



Introducing High Definition Stream Surveys

Better Quality. Faster Turnaround. Lower Cost.

ParhamEnvironmental.com
TruttaConsulting.com

Parham & Associates
Environmental Consulting LLC

*in partnership
with*

TRUTTA
CONSULTING

**Rates As Low
As \$999 Per Mile**

615.461.0010

419.215.7897

What Is High Definition Stream Survey (HDSS)?

HDSS is an integrated system of sensors and software that allows for rapid acquisition and classification of bank and channel conditions in streams and small rivers. HDSS allows surveys for 10 to 15 miles of stream per day with data collected every meter. HDSS uses integrated GPS, video, depth, side-scan sonar, and water chemistry sensors to rapidly collect important habitat variables.

The HDSS data collection technique will change the data-poor stream lines in your GIS maps to a high-resolution habitat layer. The range of data collected is highly useful for habitat delineation and stream management applications.

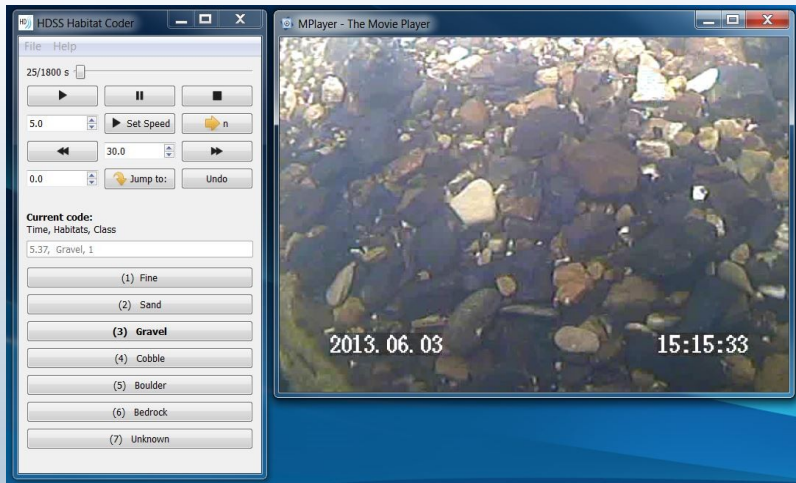
How HDSS Can Help You:

- **Continuous surveys to document long segments of streams and small rivers**
- **No more extrapolating between widely spaced samples**
- **Greatly improves resolution and results of habitat suitability models**
- **Zero impact sampling without access restrictions**
- **Provides reviewable archive of stream conditions**
- **Supports integrated fisheries, water quality, and hydrology studies**
- **Can collect data in both cross-sectional & longitudinal (thalweg) profiles**

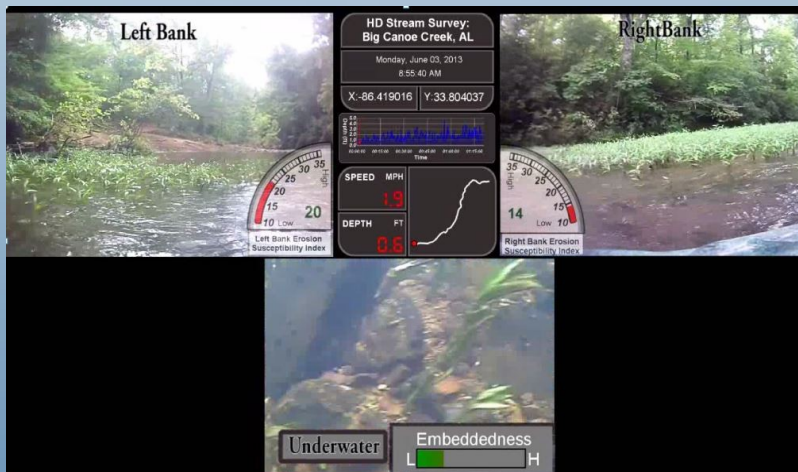
**60x Faster * 33% Less Expensive * 25x Higher
Resolution than transect surveys**

**Contact us TODAY to discuss
turnkey survey services, hardware, software or training!
TruttaConsulting@gmail.com — Info@ParhamEnvironmental.com**

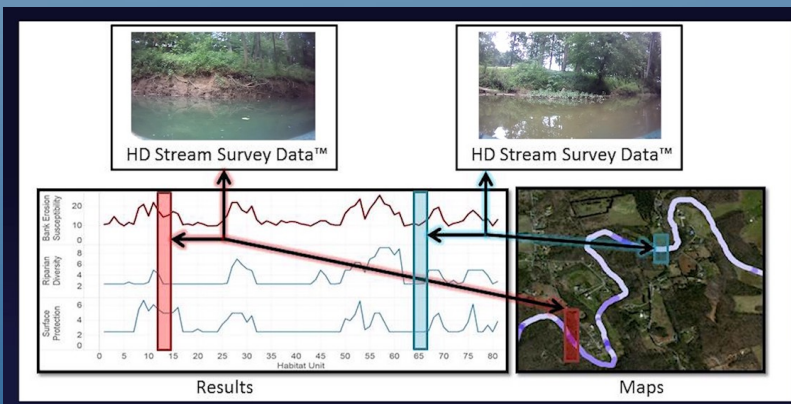
Custom HDSS Habitat Coding Software



HDSS Dashboard Views



Data, Maps, Statistics and Graphic Integration



HIGH DEFINITION STREAM SURVEYS

With our custom HDSS hardware and software, data collected in the field flows smoothly into information management systems and are rapidly analyzed into useful results to support decision makers. The integrated suite of sensors allows a range of habitat conditions to be measured including:

Right and left streambank conditions

- bank height
- bank angle
- bank stability
- surface protection
- bankfull level
- bank erosion potential
- riparian diversity
- legacy trees
- woody debris
- docks, boat ramps, bridges
- power line crossings
- pipe intakes and outfalls
- point source pollution locations

In-Stream conditions

- habitat type (pool/riffle/run)
- stream width & depth
- velocity classes
- substrate
- substrate embeddedness
- water quality parameters
- channel rugosity
- instream cover
- location of barriers
- instream vegetation
- sinuosity

***We have multiple different configurations that mount on
boats, kayaks, bodyboards and backpacks to cover everything from small creeks to small rivers.***