

Andover, New Hampshire

CASE STUDY

How a town saved thousands of dollars on road-maintenance costs and made peace with its beavers



Photo: Cheryl Reynolds



Perfect damming sites, unprotected culverts will always be re-dammed.

SMALL TOWN, COSTLY PROBLEM

Andover sits at the base of Ragged Mountain in central New Hampshire. The town's 2,500 residents value its rich network of streams, ponds, and lakes. So does a healthy population of beavers.

Dams built by beavers in eight of the town's road culverts were a perpetual problem. When dams plugged culverts, waters rose and flooded roadways. The heavy equipment required to remove the dams cost \$125 hour. Clearing a single culvert often took several hours. Exorbitant costs were also incurred to repair degraded roads.

THE HIGH COSTS OF TRAPPING BEAVERS AND CLEANING CULVERTS

For decades Andover's selectmen and road agents took the traditional approach to the conflict. They hired trappers to kill beavers and contractors to clear culverts. The figures below approximate the costs of trapping, culvert cleaning, and minor repairs.

AVERAGE ANNUAL
COST PER CULVERT

\$2,000

ANNUAL COST OF
EIGHT CULVERTS

\$16,000

10-YEAR
COST

\$160,000

30-YEAR
COST

\$480,000



Ram-rodging a clogged culvert on Elbow Pond Rd.



Clockwise from upper left: Skip Lisle, Beaver Deceiver™ inventor; John Thompson, Road Agent; Vicky Mishcon, Select Board Chair; Nan Kaplan, Conservation Commission.

SEARCH FOR A NEW DIRECTION

The traditional approach was inefficient, unpopular, and costly. In a never-ending cycle, new beavers moved in to replace those killed. Public disdain for trapping kept growing. In addition, beavers, an animal of unequalled ecological value, were routinely eliminated from local ecosystems. Non-lethal control methods were considered, but most state transportation and fish and game officials advised against them because they believed success rates were low.

In the fall of 2006 Nan Kaplan, a member of Andover's Conservation Commission familiar with the town's predicament, read an article about wildlife biologist Skip Lisle, inventor of the Beaver Deceiver™ and other "flow devices." Kaplan had a hunch he could deliver a solution, and she pressed town officials to meet with him.

"The town has spent thousands on cleaning culverts and replacing gravel. How about spending a small amount on a solution? These flow devices will work! The Conservation Commission is willing to expend our own funds to prove it."

**Nan Kaplan
(from a 2006
letter to the
Select Board)**

SKILL OVERCOMES SKEPTICISM

In 2007 board members met Lisle and were impressed by his designs, knowledge of beaver behavior, and track record. They didn't call on him, however, until a vital thoroughfare—Elbow Pond Road—washed out after the culverts were once again dammed. Rebuilding the road cost the town \$48,000.

With their patience and budget exhausted, the board hired Lisle to protect its investment. **Despite beavers remaining active at the site, the Beaver Deceivers™ have prevented any damming, flooding, or other beaver-related problems for more than a decade.**



Photo: Jan Lambert

Lisle at Elbow Pond Road.

"We haven't spent a penny cleaning culverts in that area since the Beaver Deceivers went in," says Mishcon, Select Board Chair.

CONCEPT PROVEN, CONFLICT SOLVED

"Elbow Pond" proved so successful the board decided to beaver-proof all of the town's conflict points. By 2017 Lisle had protected all eight threatened culverts.

With its roads and culverts safe from beaver damming and damage, the town will save a lot of money in coming decades. By choosing flow devices over traditional management, Andover expects to save approximately \$130,000 over a ten-year period, and nearly \$500,000 over a thirty-year period. **Extrapolated across a given county or state, the potential savings represented by the use of properly designed, high-quality flow devices could be breathtaking.** In addition, there are many nearby wetlands worth hundreds of thousands of dollars in ecological and hydrological services that would drain if beavers were killed and their dams not maintained.

"I was skeptical, but not anymore. The key to our success has been Skip's unique skill and knowledge. He adjusts his work to the site and uses strong materials. I hope we will always have a line item in our budget for flow devices."

John Thompson
Road Agent

"There are two options: Endlessly kill beavers and clean culverts, or install a high-quality flow device. They both cost money, but we have all kinds of evidence that the first method does not work. The second does work, and it is far less expensive."

Vicky Mishcon
Select Board Chair

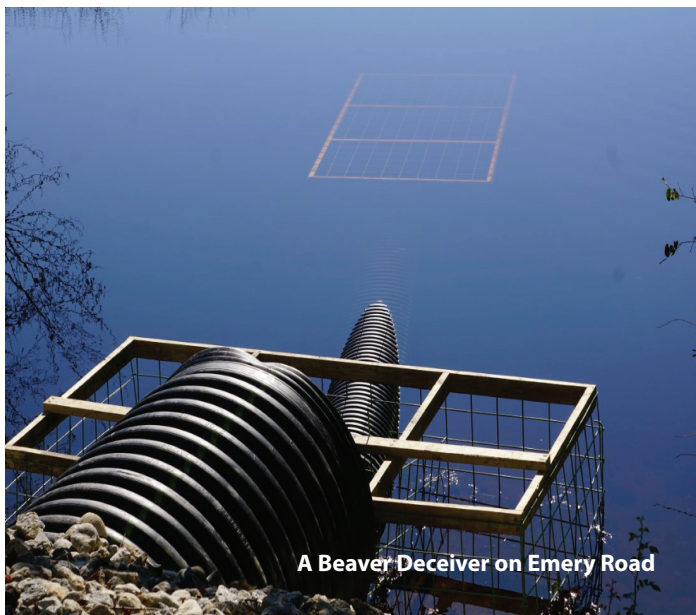
"Beavers are a native, keystone species that create, maintain, and improve wetlands. The best way to maximize hydrological values and to improve the health and productivity of watersheds is to take measures to keep live beavers in them."

Skip Lisle, M.S.
President
Beaver Deceivers
International

AN ENDURING REMEDY AT A FRACTION OF THE COST OF A "KILL" STRATEGY

| TOTAL COST OF FLOW DEVICES AT EIGHT CULVERTS | ESTIMATED 30-YEAR BUDGET FOR MAINTENANCE* | 30-YEAR TOTAL COST OF FLOW DEVICES | 30-YEAR TOTAL COST OF TRADITIONAL METHODS | 30-YEAR SAVINGS FROM FLOW DEVICES |
|--|---|------------------------------------|---|-----------------------------------|
| \$23,000 | \$25,000 | \$48,000 | \$540,000 | \$492,000 |

*The lifespan of Lisle's flow devices is estimated at 30 to 40 years.



A Beaver Deceiver on Emery Road

FIND OUT MORE TAKE A TOUR

Officials from towns, DOTs and conservation commissions are welcome.

To visit Andover Beaver Deceiver™ sites, or for more information about the town's experience, please contact:

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