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Community Forestry Inventory Decision Model

A model for deciding the type of inventory to perform

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Having some knowledge about what you have is the first step in developing a community tree management strategy. But what information is necessary? What is the best way to collect and maintain this information? What are the strengths and limitations of the various methods? As might be expected, there is no one-size-fits-all answer to these questions. The type of inventory that will fit your community best depends on community size, size of the tree population, the technology level of your community, budget, staff availability and how the information will be used. In an effort to help communities determine what might work best, urban forestry professionals from Indiana, Minnesota and Wisconsin came up with an inventory decision model based on the size of the community's tree population. You will note that there are several suggested options for each tree population category.

Table one lists the various inventory types based on the cost of data collection, quantity of data collected and the cost to maintain the system. The least costly and complex (canopy analysis) is at the top, and the most costly and complex (GIS) is at the bottom. Across the top are the sizes of a community's tree population. The boxes with check marks show those inventory methods that will typically work best for that community. Note that these are only suggestions—the type of inventory a community ultimately decides upon will depend on many things, including what the inventory will be used for. Additionally, some communities may decide to do more than one type simultaneously because of the different kinds of information they yield. For instance, a community may wish to complete a canopy analysis to help them map large-scale changes over time and provide information on benefits and costs of the forest as a whole. Since this type of inventory provides little information on individual tree management, they may also want to do an inventory specific to individual trees.

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Table 1: Suggested Inventory Approaches by Size of Tree Population

	Approximate Tree Population →	*<1,000*	*1,000 to 5,000*	*5,000+*
Inventory Options (in order of complexity)	*Canopy Analysis*	✔	✔	✔
	Sample Survey			✔
	Tree Tally	✔	✔	✔ *by work unit*
	Index Card File	✔	✔	
	Spreadsheet/Database	✔	✔	✔
	Commercial Inventory Software		✔	✔
	Geographic Information System		✔	✔

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