New field methods & applications of tools for research and management

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1. Where are wetlands?
2. What are their dynamics?
3. How will they change?
4. Where to focus climate adaptation efforts?
How are pond area and volume changing over time?
New field methods
Monitor hydroperiod using ibutton dataloggers
1. Detect **drying events**
2. Continuous **water temperature** monitoring
Couple hydrologic monitoring with ecological surveys
Hydrologic models
  • calibration datasets
  • 2 years daily/frequent time series data

Vulnerability assessment
  • ecological data tied with hydrologic types of wetlands
Putting all the pieces together: Amphibian vulnerability to climate change in WA National Parks
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Monitor hydroperiod using ibutton dataloggers
Adaptive Capacity?
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(Non-climate stressors?)
FIGURE 30. Airplane fish planting.
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Next steps:
Expand to additional ecoregions
Add water temperature modeling

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What do you need to do?

• Conservation & management
  – Baseline monitoring
  – Place-based vulnerability assessment
  – Conservation prioritization
  – Management decision-making

• Research
  – Connectivity
  – Species responses to climate change
  – Carbon sequestration & release
  – Climate impacts on food webs