

2017 BIOMONITORING RESULTS:

**GORE CREEK
RED SANDSTONE CREEK
EAGLE RIVER**

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- Background (Sampling, Processing, Identification)
- Data Analysis Methods
- Results from 2017
- Comparison with Previous Years
- Looking Forward

Sampling







Mayflies



Stoneflies



Caddisflies





- *Polypedilum sp.* (Midge)
- Order = Diptera
- Climber
- Shredder
- Tolerance Value = 6.0



- *Drunella grandis* (Green Drake)
- Order = Ephemeroptera
- Clinger
- Scraper, Predator
- Tolerance Value = 0.0

Gore Creek and Eagle River (2017)

- 13 Mayfly Taxa (Ephemeroptera)
- 19 Stonefly Taxa (Plecoptera)
- 16 Caddisfly Taxa (Trichoptera)
- 100 Identified Macroinvertebrate Taxa
- 27,108 individuals

MMI: Multi-Metric Index

Measures overall health of aquatic communities in Colorado (two biotypes)

EPT: Ephemeroptera, Plecoptera, and Trichoptera Measures sensitive taxa

HBI: Hilsenhoff Biotic Index

Measures nutrient tolerant taxa

- Combines 5-6 equally weighted metric values
- Scores based on relative percent comparison to a reference condition
- Values range from 0.0 to 100.0
- Higher values indicate better aquatic conditions

MMI Biotype 2

50.1 - 100.0

Attainment

42.0 - 50.0

Grey Zone

0.0 - 41.9

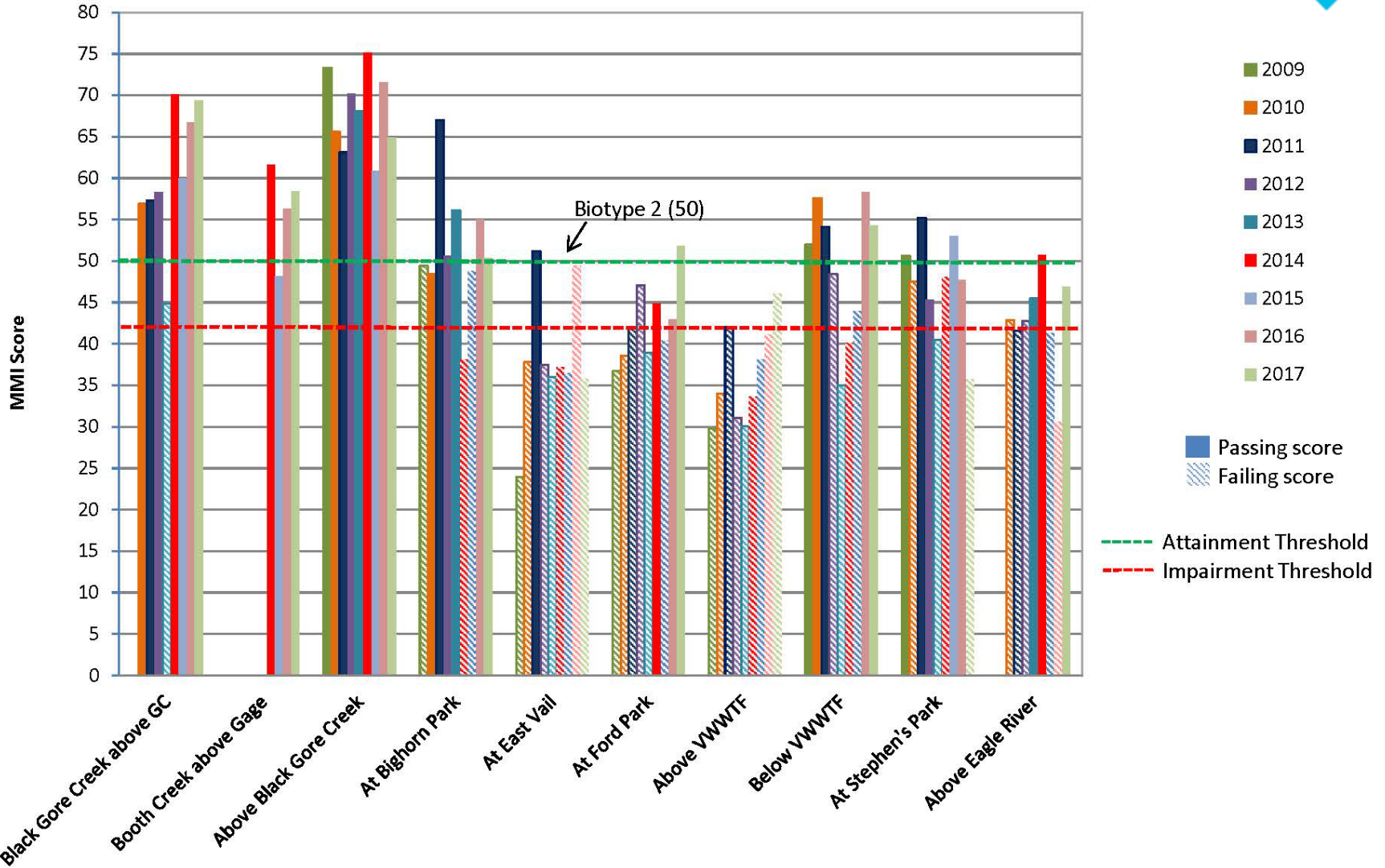
Impaired

Gore Creek

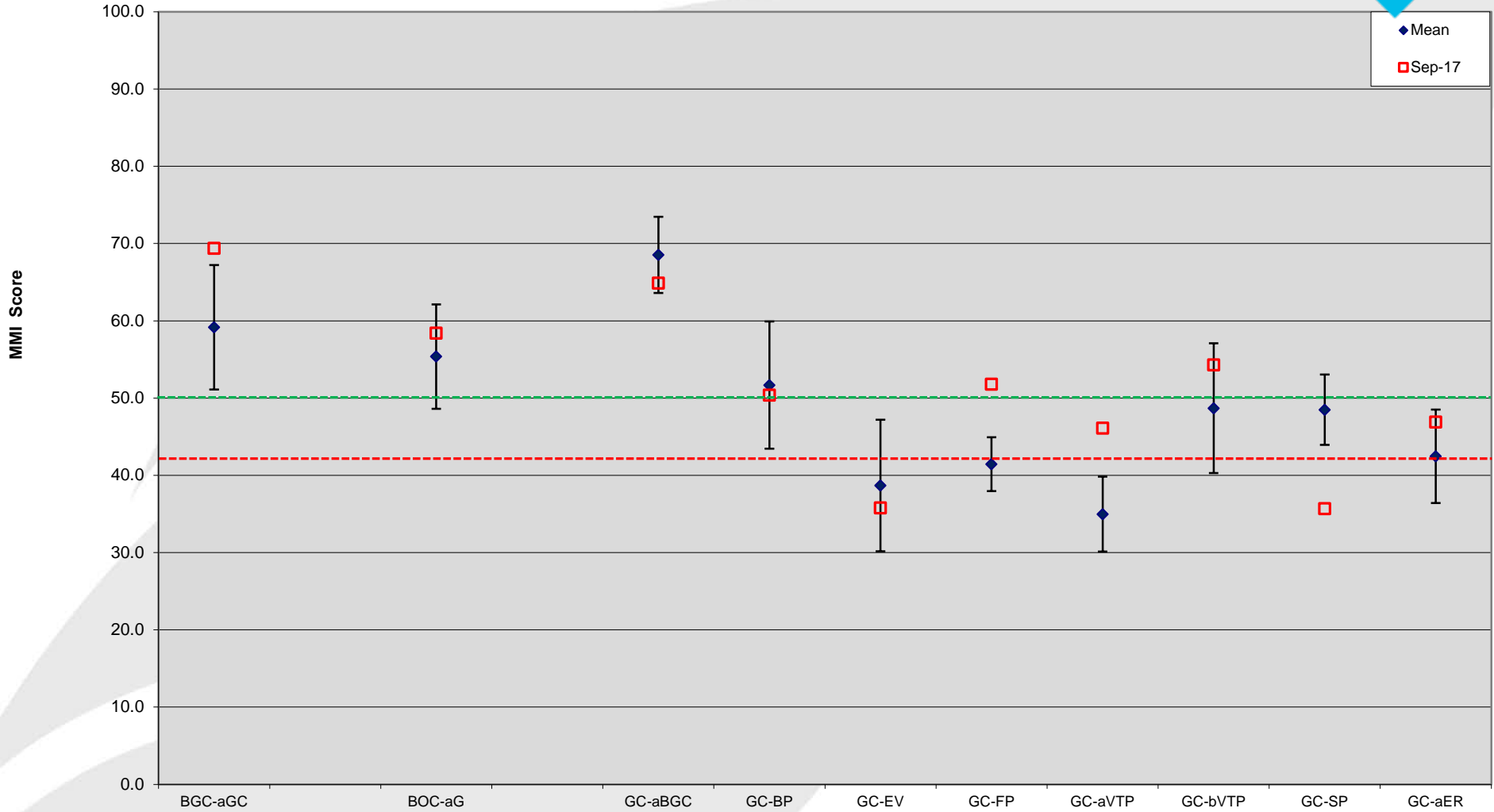


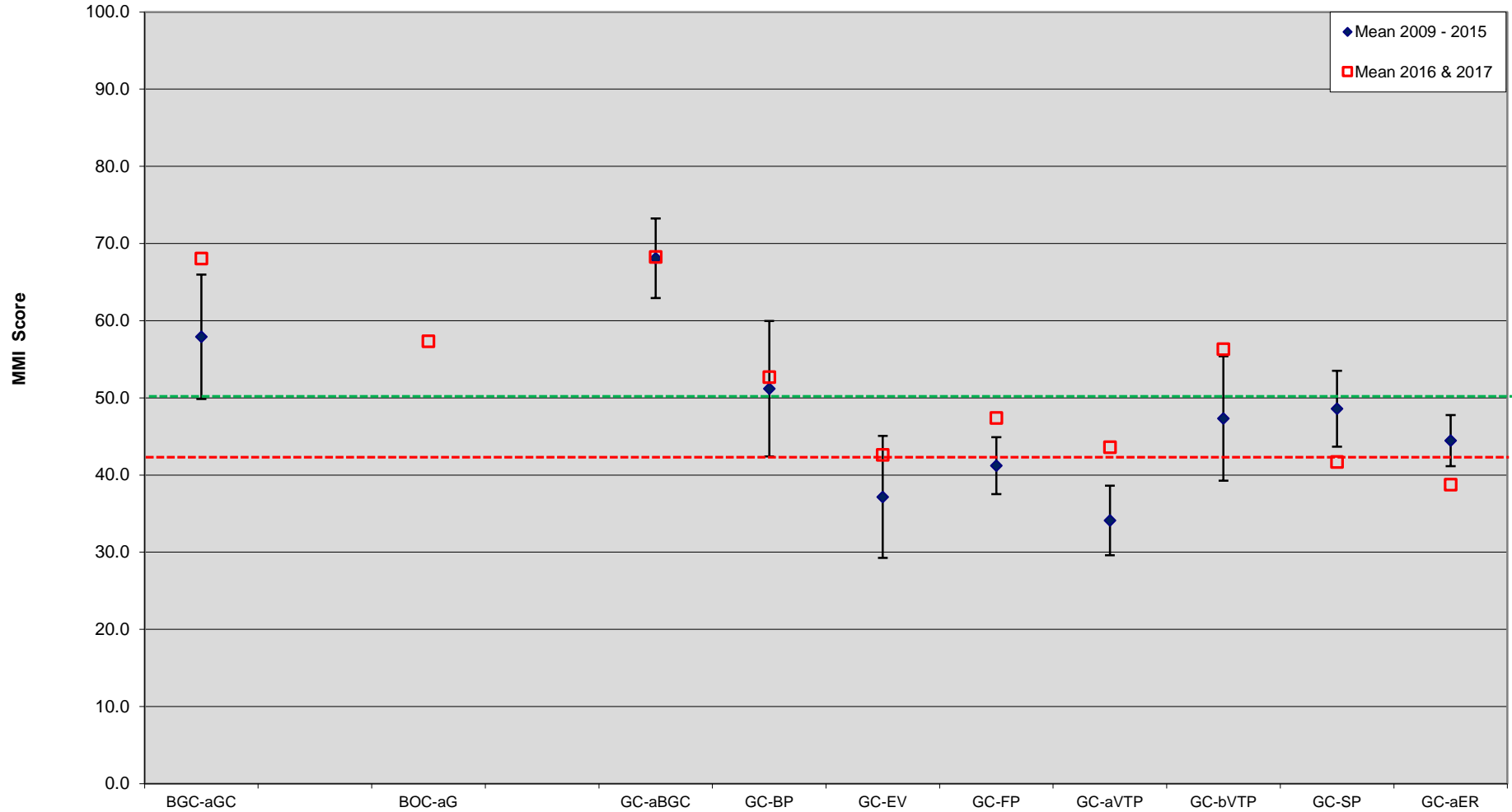
Gore Creek MMI

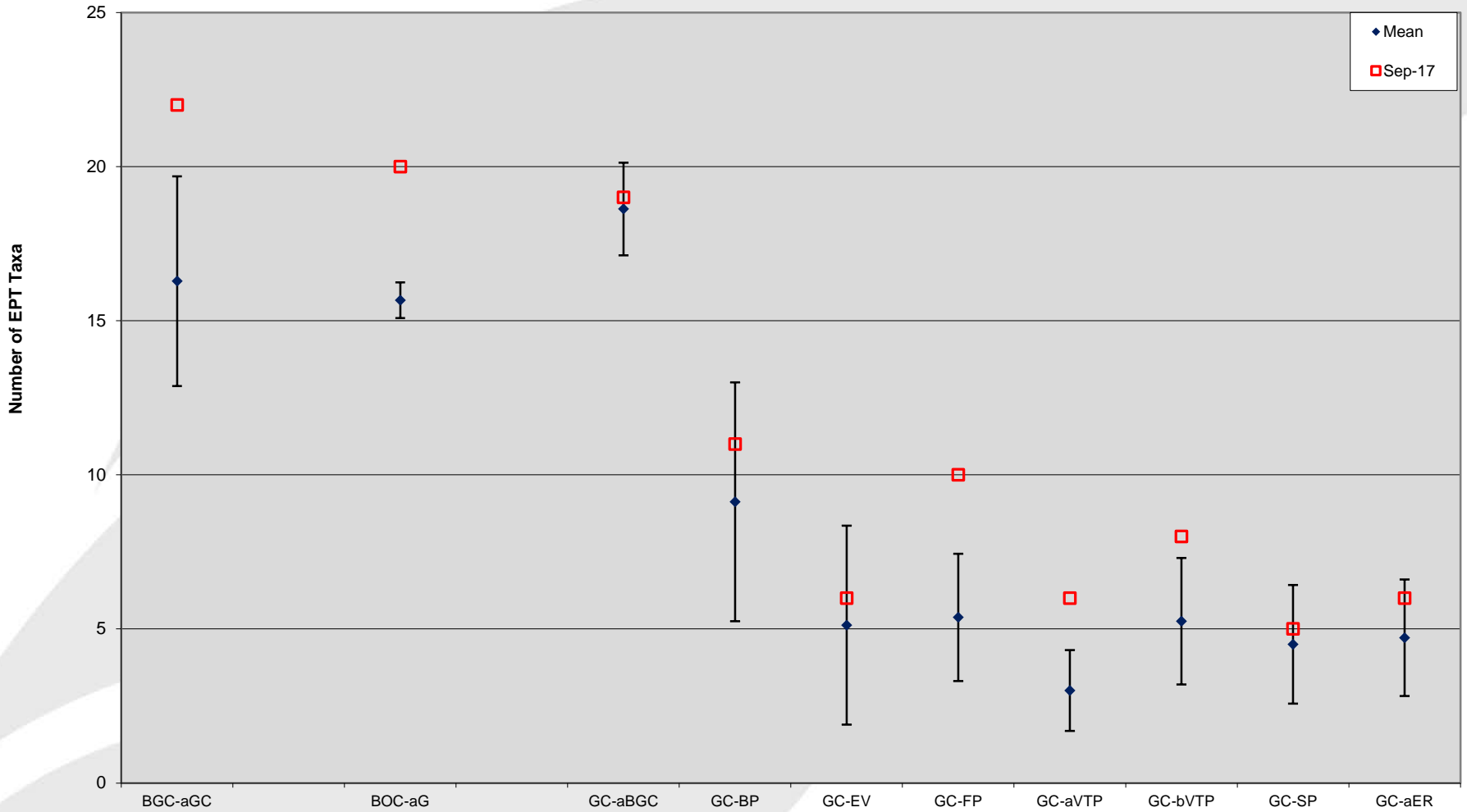
Fall 2009-2017

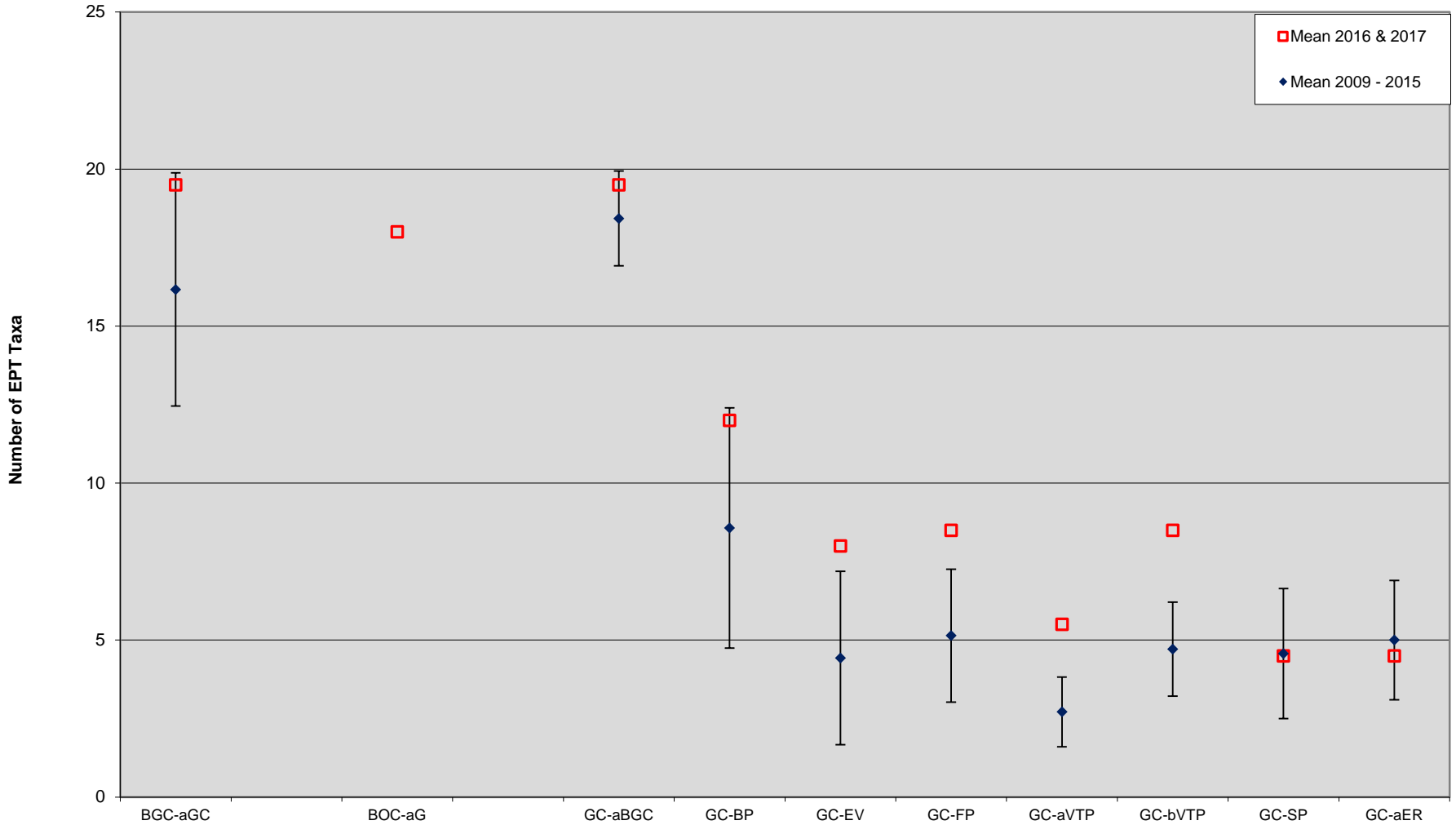


Gore Creek MMI

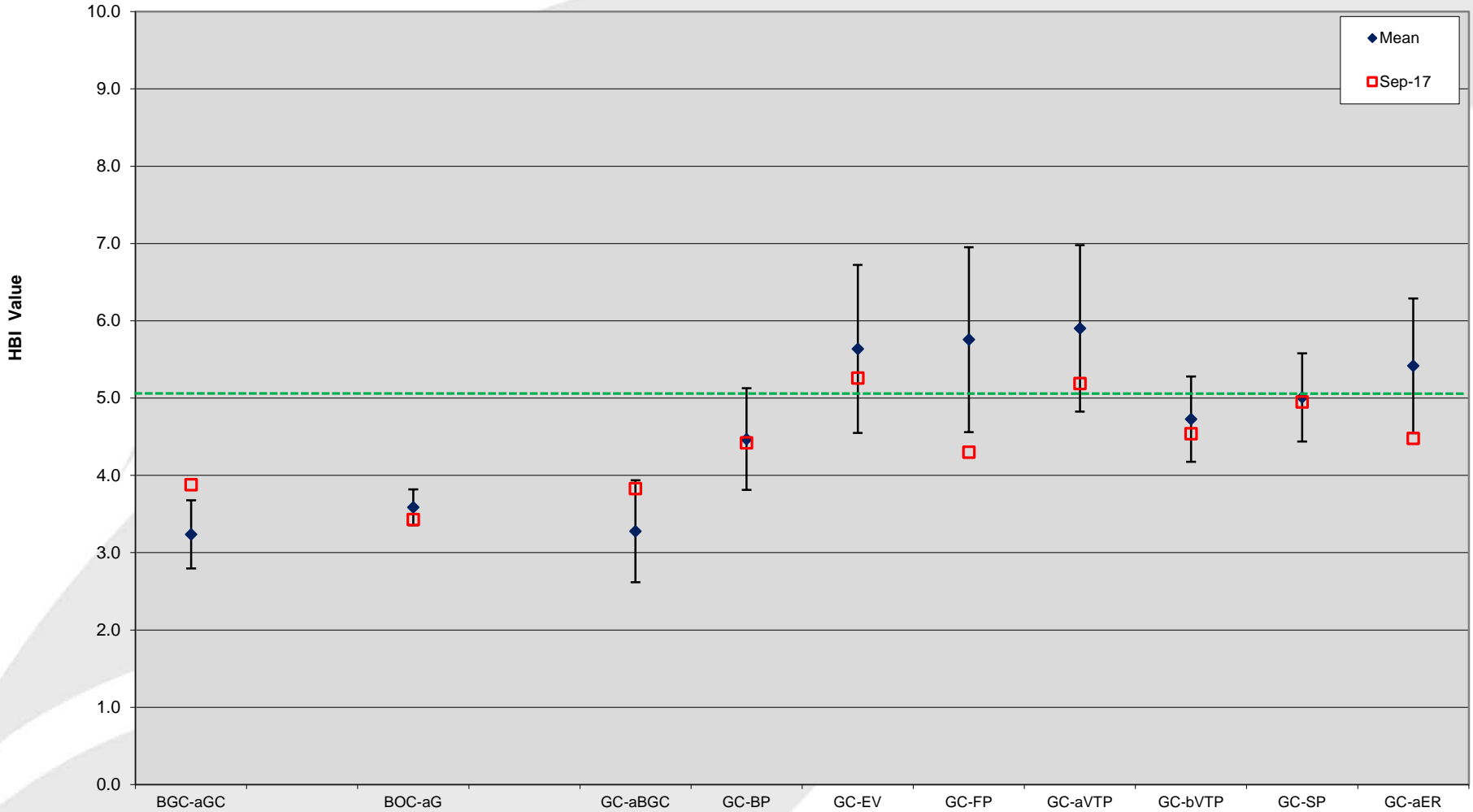






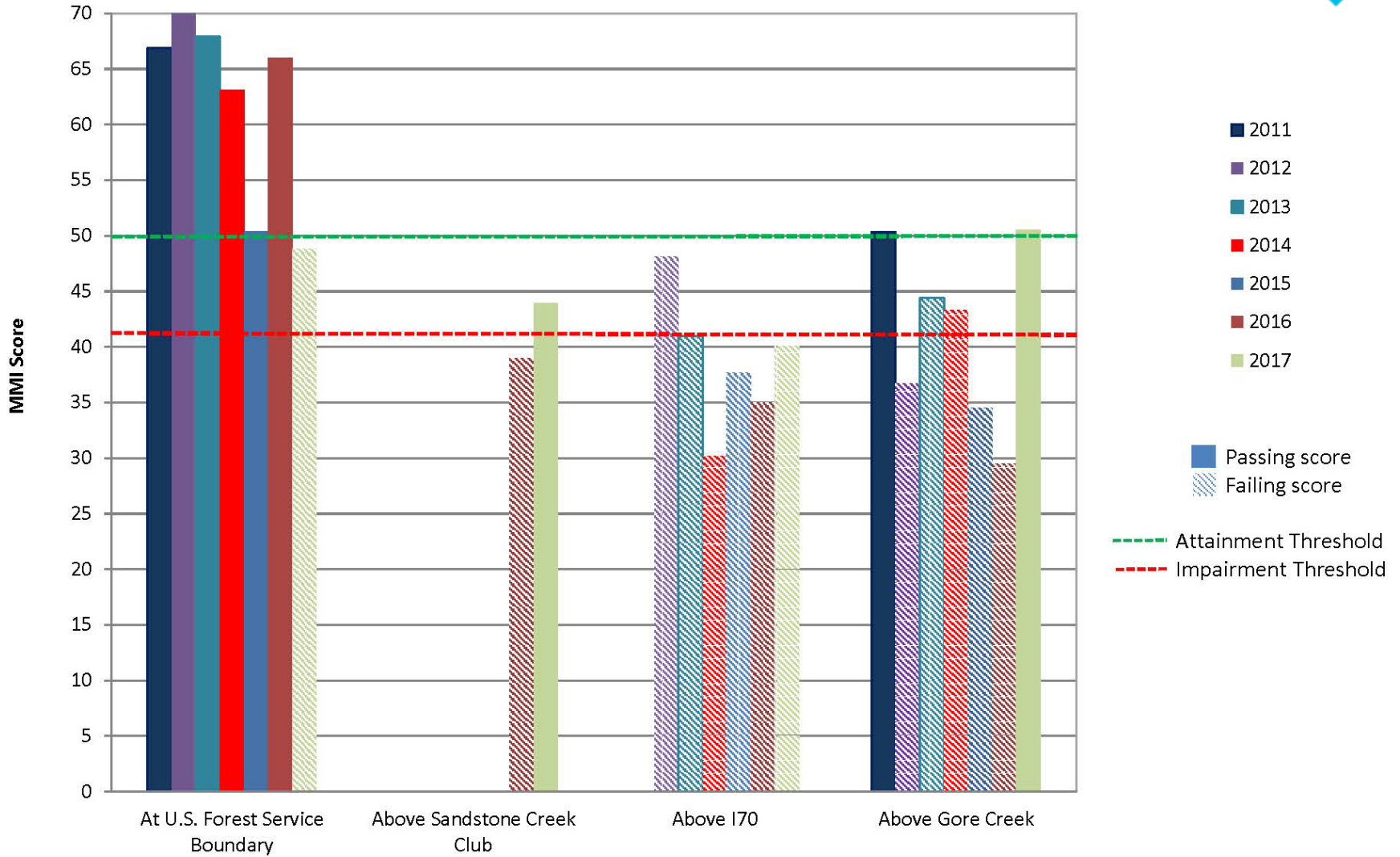


HBI Values (Fall 2017)



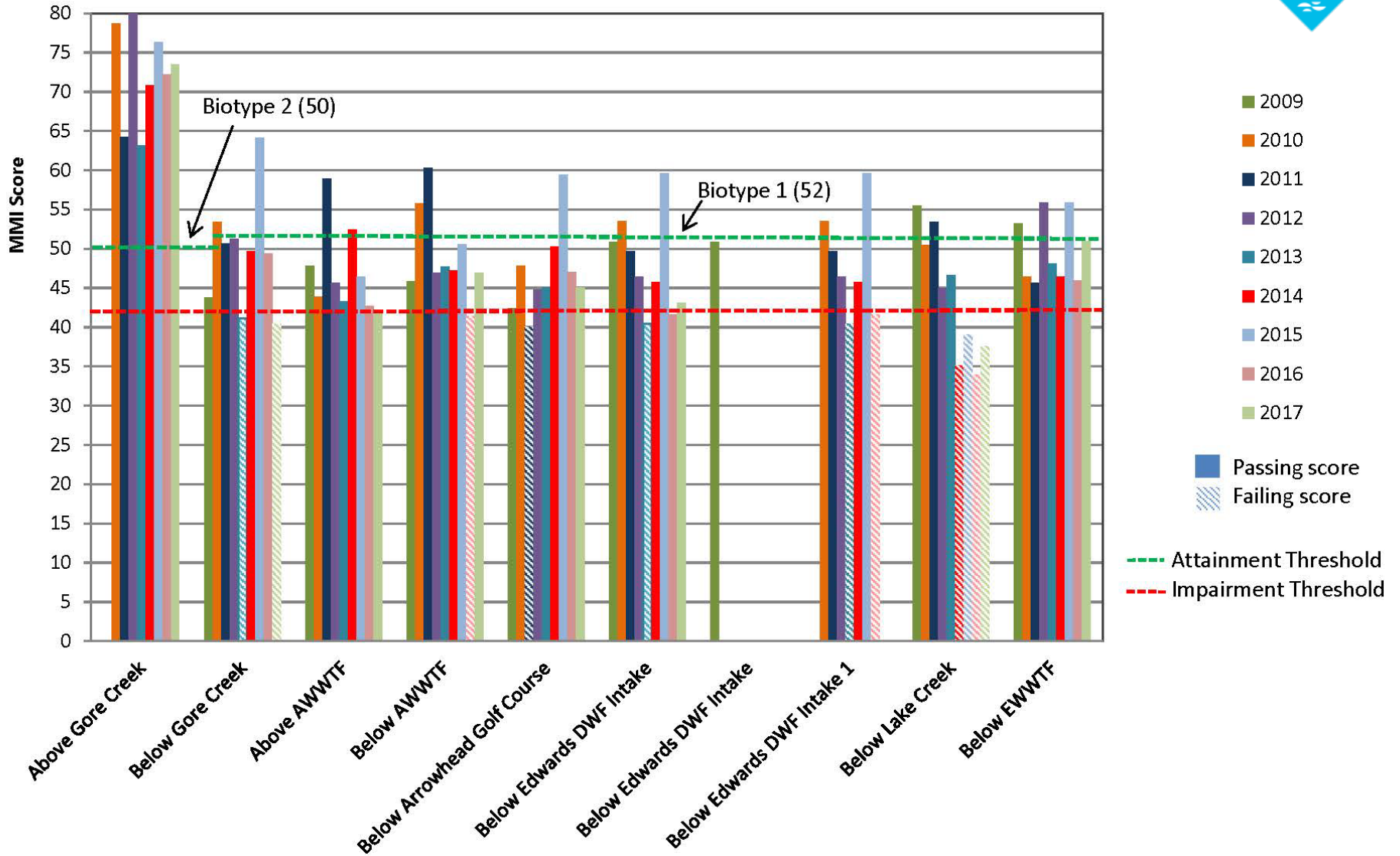
Red Sandstone Creek

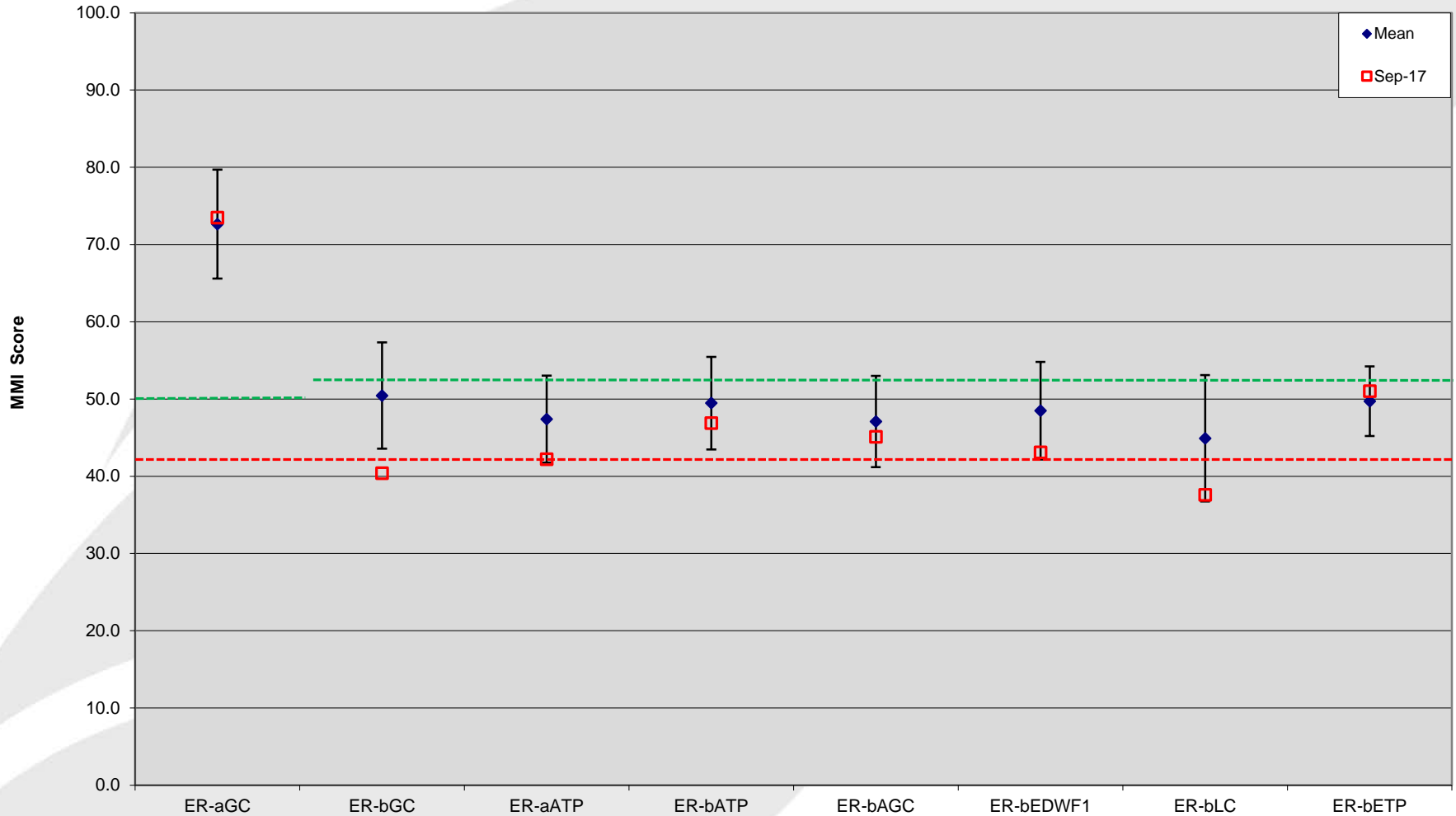


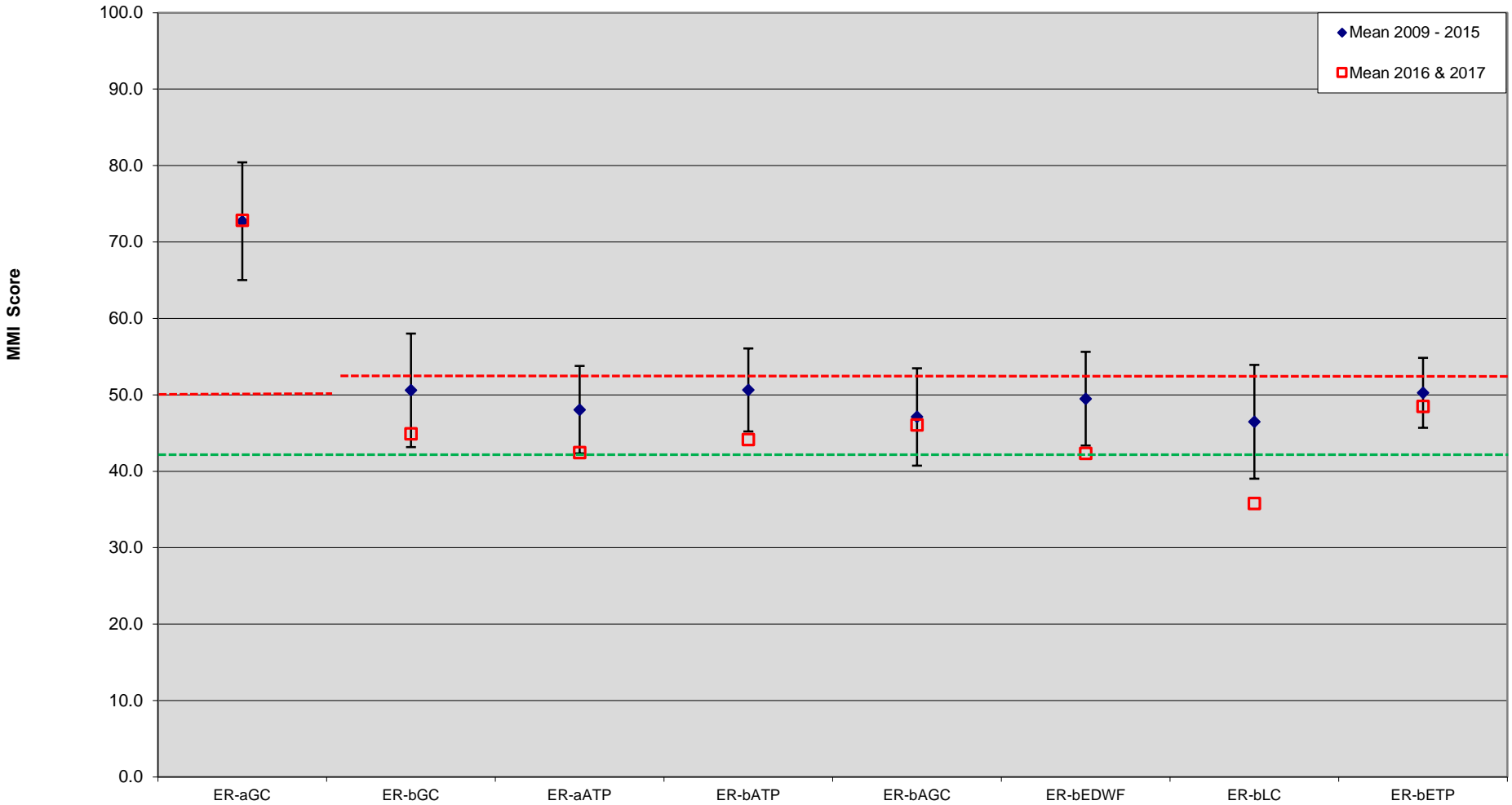


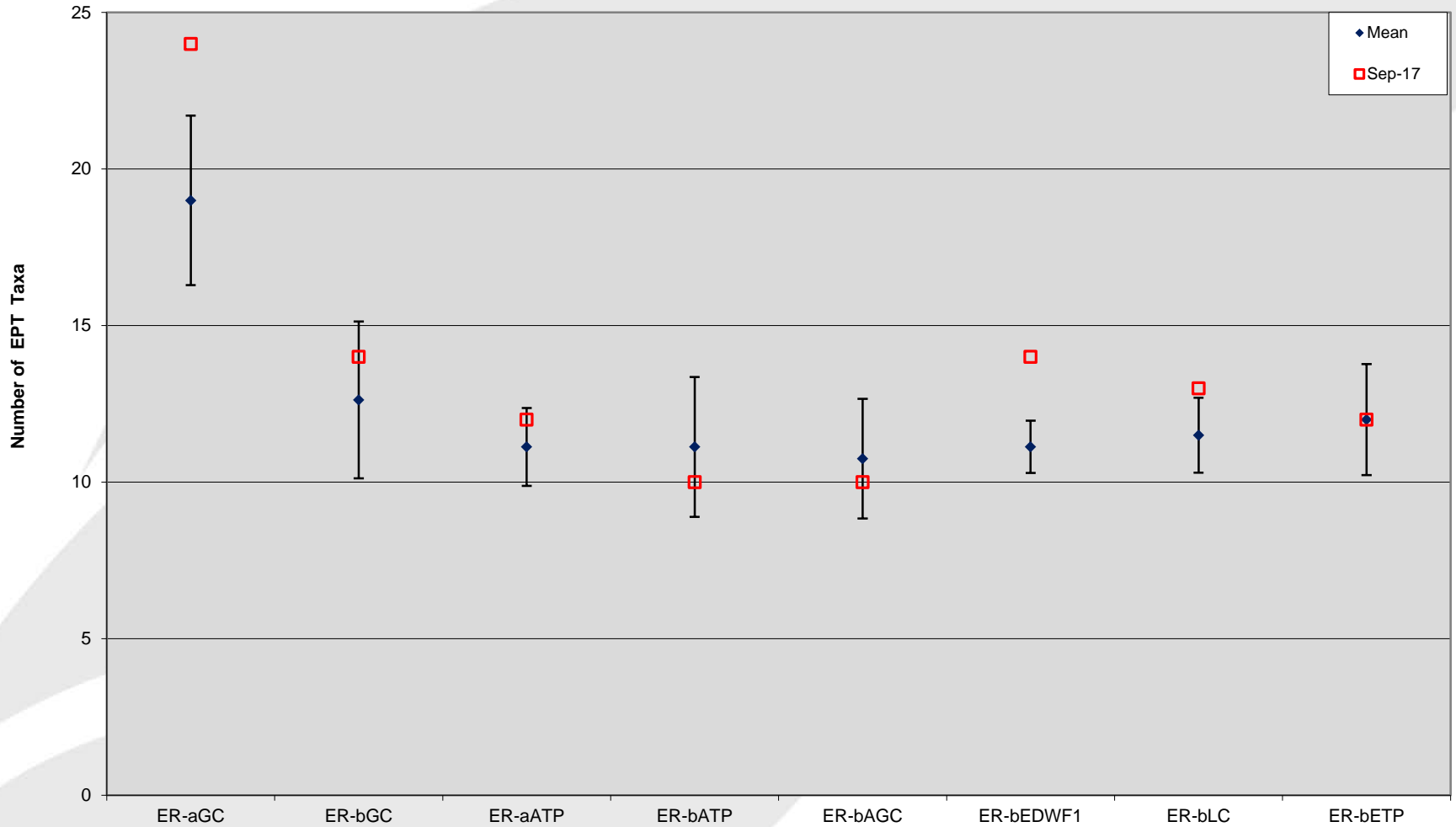


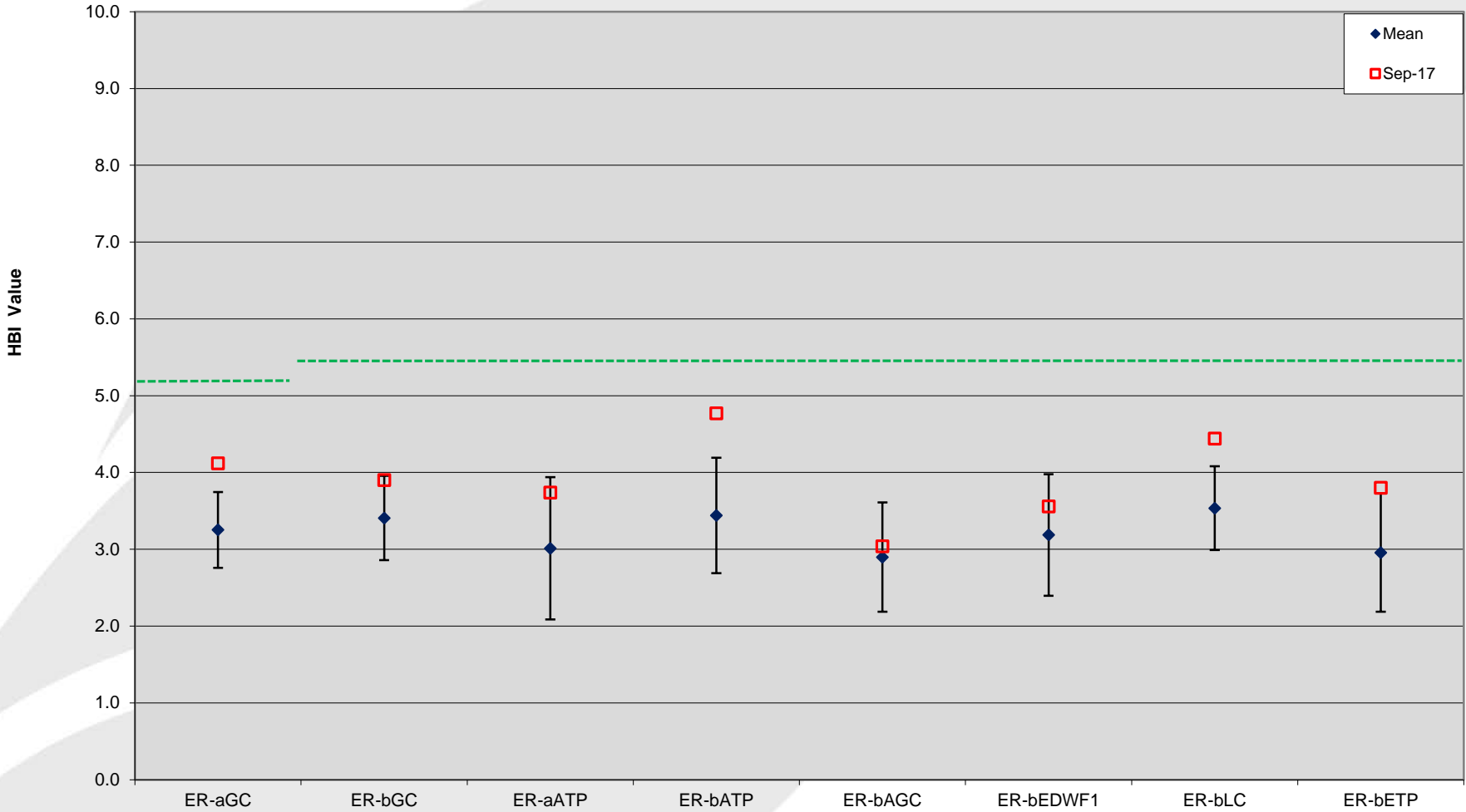
Eagle River MMI Fall 2009-2017











- Most stress to aquatic life found in areas of urban development
- Some signs of improvement in Gore Creek
- Signs of increasing stress in the Eagle River
- Changes in monitoring and data analysis - 2018

- MMI will change from version 3 to version 4
- Other analysis tools will remain the same
- New reference site on Gore Creek
- Monitoring Black Gore Creek prior to highway construction

Black Gore Creek



Black Gore Creek



