ponds

New

Caroline



Thank you for visiting the Cobb County PARKS Ponds website. Keep scrolling to find updates about current pond statuses, pond locations, the species of fish we stock, and more!

Current Pond Status

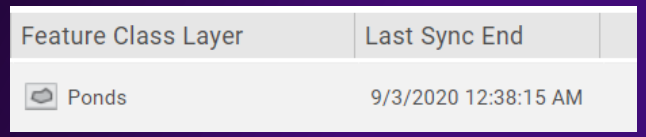
Cobb County manages and maintains 12 ponds within several of our park properties. Many of our ponds are fishable and open to the public. Occasionally, we must close ponds for maintenance and/or development. Check back for notices about future pond closures.

Click here to purchase a Georgia fishing license.

Georgia law requires anglers aged 16 and over to have a current Georgia fishing license in their possession while fishing in fresh or salt water in Georgia.

Catch and Keep	Catch and Release	Closed

1. Pond Status updated in Cartegraph OMS



2. Pond layer syncs to connected feature class nightly

```
def enrich_layer(source, target, settings):
    wkid = target.properties.extent.spatialReference.wkid

    # Query for target features
    rows = _get_features(target, "1=1", return_geometry=True)

    for row in rows:
        # Perform spatial query to get attributes of intersecting feature
        ptgeom = {'geometry': row.geometry,
                  'spatialRel': 'esriSpatialRelIntersects',
                  'geometryType': 'esriGeometryPoint',
                  'inSR': wkid
                  }
        sourcefeat = source.query(geometry_filter=ptgeom)

        try:
            # Only first feature is processed
            source_val = sourcefeat.features[0].attributes[settings['source']]
            row.attributes[settings['target']] = source_val
        except IndexError:
            continue  # no intersecting feature found

    if rows:
        results = target.edit_features(updates=rows)
        _report_failures(results)

    return
```

3. Script copies Status field from OMS Pond layer to Hub pond layer

4. Pond site is updated with current fishing status

Cobb County Parks Pond Fishing Survey

Answer the questions below to tell us about your recent visit to our ponds!

Date of Visit:

m/d/yyyy

Time of Visit:

-Please Select-

Pond:

-Please Select-

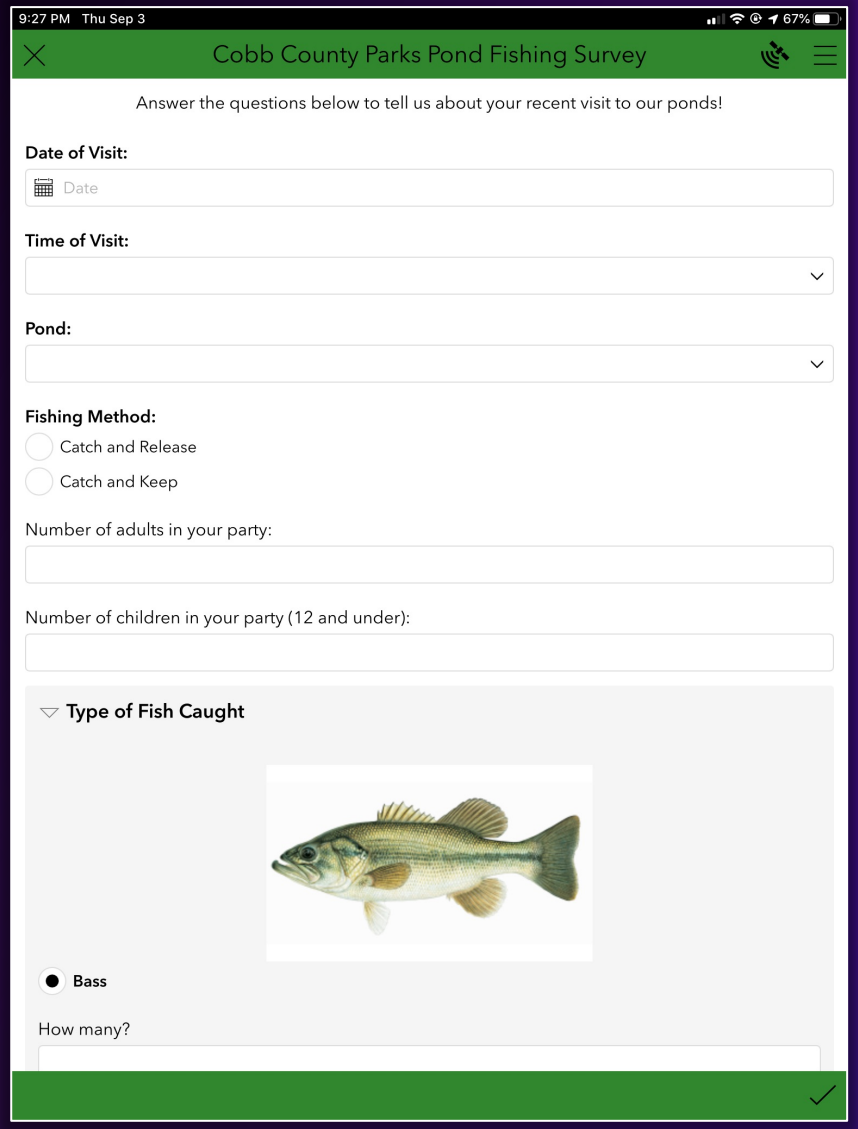
Fishing Method:

- Catch and Release
- Catch and Keep

Number of adults in your party:

Number of children in your party (12 and under):

Fishing Survey (Survey123)



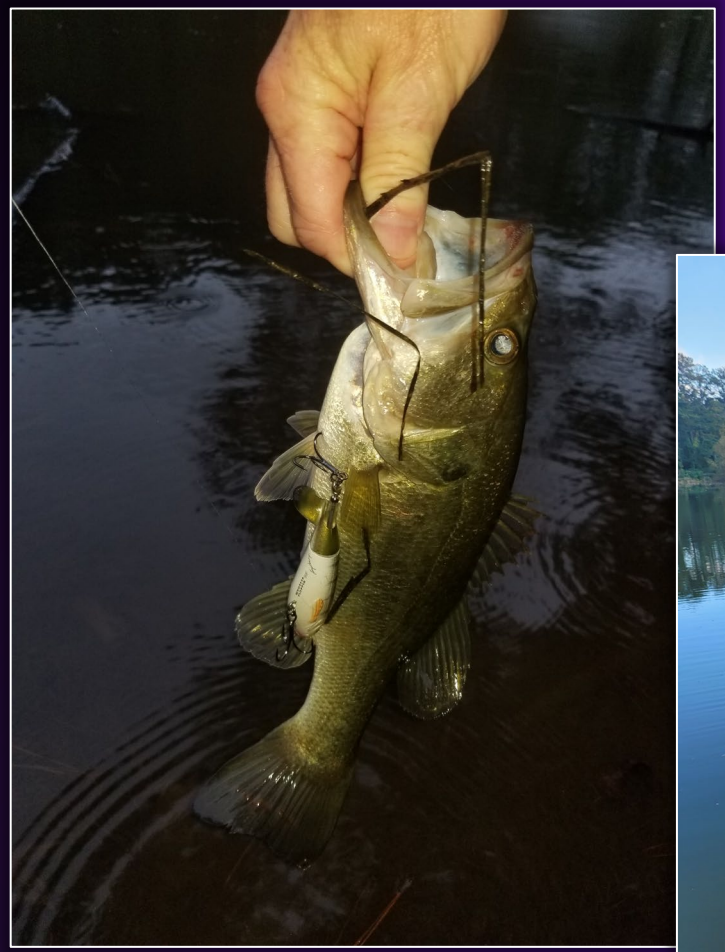
Ebenezer Downs Park - Nov 8, 2020

1. Clear more brushes/bushes so there are even more areas to bank fish. 2. Place a trash bin closer to dock so anglers are more inclined to dispose of fishing lines, lures, etc. instead of leaving them on dock or worse yet, into the water.

Lost Mountain Park - Sep 1, 2020

This pond badly needs restocking. Otherwise, I enjoy fishing here very much and appreciate how well maintained the grounds are at Lost Mountain Park. It would be nice to have some new benches at the pond, please. Thank you.

Fishing Survey (Survey123)



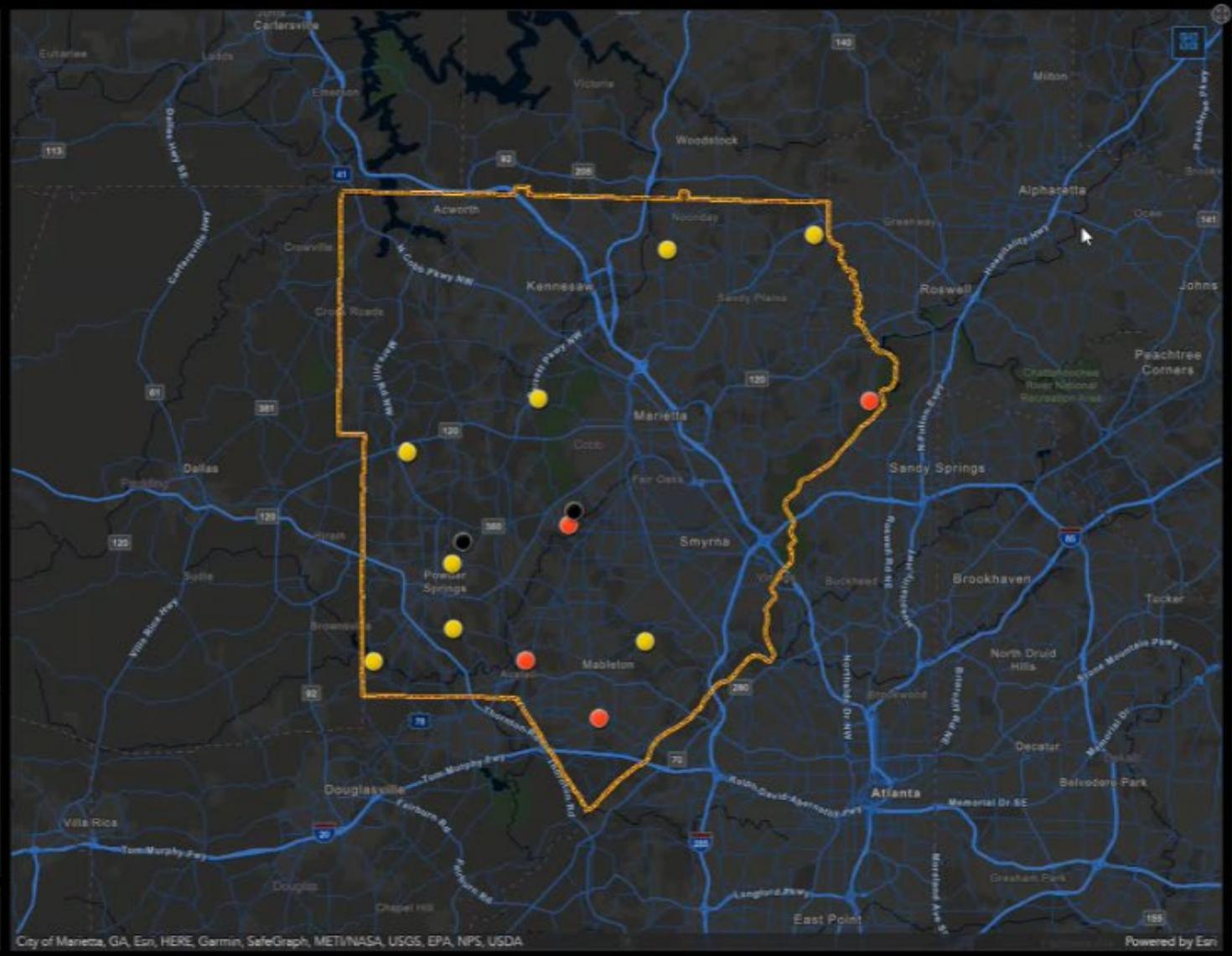
Operations Dashboard

Internal Resource for Pond Management

- Wild Horse Creek Pond
- Stout Pond
- Thompson Pond
- Schmidt Pond
- Ebenezer Downs Pond
- Furr Pond
- Mabry Pond
- Lost Mountain Pond
- Jim R. Miller Pond
- Hyde Farm Pond
- Bartlett Pond
- Cato Pond
- Yarbrough Pond
- Al Bishop Pond

Last update: 5 minutes ago

Fishing Survey Results



Restocking Tasks

- 201927 Pond:HYDE Completed 6/29/2020, 8:00 PM
- 201868 Pond:LMPK Completed 6/29/2020, 8:00 PM
- 228752 Pond:SCHMT Planned
- 228774 Pond:SCHMT Planned
- 228784 Pond:SCHMT Planned
- 228800 Pond:SCHMT Planned
- 228811 Pond:SCHMT Planned
- 228817 Pond:SCHMT Planned

Last update: 5 minutes ago

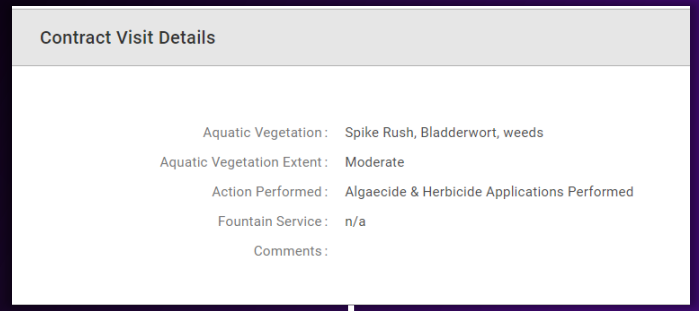
Aquascape Contract Visits

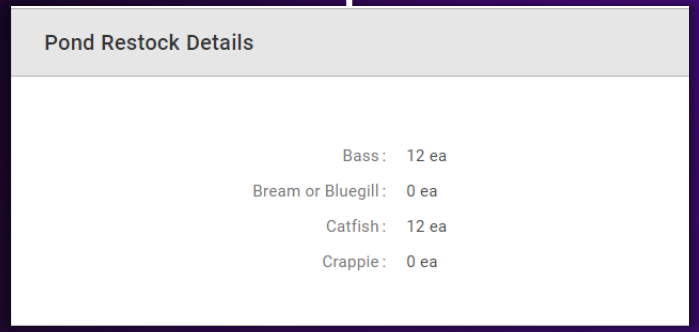
- Task ID 257878 Pond:THOMPK 5/5/2021, 10:10 AM
- Task ID 257879 Pond:MABRY 5/5/2021, 10:10 AM
- Task ID 257880 Pond:JRM 5/5/2021, 10:10 AM
- Task ID 257881 Pond:HYDE 5/5/2021, 10:10 AM
- Task ID 257882 Pond:CATO 5/5/2021, 10:10 AM
- Task ID 257883 Pond:BARTLT 5/5/2021, 10:10 AM
- Task ID 257390 Pond:SCHMT 5/3/2021, 4:23 AM
- Task ID 257391 Pond:EBNEZR 5/3/2021, 4:23 AM
- Task ID 257392 Pond:FURR 5/3/2021, 4:23 AM
- Task ID 257393 Pond:LMPK 5/3/2021, 4:23 AM
- Task ID 257394 SmallPond:LMPK 5/3/2021, 4:23 AM
- Task ID 257395 Pond:STOUT 5/3/2021, 4:23 AM

Last update: 5 minutes ago

CATCH AND KEEP	CATCH AND RELEASE	CLOSED	UNLISTED
0	9	4	2

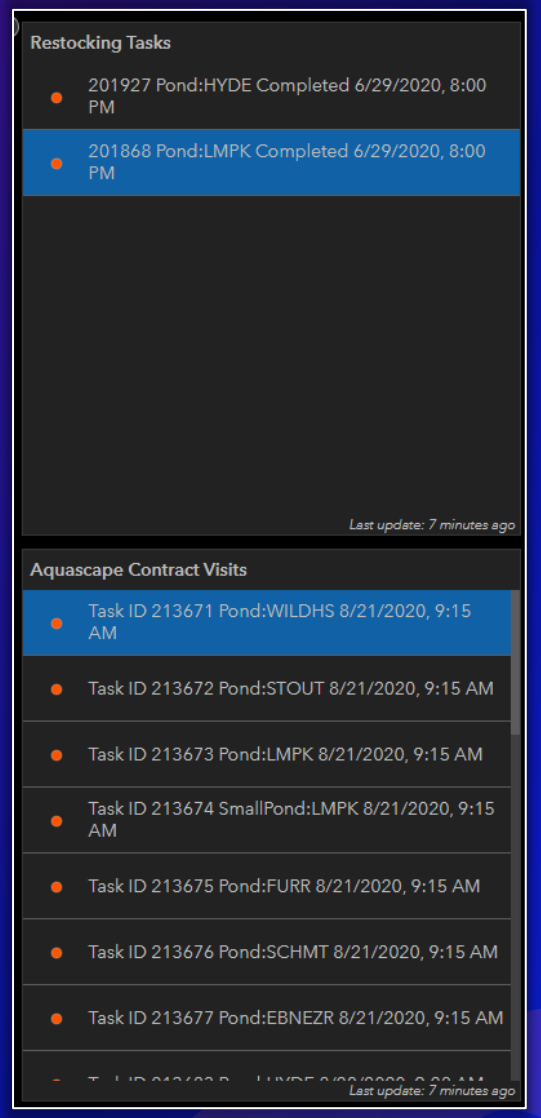
Cartegraph OMS – Ops Dashboard Integration





Tasks point layer syncs to server and AGOL nightly

Task-Based layouts in OMS
CG Fields connected to GIS Fields



Updates Operations Dashboard

Summary

- PARKS Pond Goal: To create an efficient, data-driven maintenance resource for park ponds while engaging Cobb residents to participate in the conservation of a valuable natural resource.

- New Pond Signage
  - Links to informational PARKS Pond Hub Site
- ArcGIS Hub Site (Public Use)
  - Reaching residents in a novel way
- ArcGIS Operations Dashboard (Internal Use)
  - Enables PARKS to make data-driven decisions quickly

Thank you!

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