

## Conservation Development at Legacy

Legacy is a conservation development, a style of green planning and building that combines the needs of the land with those of the people. Legacy strives to create a community where one can truly live graciously. Legacy provides:

- A community that has good size homes while caring about the environment.
- A community with lovely natural views.
- A community that has natural areas where its residents can walk, exercise, and enjoy the outdoors.
- A community that maintains a conservancy for restoring and conserving natural resources.

To do this, Legacy developers began with a survey of the land to assess its natural resources, such as mature oak woodlands, wetlands, or savannas. This survey identified several high-quality natural areas on the site as well as areas that are best suited for building.

The conservation planners then set out to work on the design of Legacy using survey and test information. High-quality areas were protected and established as common open spaces for residents to enjoy. Placement of houses, streets, stormwater management areas, and other structures were planned to create as much common open space as possible.

Plans were also laid to manage stormwater *naturally*, such as using vegetated swales and naturalized ponds to collect rainwater. These stormwater management areas are to become common open spaces as well. All of the open spaces including stormwater management areas provide homes for native birds, butterflies, and animals that add to the area's ecological health.

Covenants to preserve the integrity of the common open spaces and the community as a whole were developed.

Conservation principles employed at Legacy include:

- Using *natural* stormwater management methods such as rain gardens, vegetated swales, and naturalized detention ponds to purify water and replenish the aquifer
- Preserving open spaces and restoring them with native ecosystems for the purpose of enhancing residents' experiences and to provide habitat for native birds, butterflies, and animals
- Reducing the footprint of impervious surface on the land
- Encouraging an ethic of environmental stewardship

## **Restoration Project**

At Legacy, 26 acres of high-quality natural areas have been preserved as open space, including an oak savanna - an endangered ecosystem in Illinois, a sedge meadow, wetlands, prairies, and young oak woodlands. All of these areas at Legacy are being restored to their native ecosystems. Restoration is necessary because all northern Illinois natural areas are struggling against a host of alien invaders that are escaped landscape plants. The trouble with many imported plants is, like Japanese beetles, they have no natural checks! The result is our woodlands are choked with honeysuckle from Japan and buckthorn from Europe; our wetlands are almost entirely filled with Eurasian cattail and purple loosestrife, and our prairies are squeezed out by Queen Anne's lace and dandelions, also from Europe. The natural areas at Legacy are defined by the native plants that live in them, but they also have been invaded by some of these non-native plants.

Restoration activities at Legacy are improving these ecosystems:

**Oak Savanna** – Legacy hosts a mature oak savanna that is made up of trees that are between 150 and 200 years old and have stood since European settlers first came into this region. Such savannas once dotted the northern Illinois landscape, but as an ecosystem they have become endangered because of traditional development methods. Restoration in the oak savanna includes removing alien shrubs from the understory and replacing them with native flowers and grasses.

**Prairies** – Much of the open space at Legacy was once prairie which, because it was used for grazing cattle and not for farming, has preserved much of its native seed bank and undergone little soil damage. Restoring the prairies at Legacy includes identifying specific invasive plants, such as Queen Anne's lace, sweet clover, and European grasses, and removing them. Then reseeding the areas with native grasses and flowers gives them a competitive edge to overcome the non-native invaders.

**Wetlands** – The open space at Legacy includes a large wetland on the northern edge. This wetland plays host to a number of rare bird species, including sandhill cranes, wood ducks, orioles, and a variety of small song birds. Restoring this wetland will enhance the habitat for these birds and invite even more. To restore the wetland, a variety of methods are employed, including prescribed burning, removing invasive wetland grasses and cattails, and planting and seeding the area with native species.

**Sedge Meadow** – On the northern edge of Legacy lies a low wet area that is filled with sedges and other related plants, including flowers such as blue vervain and sawtooth sunflower. Sedge meadows also provide specific habitat for unusual birds like the sedge wren. Restoring the sedge meadow includes removing European wetland grasses and invasive cattails to allow the native sedges and flowers to flourish.

**Emergent Oak-Hickory Woodlands** – Around most of the perimeter of Legacy lies young oak-hickory woodlands. These native tree communities, consisting of red oak, shagbark hickory, and burr oak, represent what was once the predominant woodland type in northern Illinois. Like other woodlands in our area, they have been invaded by non-native shrubs, especially European buckthorn. Restoration activity entails removing the buckthorn and replacing it with native woodland plants, including a number of spring flowers such as wild geranium, trillium, columbine, May apple, and many others.

### **How is Conservation Development Different?**

In order to understand how conservation development is different, it is important to understand traditional practices.

Traditionally, developers utilize the following steps when creating a housing subdivision:

- Remove trees and other woody vegetation
- Level site contours and remove topsoil
- Create a grid structure for streets and install culverts, ditches, and other stormwater conveyance structures
- Create foundations and erect homes
- Replace some topsoil and install traditional lawn and landscaping

Recently, flooding problems along Midwest rivers and creeks have highlighted the need for developers to manage stormwater on site. In response, many building codes developed in the Chicagoland area over the last ten years or so require developers to create detention basins to accommodate all the stormwater for the entire development. The detention basins are usually created in one or two ways: In some instances, a pond is developed and aeration keeps the water appearing clean. In other instances, the basin is lined with traditional lawn grass.

Conservation development differs from traditional methods by employing the following principals:

- During the planning stages, a natural resource inventory is completed to identify high quality natural areas and those that are better suited for building
- Native trees and other native woody plants are preserved and protected during construction
- Streets, houses and other impervious surfaces and structures are built to have the lowest impact on the land and to work with the natural hydrology on the site

- Natural stormwater management methods, including naturalized detention basins, rain gardens, vegetated swales, and others, are employed to mitigate flooding problems, both off site and on, and to rejuvenate groundwater supplies
- Native ecosystems are set aside and restored and trails are established
- Homes are built with environmentally sound materials and methods

In employing these practices, conservation developments improve environmental health in a variety of ways:

- Treating stormwater on-site reduces flooding in the neighborhood and downstream
- Natural stormwater methods clean the water by removing silt, salt, and surface pollutants like automobile fluids, cleaning solvents, and other chemicals
- Reducing the amount of impervious surface allows more room for rainwater to fall and infiltrate into the soil and provides more room for both people and wildlife
- Lowering building impacts allows for natural soil stratification to remain intact, preserving native seed banks, natural contour of the land, and soil integrity
- Using native plants in natural areas and in stormwater ponds and other structures creates habitat for birds and butterflies, beautifies the site, and purifies stormwater
- Preserving existing native trees and shrubs enhances the natural beauty of the site and provides a mature habitat for birds
- Restoring native ecosystems preserves habitat for native wildlife and gives residents access to lovely woods, prairies and other native vistas