

US EPA ARCHIVE DOCUMENT



# Wadeable Large River Fish Community Assessments

Year 1 of 2



CT DEP  
WPLR

[Mike.Beauchene@ct.gov](mailto:Mike.Beauchene@ct.gov)



# Rationale

- Alternative method to obtain aquatic life use support assessment data from large rivers
- Traditionally done with streamshocker(s) and many many staff.
- Bias towards gamefish? larger fish? Miss small fish?
- Bias towards center 2/3rds of channel?
- Missing species and or year classes?
- Cost of Donuts are going up and up!

02/26/2008

# Main Question

- Are final ALUS assessments comparable when data are collected using a backpack versus traditional streamshocker(s)?



# Method

- Paired samples
- Stream reaches selected for wadeable riffle/run habitat throughout.
- WPLR crew with Pod sample 150 meters each bank. Shock within 5 meters of bank.
- DEP Inland fisheries crew sample with 1,2 or 3 streamshockers.
- All species collected, measured, and identified.
- VT Mixed Water IBI calculated for each sample.





1999. 5





2001. 5. 2









2001. 5. 2



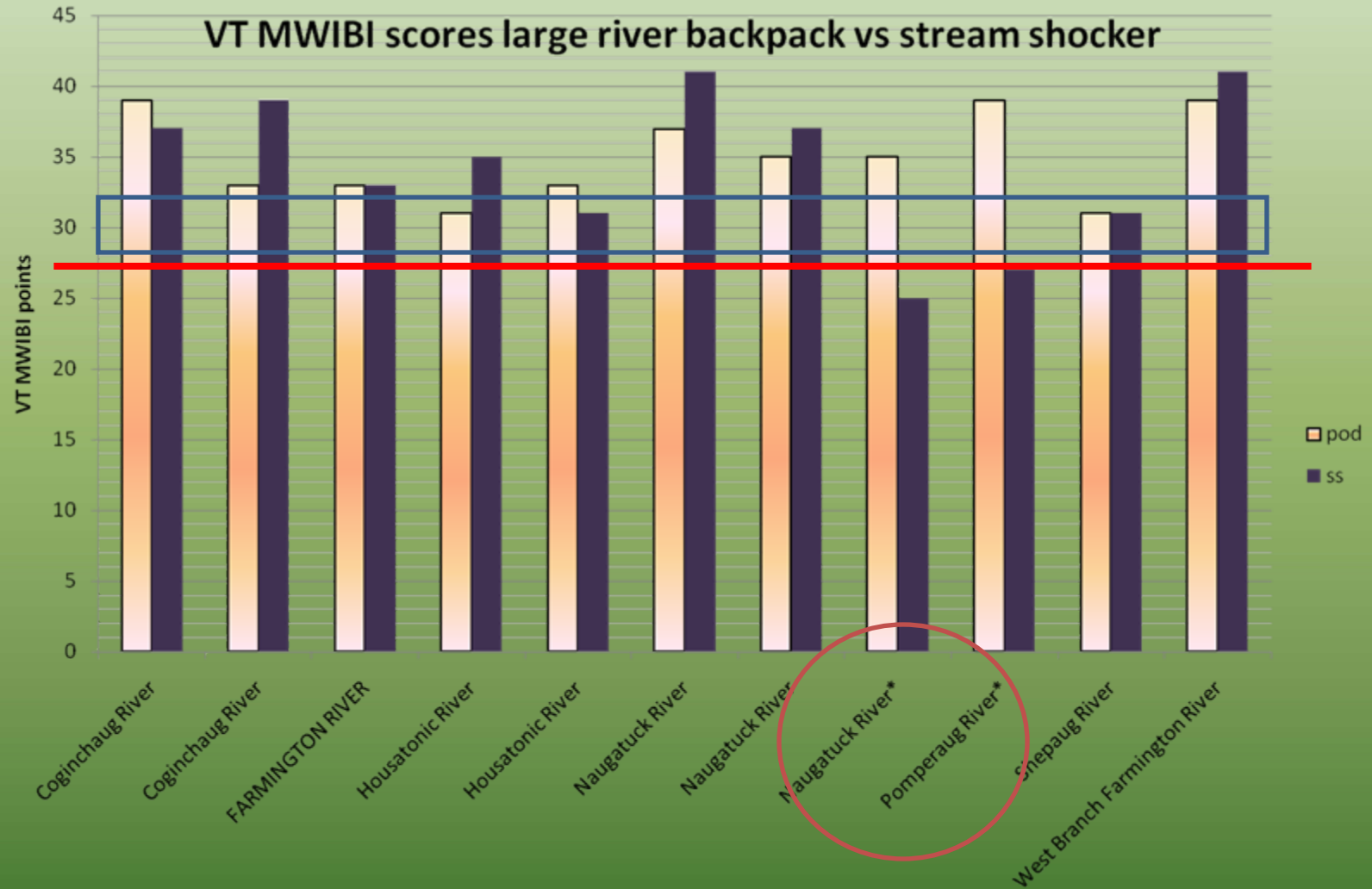
**What's the  
Catch?**



17. 7. 2001

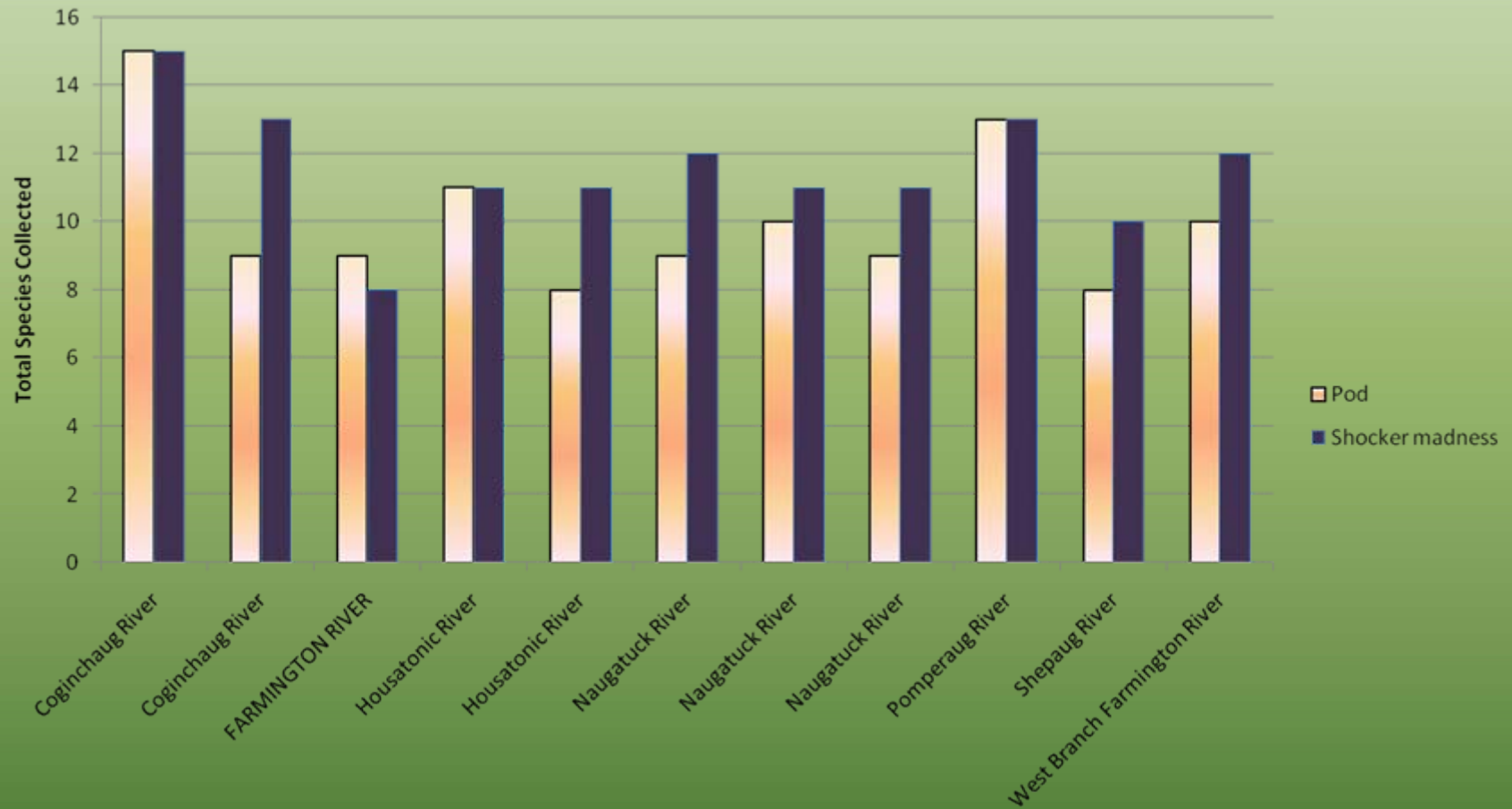


# Bottom Line



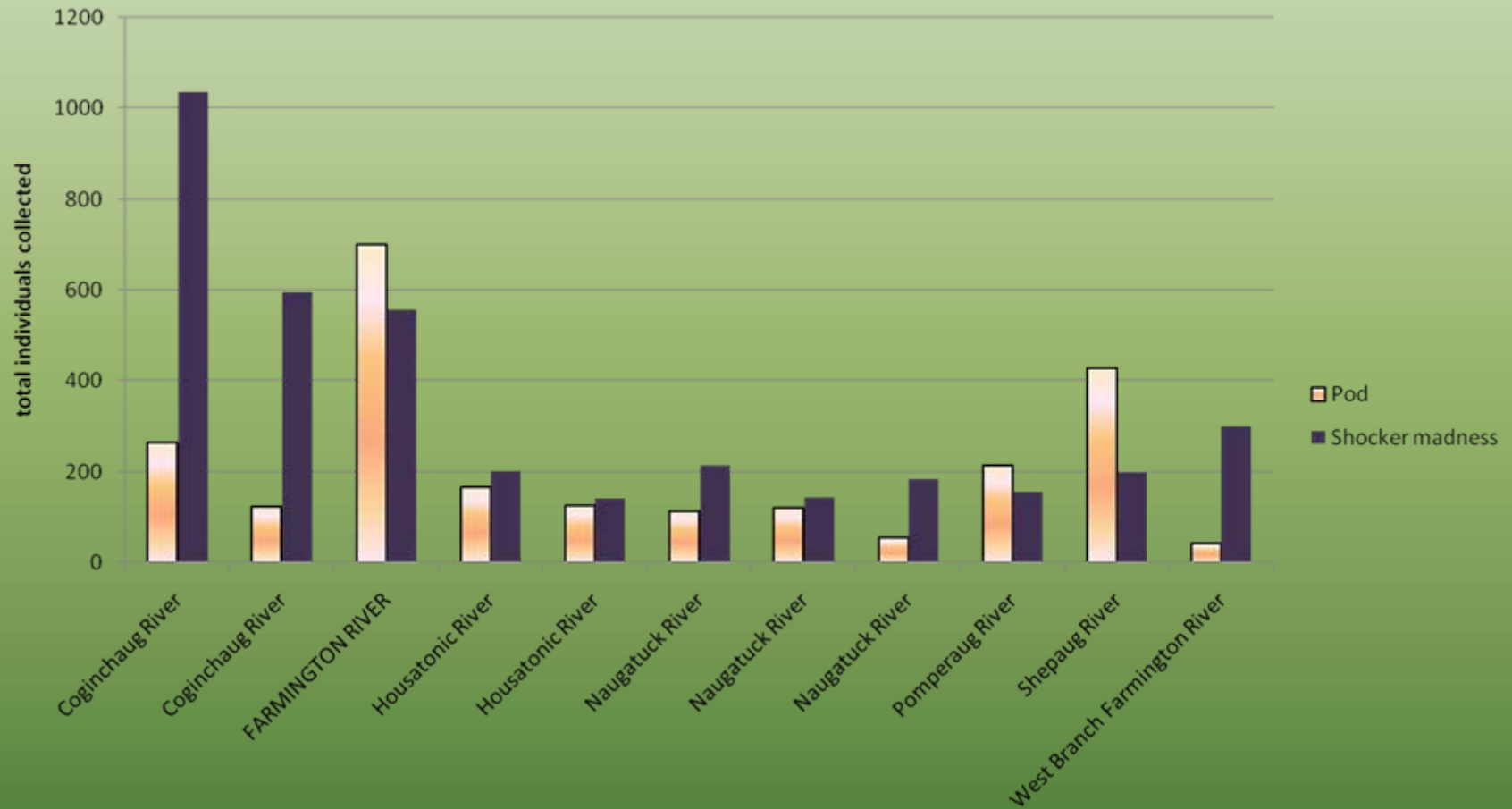


# Total Species Year 1



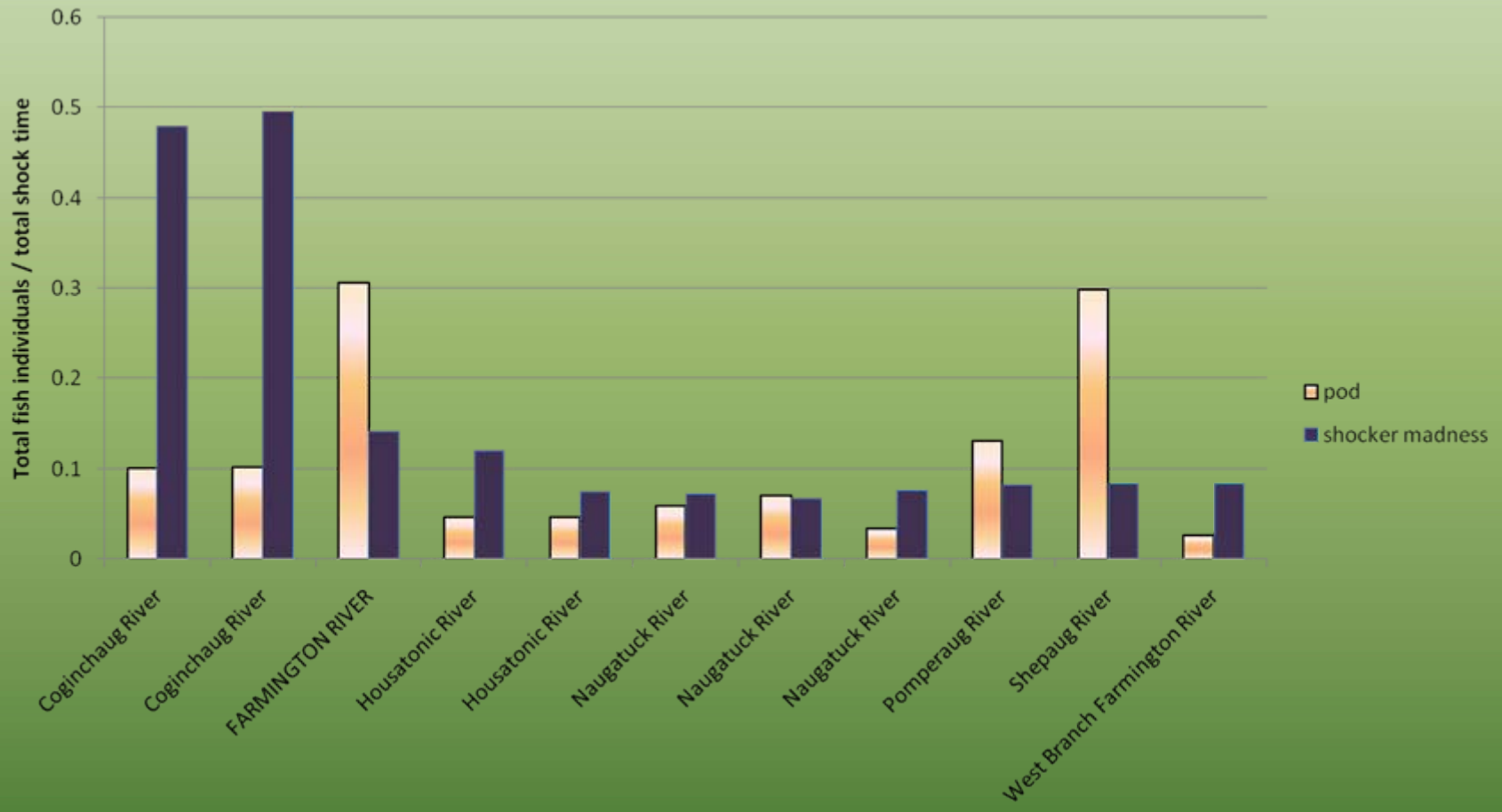


# Total Individuals collected year 1





# CPUE Year 1





# Answer

- Are final ALUS assessments comparable when data are collected using a backpack versus traditional streamshocker(s)?
- **So far = YES**
- **Mean IBI** ( $P = 0.68$ )
- **7/11 are similar**





# Overall comparison

| Category                       | Pod                  | Shocker madness                |
|--------------------------------|----------------------|--------------------------------|
| Overall MWIBI                  | Comparable           | Comparable                     |
| Total species                  | Comparable           | Comparable                     |
| Total individuals              | Usually Less         | Usually More                   |
| CPUE                           | Usually comparable   | Usually comparable             |
| Stocked Trout                  | Few                  | More                           |
| Large adult individuals        | Few                  | More                           |
| Negatively buoyant individuals | More                 | Few                            |
| More likely to add             | Small minnow species | Large adults (stocked species) |
| Total cost                     | Cheap                | Expensive                      |
| Sample effort                  | Minimum              | Maximum                        |
| Choice of method               | Primary              | Secondary when needed          |
| Donut cost                     | Cheap                | expensive                      |



# Conclusions

- **Appears the backpack method produces equivalent fish community assessments as traditional streamshocker method.**
- **In fact the backpack data may be more accurate for ALUS.**
- **Substantial resource savings in both staff time and equipment**
- **Ability to WPLR to obtain greater amount of data on larger rivers.**
- **Need to obtain larger paired data set**
- **Care in using results**
- **Need to validate VT MWIBI for use in CT.**





**Discussion?**