

FY-15 forestry project proposals

Commonwealth of Massachusetts
Department of Conservation and Recreation
Division of Water Supply Protection



Guiding principle: most resilient watershed cover is a diverse forest

- ✓ Vigorous and diverse
- ✓ Actively reproducing
- ✓ Deliberately patterned
- ✓ *Resistant* and *resilient*



Massachusetts



How does DWSP build **resistance/resilience**?

Principles of sustainable watershed silviculture

- ✓ Increase diversity by cutting openings that will meet silvicultural objectives
- ✓ Cut less than 25% of any subwatershed in any given 10 year mgt period
- ✓ Retain filter strips along water and engineer a separation between water and roads
- ✓ Work to control the impacts of deer, moose, and invasive plants on tree regeneration
- ✓ Monitor, improve, and repeat



2-year post harvest multi-aged structure developed via small group selection on Prescott Peninsula

Recent Refinements in DWSP Forestry

- ✓ *Improvements in public information*, via internet postings and signage
- ✓ *Revised openings in regeneration harvests*, via adjustments to size, shape, and distribution
- ✓ *Green retention*, retaining live individuals or aggregated groups for visual softening
- ✓ *Enhanced monitoring of timber harvest effects*, building on existing water quality monitoring to focus more intensively on quantifying the effects of existing cutting practices on water resources
- ✓ Photo points used to document management activities and changes in the forest over time.

Ware River Regeneration Monitoring 2013

- ✓ Average stems /acre = 3981 (>1')
- ✓ Average stems over 4.5' /acre = 2077



Summary of silviculture

Target low quality poor vigor stands

Irregular shaped openings

Maximum opening size of about 0.5 acre

Leave the biggest and best formed trees in the openings

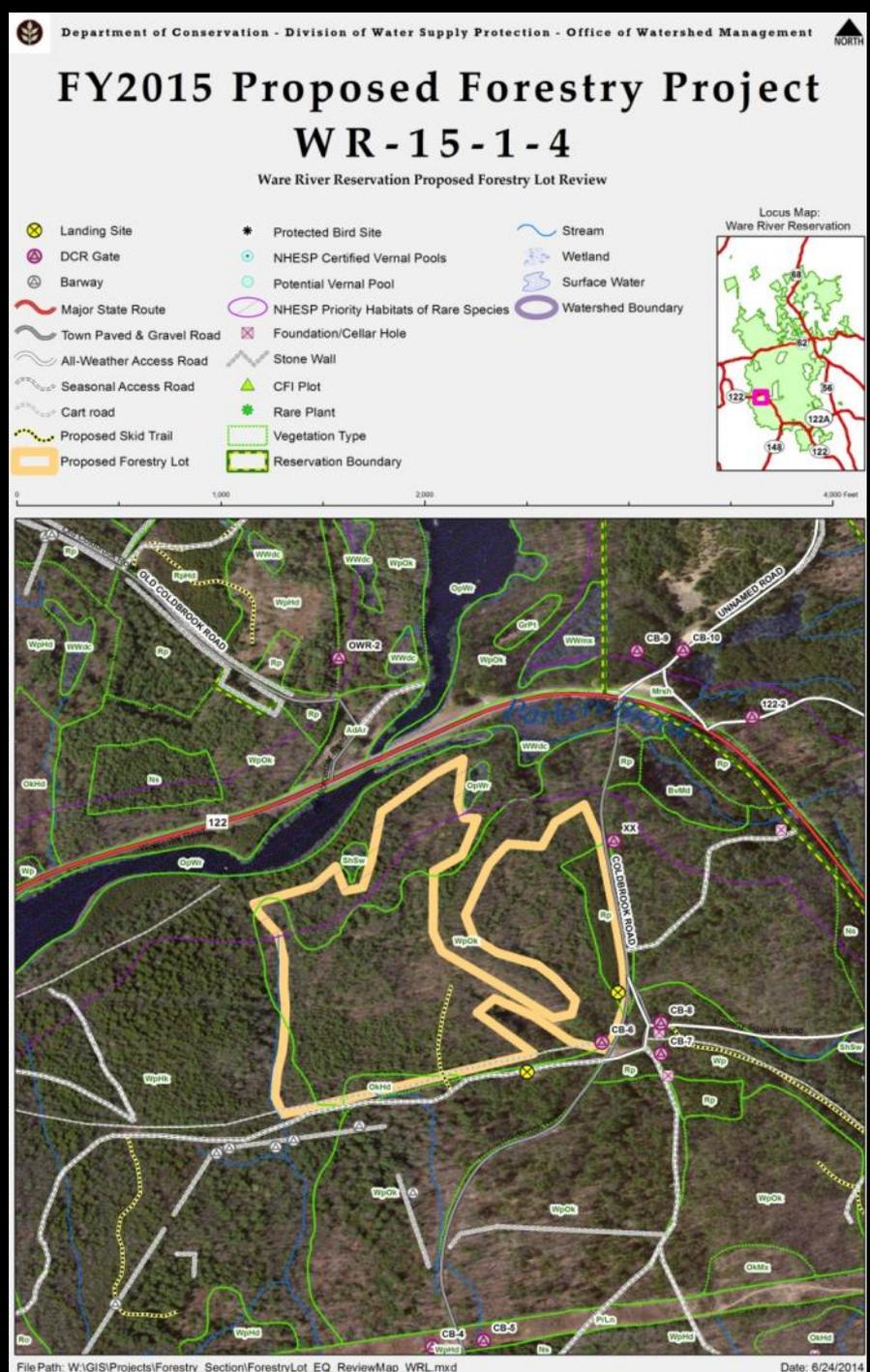
Regeneration Openings Summary

- ✓ Less than 25% of each lot will be cut for regeneration openings.
- ✓ Some additional area will be thinned.
- ✓ Total area in regeneration openings for these 3 proposals will be less than 30 acres, much less than 1% of our forest.



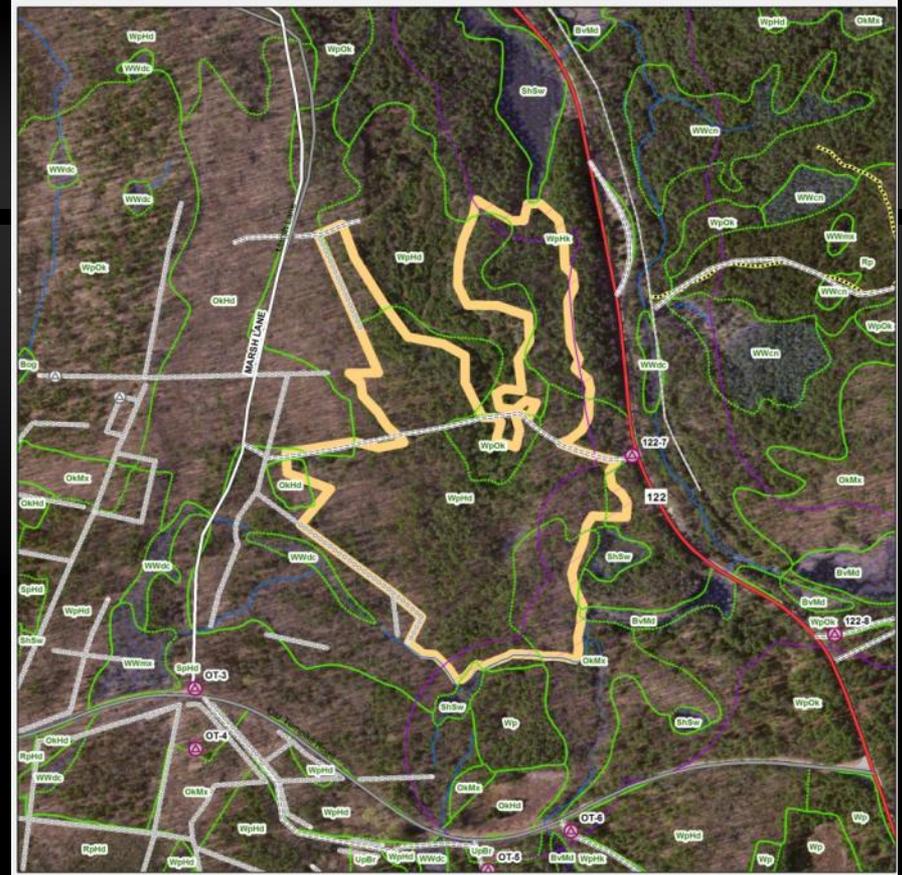
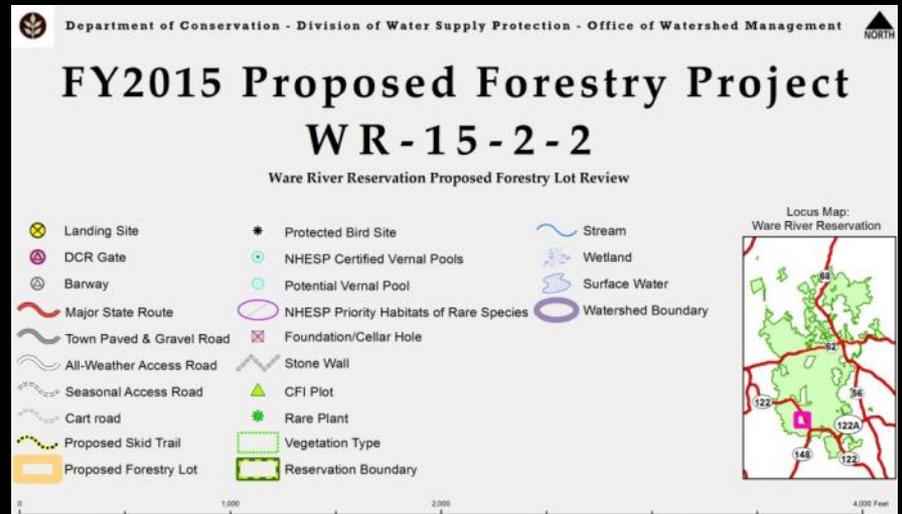
Coldbrook Road proposal

- ✓ 40 acres
- ✓ oak pine forest type
- ✓ Harvest small groups up to 1/3 acre
- ✓ Some thinning between groups
- ✓ Low vigor, poorly formed stems will be targeted
- ✓ Part of the area contains rare species habitat
- ✓ Input?



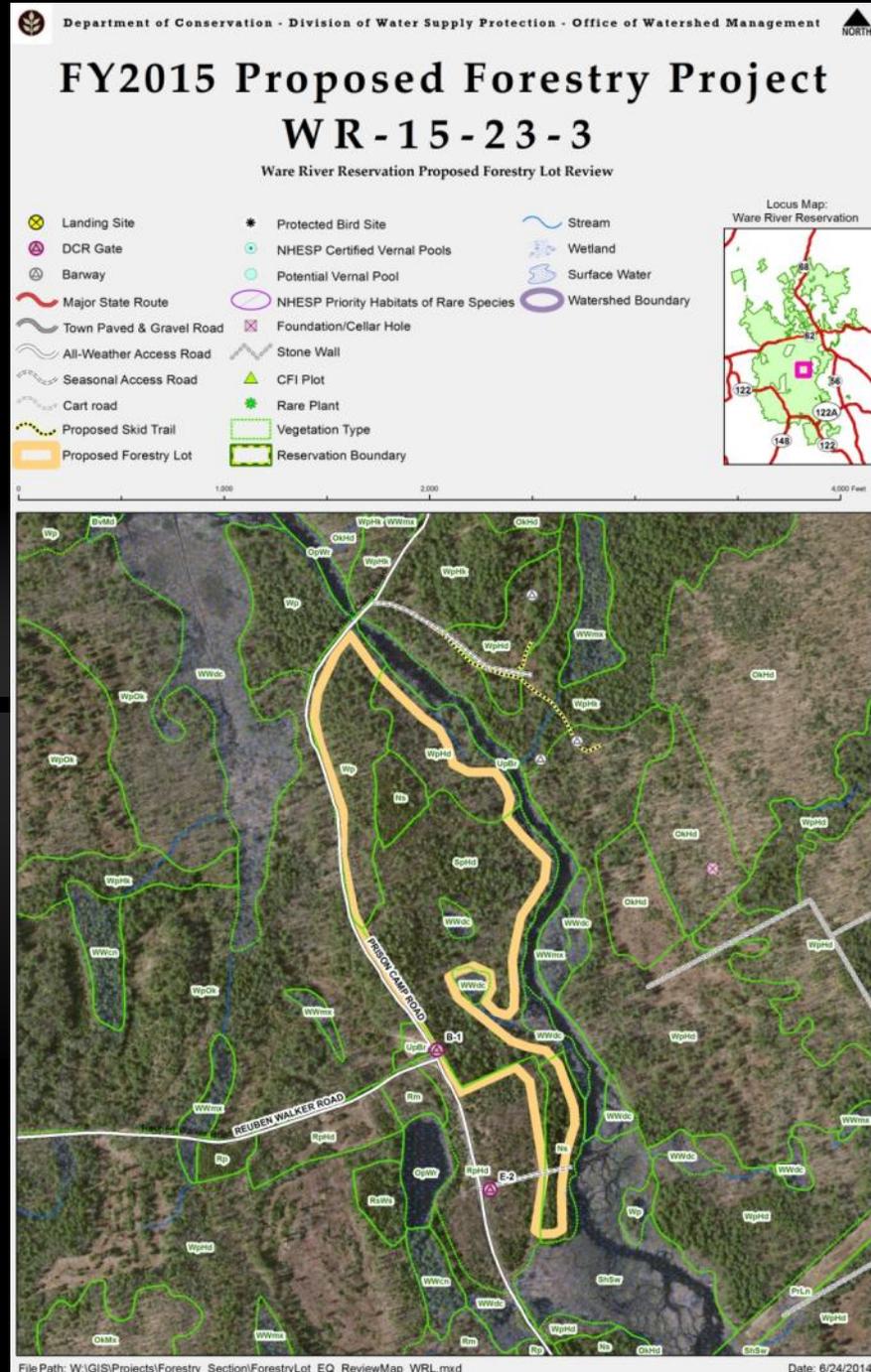
Marsh Lane road proposal

- ✓ 44 acres
- ✓ oak pine forest type
- ✓ Harvest small groups up to 1/3 acre
- ✓ Some thinning between groups
- ✓ Low vigor, poorly formed stems will be targeted
- ✓ Part of the area contains rare species habitat
- ✓ Input?



Elm Street proposal

- ✓ 34 acres
- ✓ White Pine - hardwood / spruce – larch plantation forest types
- ✓ Harvest small groups up to 1/3 acre
- ✓ Some thinning between groups
- ✓ Low vigor, poorly formed stems will be targeted
- ✓ Input?



Finally...



- ✓ The protection forest surrounding Boston's water supply has been **actively managed by this agency for >50 years**.
- ✓ During that time, **1,000+ timber sales** have been conducted, improving forest vigor, diversity, quality, and value while supplying natural resources to support the rural Massachusetts economy, and protecting or enhancing uncommon species/habitats and cultural resources.
- ✓ The water supply has remained, throughout that same time, amongst the cleanest in the world, **with no measured degradation related to active forest management**, verified by consistent routine monitoring that currently includes **1,500 water samples per month**.