

Applying Tools and Strategies for Planning and Conservation

Identifying Lands to Conserve and Develop

As a planner you must deal with issues related to growth, conservation and restoration. You need to assess the various natural resources, natural hazards, areas of development and areas that need to be protected.

Communities near or in the Great Lakes coastal zone take on additional complexities, run off from urban areas can adversely impact water quality and persistent flooding in these areas can cost small municipalities tens of thousands of dollars each year. For this assessment you make recommendations identifying priority conservation and growth areas for a regional comprehensive plan.

Many small communities in Indiana are interested in using green infrastructure to attenuate coastal and inland flooding in a cost effective way. For the purpose of this exercise we will use Whiting, Hammond, Munster, East Chicago, and Gary Indiana as examples. These communities are interested in supporting growth and attracting new residents and businesses while maintaining the integrity of their natural resources and without significant upgrades to their stormwater infrastructure. To accomplish this end, these cities are seeking to use green infrastructure and open space preservation to increase the capacity of their stormwater infrastructure system and improve water quality.

Specific goals include:

- **Protect or restore freshwater wetlands, natural areas and open space to better manage sediment runoff for water quality and to mitigate flooding due lake level change, heavy precipitation and storms.**
- **Identify areas where green infrastructure may be able to help attenuate flooding.**
- **Direct new development toward existing developed lands and infrastructure.**

Assignment:

Identify possible areas for conservation and growth, set priorities, and explain reasons for selecting them.

Specifically, identify:

- **Key geographic areas to conserve, restore, maintain, or place green infrastructure**
- **Areas suitable for future residential and/or commercial growth**
- **Are there other risk or vulnerability factors that should be considered?**

Before you get started **review the paper maps**. You have two paper maps to work with while developing your plan. These represent most of the available geographic (GIS) datasets for the area.

Mapping Guidelines:

- **Select a color for each type of use, recommended colors:**
 - **Green:** currently protected land (existing parks and natural areas)
 - **Blue:** land recommended for conservation (wetlands, forest, flood prone areas, etc.)
 - **Red:** areas for restoration or placing green infrastructure (be sure to designate which)
 - **Black:** currently developed land
 - **Orange:** land recommended for development
- **Use patterns to indicate intensity/importance.** Use different patterns (dots, crosshatch, etc.) to show intensity of resource/land use. Establish a legend on your map to track what colors and symbols represent.

Process Steps:

1. First identify currently **Protected Land**: start by placing the clear worksheet (Mylar) over the “Natural Resources” map showing wetlands, landcover, etc. **Draw** in the currently protected lands, parks, and/or lands that have been designated as conservation management areas. If you’re familiar with the area, add any additional protected land that may not be on the map.
2. Next identify the currently **Developed Land** by using the same map and showing where the cities and towns are located. In this case, unless the lands is designated as a park, open space, forest, or pature, assume that it is developed. **Draw** these areas on the Mylar.
3. On the “Hazards” map, reference the FEMA Flood Zone, Parks, Forests and Flood Hazard Areas map layers to identify **Land to be Conserved**. Remember that establishing forested stream buffers, limiting impervious surfaces, protecting open spaces are very important to maintaining the health of streams and lakes. Add any additional land, such as areas that can be used for flood storage, green infrastructure, or stormwater capure/conveyance. **Draw** these areas on the Mylar - and indicate their importance.
4. Next, identify the **Land to be Developed**. Compare the “Hazards” and “Natural Resources” maps and use the “Natural Resources” map to identify ways in which you could adjust future development plans to reduce socio-economic risk. Think about directing growth to locations near existing development infrastructure, protection of critical drainage areas and wetlands and any other factors, which will help maintain the character of the area and protect critical resources. **Draw** these areas on the Mylar.
5. Finally, consider **Lands to be Restored or Revitalized** - these areas could currently be developed lands, existing open spaces, or parcels in flood hazard areas. These areas may be prime locations for green infrastructure in urban landscapes or wetland restoration in rural landscapes.

Results and Report

Identify your top three geographic areas for conservation and/or development. Circle them on your Mylar overlay and label them.

1. **Start** by placing your Mylar over the Natural Resources map. Determine your top three priority areas by considering such factors as:
 - Importance in meeting your goals
 - Size (larger is better for conservation lands)
 - Linkage (contiguous) to other protected lands (for hydrological, wildlife and recreation functions)
 - Risk - from flooding, storm surge, imminent development, etc.
 - Attainability - willing landowners, financial resources, etc.
2. **List other data** that would be helpful and/or needed to guide your analysis.
3. **Record the reasons** for selecting each.
4. **Select a spokesperson** to present your plan.