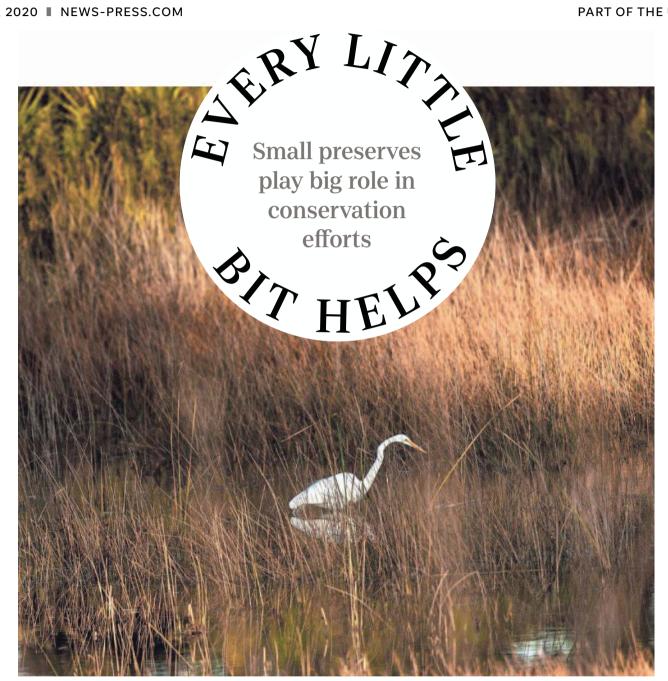
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A great egret forages for food in a marsh in Bonita Bay on Jan. 30.

Karl Schneider Naples Daily News USA TODAY NETWORK - FLORIDA

> lorida has millions of acres protected in federal and state preserves.

But across fast-growing Southwest Florida, thousands of acres are also preserved in presumed perpetuity behind the gates of private communities.

Alone, 80 acres here and 100 acres there might not have much of an environmental effect, but taken together, the tracts provide water recharge areas, storm water systems and habitat for wildlife ranging from raccoons and foxes to nesting birds and alligators.



Bees congregate on a large hive in a preserved area at Bonita Bay last month. PHOTOS BY ANDREW WEST/ THE NEWS-PRESS

Preserves

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"(Preserves) provide a lot of value and function for species," said Jim Beever, a member of the Southwest Florida Regional Planning Council. "Even smaller preserves can do a lot of good for species without large ranges like gopher tortoises and species that can get around in the air. They're very valuable for things like the bald eagle."

These preserve areas are typically planned in advance, before the first skeletons of new homes are raised. Beever has worked on these types of preserve areas in Southwest Florida for decades and said each plan for a new preserve is site specific.

"There is no absolute rule of thumb," he said. "You look at what is on the landscape, what resources are there, and determine what's worth preserving."

Developments like Wild Blue off Corkscrew Road in Lee County and in older communities like Bonita Bay and Pelican Bay farther south have built housing around native vegetation, natural and manmade lakes and natural sloughs and wetlands.

In some places, developers plant native vegetation to replace what has been lost. For example, at The Place at Corkscrew, a 1,325-home community on the north side of Corkscrew Road, developer Cameratta Cos. is preserving 750 acres, including new native trees.

While debate continues on whether a single large preserve or several small preserves have more benefit to the environment, one idea is common: anything set aside as a preserve is a good thing.

"Some of the ecosystem services that urban natural areas may contribute to enhance groundwater recharge, water quality, reduce threat of flooding and one of the most important features for wildlife is a niche habitat for native species," said Meredith Budd, the Florida Wildlife Federation's Southwest Florida field representative.

There is value and importance to these preserves, but connectivity is something planners and municipalities should strive toward, she said.

"In general, larger preserves are going to be better than smaller preserves and connected ones better than separated ones," Budd said. "But at the same time, you have to understand that there's wildlife needs, water resource needs and development needs. We need to manage resources and try to create structurally diverse and continuous corridors and patches within native habitat." Smaller preserves will have an "edge effect," Beever said. Meaning that more of the vegetation is exposed to roads and housing.

"Intrusions into the preserve can occur," he said. "People may dump garbage into the preserve, house cats can attack wildlife and mowers either intentionally or not hit preserves. That's why we always tried to avoid 'spaghetti preserves.' Long, twisting skinny areas are not enough for mature trees, for birds and do not protect gopher tortoises."

These big picture ideas are then distilled into individual plans when small developments come to the table. When the Bonita Bay community was developed, the idea was that residents could live with nature.

Bonita Bay has roughly 3,300 homes or apartments and is built adjacent to the Estero Bay Aquatic Preserve. A slough runs through the middle of the developed area providing residents with a view of nature as well as an area for aquifer recharge and wildlife habitat.

Some vegetation, like mangroves, have state laws protecting them from removal. Other species or habitats are usually prioritized differently when discussed in the planning stages. Wetland habitat is given a higher priority while other habitats such as uplands, dry prairies and pine flatwoods would be considered on a site-by-site basis.

"If we've identified native habitat and it does not have a lot of exotics, we are going to keep our development out of that area," said Tina Ekblad, partner and planning director at Morris-Depew and Associates. "It helps us meet requirements and provides inner connectivity, which helps with surface water management and wildlife."

Morris-Depew works with land developers to survey tracts and provide landscaping architecture to new housing communities. The goal is to preserve as much native vegetation as possible while removing exotic flora, Ekblad said.

"When the Army Corps came through to drain the Everglades and dropped melaleuca and Brazilian pepper, those things have degraded natural habitat," said Michael Ekblad, Tina's husband and director of landscape architecture for Morris-Depew. "Those are the areas that we try to impact first."

Once environmental workers and developers set aside these small preserves and finish building out the communities, maintenance is usually up to homeowners or community associations.

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A marsh is seen in front of some of the towers at Bonita Bay, Jan. 30. ANDREW WEST/THE NEWS-PRESS

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"Maintenance has varied throughout the years," Beever said. "There have been periods where it's done at will and periods were compliance declines. Changes in ownership can alter that, too."

Collier and Lee counties currently require landowners to take care of the maintenance. This means removing any exotic vegetation that crops up in the preserve areas and also ensuring native plants remain healthy.

Michael Ekblad said it's important that landowners don't remove littoral vegetation — plants surrounding manmade or natural lakes — and that communities should place signs up to warn residents. Littorals act as natural water filters by removing excess nutrients such as nitrogen or phosphorus.

"In most instances, native habitat is placed under conservation easements and granted to a water management district or municipality," Tina Ekblad said. "This creates a monitoring and enforcement mechanism to make sure maintenance occurs."

A conservation easement is an agreement with a municipality to keep the natural lands permanently pristine.

In Bonita Bay, Bill Lynn oversees the maintenance of the roughly 1,200 acres of green space. Of that, 345 acres is preserved native vegetation. "It's easier to keep exotic vegetation in check rather than remove them," Lynn said. "When you have to take them out you have nothing left, so you then have to put native plants back in."

A large part of the preserve areas in Bonita Bay constitute its storm water management system. Lynn calls this the "treatment train."

One area — a reservoir, lake or wetland — will keep the first inch of rain during a storm. The community has structures in place that then move the water through a series of lakes allowing impurities in the water to be taken up by littorals and other native vegetation.

"We're slowing storm water down and trying to get the nutrients out before they go into the Imperial River," he said. "We try to treat the water and want that water to leave out of here hopefully nutrient free."

The system of lakes and reservoirs is outlined by native trees and vegetation. Lynn and his crew of 49 work year round to go through and remove exotics and keep the native plants healthy.

"To save live oaks that are 50 or 60 years old is just phenomenal," Lynn said.

Preservation in these communities comes down to the master plan before development starts, Lynn said. While neither Collier nor Lee could provide

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documentation about how many acres are in preserve for either county, both have guidelines developers must follow before construction begins.

The amount of preserve land within a new development in Collier must meet requirements depending on the type of development and where the project is going to be built. Types of development include residential use, golf courses and commercial or industrial buildings.

To help determine what portions of land should be set aside, some priorities are in place.

"Wetlands are a priority as well as any habitat for animals," said Kristen Wilke, manager for environmental services with Collier County.

When landscape architects come into a property to be developed, they will first survey the area, either with people on the ground or by using aerial photography or a combination of the two.

"What we try to do, we try really hard to review aerial photography to tell us where wetlands are and the quality of native habitat," Ekblad said.

Lee County takes a different tact for native vegetation preservation. The regulations are based on open space requirements.

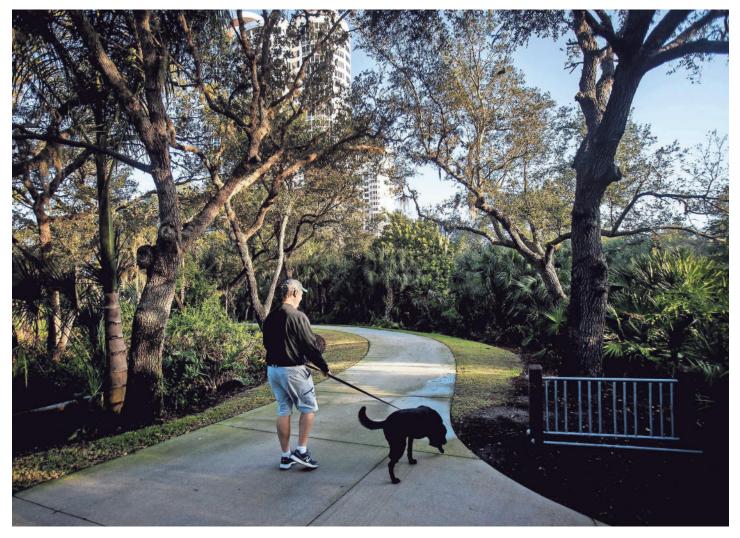
"(Lee County code) requires large developments to provide half of the required percentage of open space as indigenous preserves," county spokesman Tim Engstrom wrote in an email.

Open space requirements will vary in Lee depending on the use of the land and if the development is proposed under a community plan.

After all the regulations are met, management becomes the most important aspect of the nature preserves.

"They do need to be maintained and sometimes the very best people to do that are the people who live there," Beever said. "They can monitor what's going on and through their HOA they can be great stewards of their preserves."

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Above: A man walks a dog in a preserved area at Bonita Bay last month. PHOTOS BY ANDREW WEST/THE NEWS-PRESS

Left: This Bonita Bay area has a bird rookery in the habitat.