

GRASS RIVER & TRIBUTARIES RESTORATION ASSESSMENT: 2011 FINDINGS

Three Lakes Association

presented by

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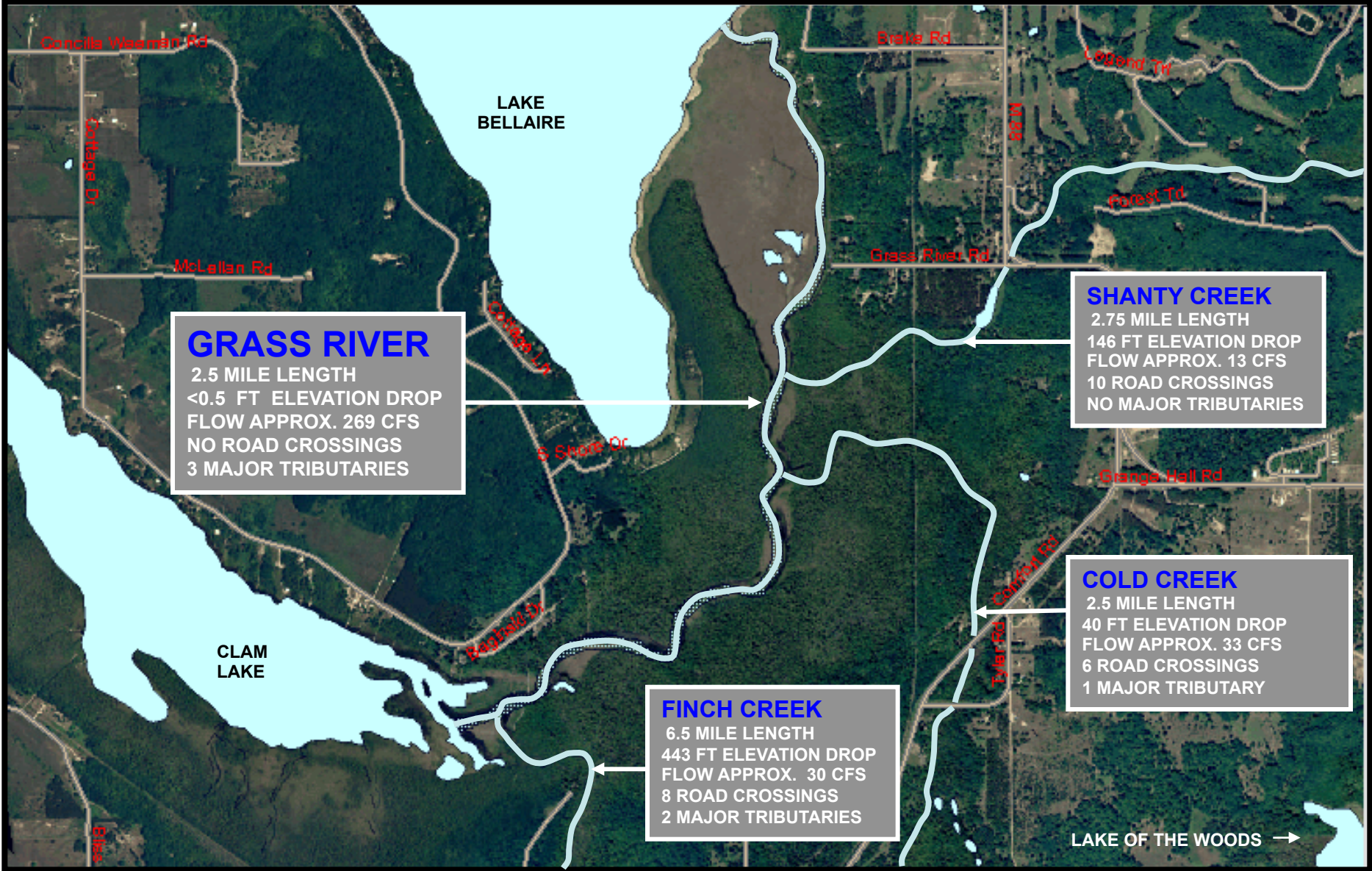


Project Objective:

Determine if human activities are contributing to sediment loading into Grass River from its tributaries and warrant corrective intervention

- Macroinvertebrate population
- Barriers to fish passage
- Road-stream crossings (culverts)
- Long-term temperature monitoring
- Stream flow measurements

PRIMARY AREA OF STUDY



Macroinvertebrate Sampling

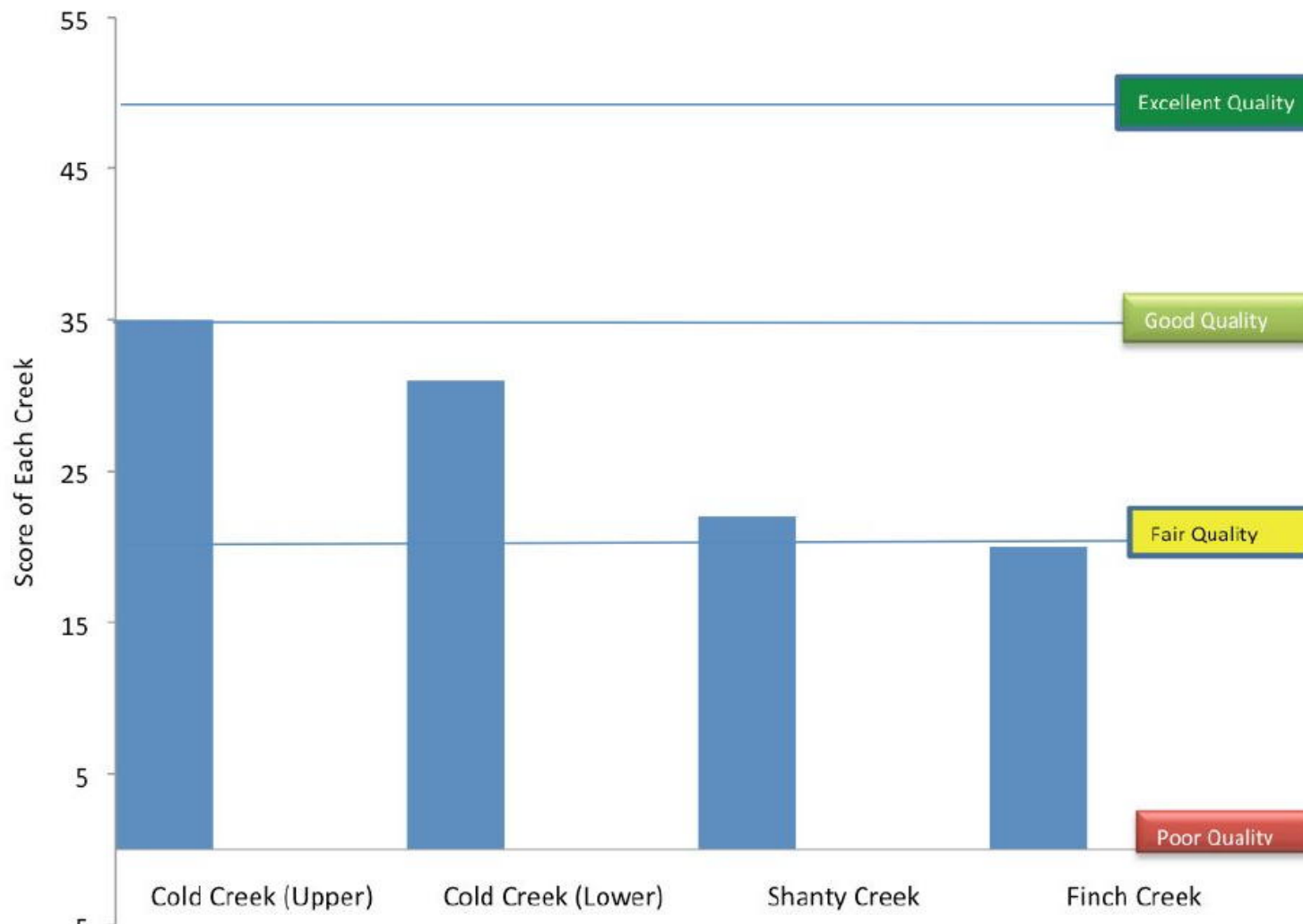


Gary, David, Erik in Finch Creek



Roger, Braden, David in Cold Creek

Macroinvertebrate Scores



Evaluating Road-Stream Crossings



Trish and David in Cold Creek



Jim, David, Dean, Carrick in Finch Creek

Effect of Undersized Culvert



Examples of Perched Culverts



Cold Creek outlet at Alden Highway



Finch Creek east outlet at Elder Road

Example of Fish Barrier



Storm Water Damage



Flow Measurements



Roger, Dennis, Braden in Grass River



Dr. Paul Richards and Carrick in Shanty Creek

Long Term Temperature Monitoring



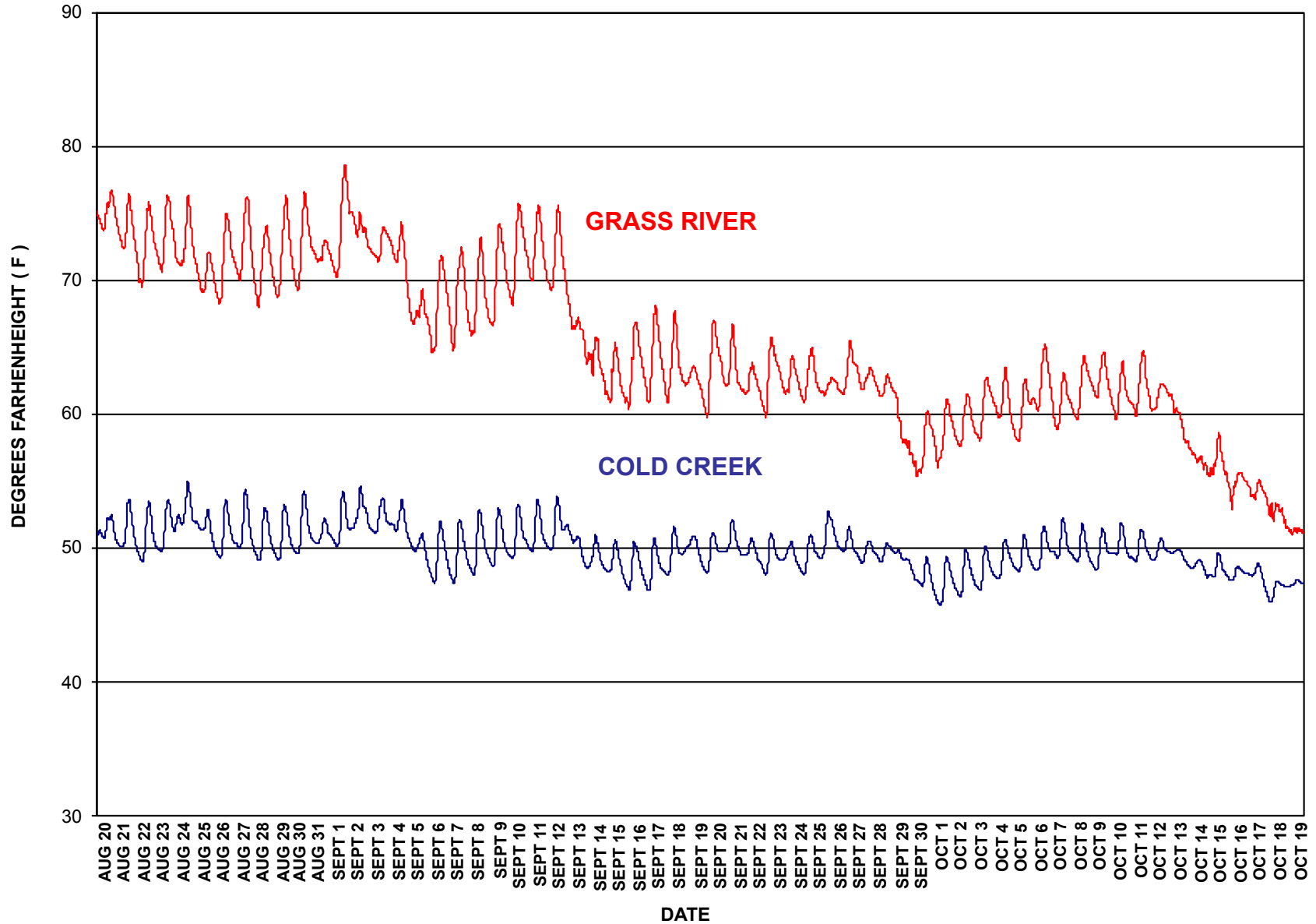
Carrick and Erik in Cold Creek



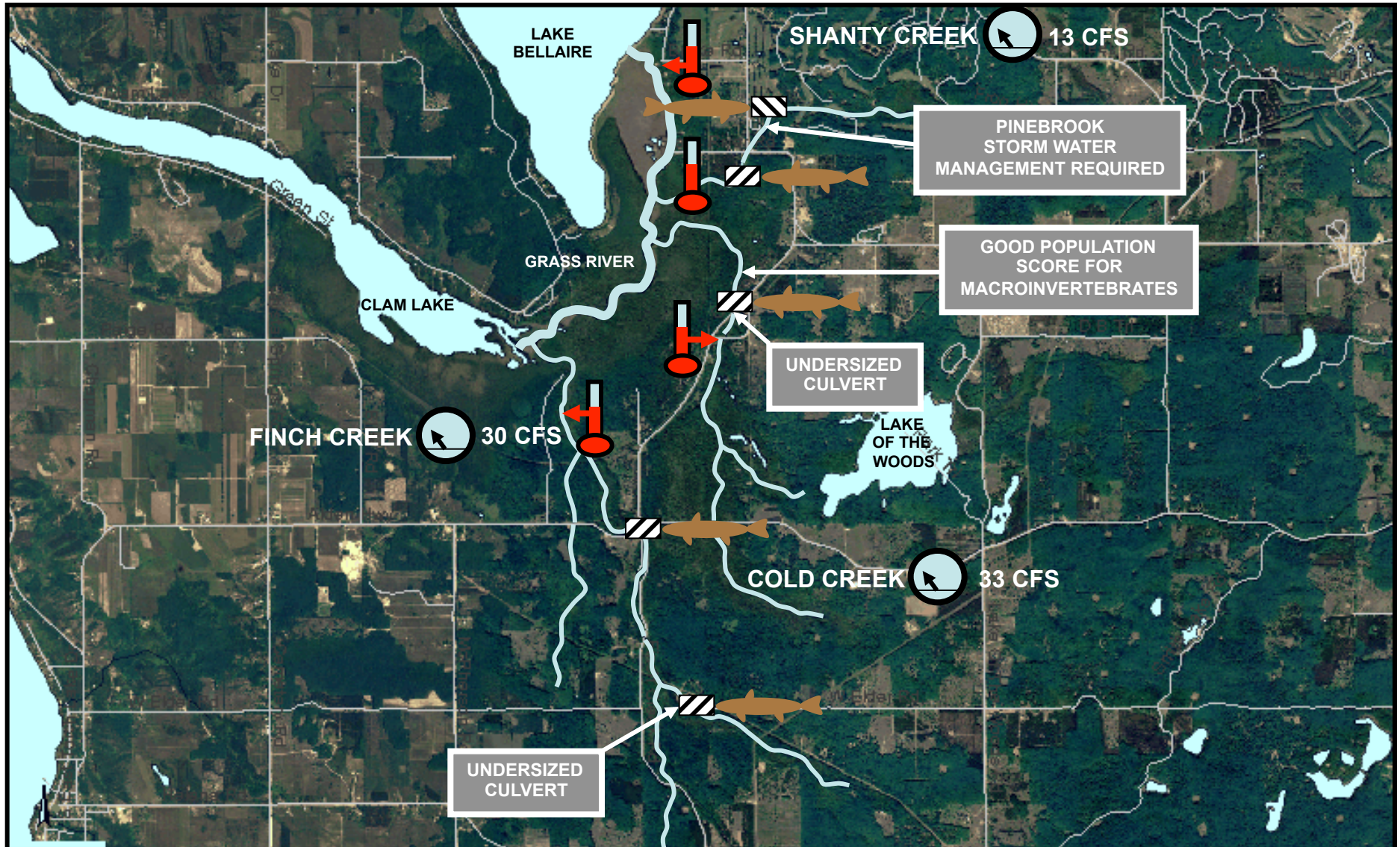
Completed installation in Shanty Creek

DAILY TEMPERATURE VARIATION AUGUST 20 THROUGH OCTOBER 19

(TEMPERATURE RECORDED EVERY 15 MINUTES)



Conclusions



Conclusions

1. **BIGGEST CONCERN: Lack of storm water management** around Shanty Creek, especially the Pine Brook development area.
2. **Barriers to fish passage:**
 - An abandoned hydropower dam on Shanty Creek
 - A small dam with a footbridge...sand trap on Shanty Creek
 - Perched culverts...
 - Alden Highway over Finch Creek
 - Elder Road over the east branch of Finch Creek
 - Comfort Road on Cold Creek

Conclusions

4. **Undersized culverts**, two examples:
 - Elder Road over east branch of Finch Creek
 - Comfort Road over Cold Creek

5. **Macroinvertebrate population scores, based on spring sampling**
 - Only Cold Creek (upper reach) could be classified as good.
 - Shanty Creek, Finch Creek, and the lower reach of Cold Creek indicated **fair water quality**.

6. **Stream flow measurements were similar to those made in 2005**

Acknowledgements

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- Trish Narwold, Norton Bretz, and pilot Jim Argo
- Paul Richards, Kevin Cronk, Braden Ackerman, and Jim Kelderhouse



TLA' s 2011 Summer Interns:
Left to right, Roger Barber, Carrick
Conway, Erik Youmans, David Witt