Beaver

Mink

Golden Mouse

Muskrat

Wetlands are areas like swamps and marshes that are filled with water for most of the year. They are home to unique animals and plants that depend upon the wetland to survive.

There are three characteristics of wetlands that set them apart from other environments:

- They are inundated with water for a substantial part of the year
- The soil in these areas is hydric, which means there is very little oxygen in the soil
- The plants in wetlands are adapted for wet conditions

According to the Wildlife Habitat Management Institute, at least 150 bird species and 200 fish species are dependent upon wetlands, and about 900 terrestrial species use wetlands for foraging and breeding.

Many of the mammals that live in these areas are adapted for swimming. Muskrats, beavers and mink are excellent swimmers that spend most of their lives in the water, and all of them can be found in the piedmont region of Georgia.

Animals like raccoons and white-tailed deer forage for food in wetlands, and many migratory birds find shelter in these areas. Though these animals do not live their whole lives in swamps and marshes, they still depend upon them for food and shelter.

Some birds do spend their entire lives in wetlands. The great blue heron is a large wading bird that lives both on the coast and in inland wetlands and lakes. Their nests are large, usually several feet across, and are located in tall trees.

Wetlands help to control floodwater and lower flood and erosion potential. They filter pollutants from agricultural and industrial runoff and provide habitats to a vast array of wildlife species.
Saltwater wetlands support shellfish production and aquaculture. Many recreational activities such as hunting, canoeing and bird watching take place in wetlands. They provide educational opportunities to researchers and schoolchildren alike, and deserve our attention.

Great Blue Heron

American Coot

Red Winged Blackbird

Green Heron

Spotted Salamander

Leopard Frog

Slider Turtle

Bull Frog

Eastern Box Turtle

Wetlands located near suburban and urban areas face great danger from development and pollution. In urban areas, most of the runoff from rain washes into storm sewers, carrying debris and chemicals into waterways. At least half of the wetland area in the United States has been drained, lost to development, or destroyed by other human activities since colonial settlement. Wetland area made up 11 percent in 1780, and has decreased to just 5 percent in 1980.

Amphibians and aquatic turtles are especially susceptible to toxins in their water habitat, as their skin is water permeable and they spend a large portion of their time in the water.

Government and local regulation have a major impact on protecting water from industrial pollution and wetlands from being developed. However, much of the danger to wetlands comes from households and individuals. You can make decisions in your life that will help protect the wetland ecosystems near you.

Conserve water, as water is sometimes drained from wetlands to provide water for households. Avoid using or lessen the use of pesticides and fertilizers around your home, as these chemicals make their way into lakes, rivers and wetlands and poison the ecosystems in them. Instead of planting high-maintenance lawns, you can landscape using mulch and native plants. Grease, oil and toxic chemicals such as antifreeze from automobiles should be disposed of safely at a proper facility. Local dumps often have receptacles for these types of waste.

Septic systems should be inspected and pumped every few years. The waste that comes out of damaged or overfull septic tanks can cause sanitation problems for the household in addition to polluting groundwater and runoff. Pick up after your pets to keep their waste from entering runoff. Waste from dogs and cats contain bacteria and diseases not normally found in local ecosystems, and can contain chemicals from their medications.
Citizens can help watch for illegal dumping by individuals or companies and encouraging their local dumps and waste facilities to accept harmful waste like oil, paints, batteries, and antifreeze so that these can be safely processed and disposed of.


Poison Sumac (DO NOT TOUC


Duckweed


Jewelweed


Stinging Nettle

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Overview

The boards for the project were cut to length in our garage and later transported to the site. The brackets were attached to the banding boards prior to their being transported to the site. The benches were assembled in the garage and carried to the site already assembled. Prior to transporting the building the materials to the site, the dimensions of the deck were measured out and the four posts sunk in their concrete footings. The outer banding was attached to the sunken posts, and the inner banding attached next. The joists were lowered into the brackets attached to the inner banding boards. The blocking was nailed in place. The decking was then laid and nailed into place, and the benches were attached to the top of the deck.

Material	Quantity	Unit Price	Total Price	Description
2x8x8	9	6.97	62.73	Joist
2x10x8	4	8.97	35.88	Band
2x8x8	2	6.97	13.94	Blocking
6x6x12	1	35.97	35.97	Post
5/4x6x8	18	3.97	71.46	Decking
2x8 Joist Hanger	10	1.44	14.40	Joist Hanger
A237 Angle	8	0.85	6.80	Angle Bracket
60 lb Concrete	8	3.46	27.68	Footing
3.5 inch Galvanized Spiral Nails	5 lb	16.78	16.78	Nails
2x4x8	3	2.47	7.41	Palings
2x6x8	3	4.97	14.91	Seat Bottom/Anti-Racking supports
2x6x8	3	4.97	14.91	Seat Back
2x6x8	3	4.97	14.91	Stand-alone Bench
Total				$337.78

Site

Blue Heron nest visible from deck

Benches

Three benches were constructed. Two of the benches were identical and one was designed to act as either a bench or a table.

To the left are the six boards used to build the two conventional benches.

The bottom plates (P1) attach to the bottom of the bench. They should have pilot holes drilled into them for the lag screws that will be run down through the bottom plate into the joist of the deck. This will help keep the bench in place.

Both benches will have three of the subassemblies shown below. A tooling fixture was created based on the first assembled subassembly. Making one will ensure the uniformity of the others and quicken the process. The seat bottoms will lay across the top horizontal (P4) and the seat backs will be evenly spaced along the backrest (P6).

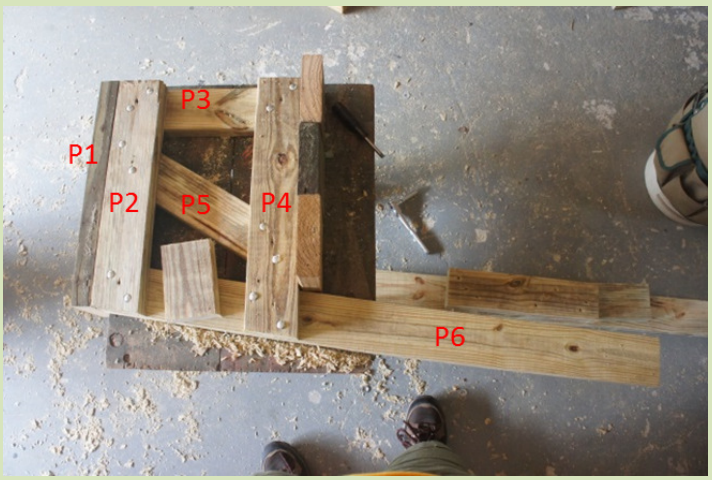
Pattern 1
Bottom Plate
Qty: 2 per bench
2x6 at 17 7/8”

Pattern 2
Bottom Horizontal
Qty: 3 per bench
2x4 at 18 7/8”

Pattern 3
Frontstrap
Qty: 3 per bench
2x4 at 14 1/2”

Pattern 4
Top Horizontal
Qty: 3 per bench
2x4 at 19 3/4”

Pattern 5
Crossbrace
Qty: 3 per bench
2x4 at roughly 15”
You will have to find your own measurements for the angle and for the precise length.



Pattern 6
Backrest
Qty: 3 per bench
2x4 at 41”

Third bench

The third bench was built to act as either a bench or a table. No formal plans were devised for it. Its top surface sits at the same level as those of the conventional benches, which is 17 ½”, and the bench is four feet long. Four 2x6 pieces are used for the top part, and a board runs from end to end beneath these to prevent racking.

Banding and joists

3 ft holes are dug where the corners of the deck sit. The varying height of the terrain must be taken into account and your posts sunk accordingly to ensure that the deck sits level. The banding sits on top of the 6x6 posts. Doing it this way instead of having the banding on the outside eliminates the need for attaching the banding to the posts with bolts. Five joist hangers are attached to two of the inner banding boards. They sit opposite of each other, and the joist boards slide down into the hangers and are secured with nails. The blocking is nailed into place.

Decking and bench attachment

The decking is laid running perpendicular to the joists. Chalk marks are made on the decking to show the position of the underlying joists. The boards are made even and nailed into place.

The benches are laid on top of the deck in the desired positions and lag screws are run down through the bottom plates. This ensures the benches will not float away in the case of a flood and makes it more difficult for vandals to remove the benches.