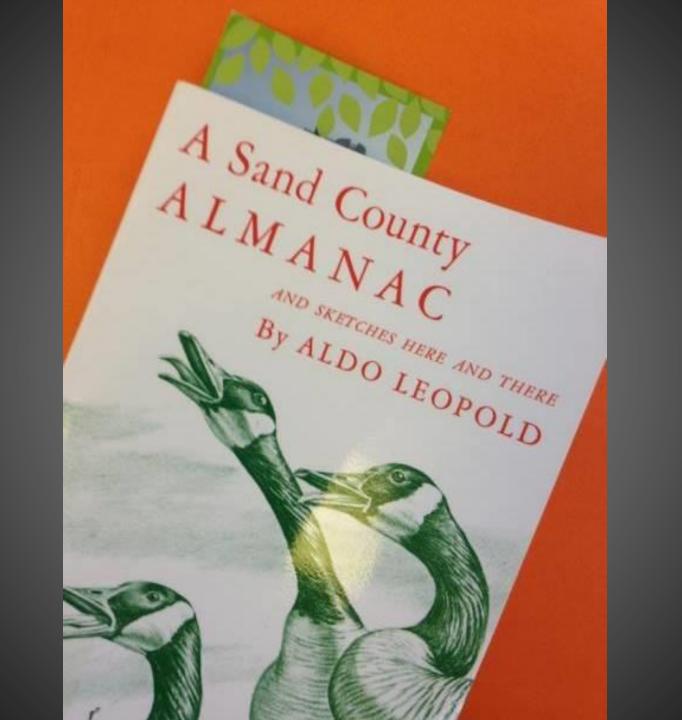
Land Stewardship: Challenges and Opportunities

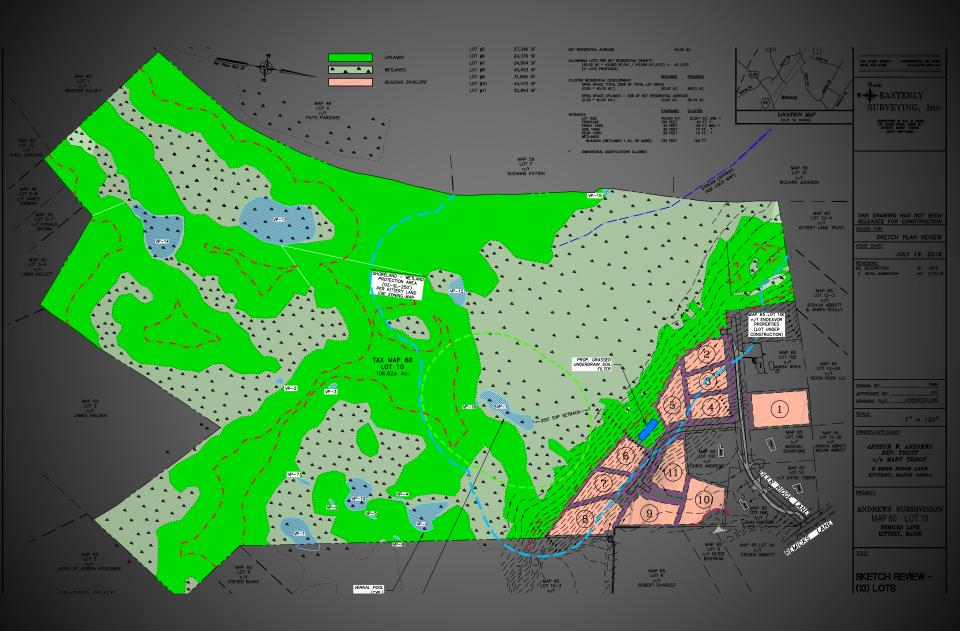
Kittery Land Trust Conservation Conversations

Tom Brightman
Wildlife Habitat Biologist
New Hampshire Fish & Game
NonGame & Endangered Wildlife Program
March 2, 2020



"A land ethic...reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity."

— Aldo Leopold



Young Forest: A History of Disturbance

Ice Scour and Flooding
Beaver Impacts
Wind and Ice Storms
Fire
Abandoned Farmland

The Young Forest Project



Species of Greatest Conservation Need





Joel Trick, USFWS

Young Forest/Early Successional Habitats



Alder Swales

Chuck Fergus



Old Farm Fields and Pastures

Jim Oehler

Pine Barrens



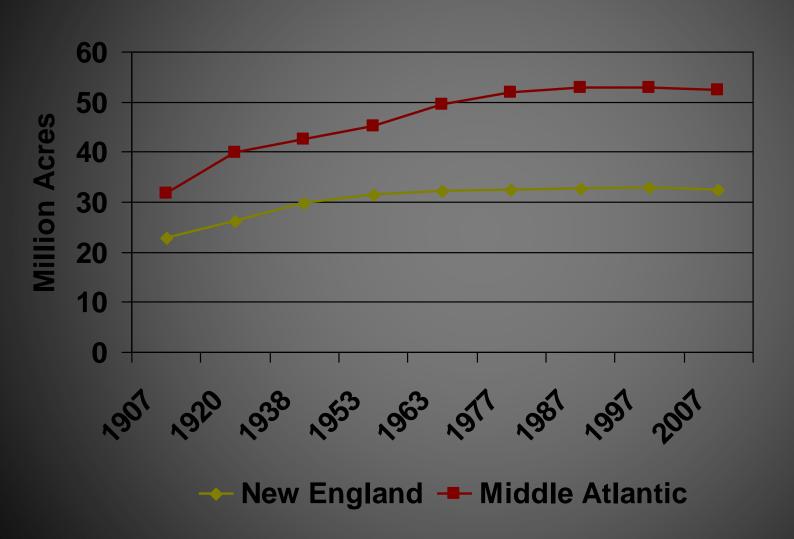


Regenerating Clearcuts

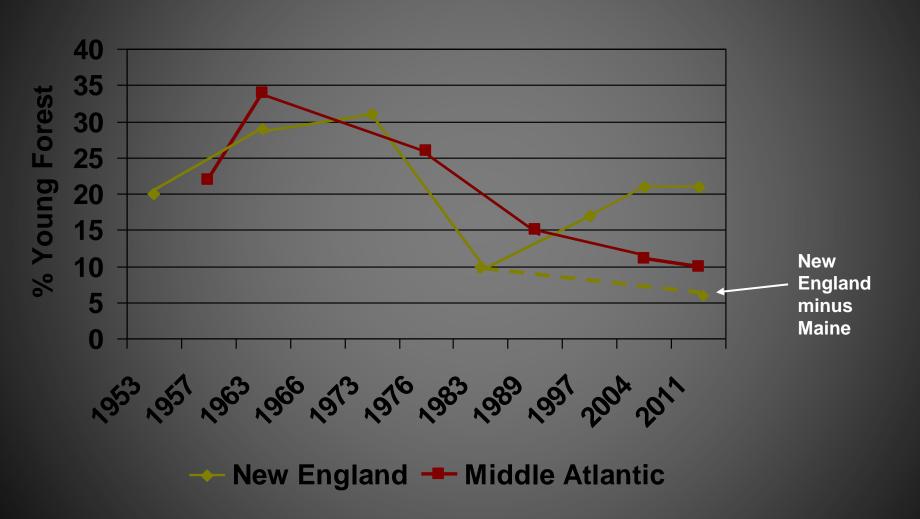
"Conservation is a state of harmony between men and land."

Aldo Leopold

Trends in Forest Area

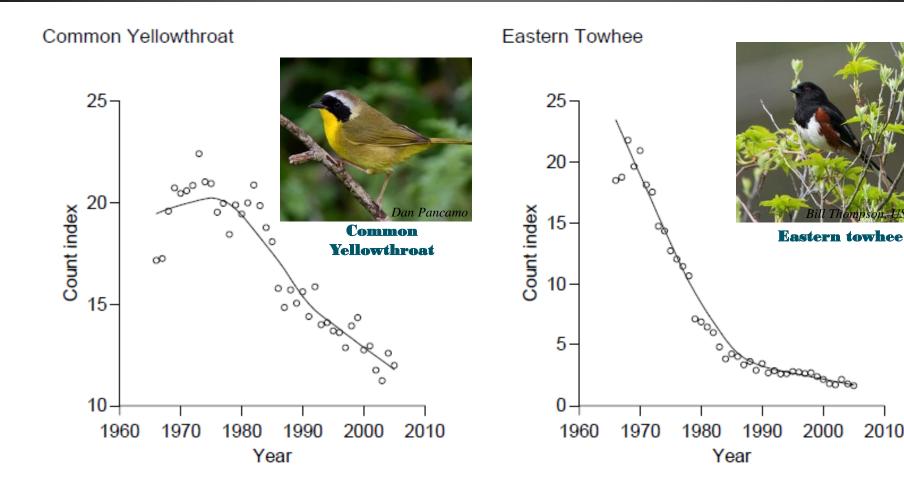


Trends in Young Forest



Trends in Young Forest Songbirds

2010



American Woodcock

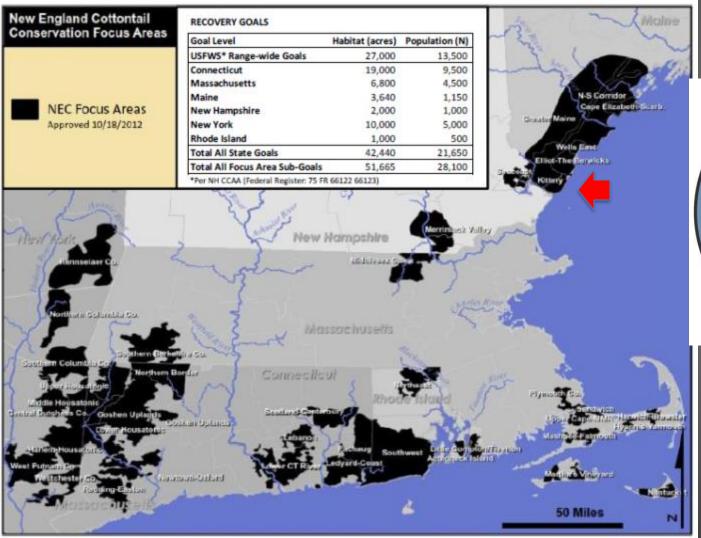


Number of Woodcock Heard on the Singing Ground Survey 1968-2006

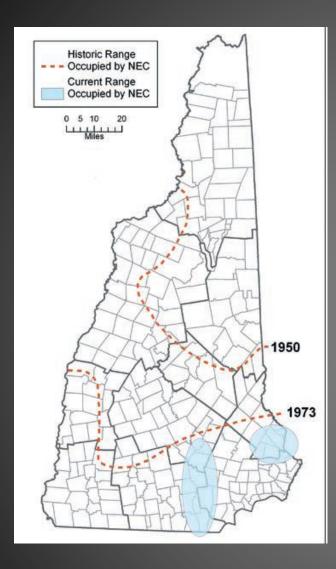
(56% decline)

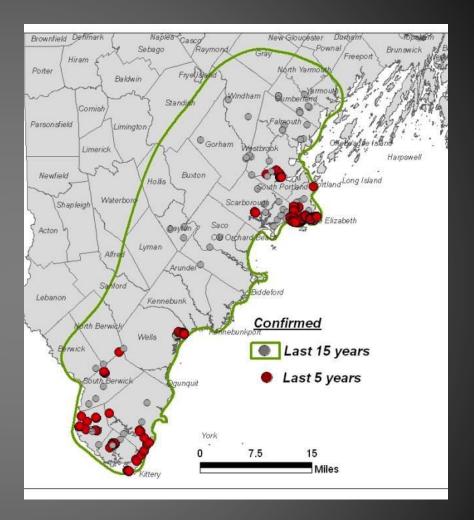


Range-wide Conservation Initiative









Captive Breeding Program



Managing Disturbance

- > What constitutes disturbance?
- > Landscape scale/fragmentation/edges
- ➤ Soil conditions—pH, bacterial vs. fungal systems, structure, seed banks, germination conditions, moisture, fertility, erosion...
- Understand plant lifecycles and plant and wildlife community dynamics
- Structural diversity leads to wildlife diversity
- Diversity = Resilience

Re-creating disturbance to restore habitat



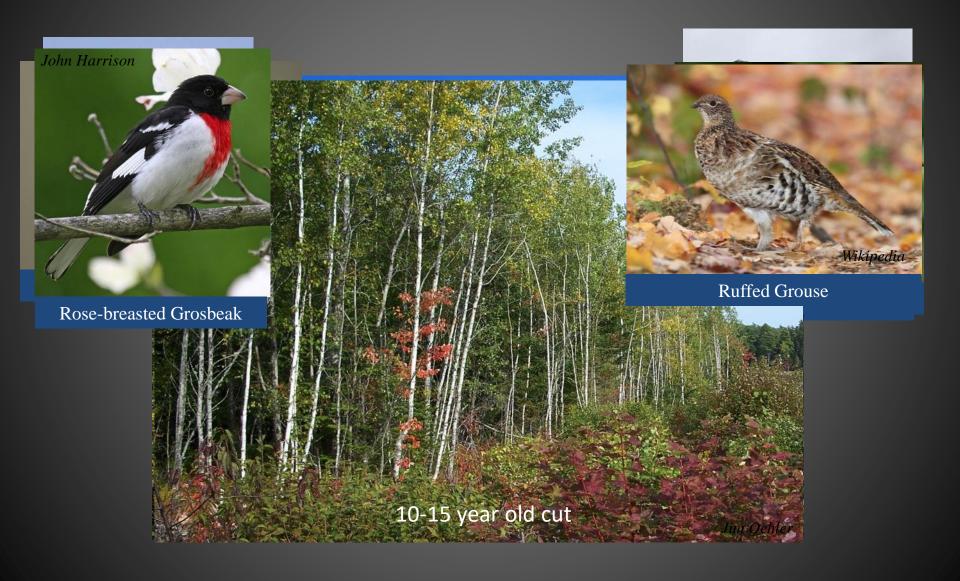
Plants Re-Grow Quickly!





Aspen (left) and oak seedlings (right) sprouting up only 5 months after a cut.

If you build it they will come!



Habitat Connectivity





Connecting Patches of Habitat



Use of Transmission Line Rights-of-way and Clearcuts by Songbirds During the Nesting and Post-nesting Season

Erica Holm, Matt Tarr, Adrienne Kovach
UNH Department of Natural Resources and the Environment































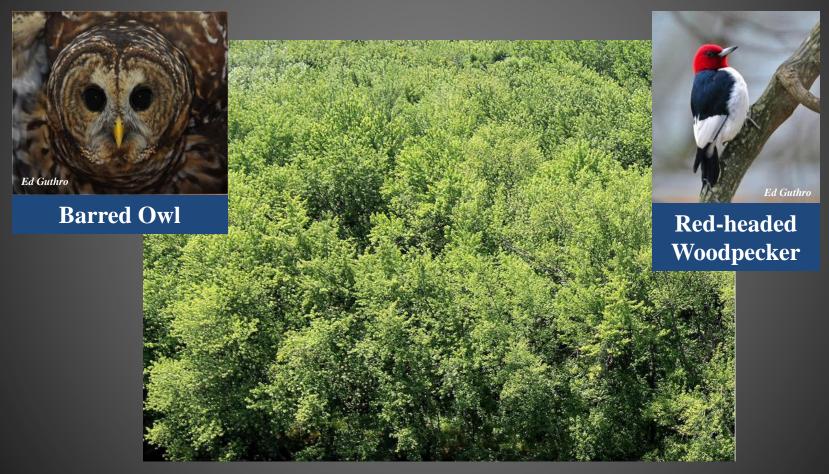


Erica Holm M.S. Project 2017-2018

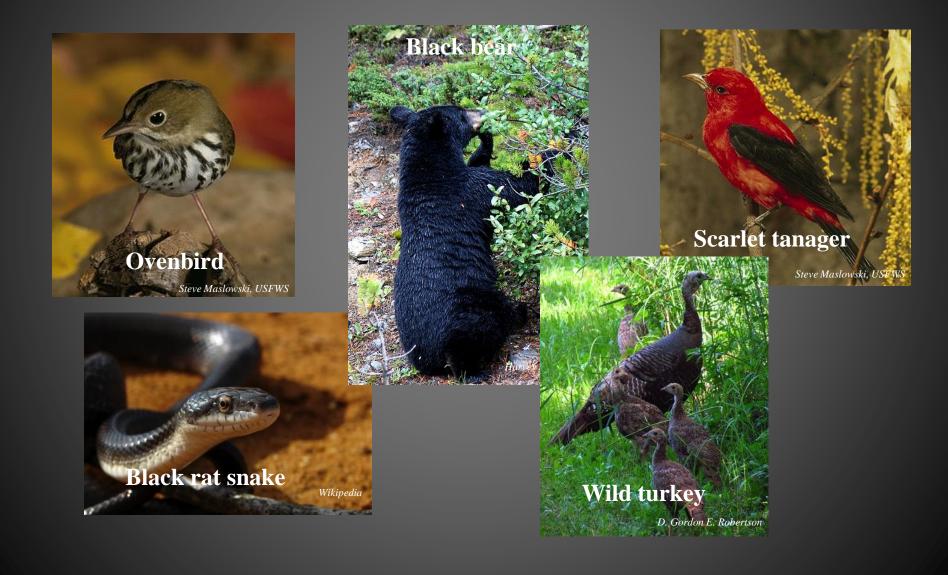




Mature Forest is Important Too (Avoiding fragmentation)



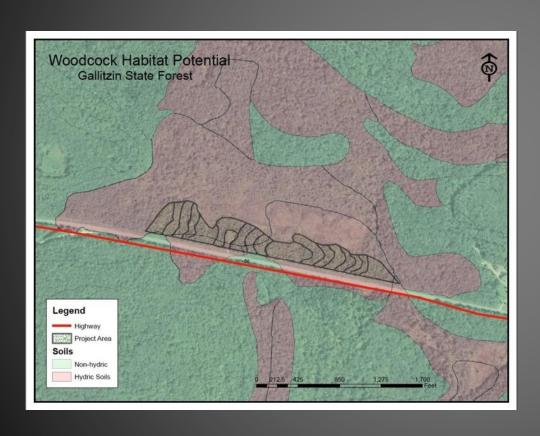
Woodland Wildlife Needs Young Forest Too



"Examine each question in terms of what is ethically and aesthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

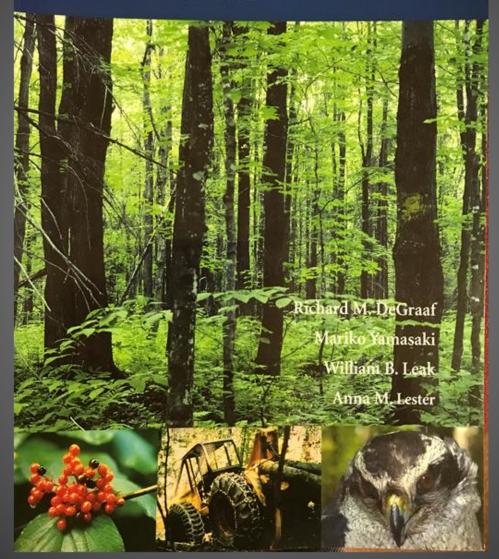
Aldo Leopold

Planning Stewardship Activities





Forest Wildlife Habitat Management IN NEW ENGLAND



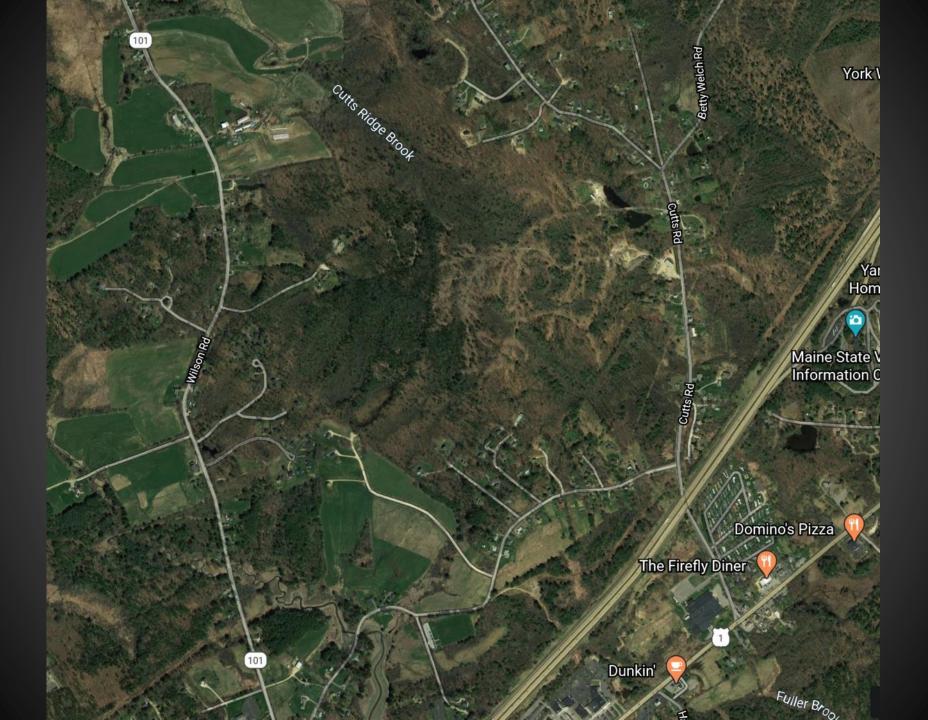
Adaptive Land Management

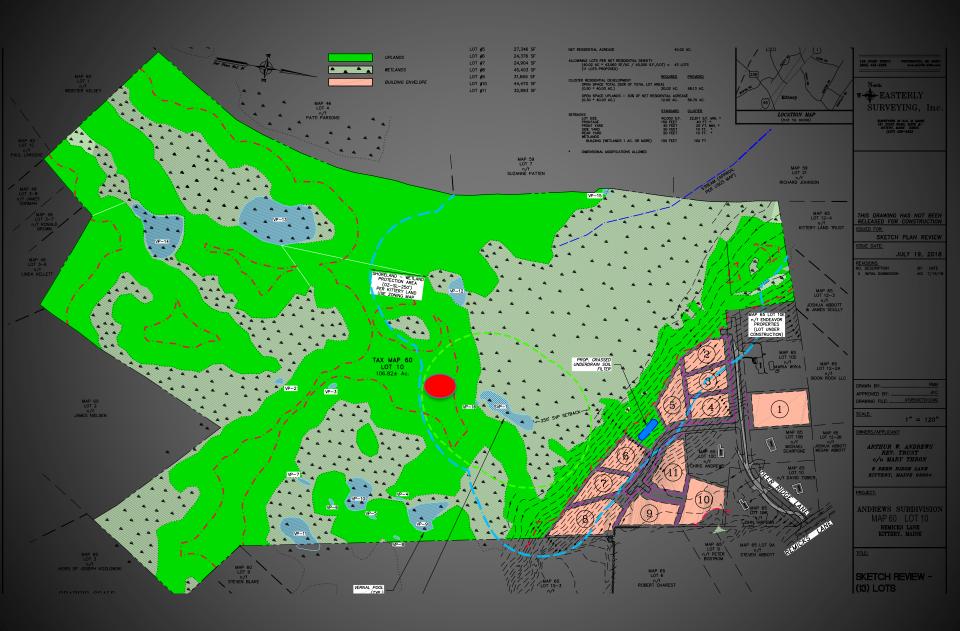
A framework for setting goals, monitoring results and applying lessons learned to future outcomes.

- -Articulate goals
- -Understand factors affecting outcomes
- -Identify management gaps
- -Develop management strategies
- -Develop monitoring program
- -Assess performance
- -Manage adaptively





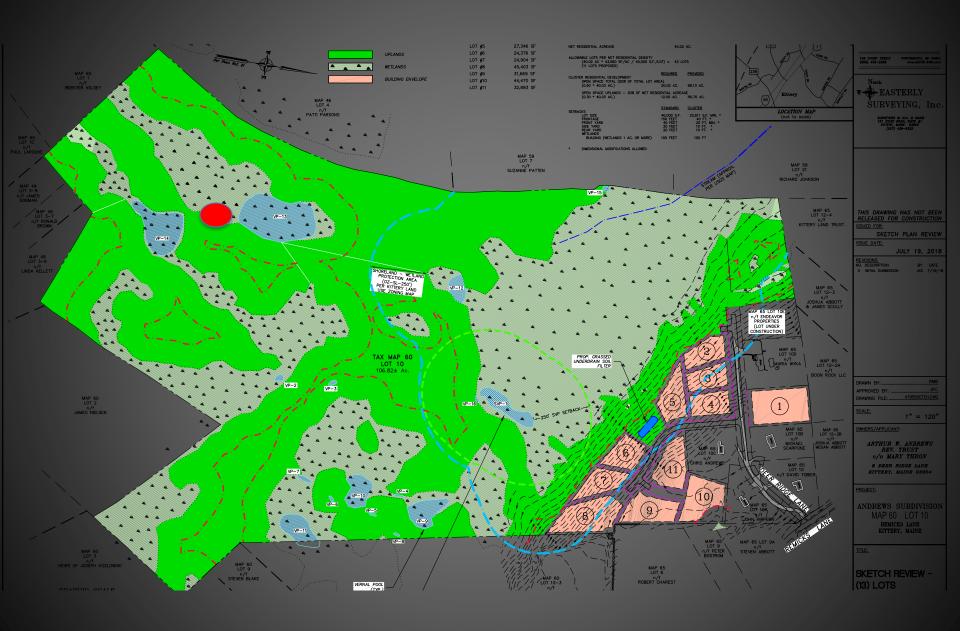


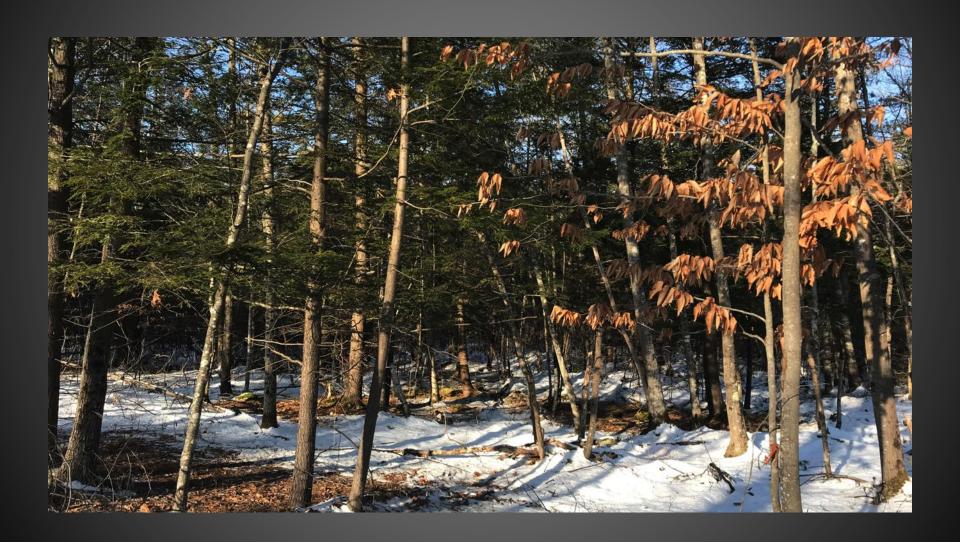


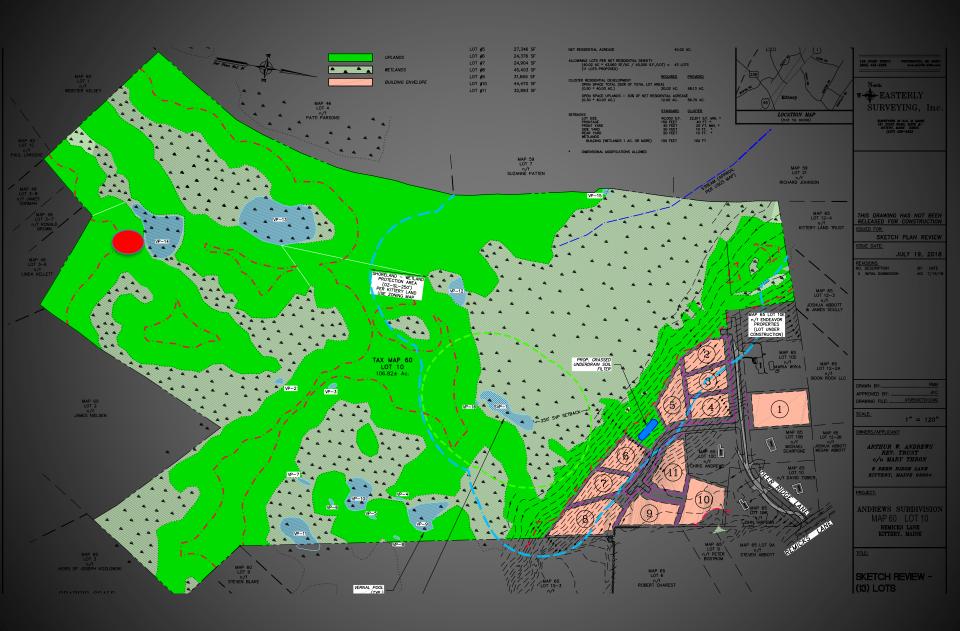








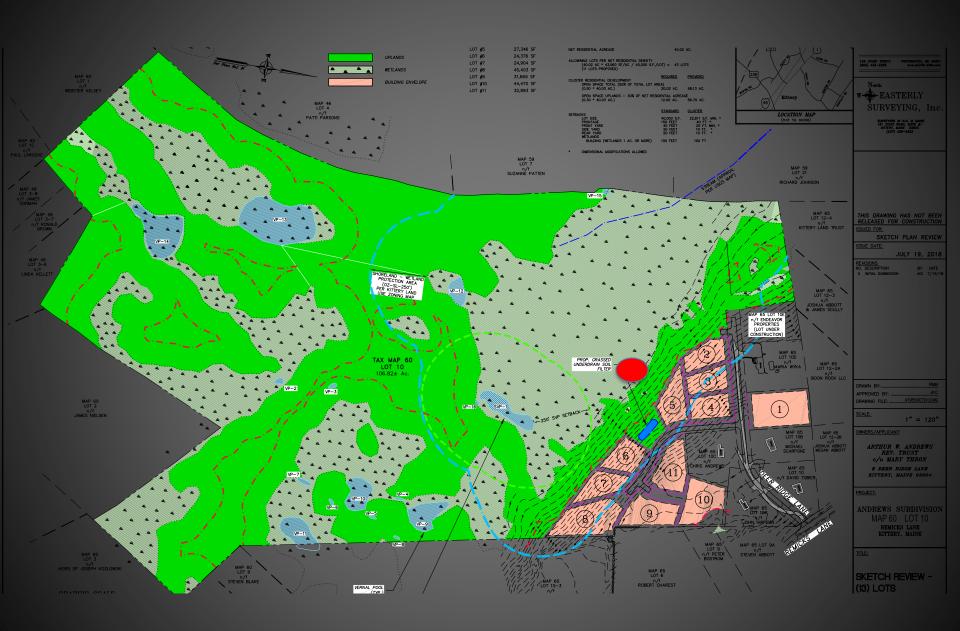












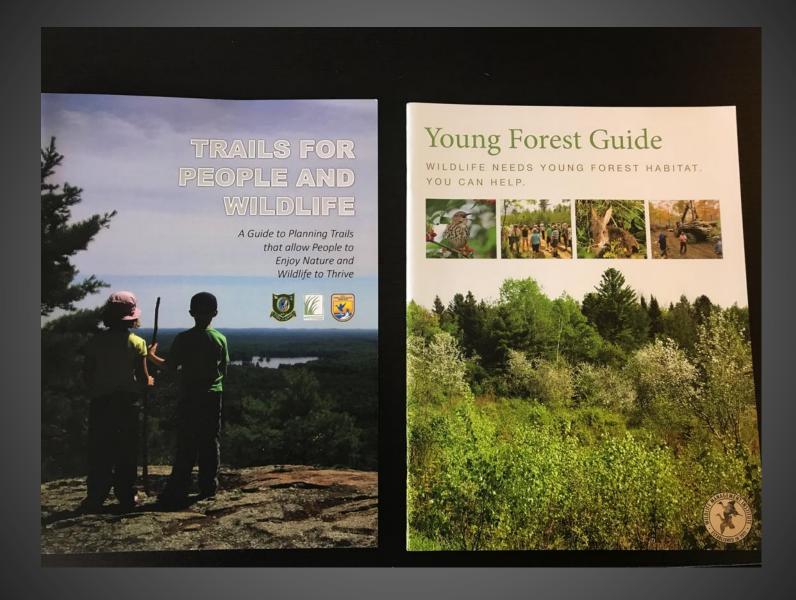


"Wildness reminds us what it means to be human, what we are connected to rather than what we are separate from."

--Terry Tempest Williams

Trails?





Interpretation



