

## **SECTION 4.1**

### **PLANNING PROCESS**

A comprehensive planning process should be considered prior to implementing any drainage improvement activity. Effective planning ensures the successful completion of project, reduces potential for costly delays in project implementation, eliminates future costly repairs, and minimizes the need for mitigation measures required as a result of implementing inappropriate practices. To be successful, a planning process should include the following steps:

- **Identify problems:** Short and long term issues relating to site resources should be identified and listed. For county regulated drains, this is normally done by the county surveyor on an annual basis as required by the Indiana Drainage Code.
- **Determine the project objectives:** What is the desired outcome? How will the site be used? What are site features to enhance? What rules, codes, regulations, ordinances, or restrictions need to be addressed? How will these constraints affect the project scope?
- **Assemble existing Information:** Gather data on soil, water, plant, animal resources, and human resources on and around the site.
- **Define the site on Map:** Use a suitable map with adequate scale to highlight the project area and its surroundings.
- **Identify the participants:** Determine who needs to be involved in the planning and review process.
- **Perform on-site assessment:** Inventory soil, water, plant, and animal resources in and adjacent to the project site. Identify the presence of wetlands and other unique aquatic resources, botanical resources, and wildlife habitat that may be impacted by the project.
- **Determine additional required data and studies:** Prepare necessary work maps, obtain required hydrologic and hydraulic models, delineate wetlands, etc.
- **Analyze resource data:** Quantify resource use and development impacts.
- **Formulate evaluation criteria:** Formulate evaluation criteria based on social, economic, and environmental feasibility and acceptability.
- **Identify solutions:** Identify alternative solutions, plans, or practices to be evaluated.
- **Evaluate and select alternatives:** Evaluate alternative solutions based on social, economical, and environmental feasibility and acceptability. Consider factors described in Section 4.2 and select alternative solutions/practices.
- **Define Necessary Maintenance Activities:** Anticipated Maintenance activities should be clearly defined and responsibilities identified.

- **Prepare an implementation plan:** Implementation plan should identify steps, implementation sequence, time schedule, maintenance schedule, and those responsible for each task.

In addition to the above steps, public involvement as well as early coordination with the regulating agencies should be considered throughout the planning phase. Agencies' pre-application procedures, described in Section 2 of this Handbook, are created for the applicants' convenience and should be taken advantage of in order to improve the chances for smooth and timely completion of drainage improvement projects.