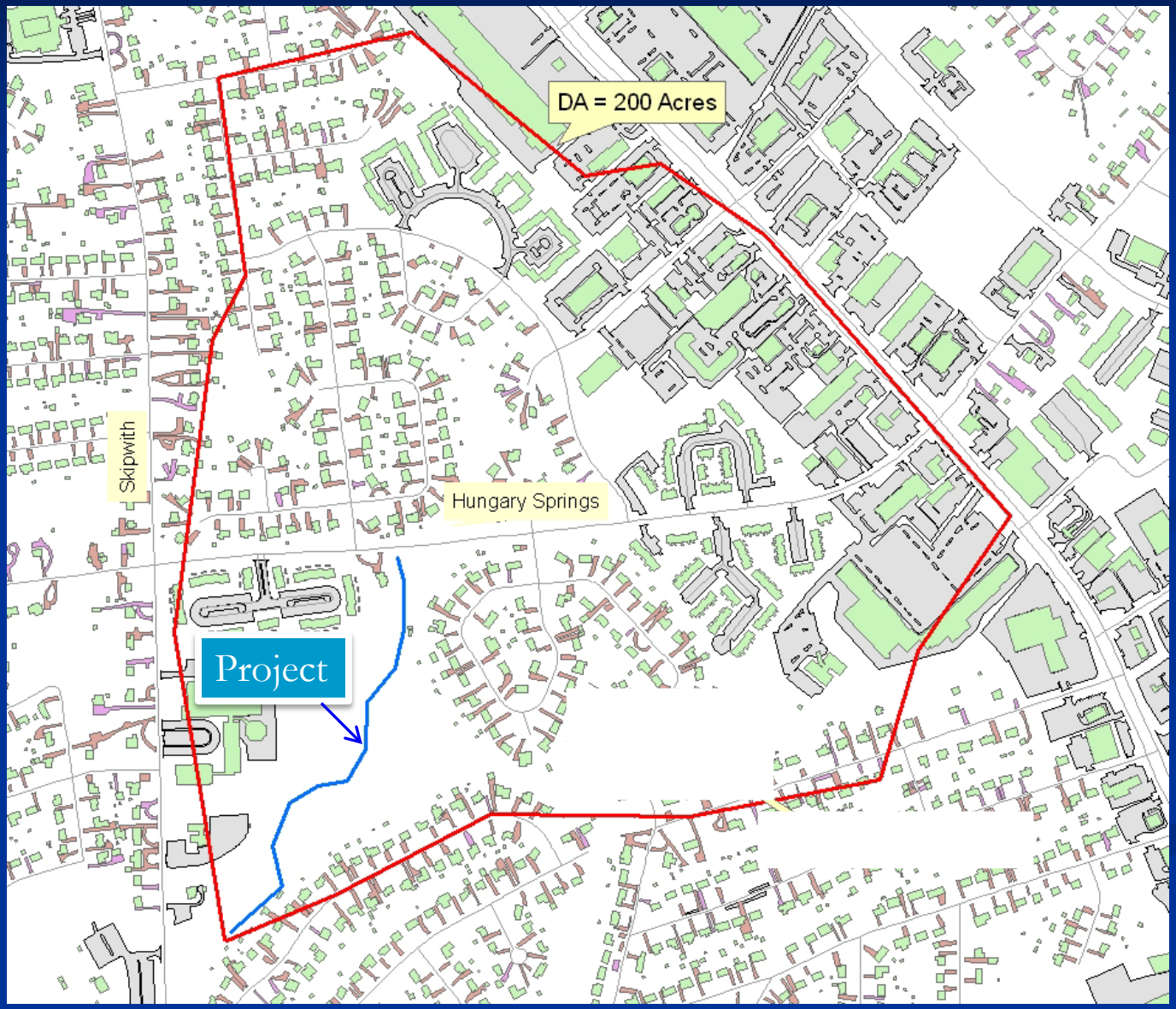
Skipwith Elem School Stream Restoration Project 2012



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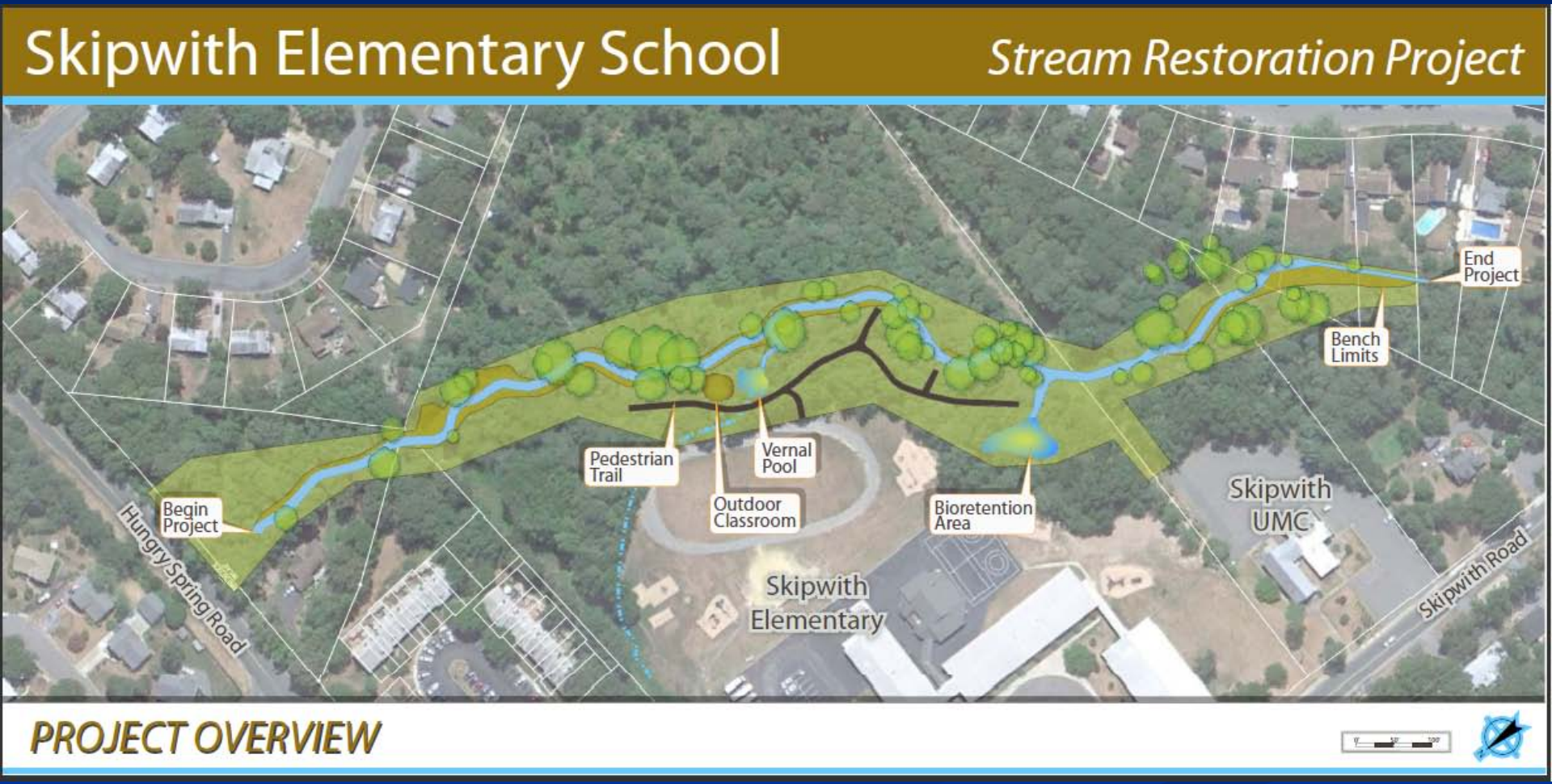

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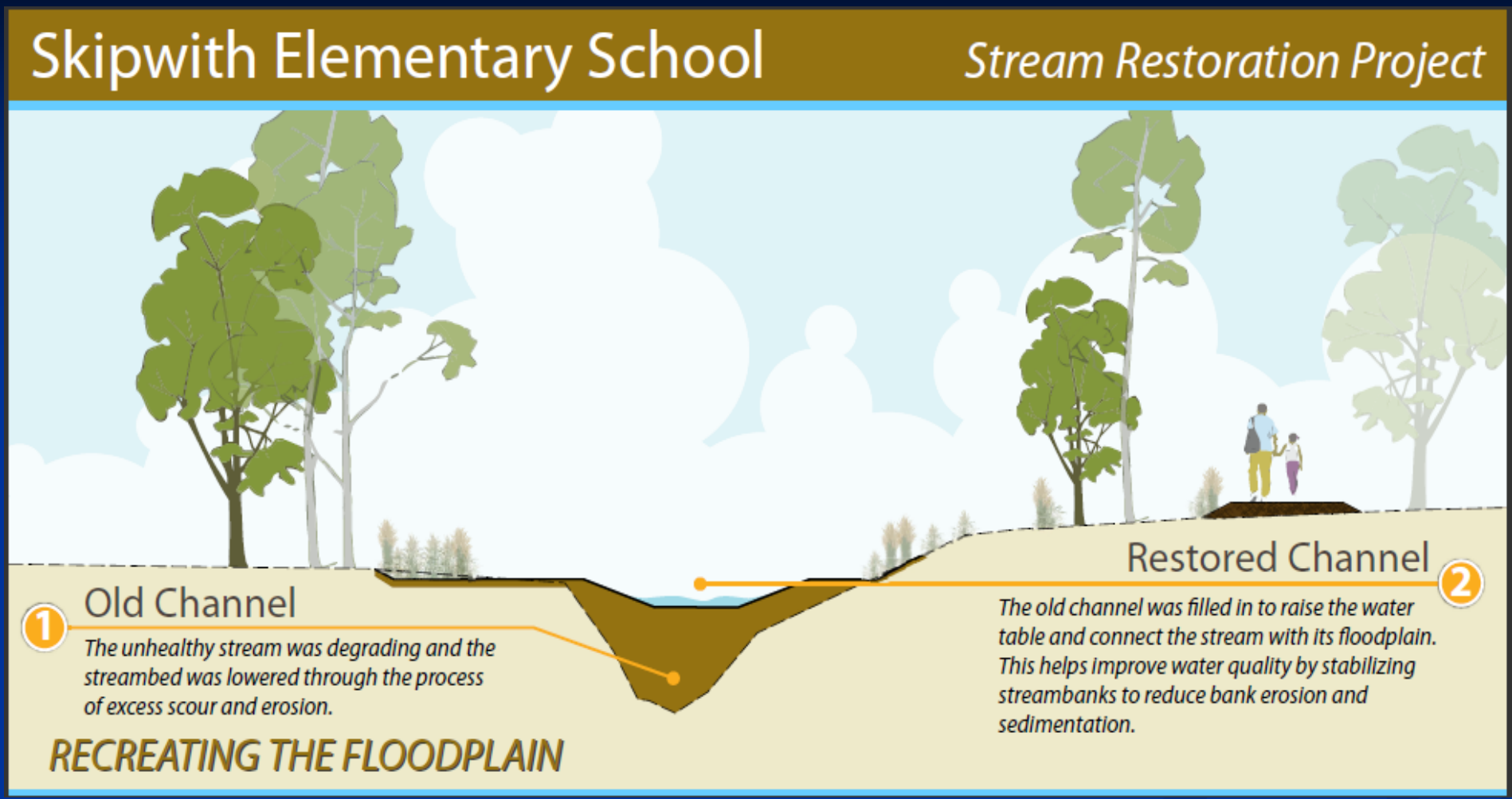

- Stream is currently eroding – 90 tons/year
- Stabilizing banks reduces sediment as well as nutrients downstream – 40lbs P, 320lbs N

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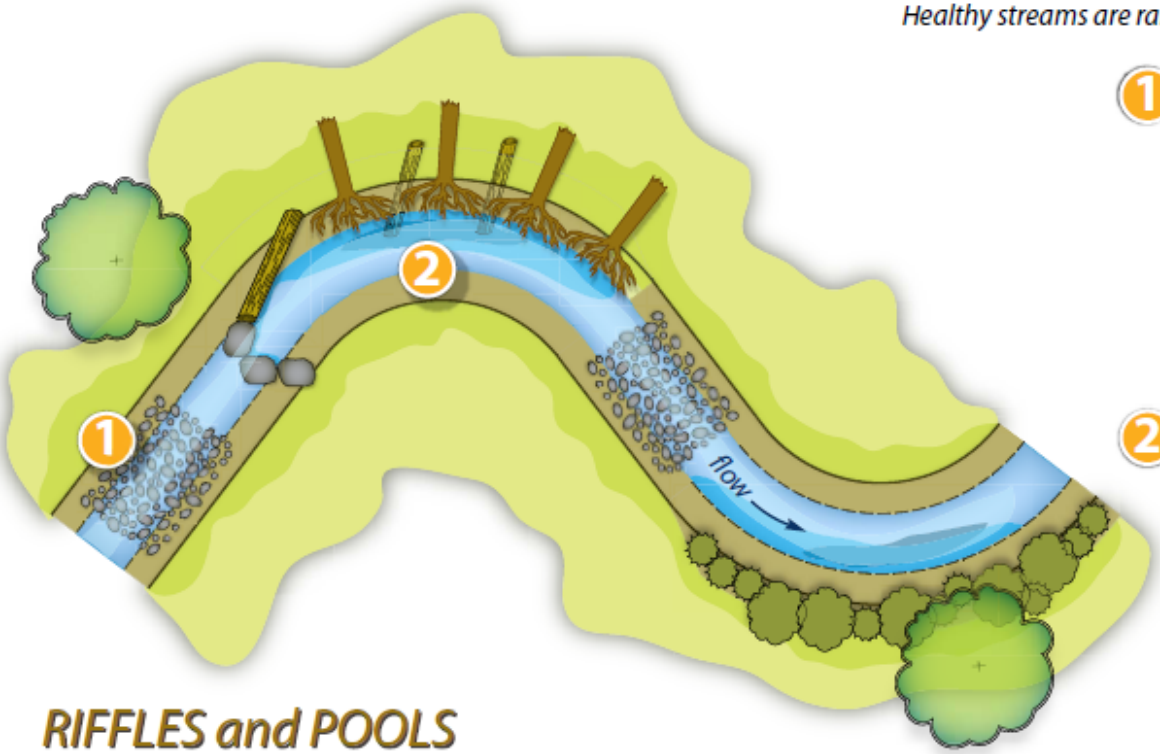

RIFFLES and POOLS

Healthy streams are rarely straight. They have a combination of riffles and pools.

1 Riffle

A riffle occurs in the straight sections of a stream and has a faster current and shallow depth.

The riffle contains larger rocks that keep the streambed from eroding and provide habitat for fish, frogs, crawfish, and insects.

2 Pool

Pools are deep sections of streams mostly located in bends. Pools contain flatter areas which help slow down the water.

Pools also provide habitat for fish, crawfish, frogs, and insects.

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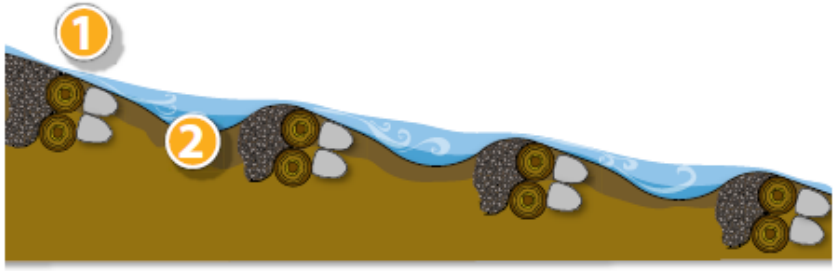
LOG and ROCK STEP-POOL

The log and rock step-pool is used for protecting the streambed and banks from eroding in straighter/steeper sections.

These structures are built to mimic a tree that has fallen over naturally in the woods.

These pools provide habitat for fish, crawfish, frogs, and insects.



1 Step 2 Pool

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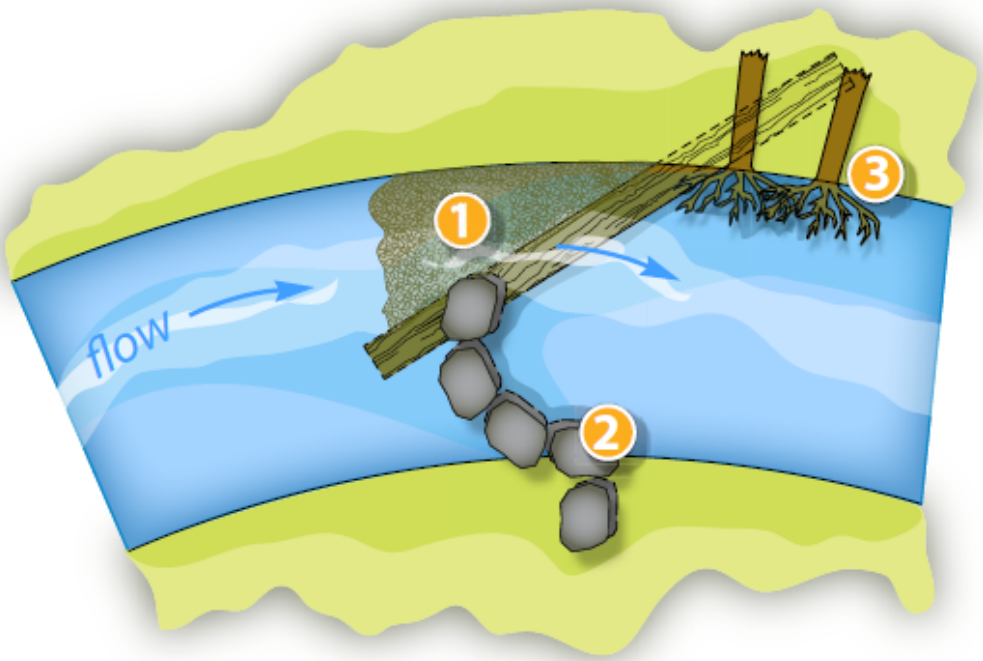

LOG J-HOOK VANE

1 Log Vane

A log vane is used to protect the streambank by redirecting higher flows toward the center of the pool.

2 Rock Hook

Larger rocks or boulders are installed to keep the streambed from eroding and help hold the log in place.

3 Root Wad

Root wads are added to keep the streambank from eroding and provide pool habitat.

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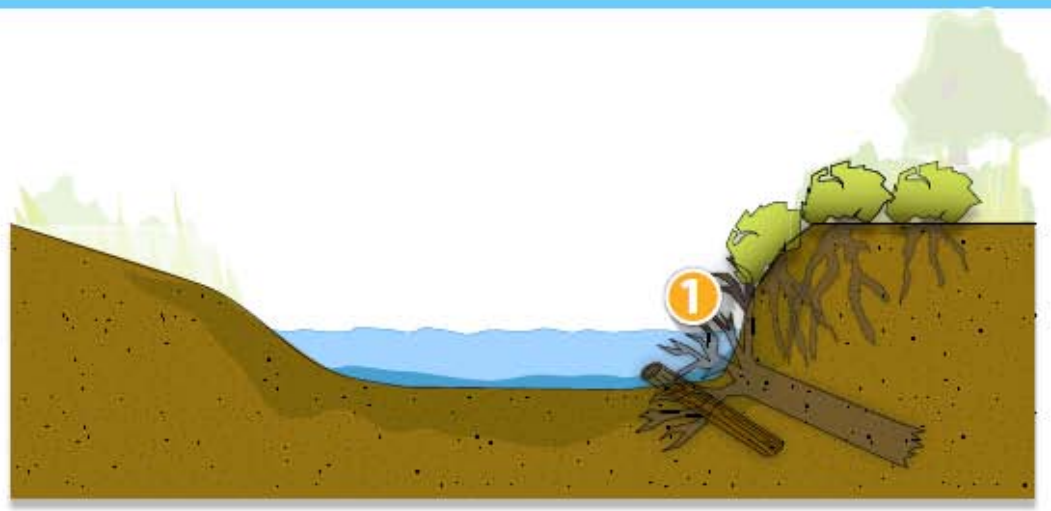

1 Root Wad

Root wads are used for streambank protection along the outside bend in pool sections. The root wads give the streambank stability and provide habitat.

ROOT WAD

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Vernal Pool

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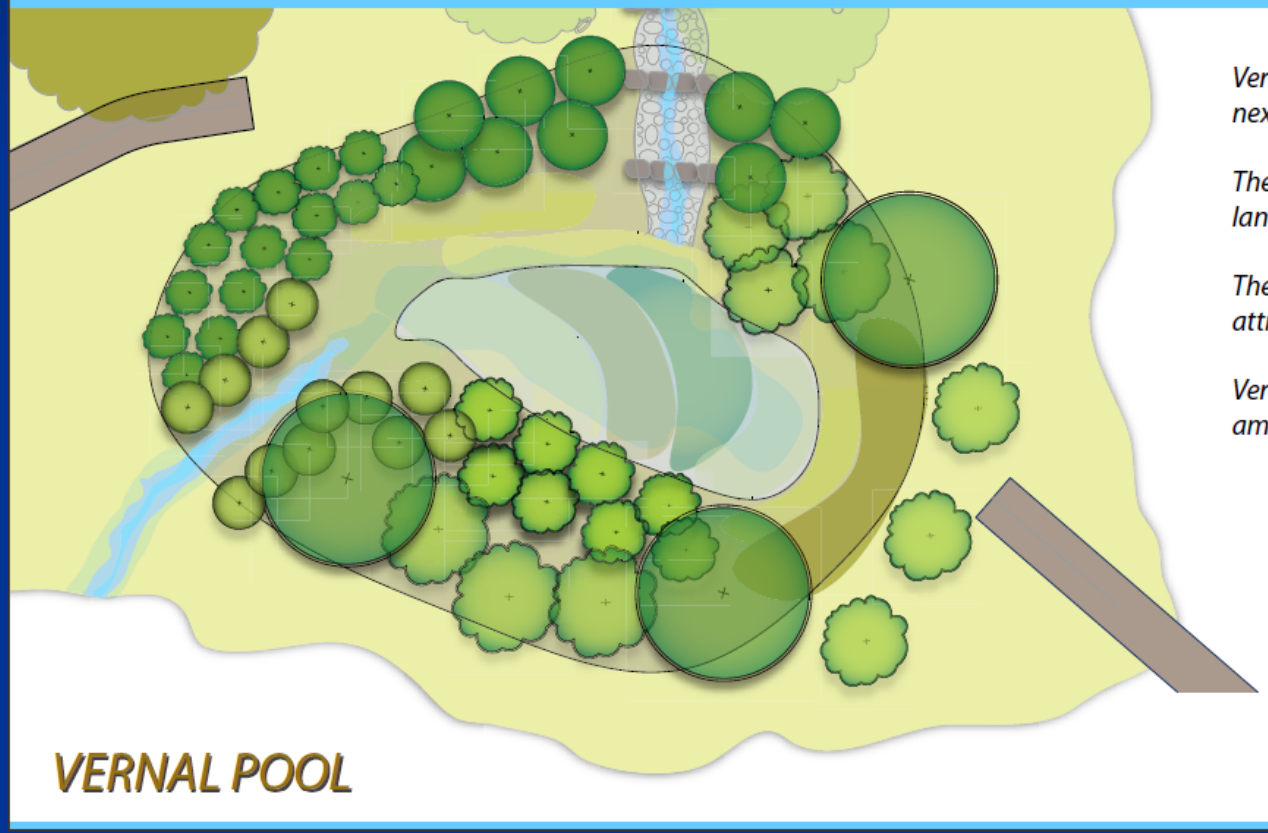


Vernal pools are shallow depressions that are found next to streams in natural forested areas.

These vernal pools intercept water flowing over the land before it enters the stream.

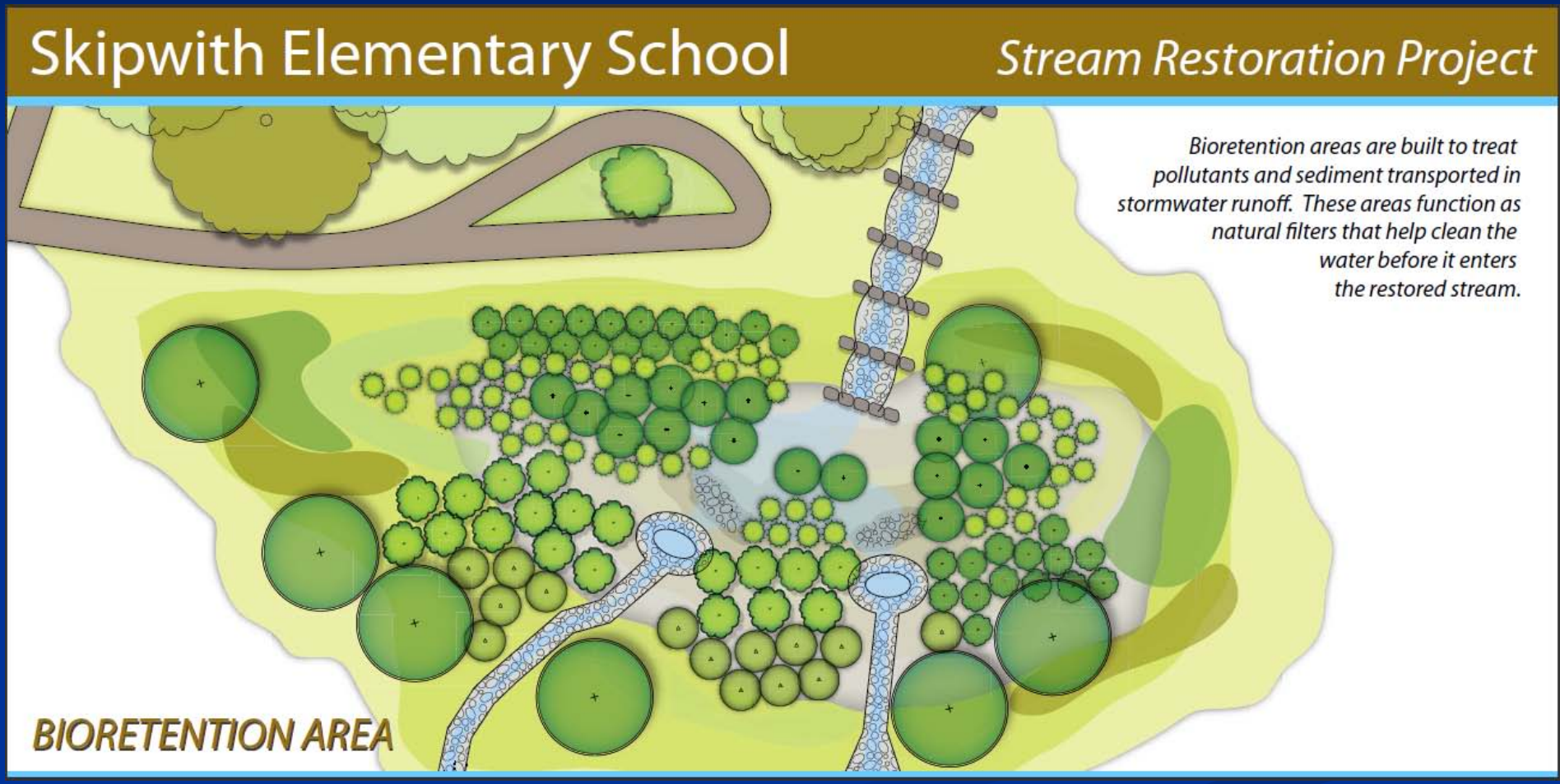
The native wetland plants help clean the water and attract a variety of animal species.

Vernal pools may also provide breeding grounds for amphibians such as frogs and salamanders.

Vernal Pool
Plantings will be completed early 2013

- High Marsh – Willow Oak, Black Gum, Redbud, Smooth Alder, Swamp Hibiscus, Wax Myrtle, VA Sweetspire, Highbush Blueberry, Spicebush, Soft Rush, Blue Flag, Bulrush
- Low Marsh – Arrow Head, Arrow Arum, Pickerel Weed, Soft Stem Bulrush

Bioretention



Bioretention
Plantings will be completed early 2013

- Black Gum, Willow Oak, Marsh Hibiscus, Smooth Alder, Arrowwood, Spicebush, Sweet Pepperbush, Spotted Joe-Pye Weed, New York Aster, Black-Eyed Susan

Outdoor Classroom & Educational Trail