**PIN**

PRRT – monitoring continuous

Measure differences from point sources, impoundments - above and below

Dolby Ponds – 30 minutes. 1 meter intervals – temperature and light long term monitoring for algal blooms. May/June to October. Realtime weather station. Houlton Band – 6 sites on Meduxnekeag. Di

Tributaries

Climate change

**Lake assessment data DEP**

No continuous data. Profile to determine where to take samples.

Lake monitoring program – every other week sampling August

500,000 temp records since 1970. 31,000 surface reading

**Tom Danielson – DEP**

340 sites. Rotating approach – 2014 focus on Aroostook.

50 Hobos – July to August – 10-15 minutes

Conservation planning

Relating temperature to biota – identifying thresholds

Temps might hit streams in more developed areas harder due to other stressors.

Started collecting data in 2002

**Richard Dill – DMR**

Suitablity of rivers. Can we grow salmon? Describe rivers potential.

Backcast productivity. Would like to forecast.

Continuous – 400 sites. Typically hourly.

Paper copies back to the 1960’s.

15-20 loggers/year

**Merry – MDIFW**

Samples back to 1930’s

Lake profile data back to 1950’s

Continuous recorders – not sure where

Cold water species management

Identifying lakes that will be resilient

What lakes will we loose?

Brook trout – regulations.

Using temperature as a parameter to prioritize fish passage projects.

Heavily geared towards lakes and ponds.

**USGS** – climate monitoring in New England. Hydrologic response in New England. Instrument each one with air and water temps in Maine. 6-8 years of continuous. One site since 1968. Center volume of spring runoff for 80-100 years. Stewards of lake ice out data (150 years).

**TNC** – lacked temperature data for resilience studies. Cold water/warm water habitat.

**Sean Smith** – Bear Brook – paired watersheds. Sebago Lake watershed study since 2010 for modeling. Long time series. Temperature sensor in Songo. NES project with UNH – coastal pollution. Groundwater inputs to small ponds.

**Mark Whitting** – DEP clamshell project

**Steve Koenig** – habitat suitability – reach level/site level. Remnant dams heat sinks. What happens when we remove a heat sink?

**Antonio** – maps of DPS showing quality/resilience. Priotization

**DSF –** run of river hatcheries. YSI in Pleasant River 10 years every 15 minutes.East Machias YSI temp. Gardner Lake Hatchery.

**Scott Craig** - EBTJV and NGO’s. 240 sites. Mainstem Narraguagus from Beddington Lake 5km 30 minute data intervals. Year round. Intensive sampling above and below. Cooling downstream.

**Rick Cunjak** – related to students – 2- 5 year datasets. Catamaran Brook continuous 25 years. 1st to 4th order. New Brunswick – DFO long term. Daniel Casey temperature managing of data. Many watershed groups. New Brunswick Data Warehouse. Substrate water temperatures – continuous. John Gilbert – Irving.

**Joe** – Research projects. 2-4 years. Fields Pond. Northern Lakes – Clear Lake. Ice cover. Smaller Lakes around Augusta. Longest time series 2004 – loggers upper down to estuary. 2009 – directly above and below dams.

**Fred Seavey** – fish passage planning at Lake Outlets. Monitor at outlet. 15 minute intervals.

**Shorey Brook**

**Sandy River**

**Mark Prout** – White

**Graham** – 1996. 1999 Pleasant and Dennys. April to July. Sheepscot 2006. Narraguagus 2009. 1-5km above head of tide. Estuary and Ocean temperatures.

**Julia Daly** – 2007, 2010 Year round sub-hourly lakes above 2000 feet. Interested in response of ponds to climate change. Thermal stability. Ice duration. Decrease to 8-10 sites.

**Dan Buckley** – 2007 27 lakes a year. 35 lakes monitored for a season.

Department of Conservation – State Park Rangers/Baxter

Wymans and Cherryfield – Air – may affect historic records

Maine Drinking Water Program

Poland Spring

St. Croix International

Ski Slopes

Eastport – Boyton Stream/Municipalities.

NRCS

Cooperative Extension

Soil and Water Conservation Districts

Land Trust Conference

Maine Water Conference

Lotic and FB Environmental Consultants

Lake Environmental – 12 Lakes in Western Maine.

Casco Bay

Karen Wilson

Park Service

Jordan Pond –

Holly Ewing – Bates Lake Auburn

Colby – Great Pond

Sebago Portland Water District.

Hydro Operators

Wildlife Refuges

TU

MDIFW Hatcheries.

Vital Signs – GMRI

Objectives –

1. Evaluation - Seasonal reach scale management planning. Forecasting where reaches would be affected
	1. Small impoundment – effects on thermal regimes
2. Prioritization - Identifying resiliency areas for cold water management. Catchment and reach scale. Location of stocking locations.
3. Groundwater inputs to systems – thermal imaging. Is there a thermal problem in the region? General trend.
4. Broad climate change
5. Identify remnant dams - answer the question which ones are problems. Expectation of what temperature should be.

**Funding**

Exchange Network – EPA

 $500,000 WQX format – beginning in November

NALCC -

* Climate prediction
* Environmental assessments
* Impact of humans on landscape

Work at a scale that’s doable – Start downeast.

Identify gaps.

Identify summer breakpoint – 30 days on either side

All year – Full August

Ben send out format to group

Digital data –

Downeast Group

Data Gap

Protocols

Outreach

Get notes out

Pilot Downeast

Ben/Jed send out email with minimum criteria ftp

Solicit info from missing groups – Jed will send out list looking for contacts

Funding – EPA Angie

Linda will talk to Volunteer Lake Monitoring Program

Objectives – Jed will summarize

 Bob Lent’s three bins

Feedback to Ben on Site

Field Measurement Standards

Spatial distribution

Geographic groups

Data management and sharing

 Access issues

SSI – Sean will check on

DEP – Agency wide Oracle/SDE

GMRI – Hosting datasets

Downeast Pilot – Steve, Scott, Ernie, Antonio, Richard

Existing Data – Richard, Merry, Tom

Sampling Data/Distribution - Fred, Richard, Merry, Tom

 What’s the ideal network?

Data – Jed/Tara/Angie

Protcols – Dan/Linda/Fred

End of March