



Observed Conditions are Classified from the Video and Sensor Data

File Observations Playback Tools Analyze Help

▶ || ◀ ◁ ▷ ▷▶ ⊕ ⊖ ◁ ▷ ▶

Ethogram

| Key | Code | Type |
|-----|------------------|-------------|
| 1 | Optimal:1 | Point event |
| 2 | SubOptimal:2 | Point event |
| 3 | Marginal:3 | Point event |
| 4 | Poor:4 | Point event |
| 5 | VeryPoor:5 | Point event |
| 6 | Additional:6 | Point event |
| 7 | Pool:7 | Point event |
| 8 | Riffle:8 | Point event |
| 9 | Run:9 | Point event |
| P | Portage:10 | State event |
| D | Dragging:11 | State event |
| X | Cross Section:12 | State event |
| E | ElectricLines:13 | State event |
| U | UndergroundLi... | State event |
| N | NotAvailable | Point event |
| T | Tributary | State event |
| B | BadData | Point event |

Subjects

| Key | Name | Description |
|-----|------|-------------|
| 1 | L | Left |
| 2 | R | Right |
| 3 | F | Front |

Focal subject: **Left**

Audio/Video
VLC (Direct3D output)

High Definition Stream Survey
TruttaSolutions.com

Map

Front

East Branch Delaware River
Downsville - Shinnhope

Sonar

Side-Scan

Left

Right

Frame by frame

Events for "FWR1.2" observation

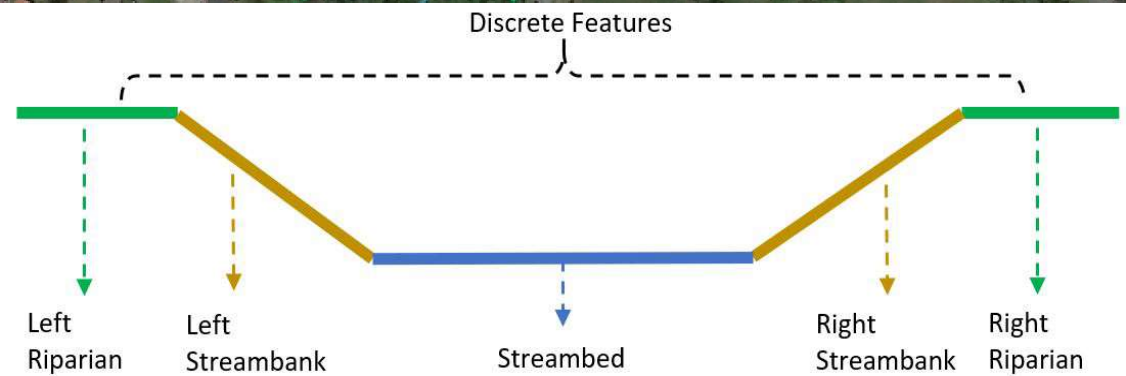
| time | subject | code | type |
|--------------|---------|------------------|-------|
| 00:00:00.023 | Left | Optimal:1 | |
| 00:02:10.868 | Left | Poor:4 | |
| 00:06:21.164 | Left | Marginal:3 | |
| 00:09:11.164 | Left | Poor:4 | |
| 00:16:43.359 | Left | Marginal:3 | |
| 00:28:45.123 | Left | Poor:4 | |
| 00:29:01.140 | Left | Poor:4 | |
| 00:32:14.098 | Left | Marginal:3 | |
| 00:38:22.433 | Left | Poor:4 | |
| 00:44:42.681 | Left | SubOptimal:2 | |
| 00:50:14.311 | Left | Dragging:11 | START |
| 00:51:19.917 | Left | Dragging:11 | STOP |
| 00:52:29.917 | Left | Poor:4 | |
| 00:54:09.980 | Left | VeryPoor:5 | |
| 00:54:39.980 | Left | Poor:4 | |
| 00:55:59.980 | Left | Marginal:3 | |
| 00:58:49.980 | Left | SubOptimal:2 | |
| 00:59:30.093 | Left | Marginal:3 | |
| 01:01:50.093 | Left | SubOptimal:2 | |
| 01:02:50.093 | Left | Poor:4 | |
| 01:03:54.164 | Left | Cross Section:12 | START |
| 01:04:54.964 | Left | Cross Section:12 | STOP |
| 01:06:14.987 | Left | Poor:4 | |
| 01:07:25.238 | Left | Marginal:3 | |
| 01:09:15.238 | Left | Marginal:3 | |
| 01:10:35.238 | Left | Poor:4 | |
| 01:12:05.238 | Left | Marginal:3 | |
| 01:12:45.238 | Left | SubOptimal:2 | |
| 01:13:45.238 | Left | Marginal:3 | |
| 01:14:25.238 | Left | Dragg... | |

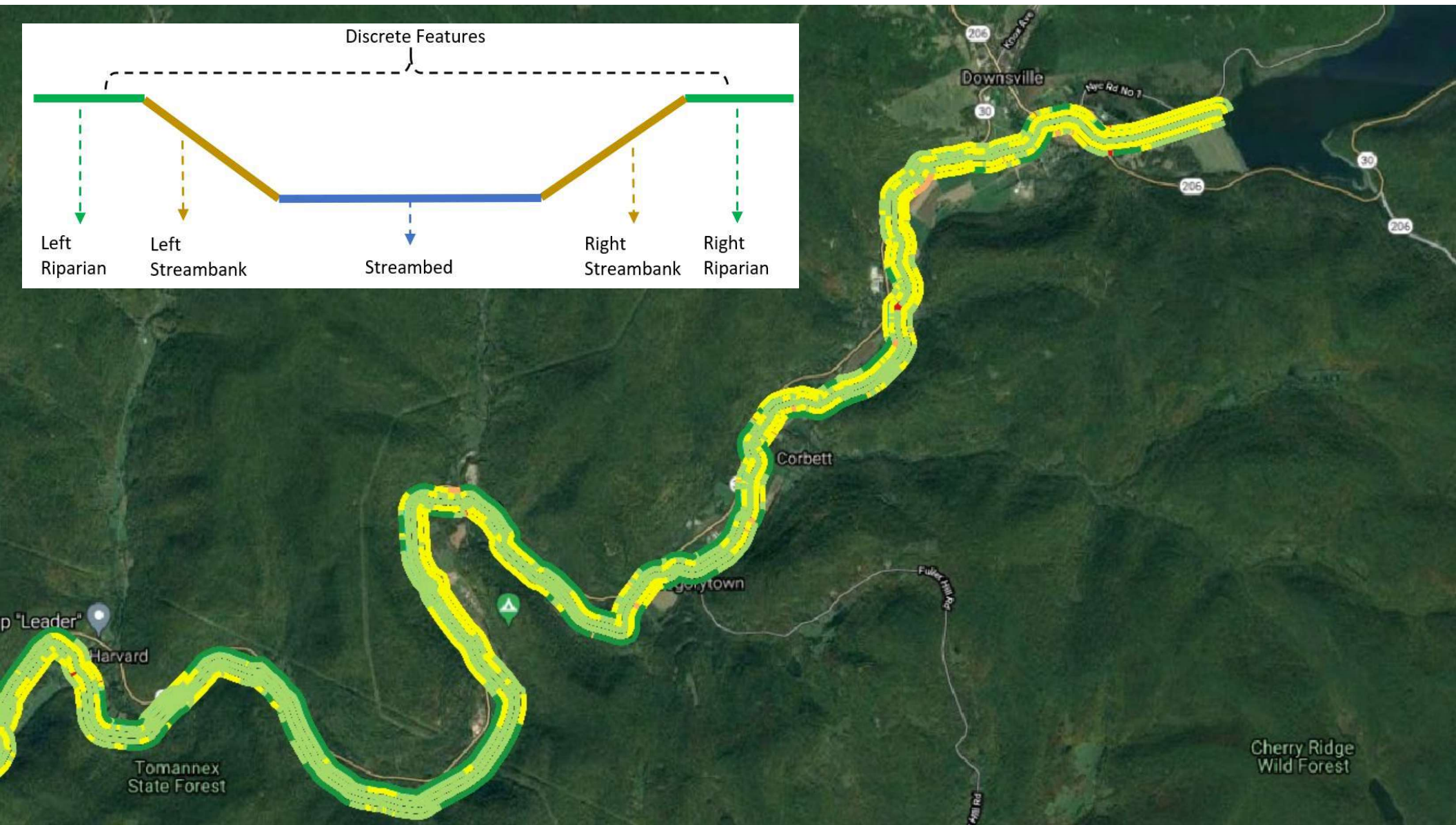
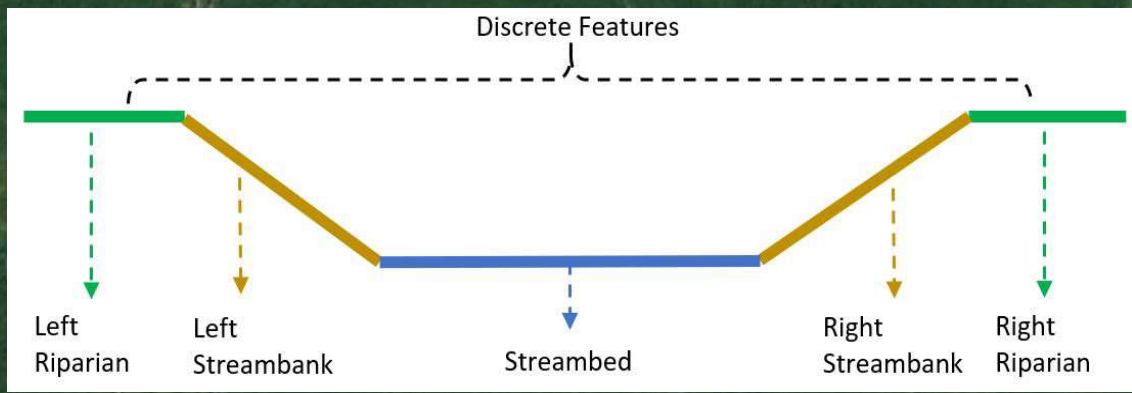
FallingWater_T1.2.mp4: 01:25:04.649 / 02:55:50.874 (paused) | Subject: **Left** | x1,000

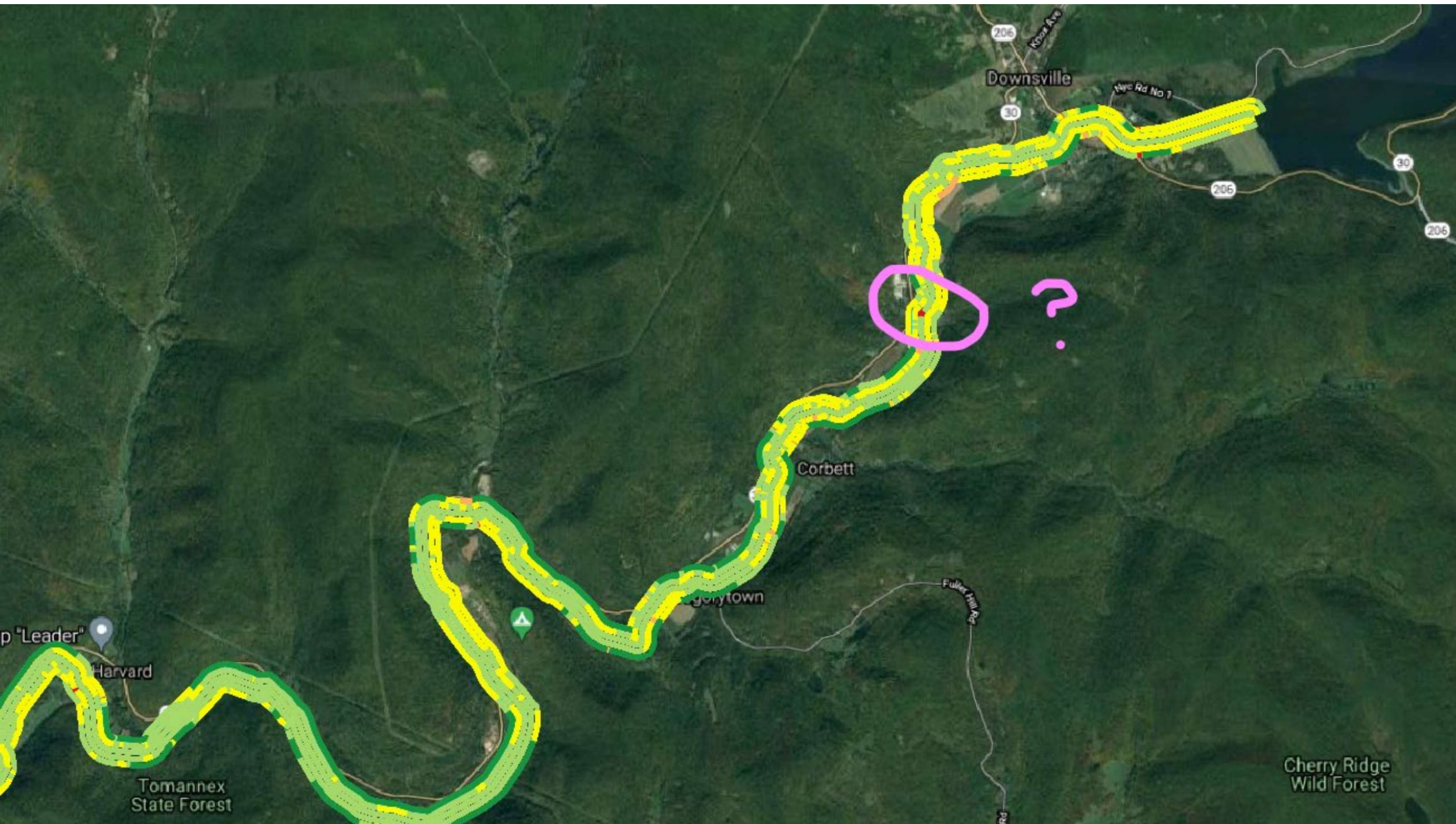
Stream Corridor Assessment

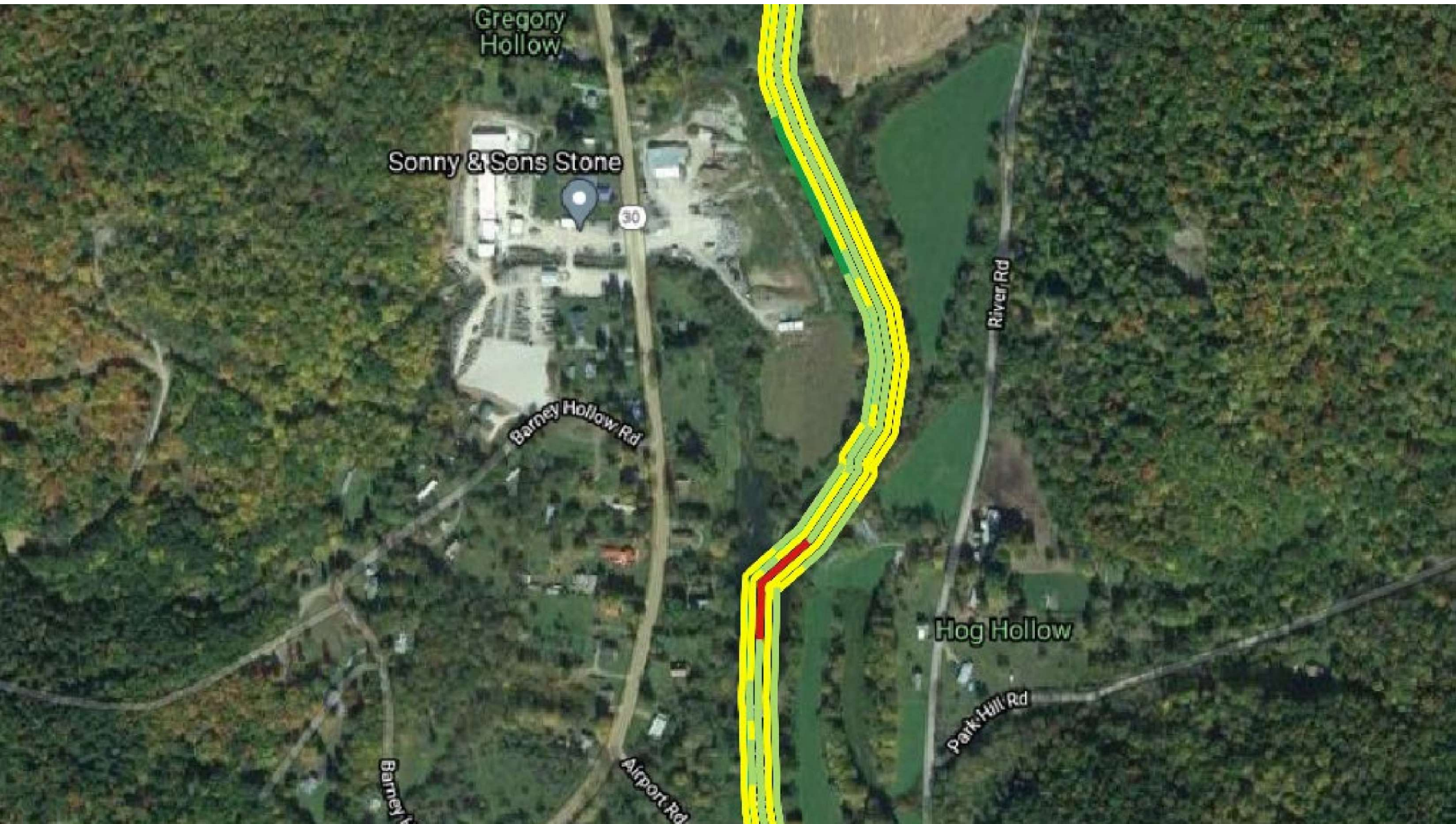
For impact Assessment
& Project Prioritization

- Riparian zones
- Streambank
- Streambed
- Discrete features















Hydropower

Water Quantity

- Channel Profiles
- Channel Capacity
- Flood Risk Models
- Drought impacts
- Instream Flow

Water Quality

- Longitudinal Profile
- Tributary input
- Sediment TMDLs
- Point & Non-Point Source Impacts

Wildlife

Habitat

- Riffle, Run, Pool Delineation
- Substrate Types
- Embeddedness
- Instream Cover
- Riparian Condition

Stormwater MS4

Infrastructure

- Location, Extent & Condition of:
- Bridges
 - Intakes & Outfalls
 - Bank Stabilization
 - Dams, etc.

HDSS
Cross-sectional Transects and Longitudinal Surveys

Stream Corridor Assessment

- Current Conditions Archive
- Restoration Prioritization
- Mitigation Potential

Outreach

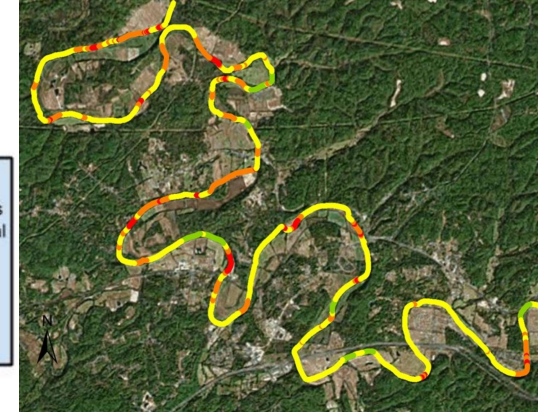
- Virtual Stream Tours
- Integrates with Aerial Imagery
- StreamView Dashboards show data and stream conditions

Environmental & Non-Profits

Transportation

Integrated Planning Framework

HDSS supports integrated planning by providing high-quality, multi-attribute, geo-referenced data of the entire stream channel



Currently Mapping Trout Habitat

Water Depth

Habitat Type (Riffle, Glide, Run, Pool)

Roughness/Substrate Type

Relative Velocity

Cover (LWD, Vegetation, Channel Complexity)

Water Quality (Temp, Do, pH, Sp. Conductivity, TSS)

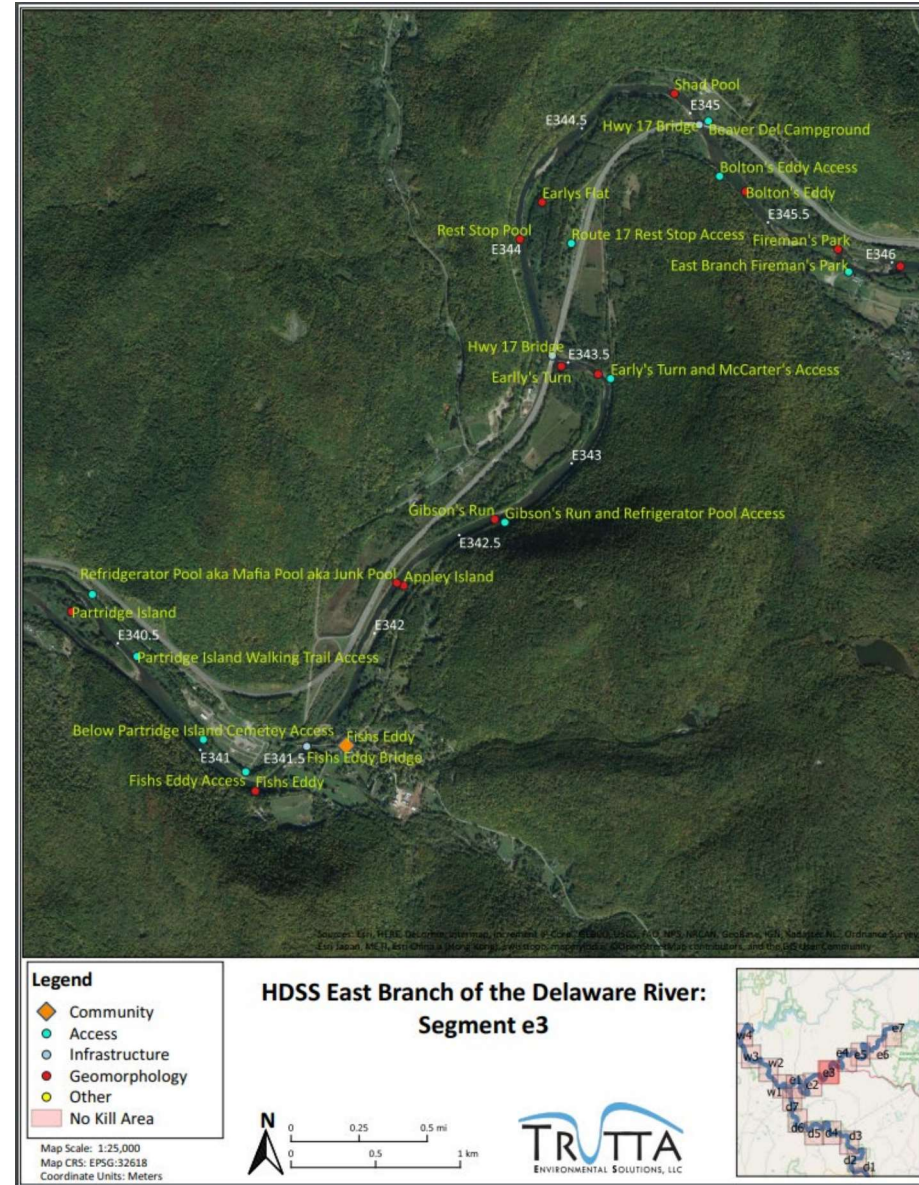
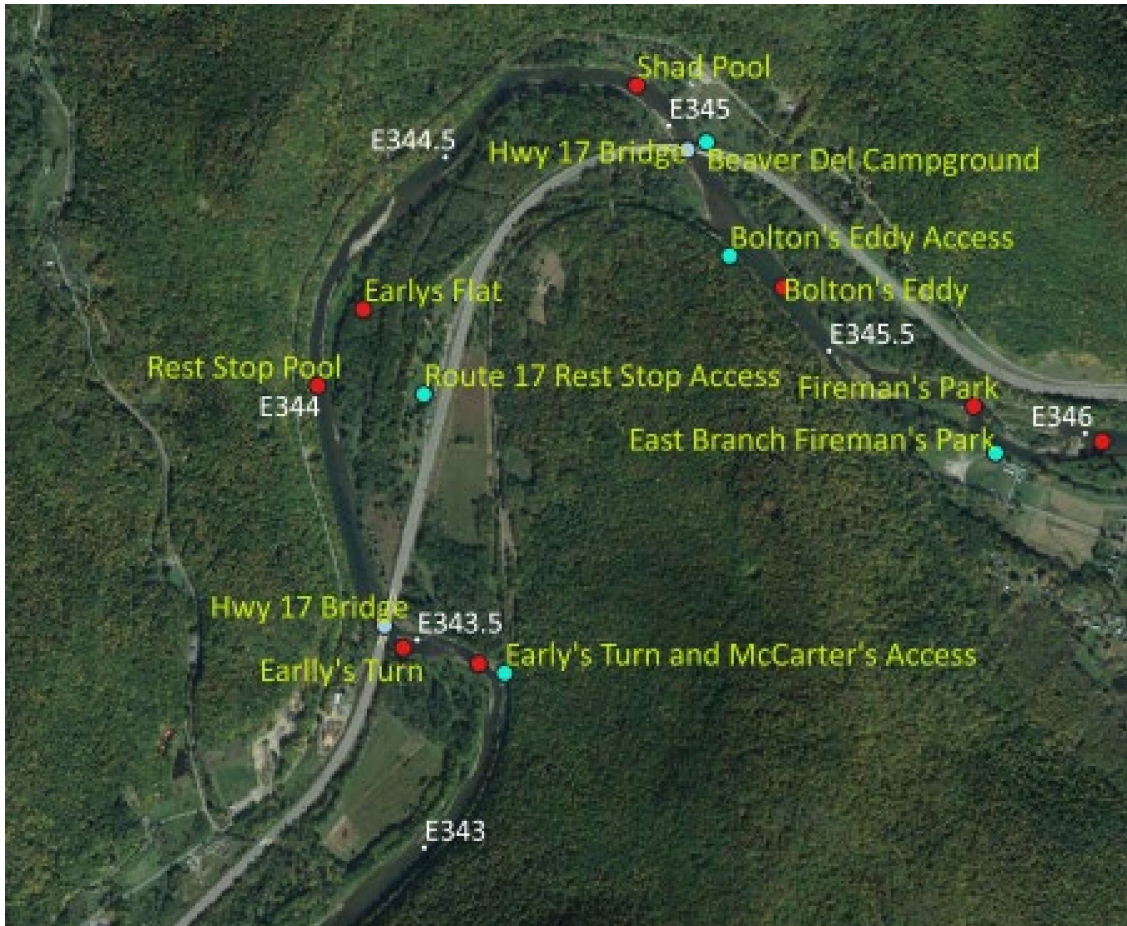
Bed Slope & Channel Capacity

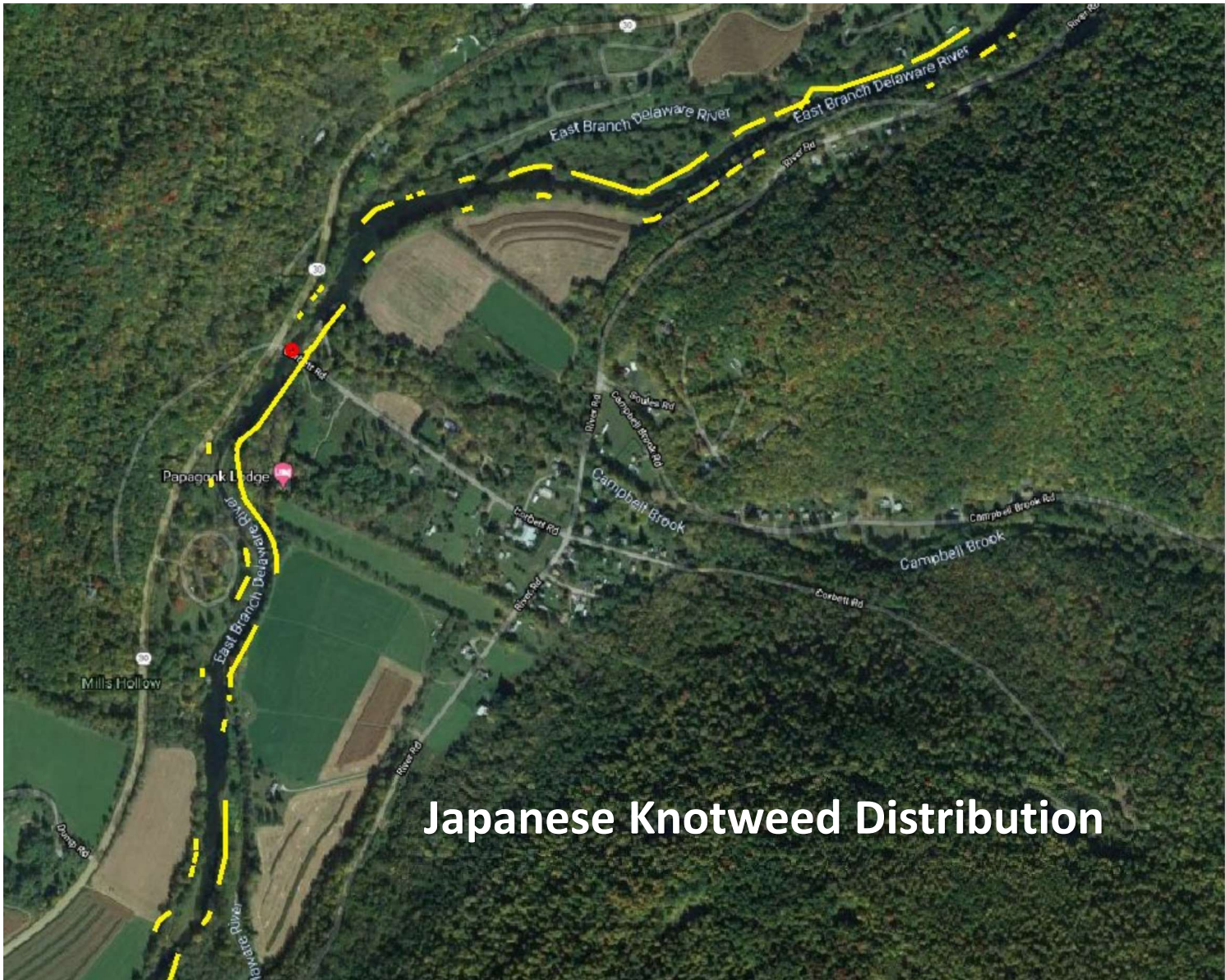
Bank and Bed Condition

Spatial Measures (Distance from Deep water, Habitat Variety)

Fishing Regulations & Distance from Access Points

Outreach





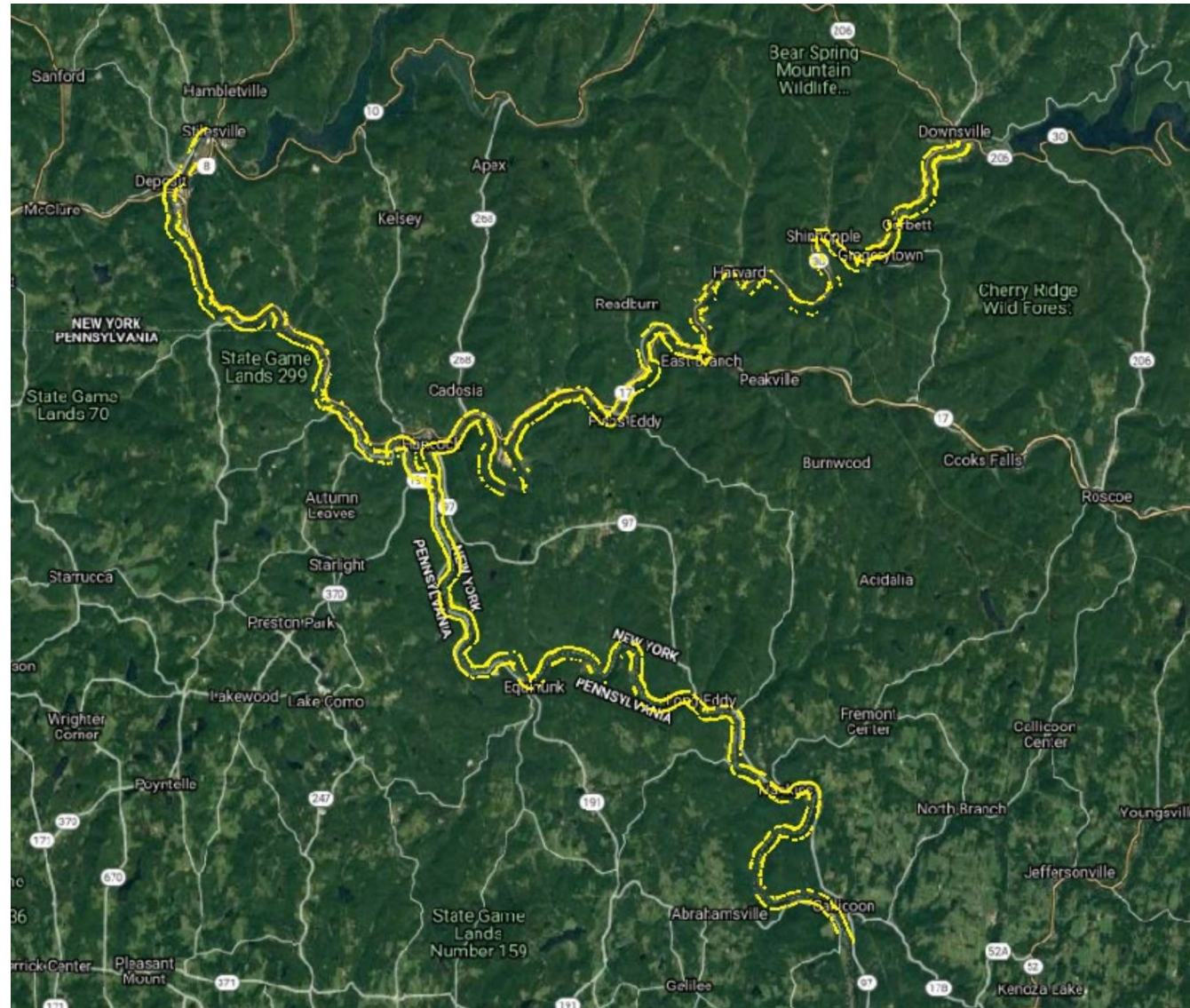
Japanese Knotweed Distribution

| Feature | Value |
|-------------------------|-------------------------|
| ▼ B1_NoTransects | |
| ▼ SonarName | R00005 |
| ▶ (Derived) | |
| ▶ (Actions) | |
| SecID | 78299 |
| TimeUTC | 2020/09/03 10:14:55.000 |
| UTCx | 2020/09/03 15:14:55.000 |
| UTCz | 2020/09/03 15:14:55.000 |
| DTE | 2020/09/03 10:14:55.000 |
| dateE | 2020-09-03 |
| timeE | 11:14:55.000 |
| DTEx | 2020/09/03 11:14:55.000 |
| DTEz | 2020/09/03 11:14:55.000 |
| TRptID | Up_east_004989 |
| Easting | 497729.584 |
| Northing | 4654931.999 |
| Elevation | 295.556 |
| hPrecision | 0.091 |
| vPrecision | 0.219 |
| AntHeight | 0.730 |
| GarminLat | 42.04644 |
| GarminLong | -75.02745 |
| D_DQCode | 0 |
| D_DQType | Good |
| DQComment | NULL |
| Project | Upper Delaware |
| Track | 411 |
| Classifier | Brett |
| Platform | Single Boat |
| Version | 4 |
| D_LBCCode | 3 |
| D_LBCTYPE | Slightly Impaired |
| D_LBCCModCo | 8 |
| D_LBCCModTy | Modified |
| LBCCComment | NULL |
| D_RBCCode | 3 |
| D_RBCTYPE | Slightly Impaired |
| D_RBCCModCo | 8 |
| D_RBCCModTy | Modified |
| RBCComment | NULL |
| D_LKWCCode | KW |
| D_LKWCModCo | left |
| D_RKWCCode | No |
| D_RKWCModCo | right |



Japanese Knotweed Distribution & Amount

| River Segment | Left KW m | Right KW m | Seg length m | Left | Right |
|-------------------------------|--------------|---------------|--------------|-------|-------|
| Delaware River | 23,971 | 21,459 | 45,742 | 52.4% | 46.9% |
| East Branch Delaware River | 20,370 | 21,405 | 54,606 | 37.3% | 39.2% |
| West Branch Delaware River | 11,311 | 15,728 | 29,991 | 37.7% | 52.4% |
| Total | 55,652 | 58,592 | 130,339 | 42.7% | 45.0% |
| Overall | | | | | 43.8% |



The logo for Trutta Environmental Solutions features the word "TRUTTA" in a bold, black, sans-serif font. A thick, blue, wavy line arches over the letters, starting above the 'T', dipping below the 'R', rising above the 'T', and ending above the 'A'. Below "TRUTTA", the words "ENVIRONMENTAL SOLUTIONS" are written in a blue, sans-serif font, with "ENVIRONMENTAL" and "SOLUTIONS" on the same line.

TRUTTA
ENVIRONMENTAL SOLUTIONS

MORE DATA, HIGHER QUALITY, LOWER COST

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