

Drone-Integrated Visits: A Hybrid Alternative to Aerial Monitoring

Lessons Learned by Eastern Shore Land Conservancy



Staff Introductions



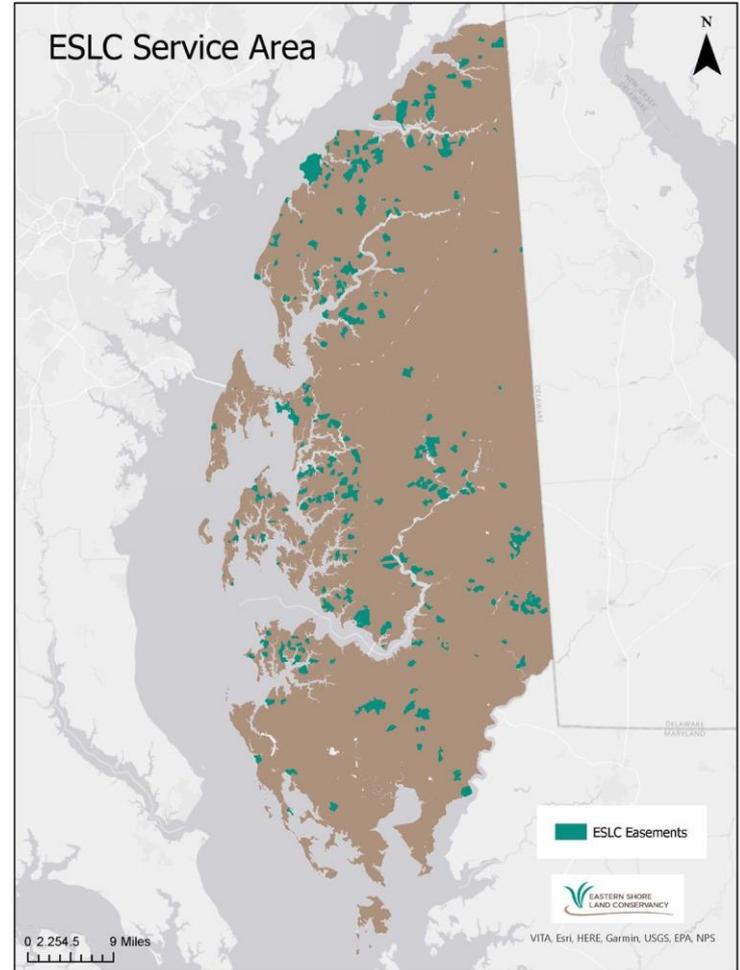
Dave Satterfield, Land Program Manager



Michael Dunmyer, Stewardship Specialist

A Brief Overview of ESLC

- ❖ Located in Easton, Talbot County
- ❖ 13 Full-Time Staff (4 Land Staff)
- ❖ Six-County Service Area
- ❖ Over 63,000 Acres Protected
- ❖ Three Preserves - One Public Access
- ❖ 310 Easements (and counting!)





Why Drones?

- ❖ Service area **topography**
- ❖ **LTA accreditation** requirements
- ❖ Existing burdens on **staff time**
- ❖ **COVID-19** volunteer exclusions

Securing Grant Funding

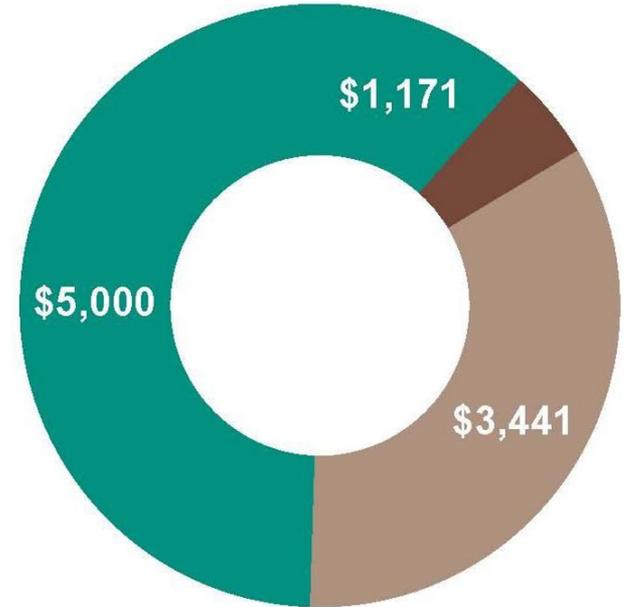
- ❖ Janice Hollmann Grant Program, FY20
- ❖ \$7,000 requested | **\$5,000** awarded
- ❖ Reminder: LTA's Remote Monitoring Grant Program does not award funds for hardware purchases!



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Hollmann Grant Expenditures

Total Expenditure: \$10,102.18



- Hardware: \$6,170.88
- Certification: \$490.00
- Staff Time and Mileage



Registration and Certification

- ❖ Drone registration and pilot licensure **required by FAA** for commercial uses
- ❖ Licensing includes **testing**, available at **Navy Annapolis Flight Center**
- ❖ Bi-annual online **recertification**

Hardware Purchasing

- ❖ DJI Mavic 2 Pro (and Fly More Bundle)
- ❖ Priorities: flight time, safety features
- ❖ Image quality sufficient across models
- ❖ Must-Have Accessories:
 - ✦ DJI Smart Controller (or equivalent)
 - ✦ Extra Batteries and Propellers
 - ✦ Landing Gear or Landing Pad















Diverse Benefits for the Entire Organization



Stewardship: substantial improvements to quality and efficiency of monitoring

Conservation: faster site visits and higher-quality baseline documentation

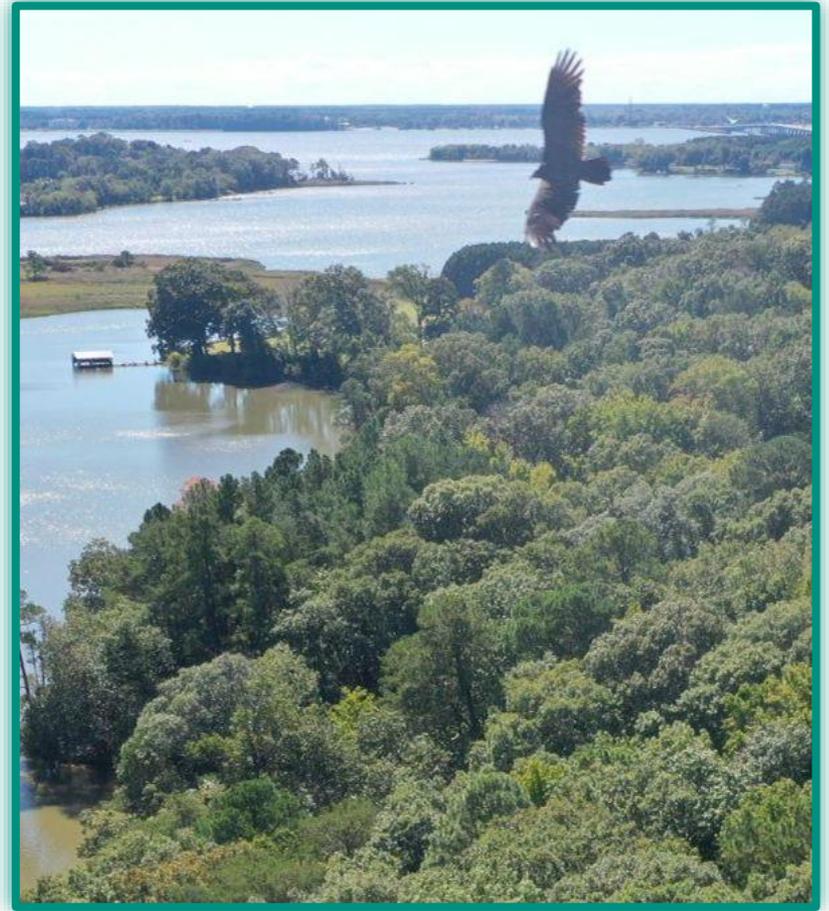
Communications: near-endless supply of current, high-resolution content for outreach



Advancement: aerial property photos for donors and easement landowners

Limitations of Drone Use

- ❖ **Airspace** restrictions
- ❖ Visibility through **canopies**
- ❖ Nuisance to **wildlife / hunters**
- ❖ Landowner receptiveness
- ❖ **Liability** for your flight
- ❖ Ongoing **maintenance** costs
- ❖ Burdensome image **file sizes**





Thank you!

