CONSERVATION INNOVATION CENTER
CHESAPEAKE CONSERVANCY

Chesapeake Conservancy
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# Anticipated benefits of ultra-high resolution (1m) LULC data for the Chesapeake Bay Program's Goal Implementation Teams

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|---|---|
| **Fisheries (GIT 1)** | • Improve the characterization of edge-of-shore habitats (e.g. wetlands, riparian corridors)<br>• Increase the predictive modeling capabilities of river and stream suitability for anadromous and catadromous fish habitat and spawning |
| **Habitats (GIT 2)** | • Create more accurate habitat models (e.g. updating habitat connectivity modeling to include smaller features that are missed by 30m data)<br>• Identify priorities for habitat restoration with greater precision<br>• Provide a baseline for critical habitat change with a greater accuracy (e.g. wetland loss and forest conversion)<br>• Track development pressure and internal fragmentation of core habitats to prioritize conservation efforts<br>• Monitor success and implementation of restoration efforts across entire landscapes (e.g. increased riparian buffers, wetland restoration, etc.) |
| **Water Quality (GIT 3)** | • Increase the accuracy of modeling efforts by providing better estimates of land use composition (e.g. impervious surface percentage)<br>• Identify specific landscapes (often at the parcel scale) that are priorities for restoration or BMP implementation<br>• Provide increased resolution for models of sediment and nutrient loading coming off the land |
| **Healthy Watersheds (GIT 4)** | • Create a highly accurate baseline to track changes in impervious surface and natural landscape coverage in high-functioning sub-watersheds<br>• Calculate and track highly accurate natural landscape condition metrics (e.g. riparian buffer coverage, ecological connectivity, headwater stream condition, etc.)<br>• Identify specific high-functioning landscapes that are priorities for conservation because they are providing water quality benefits |
| **Stewardship (GIT 5)** | • Target outreach and education efforts to landowners that have been identified as having high-functioning or underperforming landscapes on their property<br>• Identify tangible actions landowners could take to reduce the impact of their land (e.g. install BMPs) or conserve high-functioning landscapes (e.g. conservation easements) that would maximize the benefits of available funding<br>• Create individualized reports for land owners detailing the land use composition of their properties and how they fit into the watersheds they are a part of (e.g. showing that they have critical habitat or an underperforming landscape) |

| State | Total Area (sq. mi.) | % of Watershed | Estimated Cost |
|---|---|---|---|
| Delaware | 707.7 | 1.10% | $ 16,566.88 |
| DC | 61.5 | 0.10% | $ 1,439.68 |
| Maryland | 9,189.9 | 14.34% | $ 215,130.63 |
| New York | 6,266.8 | 9.78% | $ 146,702.43 |
| Pennsylvania | 22,507.5 | 35.13% | $ 526,887.33 |
| Virginia | 21,756.8 | 33.95% | $ 509,315.02 |
| West Virginia | 3,586.5 | 5.60% | $ 83,958.04 |
| **Total** | **64,076.7** | | **$ 1,500,000.00** |