



Natural Landscaping:

Working with Water

City of
Bloomington
Environmental
Commission

www.bloomington.in.gov/boards/environment

Water is essential to all wildlife and is a necessary component for any backyard habitat. A wide variety of species will be attracted to a water source, including song birds, small reptiles, amphibians, small mammals and insects. Water can be provided through birdbaths, small ponds, streams, marsh or wetlands.

Ponds:

With adequate space and topography, a backyard may be able to support a small pond that can attract a variety of wildlife species including birds, frogs, turtles and salamanders. Ponds should be placed in locations that receive at least five hours of sun daily and within reach of the garden hose for periods of low rainfall.

Step 1: Dig a hole. If the entire pond cannot be finished in one day, spray the hole with water to loosen the soil for the next session. Small backyard ponds should not exceed a width of 10 feet or a depth of 3 feet at the deepest point. A pre-formed concrete, rubber or plastic pond liner can be purchased to ensure the pond will remain long term. Dig the hole shape to fit the liner.

Step 2: Place sand or old carpet in the hole to protect the liner from roots and rocks.

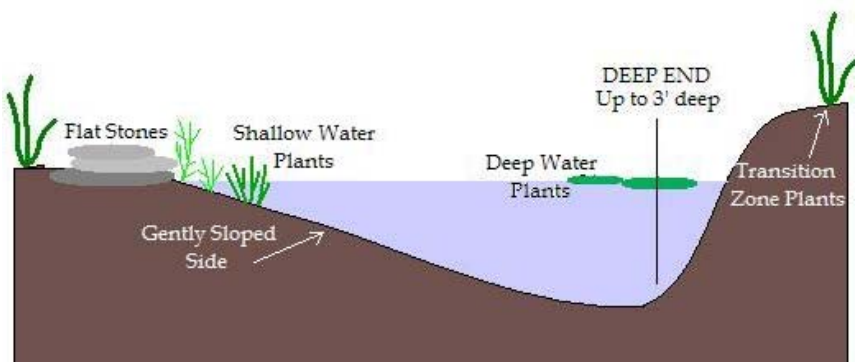
Step 3: Install the liner, which should cover the hole and the edge of the hole. Flat stones can be used to cover and stabilize the liner edges. Make sure the sides of the pond are not too steep, but gently sloped for wildlife access.

Step 4: Fill with water to 2 inches from the top. After 48 hours, potted aquatic plants can be placed into the pond. A layer of gravel should be placed on top of the soil in the pot to prevent soil from floating out. Floating plants can be placed directly in the pond (see backside of handout for more on aquatic plants).

Step 5: Periodic maintenance may be required to ensure the habitat quality of your pond. This may include removing debris from the pond bottom, skimming algae from the pond surface or adding more water as needed.



The above picture illustrates a small backyard pond complete with stones around the edges and aquatic plants.



The diagram above represents a cross section of a backyard pond. Note the gently sloped edge for plant establishment and wildlife access. The three types of plants associated with backyard ponds are also depicted.

Any natural water feature in a backyard, such as a spring or stream, should be protected from erosion and runoff.

For more information see:

www.nrcs.usda.gov/feature/backyard/

Aquatic Plants

The table below lists native aquatic plants that you may consider using for a backyard pond. These plants may float on the water, emerge from the water or live along the water's edge. Native aquatic plants will increase the habitat value of your backyard pond. However, you should monitor floating aquatic growth so that the entire pond surface is not covered. If plant growth does begin to cover the pond surface, trim leaves and stems to allow sunlight into the pond for the benefit of wildlife and other plants.

Common Name	Scientific Name	Water Level	Sun	Height (ft)	Wildlife Value	Bloom Color
American Lotus	<i>Nelumbo lutea</i>	Deep Water	F	Floating	A	Yellow
Blue Flag Iris	<i>Iris versicolor</i>	Shallow Water	F	2	B	Violet
Bottlebrush Sedge	<i>Carex lurida</i>	Transition Zone	FP	3	F	
Broadleaf Arrowhead	<i>Sagittaria latifolia</i>	Shallow Water	F	3	F	
Monkey Flower	<i>Mimulus ringens</i>	Transition Zone	FP	3	B	Purple
Pickering Weed	<i>Ponederia cordata</i>	Shallow Water	F	4	B	Blue
Scouring Rush	<i>Equisetum hyemale</i>	Shallow Water	FP	3	A	
Soft Rush	<i>Juncus effusus</i>	Shallow Water	F	4	C	
Water-Shield	<i>Brasenia schreberi</i>	Deep Water	F	Floating	A	Purple
White Waterlily	<i>Nymphaea odorata</i>	Deep Water	F	Floating	A	White

Water Level = Deep Water: 6"-24"; Shallow Water: 2"-6"; Transition Zone: 2"-6" ABOVE Water Level

Sun Requirement= F: Full Sun, P: Partial Shade

Wildlife Value= A: Both Food and Cover, B: Butterfly Nectar, C: Cover, F: Food

NOTE: All blooms occur during the summer for the above plants.

Pond Life

FISH: You may consider placing small native fish species into your backyard pond. The fish will aid with insect control by eating mosquito larvae. Some native fish species, such as the black stripe top minnow (*Fundulus notatus*), are specifically adapted to eat aquatic insect larvae. For more on native fish species see www.nanfa.org.

MOSQUITOES: Mosquitoes require still, warm water to lay eggs and five days to hatch. Your pond will not likely be a breeding ground for mosquitoes with fish present. If you choose not to stock fish, placing a fountain or bubbler into your pond will limit breeding.

In addition to various birds and mammals that may use your pond, amphibians may also make an appearance. To benefit amphibians, do not stock your pond with fish that will eat amphibian eggs and young. Consider placing logs or branches in your pond for additional habitat and for egg attachment.

FROGS: You may see Southern Leopard Frog, Green Frog, American Toad, Fowler's Toad, Cope's Grey Tree Frog, Spring Peeper and Western Chorus Frog. With good wetland vegetation, you may also attract Cricket Frog or if you have woodland, you may attract Wood Frog.

SALAMANDERS: These amphibians are only likely to be seen if you have nearby woodland. Possible species include Jefferson's Salamander, Smallmouth Salamander, Spotted Salamander and Marbled Salamander.

Birdbaths:

If pond construction is too extensive for you, a birdbath can be purchased from a garden center or can simply be created from household items such as a trashcan lid or cake pan. Water should be changed every other day to keep the water fresh and prevent mosquitoes. To make birdbaths even more attractive to birds, provide dripping or flowing water. For example, water can drip from an overhanging bucket. For winter months, a water heating element can be placed in a birdbath to keep water from freezing.

- **Location:** Any type of birdbath should be placed 15 feet or more from trees or shrubs to prevent easy cover for domestic cats.
- **Construction:** Birdbaths can be constructed by pouring concrete in a shallow depression at ground level. The depth of a birdbath should not exceed three inches and the sides should gently slope. Edges of birdbaths are best when the surfaces are roughed for good perching surfaces.
- **Cleaning:** Every few days, birdbaths should be cleaned with a stiff brush and rinsed well.

References:

Henderson, C.L. 1987. *Landscaping for Wildlife*. Minnesota DNR, St. Paul, MN.

National Wildlife Federation. 2007. Step 3: Water. <http://www.nwf.org/backyard/water>

Natural Resources Conservation Service. 2007. Backyard Pond Webpage. <http://www.nrcs.usda.gov/feature/backyard/bkpond.html>