LoonWatch

Artificial Nesting Platforms (ANPs)

Do They Spell Success for Loons?

Artificial nesting platforms have been used in attempts to increase loon productivity since the early 1970s. But do loons use ANPs and do they increase loon reproduction? A recent study in northern Wisconsin found that, after 3 years, loons nested on half of the 26 platforms that were placed on lakes during the study. Loons nesting on platforms did have more of their nesting attempts reach the hatching date compared to loons nesting at natural sites (Piper et al. 2002).

So ANPs can be an effective management tool when the situation is right.

ANPs tend to be most successful:

- where loons nested in the past but nests failed due to nest predation or water level fluctuations
- where nesting habitat was eliminated by shoreline development and human disturbance
- where all other qualities for loon reproduction are present (water clarity, quality nursery area, good supply of fish and aquatic insects, quiet bays, and minimal human disturbance).

Artificial nesting platforms, however, are not always the answer and they do not guarantee nesting success. The need for loon platforms implies that humans have manipulated the habitat to a point where natural nesting is not possible - through shoreline development, water level adjustments, creation of habitat for loon nest predators, and disturbance of nesting loons. Where they are used, ANPs can sometimes introduce new problems for loons. Loons nesting on platforms tend to be more visible to avian predators such as crows, gulls, and eagles, and to curious humans. The best way to enhance healthy populations of loons in the *long term* is to protect natural nesting habitat.

To determine if an ANP is appropriate and necessary for your lake, consider the following questions:

- Do loons produce chicks on your lake once every three years?
- Do your loons successfully nest on a nearby lake?
- Are there natural nesting locations on your lake that could be enhanced?
- Are you unsure about how loons are using your lake (just feeding, nesting, etc.)?

If you answered yes to any of these questions, a platform* may not *be the right management tool for your lake.

If you answered yes to the last question your first step should be to document how loons use the lake. Are the loons territorial (exhibiting defensive postures such as the penguin dance)? Are they nesting? Where are the nests located and what are the causes of nest failure? If loons are not nesting on your lake, there may be a number of reasons such as poor food base, high levels of human disturbance, or simply that the loons are successfully nesting on a nearby lake and the adults are using your lake as an additional feeding territory.

If you answered no to the questions above and have decided to build a nesting platform for your lake, first contact your local Department of Natural Resources wildlife biologist to obtain permission to place a platform. Then follow our directions on how to construct the *Eternal* nesting platform, plant a platform garden, choose a location for placement, and protect the loons.

Sigurd Olson
Environmental Institute

Eternal Nest Platform Construction

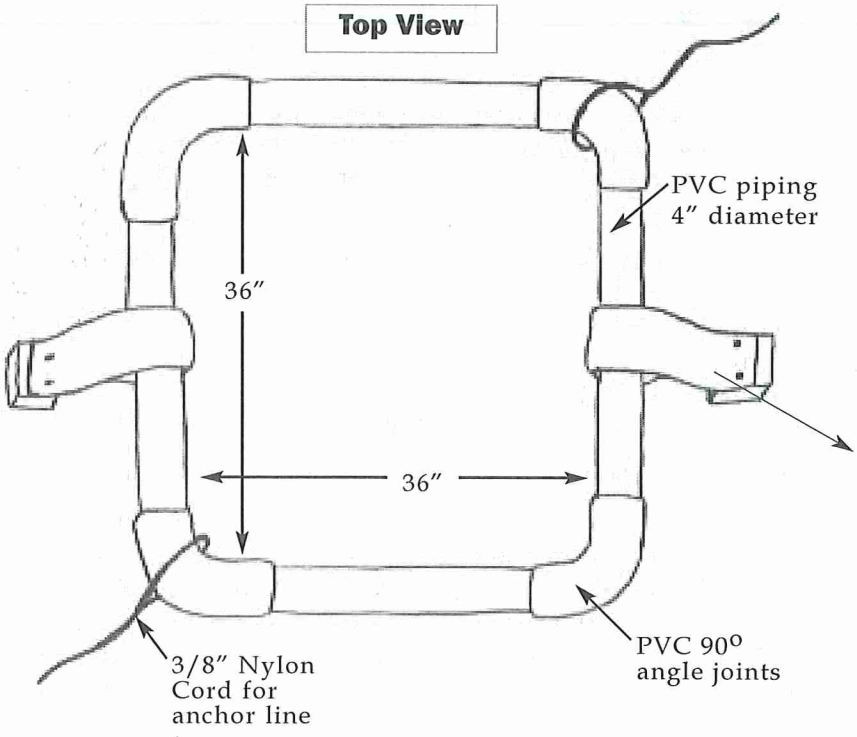
designed by Sandra Gillum

Materials checklist

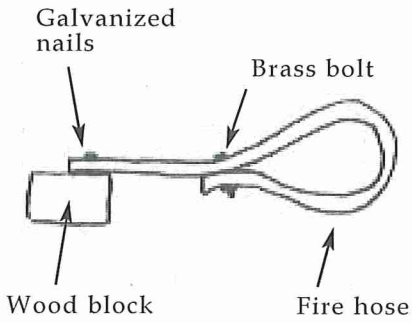
- 4 black or gray PVC piping, 4 x 36 inches
- 4 cans spray foam
- 4 black or gray PVC 90° angle joints
- 1 tube PVC glue
- 1 tube latex caulk
- 2 2 inch foam insulation boards, 3 x 3 feet
- 2 wood blocks, 2 x 4 x 4 inches
- 2 Brass bolts, 2 x 3/8 inch, nuts and washers
- 8 galvanized 1 inch roofing nails
- 2 vinyl coated aluminum garden stakes
- 2 Cement blocks for anchors
- 2 Fire hose (or inner tube), 4 x 33 inches
- Dark green or black snow fencing, 4 x 8 feet
- Packing peanuts
- Nylon cord, 1/4 inch
- Sandpaper
- Nylon cord 3/8 inch (double the amount of line it takes to cover lake depth at the placement site plus 16 inches extra for platform movement)

To construct platform frame

- Fill PVC pipes with spray foam.
- Fill the four joints with packing peanuts and fit on pipes, forming a square.
- Glue and caulk joints, creating a good seal to prevent water leaks.
- Rough sand piping to create a better gripping surface for birds.



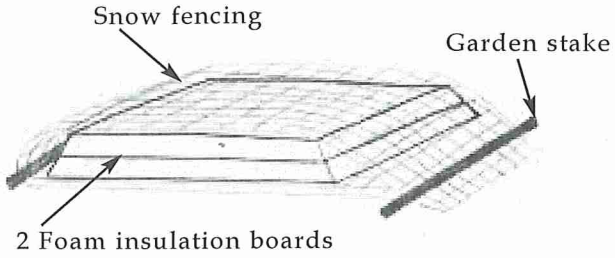
Chick Ramp (side view)



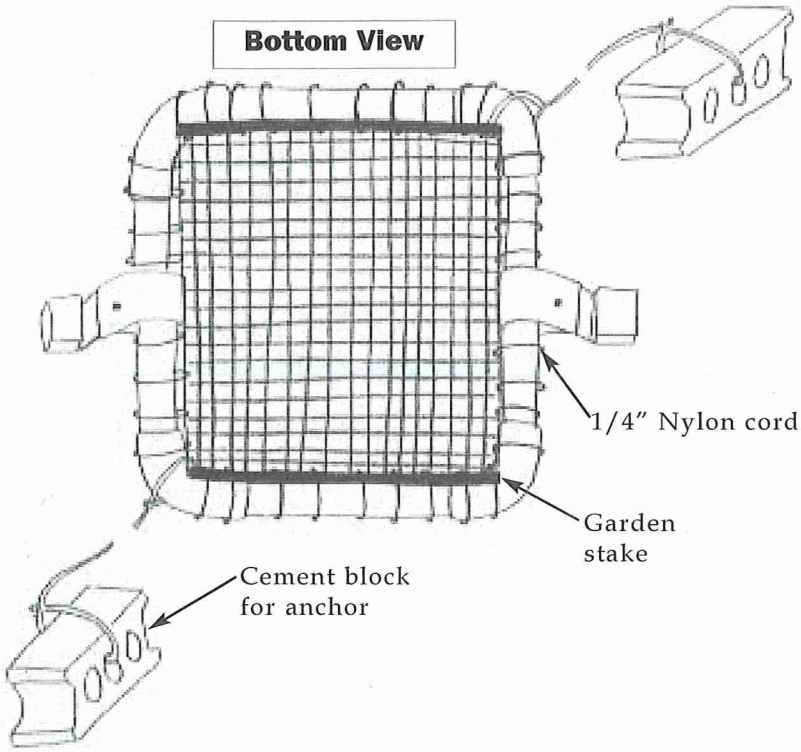
If fire hose is not available, replace with a piece of inner tube from a large tire.

To construct platform center

- Angle edge of foam insulation board so bottom board fits snugly under frame.
- Sandwich insulation boards between snow fencing.
- Wrap ends of fencing around garden stakes.



To assemble platform

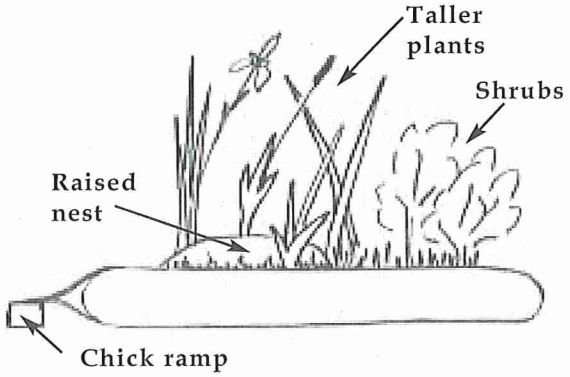


- Lash fencing to all sides of frame with nylon cord, using the garden stakes on two sides to support the fencing and to prevent ripping.
- Attach anchor line to cement blocks, leaving enough cord for platform to rise with waves.

If you vary the materials or design in making your platform, please let us know if you find good alternatives.

How to plant a loon platform garden

Always plant your platform with the nesting spot in mind. Form a large dish shaped nest with mud, sand, dead vegetation and twigs (about 18" diameter and about 4" high), then surround the nest on three sides with plants such as small alder bushes, grasses, reeds and sedges. Leave one of the chick ramp sides without vegetation for easier access. Arrange tall plants around the nest to provide the brooding loon with shade from intense sun and to shield it from avian predators such as eagles, gulls and crows. Do not overload the platform, as it needs to hold the weight of 1 or 2 loons, as well as the vegetation.



Platform Placement

Before placing a platform, contact your local Department of Natural Resources wildlife biologist to obtain permission, and advice on choosing a location. You must also have permission from the landowner adjacent to the area where the platform is placed, if you do not own the land yourself. Some guidelines for placing a platform include:

- Far enough from shore to deter land predators
- In water 4-6 feet deep
- Within the loon territory, preferably near the traditional nesting area
- Away from areas of high boat traffic and human use
- Away from Bald Eagle nests or perch sites
- In an area protected from winds

Platform Maintenance

The *Eternal* **Nest Platform** was designed to stay on the lake through the winter but it still requires your attention and care. Each spring after ice out, the platform should be inspected for damage to the frame and to the foam boards. Also make sure the platform can still move up and down freely with the waves. Selectively remove any over abundance of plants to reduce excess weight resulting from plant growth.

Loon Protection

Loons nesting on platforms tend to be more visible than those at natural nest sites. Help protect the loons by:

- Placing **Loon Alert** signs at public landings to inform lake users of the loon's presence. Loon Alert signs are available through LoonWatch.
- **Informing your lake neighbors** about loon nesting activity. With an educational approach, people can learn to enjoy watching loons from a distance, allowing loons space to live and raise their young.
- Sending your loon observations to LoonWatch so we can include them as part of our annual monitoring database. Contact us for more information about becoming a volunteer **Loon Ranger**.

Do ANPs spell success for loons? The answer is - not always. Platforms can be an easy out from the true challenge of balancing human lake use and the habitat needs of loons and other species. Protection of nest sites from development, coordination of water level fluctuations to protect nests, and an understanding of habitat suitability are essential. If you would like more information on ways you can help protect loons and their habitats, please contact LoonWatch.

LoonWatch works to protect Common Loons and their aquatic habitats through education and research. LoonWatch is a program of the Sigurd Olson Environmental Institute, Northland College, Ashland, Wisconsin 54806. For more information, call (715) 682-1220, email us at loonwatch@northland.edu or view us at our website at www.northland.edu (click on The Institute to find LoonWatch).

The full paper on Artificial Nesting Platforms can be found at: Walter H. Piper, Michael W. Meyer, Margaret Klich, Keren B. Tischler, and Amy Dolsen. 2002. *Floating Platforms increase reproductive success of common loons.* Biological Conservation. 104(2): 199-203.

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