

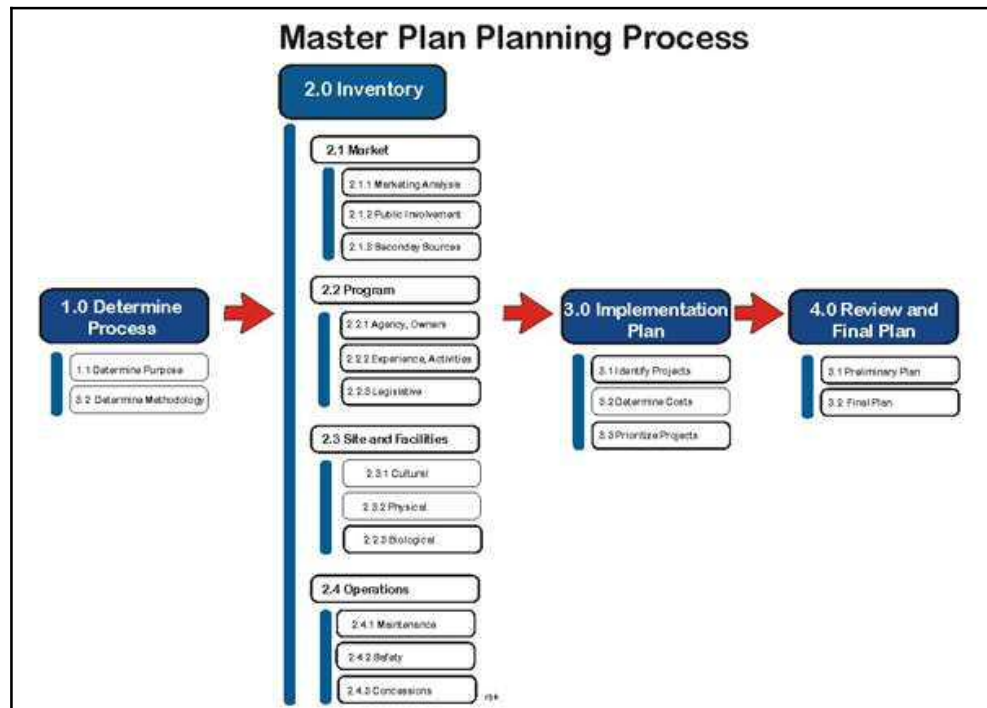
## Chapter 17

# Master Planning

This chapter introduces the concept of master planning with a focus on parks and facilities. Master planning is a flexible process with its structure being determined by its intended use. The following working definition of master planning is adapted from the Brookside Garden master plan. “*Master planning provides a vision for guiding an agency, program, park or facility to meet the needs of the present and the challenges of the future.*” (Brookside, 2001, p.1) The key components in master planning are that it is a plan and that it allocates resources over time to develop a park or facility.

Copeland (2011) identified five components of a master plan. These are the market, program, site and facilities, operations, and finance and funding (Figure 17.1). Conceptually, these five components are a good way to view the master planning process. The *market* focuses on the constituents, patrons, participants, members, and visitors. It focuses on the external factors to the site or facility. The *program* focuses on the experience delivered by the activities and program. Returning to the thesis of this book and Figure 1 in the Introduction, the experience is the confluence of the activities and program, facilities and park resources. The third component addresses the combined elements of *site and facilities*. Since the focus of this book is on park and facility design, this chapter and the next two chapters are site and facility oriented. In discussing the program oriented organized camping field, combining sites and facilities by Copeland (2011) is not unexpected. *Operations* includes support services and typically includes maintenance, safety and security, and food service, if applicable. Last is *finance and funding* which seeks to identify the costs involved in fulfilling the vision.

The model used for the master planning process rearranges these five elements into a process oriented model (Figure 17.1). It emphasizes inventorying the sites and facilities, programs, and operations components. Next, the model focuses on developing an implementation plan. The implementation plan focuses on determining the costs and funding for the vision.



**Figure 17.1 – Master Plan Components** – The master plan process can vary according to the needs of the organization. This model focuses on the development of park and facility resources. Source: Author; adapted from Copeland (2011). – [file:\MasterPlanningModel.jpg]

Often the vision needs to be accomplished in manageable steps or phases. Last, the final plan is organic in that it is constantly changing to changing needs.

This chapter uses the Brookside Gardens master plan as its primary case study. There are some differences between the model used in Figure 17.1 and the organizational structure of the Brookside master plan. This is normal. The primary focus of the Brookside master plan is on the renovation and development of its site and facilities. In contrast, there is less of a focus on the market and program components. This focus is expected for an existing facility. In terms of the propagation center, the operations component is a significant portion of its master plan.

## Determine Process (1.0)

The master planning process is flexible. The model presented in this chapter is a starting point and it can be modified to meet different needs of the owner, agency or developer. Using Copeland's (2011) five areas as a starting point, the master plan model presented in this chapter rearranges the five components. As might be expected, the category of sites and facilities includes parks and facilities. Second, the finance component is moved into the implementation phase where financial resources become a key factor in determining the implementation of the vision. Third, the focus of the master planning presented here is on the development of park or facilities. This is the focus of this textbook and links this chapter with the next chapter on site development.

In discussing the process, it is important to note that any one of the five areas identified by Copeland (2011) can be the focus of the master planning process. For a new park or facility, the focus of the process would normally be on assessing the market demand for the new venture to determine if there is sufficient support. The outcome would focus on assessing demand and on developing steps to fully tap into the community support for the new park or facility.

The master plan can focus on developing new programs at an existing park or recreation facility. In this process, it is assumed that there will be little or no site or facility improvements and that the program development will use mostly existing resources.

Less likely but sometimes of equal importance is the development of a master plan that focuses on operations and support services. Brookside Gardens is a point in case. They have a need to propagate plants for their gardens. This is an ongoing need. It is significant also. Second, they have a tree blight which might kill many of their specimen trees. This would change the forest canopy which in turn would change the plants in understory. Changing conditions may require plants that favor sun versus the current plants that favor shady condition. Or how do they maintain the forest canopy. In their master plan, the propagation area comprises significant consideration and it could easily be its own master plan.

A capital campaign is really a master plan on raising capital to finance parks and facilities. It looks at capital needs over time and it seeks to raise funds through campaigns and in phases. Facility development is often tied to or limited by the raising of funds that occurs. This was true for Brookside Gardens where they originally developed five phases. Since there was insufficient funding, the five phases were expanded to fifteen phases where each phase was less costly.

Returning to the model in Figure 17.1 the five elements are arranged with an emphasis on park and facility development. In addition, the model includes the development of an implementation plan which develops phases or projects for developing the park and facility based on the financial resources available.

<b>**Determine Purpose** (1.1) – The purpose of the master planning process is to devise a plan to implement the vision of the future. The vision is determined by the need. Building on the discussion in the previous section, the purpose of the master planning process determines the structure used. A new or proposed facility will most likely emphasize a plan focusing on determining the market. A recreation facility with existing facilities will most likely emphasize developing a master plan focusing on developing their program. An existing park such as Brookside Gardens will tend to emphasize the development of its park and facility resources. This is why it is used as the case study in this chapter. The Brookside Garden master plan could also be used to demonstrate a focus upon operations and maintenance.

<b>**Determine Methodology** (1.2) – In this chapter, the master planning approach is delimited to parks (sites) and facilities. As noted, the process can easily be adapted and modified to address any of the five components identified by Copeland (2011). This includes the model and its components delineated in Figure 17.1. In addition, the end product of the process in this chapter is to develop a plan that delineates what will be accomplished and when it will be accomplished.

## Inventory (2.0)

Using Copeland's (2011) five components, four of the components have been included as part of the inventory process. These are the market, program, sites and facilities, and operations and maintenance. The finance and funding component was moved into the implementation plan.

<b>**Market** (2.1) – It is important to determine the clients and visitors to the park or facility. The market or external environment focuses on who is serviced by the park or facility. Market is a good term to use since it denotes the identification of potential users and meeting their wants and needs. Referring to the market as the external environment is also appropriate since it focuses on those influences affecting the park and facility lying outside of the park and facility. Also, these influences can include legal, legislation, regulations, political, competition and other external influences.

<c>**Marketing Analysis** (2.1.1) – Marketing analysis focuses on the 4-Ps, product, price, promotion, and place (distribution). The 4-Ps are a useful way to analyze the users of a park or facility in terms of offerings of the park or facility (Howard and Crompton, 1980, p.330). The *product* or *program* in recreation and park oriented settings refers to the experience provided by the park or facility. It often includes the activities and programs offered, but it needs to include the overall experience also. *Price* refers to both pecuniary and non-pecuniary costs. An entrance fee is a pecuniary cost. The distance traveled and the time required to reach the park or facility is an example of non-pecuniary costs. The park or facility needs to position itself in terms of pecuniary and non-pecuniary costs to attract its desired clientele and visitors. *Promotion* refers to attracting the desired clients and visitors by creating advertising materials to promote its programs at the appropriate price in an effort to attract the desired clients or visitors. For most parks and facilities, the sites are pre-existing and already in place.

There are three approaches for profiling potential users. These are using socio-demographic information, geographic and psychographic data.

<d>**Socio-demographic** – The socio-demographic profile of potential users focuses on the age, gender, income, education, occupation, ethnicity, social affiliation of the visitors.

<d>**Geographic** – Usually, geographic analysis is the analysis of socio-demographic information by zip codes. This analysis can provide considerable information about potential visitors to a park or facility.

The following example indicates how the socio-demographic information provided by a zip code analysis of the market area surrounding the chain or convenience store can be used to make a decision regarding locating a store in a neighborhood. Assume that a company knows that 80% of its market is from an area within a defined radius from the proposed store. They identify the zip codes of the areas within that radius. The internet provides the typical socio-demographic information for each zip code such as education, type of employment, household income, and age. Knowing the population of the area and the profile required to support similar stores from other locations, the company can easily determine if there are enough people with the necessary income and possessing the appropriate socio-demographic profile to support the store at the proposed location. Along with an analysis of a couple of other factors such as the road network and competitors, the decision to locate at the proposed site could be fairly straightforward with the chain knowing that there is a sufficient population present to support their store.

<d>Behavioral/Psychographic – Psychographic factors focus on why people participate in the activity or what benefits they seek from the activity. For example, respondents surveyed are asked if they participate in an activity to seek nature, to test their abilities, to be with others, to be with their family, etc.?

<c>Public Involvement (2.1.2) – The public can be actively involved in the information gather process. Kelsey and DeFillippo, (2010) outline several of these methods. Typical approaches include public hearings, surveys, focus groups, and charettes. A tendency among all of these sources of information gathering is that the respondents tend to be either very favorable or very much against the proposal. This is because they are motivated.

<d> Public Hearings – Often public agencies are required to have public hearings on initiatives or significant changes. If public hearings are required, the issue becomes whether the agency is really interested in collecting information or merely going through the formality of completing the requirement.

In the *presentation-based approach*, the purpose of the presentation is to inform the public. Normally, this approach utilizes a formal presentation followed by a question and answer period. Usually, the purpose of the question and answer period is to clarify information presented rather than to argue the merits of the information presented.

In the *priority setting method*, the attendees are provided with a series of alternatives to which they respond. Usually, there are three or four alternatives. The format may use a discussion format where participants discuss the different alternative packages prior to voting on them. A problem of this approach is that it is susceptible to who attends and block voting by the interest groups.

In the *open forum format*, attendees are allowed to respond to the proposal. There may be a short presentation or no presentation prior to the comment session.

<d>Survey – In this approach, a short or medium length questionnaire is developed and the community is surveyed to determine potential participation and/or positions on possible issues. Usually, a phone interview is the most cost effective in terms of cost and time required to collect the information. An interview process can be used also although it is more costly and takes more time. There are issues with any sampling methodology being representative of the overall population. Phone surveys tend to favor retirees and land-lines in an era of cell phones. Interviews tend to favor retirees and housewives who are at home during the day. Although any methodology has its limitations, the survey approach tends to be considered representative of the overall population.

<d>Focus Groups – Focus groups are a form of survey research. Different target groups are identified within the community. Each focus group responds to a series of questions or issues where they are allowed to react to and discuss the issues among the group. At an appropriate time, the group is polled on

the issue and this provides the data for analysis. Individual comments made by participants provide context to the polling.

<d>Charettes – A charette is a planning technique used in land planning where all the stakeholders come together to work on solving an issue or problem. The process can be a multi-day process. Critical to the process is that it attempts to involve all the stakeholders and that it is a problem solving process focused on resolving issues.

<c>Secondary Sources (2.1.3) – Secondary sources infer market demand. It is determining regional recreation opportunities based on supply and demand of recreational opportunities. Supply focuses on recreational opportunities that are provided by others in the region and demand focuses on the numbers of people using these recreational opportunities.

There are numerous government, corporate and association information available with which to infer demand for recreational opportunities. Hass and Wells (2007) provides a good overview of the methods including sources of information in *Estimating Future Recreation Demand: A Decision Guide for the Practitioner*. The publication is available online at [\[http://www.usbr.gov/pmts/planning/recreationdemand.pdf\]](http://www.usbr.gov/pmts/planning/recreationdemand.pdf). Sources of information for estimating recreation demand are listed in Figure 17.2. Local sources were not included.

**Figure 17.2 – Sources of Information for Estimating Recreation Demand**<sup>1</sup>

	<b>Public Sector</b>	<b>Private Sector</b>	<b>Non-profit Sector</b>
Federal	National Survey on Recreation and the Environment (USFS) National Visitor Use Monitoring data (USFS) U.S. Army Corps of Engineers visitation data U.S. Fish and Wildlife Service 5-year hunting and fishing survey Federal Energy Regulatory Commission relicensing studies Environmental impact statements General management and resource management plans Federal research publications and Web sites Special departmental or congressional reports or commissions Agency visitor monitoring reports	Corporate market research studies Private consultant reports Recreation, tourism, and leisure textbooks	National Recreation and Parks Association Outdoor Industry of America Recreational Roundtable Annual Reports Trade organizations Special reports of recreation industry association Conference proceedings Travel Industry Association Gallup, Roper, Pew, and other national polls
State	Statewide Comprehensive Outdoor Recreation Plans Statewide public surveys Census reports Economic profiles Demographic profiles State tourism reports and data Sales tax generations University research studies Agency visitor monitoring reports	Resort visitation Travel industry visitation reports Private consultant reports Private college reports and studies State park concessionaire reports and studies	State Tourism Boards State recreation and tourism associations State chapters of national recreation organizations Conference proceedings

<sup>1</sup> Source: adapted from Table 1 on page 10 of Hass, G., and Wells, M., (2007). *Estimating Future Recreation Demand: A Decision Guide for the Practitioner*. United States Department of the Interior Bureau of Reclamation. <http://www.usbr.gov/pmts/planning/recreationdemand.pdf>. The local sources were not listed.

<b>*Program* (2.2) – In the master plan process, the program is the confluence of three factors. These are the vision and purposes of the owners, agency or developers, the experience and activities desired, and legislative impacts. The mix of these factors can vary greatly on the impact of the eventual plan. For example, Disney purchased orange groves around Orlando, Florida with the specific purpose of converting orange groves into Disney World and the Magic Kingdom experiences. In contrast, agencies such as the U.S. Forest Service or the National Park Service are heavily guided by legislative factors in their planning process.

<c>**Agency, Owners** (2.2.1) – The owner, agency or developer is the primary determinant of the eventual use of the park or facility. Whether it is a public agency or private developer there are two divergent approaches to their impact on the master plan and development process.

The first is where the private developer or agency has a pre-determined intended use for the land or facility. This approach tends to be more prescriptive. The land or facility is inventoried with the express purpose of how it can be developed for its intended use. Disney purchased orange groves around Orlando, Florida with the specific intent of constructing Disney World. In Chapter 4, the land for Central Park was obtained with the specific purpose of creating a park for an expanding city. The Japanese Tea Garden and Les Buttes-Chaumont park in France were abandoned stone quarries converted into parks. Brookside Gardens is a series of gardens where the owners are seeking to further develop their gardens.

The second approach is more inductive. Usually the owner or agency has some general guidelines for the land or facility, but they use the inventory process and the features of the land to dictate the eventual use for the land. In Chapter 4, large areas of timbered over areas of the White Mountains were purchased back by the Federal Government under the Weeks Act in 1911. The purchase of these lands created the eastern National Forests under the jurisdiction of the U.S. Forest Service. Incorporating legislative directives, policies and agency history, the Forest Service attempted to develop a management plan optimizing sustained use of the land over time.

<c>**Experiences, Activities** (2.2.2) – The park or facility provides an experience for people. This is an underlying theme of this book. It was discussed in the Introduction of this book and modeled in Figure 1. Usually, the owners, agency or developers have a vision regarding the activities conducted at the park or facility that facilitate the desired experience. This vision is an interactive process influenced by the owners, agency and developers and the legislation discussed in the next section. It should be noted also that the experience can include historical and preservation mandates that do not directly involve people's experience. Regardless, it is still an experience for people.

<c>**Legislative** (2.2.3) – Particularly for governmental agencies, legislative directives can have considerable impact in formulating the eventual master plan. Legislative impacts on the program are either direct or indirect. Direct impacts are usually associated with governmental agencies. In developing a management plan, the U.S. Forest Service is guided by a series of legislative acts including the MUSY Act of 1960 (Multiple Use Sustained Yield) or the Wilderness Act of 1964.

In managing Yellowstone National Park and its other national parks, the National Park Service is guided by the Organic Act of 1916 which stated "*....to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*" Although the interpretation of the directive has changed over time, it is still a clear dual directive of conservation and use by the public.

In contrast, National Monuments are created under the Antiquities Act of 1906. The emphasis is on protection and preservation of the resource rather than use. An overview of the Antiquities Act of 1906 is covered in Chapter 14 on Vandalism. The interesting irony is that Mesa Verde lead to the Antiquities Act yet is managed as a National Park.

Indirect legislative impacts are general laws that affect the eventual development of the land. There are numerous laws and codes that affect buildings and the development of land. Buildings are affected by framing, fire, electrical, plumbing, and egress codes. When Disney developed the orange groves into Disney World, there were no building codes for the area. Disney developed its own building codes.

Land development is affected by utilities. Zoning laws often use sewage treatment to limit development.

There are three approaches toward sewage treatment. These are holding tanks, septic systems and treatment plants. Holding tanks minimize local environmental impacts and need to be periodically emptied. Septic systems dictate minimum land size associated with buildings to accommodate current and future leach fields, usually two to three acres per site. Sewage treatment plants are expensive and they discharge into waterways. A fourth method which has made inroads is composting methods. Regardless, laws, regulations and codes affect the eventual development of the land or facility.

<b>*Site (Parks) and Facilities* (2.3) – Conceptually, the inventory process of the site includes three areas. These are cultural, physical, and biological factors. Cultural factors are man-related factors including historical and archeological, boundaries, land use, transportation, buildings, utilities. Physical factors focus on non-living features including geology and soils, scenic areas, wild areas, research natural areas, climate, and elevation. Biological features focused on living elements and were sub-categorized into flora, fauna, and endangered species.

As previously noted, the factors and subcategories used in the inventory process can be regrouped as needed. Also, they will vary somewhat from study to study. Regardless, there is considerable consistency in their selection. Also, in the inventory process, facilities are included in cultural features.

Second, the inventory of cultural, physical, and biological factors serve as the foundational stage in the site planning process discussed in the next chapter. This saves considerable duplication and unnecessary redundancy.

Third, the inventory process generally relies on external sources for information. Soils rely on the foundational work and inventory process of soils by the Soil Conservation Service. Historical analysis often relies on the work of the local historical society. Climate and weather rely on the Climatic Atlas. Where applicable, these sources are provided.

<c>**Cultural** (2.3.1) – Cultural features focus on human related activities and impacts. It is a diverse category including historical and archeological features, boundaries, land use, transportation, and utilities (see figure 17.1). These categories can be expanded or contracted as needed.

<d>*Historical and Archeological* (2.3.1.1) – Differentiate between a building being old and being significant. Significance increases its importance, and it can also increase problems. Review Chapter 13 on historical preservation. Depending on the projected use of the facility, an insignificant but old building can have value. For example, the old foundation of a farmhouse that is historically insignificant can provide a valuable learning resource for outdoor education students where they can conduct an archeological dig.

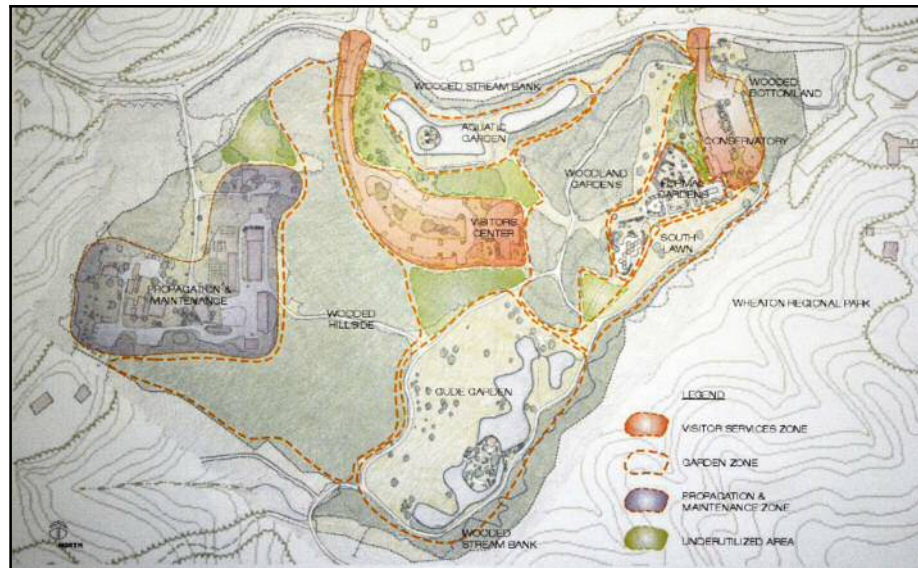
Begin the search for historical and archeologically significant features at the local historical society. Also, examine internal documents since often these features have already been documented.

Contractors are normally required to perform test digs before laying sewer or drain pipes and other utilities. These test digs are a matter of public record and can be a source of information regarding potential archeologically significant sites. The survey results are on file with the appropriate state agency. A word of caution on these surveys. The purpose of these test digs is to determine if there are any significant artifacts to be found along the route. The contractor doesn't want to find artifacts since this can delay the project. They tend not to dig where someone looking for artifacts would find them.



<d>Boundaries (2.3.1.2)

- Delineate the boundaries of the park or the area being studied. If the boundaries are different from the park boundaries, note the study area. Be sure to include in-holdings. In-holdings are lands not owned by the park or agency within its boundaries. Determining the boundaries is important because it defines the park or resource being inventoried and the external environment. Often the boundaries are incorporated into one of the other site maps.



**Figure 17.3 – Zones of Use – Brookside Gardens** – The master plan identifies three primary zones of use based on their functionality. The first focuses on visitor services and needs. The second zone focuses on the program or the gardens. The third zone focuses on support services and operations. – Source: 2001 Brookside Gardens Master Plan Appendix – [file:\BSMP2001appx-p02phases.pdf]

Usually, this information has already been determined and is part of the agency’s internal documentation. USGS topographic maps or Google Maps ® can be used to provide source maps. Occasionally there is a contested border where a bordering landowner disputes the boundary. Footnote the discrepancy.

<d>Land Use (2.3.1.3) - Current land use is the classification of the resource into different categories of use. The emphasis is on how the land is being used by people. Typically, classifications might include residential, commercial, agriculture, industrial, open space, etc. The information can be obtained from other master plans, zoning maps, or Google Maps ®.

For Brookside Gardens, the primary land use is the gardens. Hence, land use is how the different areas of Brookside Garden is used by people. The section identified as the “zones of use” most closely approximates the land use concept. The master plan identifies three zones of use (Figure 17.3). These are the Visitor Services Zone, the Garden Zone and the Propagation and Maintenance Zone. The Visitor Services Zone services the public and its needs. It includes parking and the visitors center. The Garden Zone focus on the program, the gardens. The Propagation and Maintenance Zone focuses on operations and support services. In addition, Figure 17.3 identifies a fourth zone labeled “under utilized” area.

As a footnote, note the amount of land in the park allocated to propagation and maintenance as a percent of the total land area. From strictly a spatial interpretation, the propagation of flora for use in the gardens is a significant function and requires significant resources. Also, note that the propagation and maintenance area is spatially removed from the program areas normally encountered by the public. This suggests good planning.

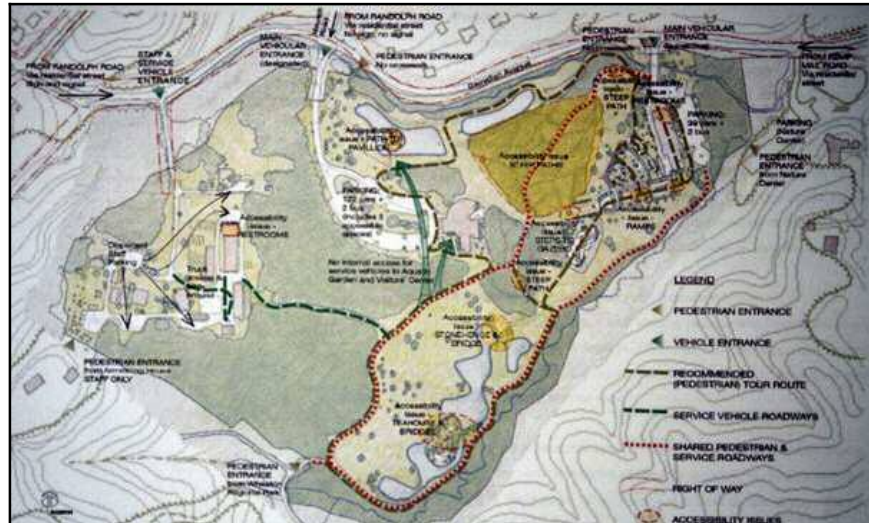
<d>Transportation (2.3.1.4)

– Identify transportation networks including roads, railroads, and airstrips. If applicable, include trails. Review Chapter 11 in terms of transitioning, circulation patterns and barriers. Roads tend to provide access to the resource or facility. However, interstate highways, major roads and railroads are often barriers to access because they are difficult to cross.

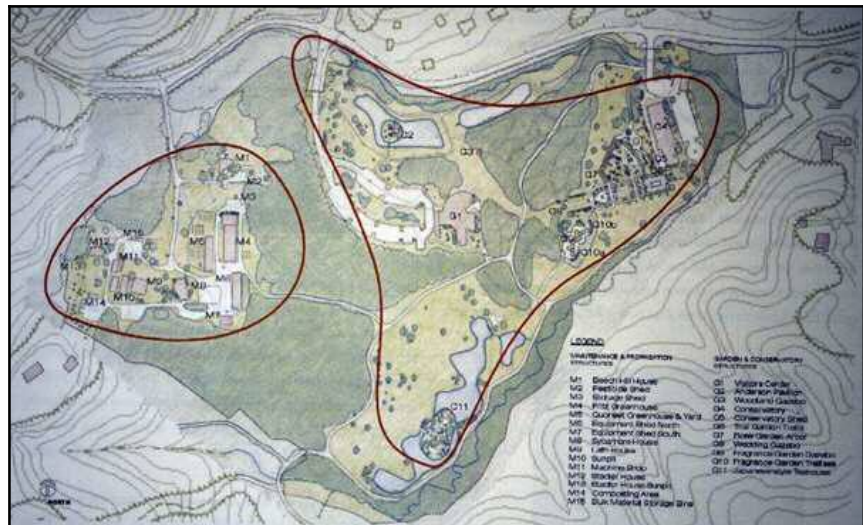
Usually, this information has already been determined and is part of the agency’s internal documentation. Otherwise, the information can easily be determined from USGS topographic maps, Google Maps®, or similar sources.

Regarding circulation, Brookside Gardens, focused primarily on vehicular access, parking and shared pedestrian and vehicular roads within the Gardens (Figure 17.4). Consider thematic transition discussed in Chapter 11. In the facility plan for the entrance, “The gatehouse will be the beginning of the Brookside experience (Main Entrance, 2008, p.1-2).” It is good thematic transitioning that they are thinking of beginning the experience upon entrance into Brookside. Later, the plan indicates that “As a small greenhouse with a vegetated butterfly-shaped roof, the proposed gatehouse design strives to blend with and celebrate the best of Brookside Gardens (Main Entrance, 2008, p.3-3).” Thematically, the gatehouse is designed to emphasize one of Brookside’s most popular programs “Wings of Fancy” which involves hundreds of butterflies. There is always the issue whether the public hurrying into Brookside to find a parking space will fully appreciate the butterfly shaped roof of the gatehouse. Regardless, the planners are demonstrating good transitioning.

Next, walk the site (Figure 17.4). Although this isn’t required, it is good analysis. Using a map, drive into the parking lot. Park the car. Enter the visitor center. Walk from the visitor center into the gardens. How far is the walk? Is the path circular or is there a dogleg back over the same route? How far are the major



**Figure 17.4 – Circulation – Brookside Gardens** – Consider the principles of thematic transitioning, functional transitioning and circulation patterns within the site. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001appx-p10circulation.pdf]



**Figure 17.5 – Buildings – Brookside Gardens** – The master plan identifies the complete range of building including the visitor center, gazebos and the Japanese-styled teahouse. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001appx-p13buildings.pdf]

features? Think time and distance. The visitor center is centrally located and provides easy and quick access to most of the attractions in Brookside Gardens. Again, review circulation in Chapter 13.

<d>**Buildings** (2.3.1.5) – Identify the location of structures on the property. Identification of major buildings or heated building is usually fairly easy. However, consider outbuildings, barns, gazebos, and other structures. Usually, structures interface with roads and transportation in the pervious section and utilities in the next section. Buildings are connected by roads and serviced by utilities.

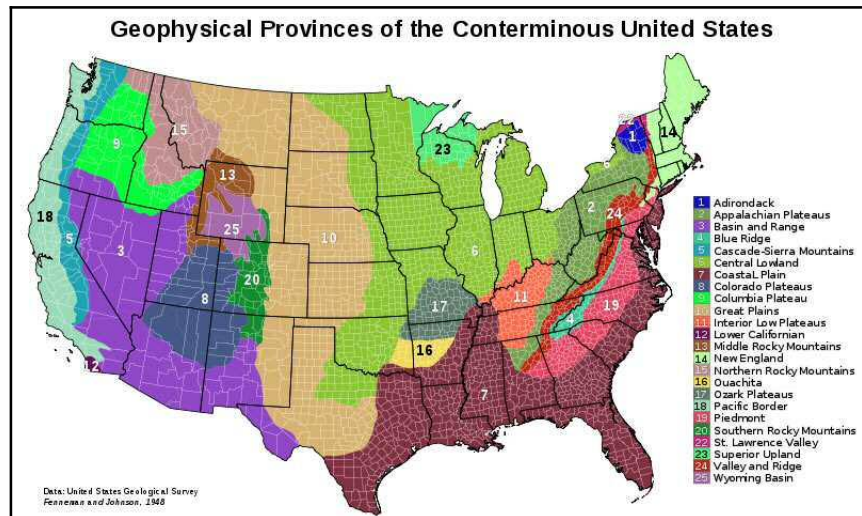
At Brookside, the buildings are identified in Figure 17.5. The buildings range the gambit of structure types. There is the visitor center which is a major structure with full services. There is the “wedding gazebo” or the “Japanese-styled teahouse” which are essentially outbuildings. The master plan identifies these buildings.

<d>**Utilities** (2.3.1.6) – Utilities are an important planning consideration since they can limit where development occurs. Generally, buildings require utilities. In general, the closer facilities are located to major utilities the more the cost savings. Conversely, locating a facility distant from utilities can result in major costs incurred before the foundation is even dug for the building. Traditional utilities include electricity, water, sewage and in some cases gas. Also, telephone service may be considered although its cost is comparatively nominal.

In identifying utilities, Brookside Gardens takes an interesting approach by identifying areas of inadequate supply (Figure 17.6). As might be expected, the visitor center has full service in terms of major utilities. Surprisingly, the Propagation and Maintenance Zone has an inadequate water supply and Conservatory area has both inadequate water and power supply.



**Figure 17.6 – Utilities – Brookside Gardens** – Service to the major utilities is identified including water, electricity and sewage. The visitor service zone is supplied with major services. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001appx-p09utilities.pdf]



**Figure 17.7 – Physiographic Zones U.S.** – The Physiographic Zones are based on the broad-based geological and topographic zones. Source: Fenneman and Johnson’s (1946) – [file:\PhysiographicZonesUS.jpg]

<c>**Physical** (2.3.2) – Physical features focus on the physical or in general, the non-living attributes of the resource. They include geology and soils, climate, topography, hydrology and wetlands, and perceptual characteristics.

<d>*Geology and Soils* (2.3.2.1) - Start with identifying the large geomorphic or physiographic provinces for the area being studied (figure 17.7). The classification system is based on Fenneman and Johnson’s (1946) three-tier classification system of the United States which utilizes eight major divisions, 25 provinces, and 86 sections. They represent common topography, rock types and structures and geologic and geomorphic history. Only the eight major divisions and 25 provinces are provided in figure 17.7 (Physiographic Regions, 2013).

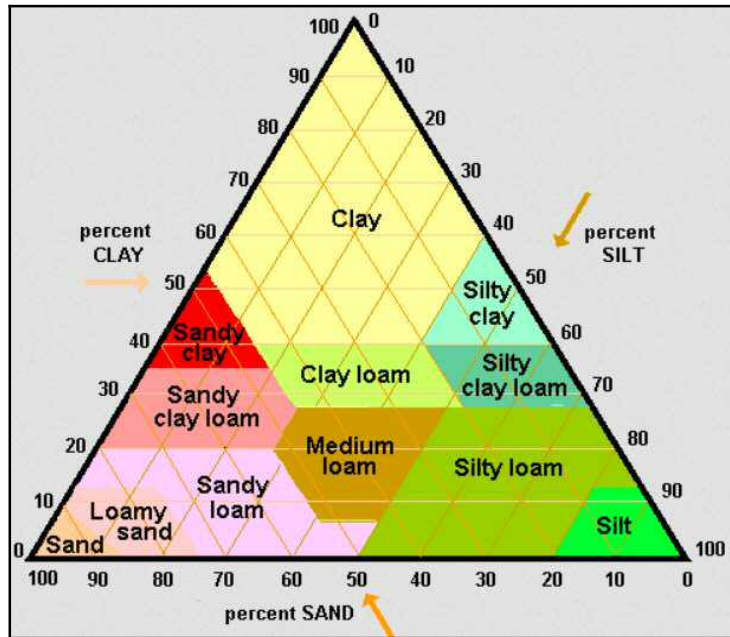


Figure 17.8 – Soil Triangle – The soil triangle relates the percentage of clay, silt, and sand in the soil. All soil contains variations of the three components. Source: NRCS (2013) – [file:\SoilTriangle.pdf]

Next identify soil types. The Soil Conservation Service (SCS) has mapped the soil types for most of the continental United States. Although historically the SCS has focused on lands for farming and similar uses, their mapping can easily be adapted to recreational lands and uses. Soil type is a primary determinant of the resource’s inherent carrying capacity (figure 17.8).

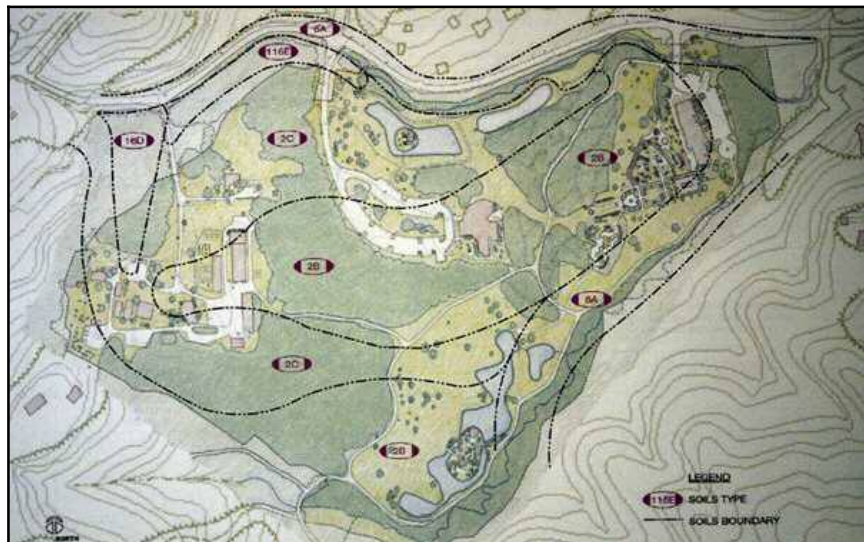


Figure 17.9 – Soils – Brookside Gardens – Using the U.S. Soil Conservation Service soil classification, Brookside soils were identified and categorized in terms of their hydrologic groupings. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001appx-p08soils.pdf]

Using the U.S. Soil Conservation Service, Brookside soils were identified and categorized in terms of its hydrologic groupings based on infiltration (run off) and transmission (absorption) rates (Figure 17.9 and Figure 17.10). The infiltration rate is the rate at which water enters the soil surface. The greater the infiltration rate the less run-off there is. Once absorbed into the soil the transmission rate is the rate at which water moves within the soil. Consistent with moderate slopes, the Group B soils have a low runoff potential and high infiltration rates. The Group C soils have a low infiltration rate and low infiltration rates. Group D soils have high runoff potential and low infiltration rates. They consist primarily of clay soils.

**Figure 17.10 – Soil Types for Brookside Gardens**

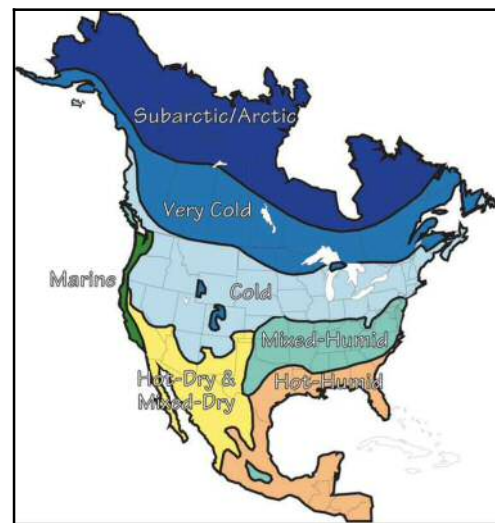
SYMBOL	TYPE	HYDROLOGIC GROUP
2B	Glenelg silt loam, 3 to 8 percent slopes	B
2C	Glenelg silt loam, 8 to 15 percent slopes	B
6A	Baile silt loam, 0 to 3 percent slopes	D
16D	Brinklow-Blocktown channery silt loams	C
116E	Blocktown channery silt loam	C

Source: 2001 Brookside Gardens Master Plan, p.8.

<d>Climate and Weather (2.3.2.2) - Climate focuses on the broad-brush or long-term weather patterns (figure 17.11). Weather focuses on the short-term or ephemeral changes in the weather. The climate and weather conditions can impact programs and facilities. It can affect heating and air conditioning needs in buildings. Also, some activities like skiing are weather dependent. Consult the Climatic Atlas for source information (NOAA, 2002). The Brookside Gardens master plan did not include any information on climate or weather.

<d>Topography (2.3.2.3) – Usually, topography consists of elevation, terrain, and slope. Generally, indicate the high point and low point. Provide a brief description of the terrain. In the troposphere, ambient temperature is affected by elevation. Also, local weather can be affected by topography. Anything over 25% grade is difficult to build upon. Construction generally favors level areas or gently sloping terrain. Also, steeply sloped terrain may be prone to erosion and have a lower carrying capacity.

Elevation can affect the program. Brookside Gardens is located on the Coastal Plain. Its elevation is a little over 300 feet above sea level. It would be difficult cultivating an alpine garden due to its low elevation. In contrast, the Denver Botanical Gardens celebrates the recent addition of their alpine garden (Figure 17.12). Personnel noted that alpine gardens generally are found at elevations of 10,000 feet and that the elevation of Denver, the mile high city, aids greatly in the success of their alpine garden.

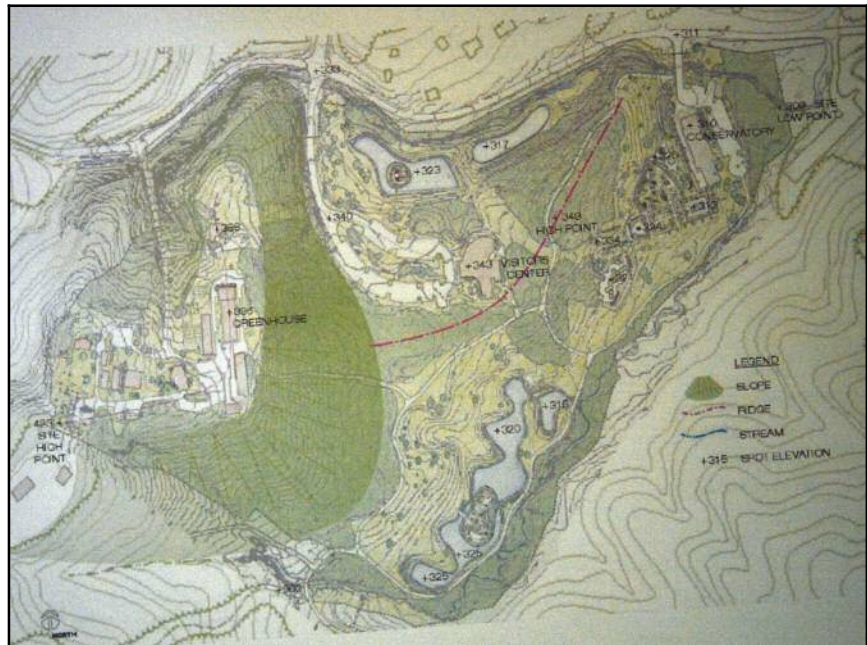


**Figure 17.11 – Climatic Zones** – Basic climate zones for North America. Source: NOAA, (2002) – [file:\ClimaticZones.pdf]



**Figure 17.12 – Alpine Gardens** – A pride of the Denver Botanical Gardens is their alpine garden. Topography and elevation relate to the success of the garden. The alpine garden flourishes in the mile high city. – Denver Botanical Gardens, Denver, Colorado. Source: author – [file:\DBG-197[v].jpg]

Regarding topography, the master plan notes that the property has a change in 125 foot elevation on the property (Figure 17.13). It notes a 35-foot change in elevation between the visitor center and the Conservatory. Depending on how this change in elevation converts into a slope can affect visitor circulation within the Gardens. Consulting soils (see Figure 17.9 and Figure 17.10) some soils indicate a slope of 8 to 15%. However, most soils have slopes less than eight percent associated with them. In addition, the master plan notes that the Woodland and Aquatics Gardens have a northern exposure and it discusses the impact of these exposures on the gardens.



**Figure 17.13 – Topography – Brookside Gardens** – There is a 125 foot change in elevation on the property and a 35 foot change in elevation between the visitor center and Conservatory. The real issue is how this converts into the gradients of trails and pathways. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001appx-p04topography.pdf]

<d>Hydrology and Wetlands (2.3.2.4) - Hydrology involves water features including lakes, ponds, rivers, streams, bogs, wetlands, bays, and marshes. These features can be determined from USGS maps, Google maps ®, and internal documentation.

Filling in wetlands is protected by Section 404 of the Clean Water Act. The U.S. Army Corps of Engineers(Corps) and the U.S. Environmental Protection Agency define wetlands as follows:

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. (*Army Corps 2013*)

If an area is a wetland, a Section 404 permit may be required from the Army Corps of Engineers before filling in the wetland for construction. In terms of “management by avoidance,” it is often fortuitous to identify wetlands and avoid attempting to build on these locations. An alternative approach is that many states have an exchange program where other lands can be substituted for those taken. Regardless, plan ahead. In addition, the identification of the 100 year flood-plain is important since construction is generally not allowed on the flood-plain either.



**Figure 17.14 – Hydrology – Brookside Gardens** – The focus of the map is to delineate the two watersheds on the property. The text focuses on the 100 year flood plain, the Canadian Goose problem, and the atrophic nature of the ponds. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001appx-p06hydrology.pdf]

Brookside utilized the Federal Emergency Management Agency (FEMA) maps to determine the 100 year flood plains (Figure 17.14). The master plan indicates that there might be an issue with the Conservatory and some of the parking lots. The master plan focused on Canadian Geese, grass clippings and fertilizer and their impact on the shallow ponds and their degradation. In addition, the hydrology section of the master plan focuses on the leaky dams and the lowering of the water table. The bottom line of the master plan is that there are some significant issues which need to be addressed.



**Figure 17.15 – Views and Perceptual Characteristics – Brookside Gardens** – One of the views identified is the view from the Reflection Terrace toward the Japanese-style teahouse. See Figure 17.16 for that view. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001appx-p05views.pdf]

<d>Perceptual Characteristics (2.3.2.5) – Perceptual characteristics address visual characteristics. They are potential locations that can be linked by trails or utilized as recreational opportunities. They can be large and spacious or small nooks. They can include natural vistas such as a scenic overlook or more ephemeral attractions. Ephemeral attractions can be influenced by the time of year. For example, the presence of leaves on trees may form a visual barrier and conversely, the leaves off the trees may offer a new view.

Views for Brookside were identified in Figure 17.15. Review the chapters on visual management including the concept of sequencing and creating mystery. The diagram of view and perceptual characteristics at Brookside indicates that there is no view of the Conservatories from the visitor center. There is a question mark on the figure. This is not necessarily undesirable. Making all sites visible from the visitor center tends to make the area smaller than it really is. Also, the two separate entrances create a sense of separation between the visitor center and Conservatory. In terms of creating the experience, the issue is whether the visual barrier is consistent with the planner’s vision.



**Figure 17.16 – View from Reflection Terrace** – One of the views identified in views and perceptual characteristics is the view toward the Japanese-style teahouse (see Figure 17.15). The Reflection Terrace is centrally located and offers excellent views of the surrounding area. Source: author – [file:\BSG-017.pdf]



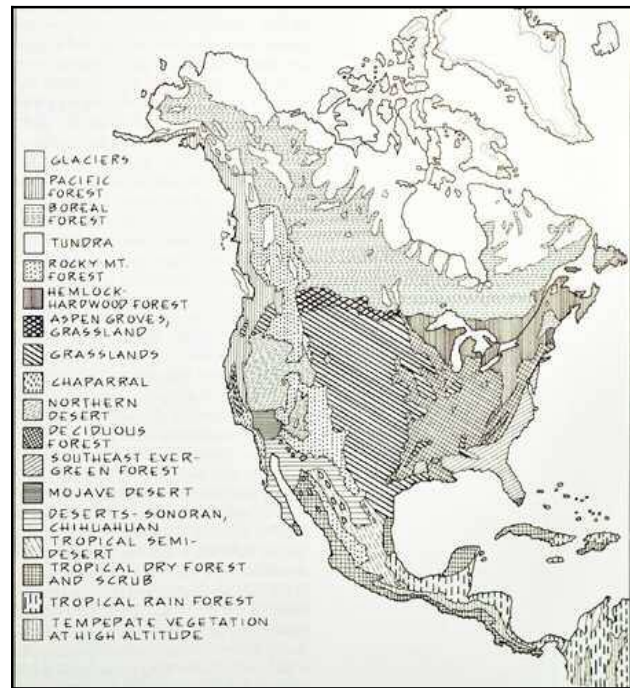
Second, the gardens offer many views. One of those views is from the Reflection Terrace (Figure 17.16) looking toward the Japanese-style teahouse. This view is identified in Figure 17.15.

<c>**Biological** (2.3.3) – Often public agencies have completed fish and wildlife, forest, and conservation plans as part of their master plans. Usually, these plans can be used as source material and if need be, they can be spot-checked with field surveys by a person trained in the specialized area. Biological features were divided into flora, fauna, and endangered species.

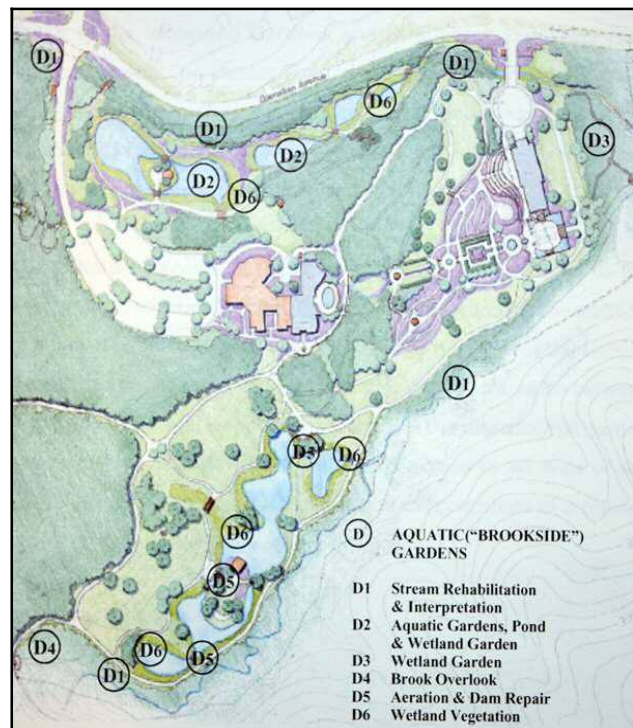
<d>**Flora** (2.3.3.1) - Flora focuses on the types of vegetation found onsite. The analysis can be started with the identification of the major plant associations (Figure 17.17). Often this information can be found from secondary sources or internal documents. Google Maps ® and other services can be used to map vegetative type. It should be noted that the over-story is visible and the under-story may need to be identified using spot-checks. Also, an internet search will usually reveal a vegetative survey conducted by the Department of Natural Resources or a similar state agency responsible for natural resources that can be used also.

The major focus of Brookside Gardens is its many gardens. Suggesting its importance, this information is found in the master plan rather than the appendix to the master plan. The master plan subdivides the gardens into aquatic gardens, feature gardens, water gardens, and woodland reserve. The aquatic gardens refer to the natural water features centering on the two streams passing through the property (Figure 17.18). The first is on the northern border and the second focuses on the series of ponds surrounding the Grude Garden (Japanese-styled teahouse).

Feature gardens are the formal gardens surrounding the visitor center and extending between the visitor center and Conservatory (Figure 17.19). There are at least 15 diverse feature gardens identified in the master plan. A sampling of gardens indicating their diversity of gardens includes Woodland, Rose, Fragrance, Yew, Color Theme and Perennial Gardens.



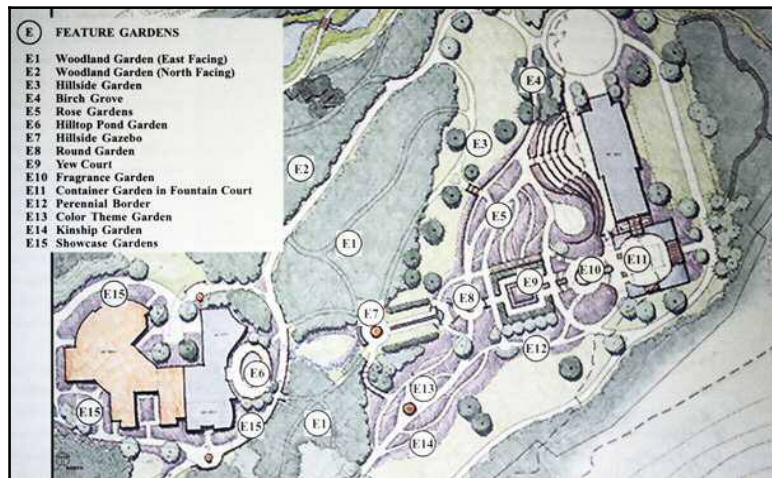
**Figure 17.17 – Major Plant Associations of North America –** Map of major plant associations in North America. Source: (Carpenter et al, 1975, p. 68) – [file:\fig1617-MapPlantAssociations.pdf]



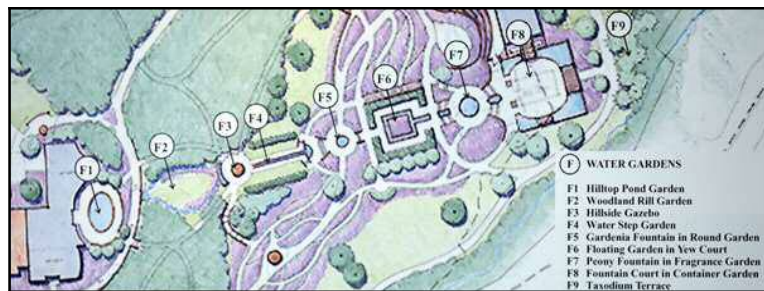
**Figure 17.18 – Aquatics Gardens – Brookside Gardens –** The focus of the Aquatics Gardens are the more naturalistic water features associated with the two streams on the property. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001p11aquaticsgarden.pdf]

Water Gardens are more formal than the naturalistic aquatic's gardens (Figure 17.20). They are embedded within their surrounding formal gardens. The water and fountains form the focus in these gardens.

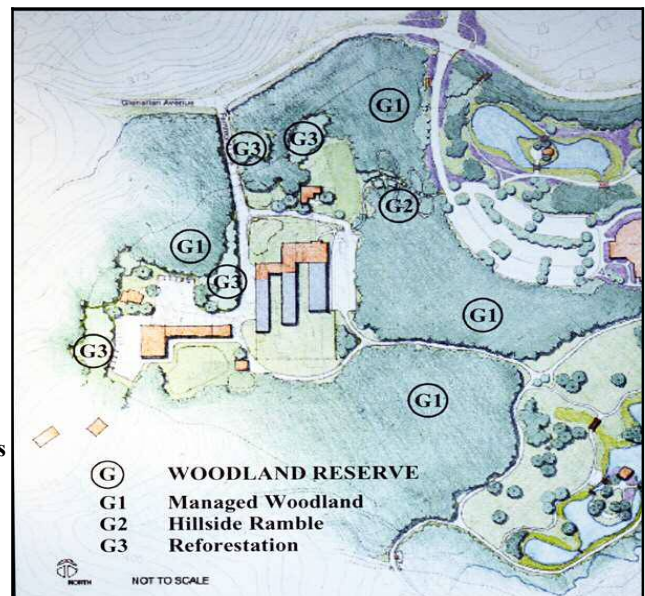
The woodland reserves comprise the western portion of Brookside surrounding the propagation and maintenance area (Figure 17.21). The master plan makes three points. The actual area within Brookside is small. However, Brookside is surrounded by Wheaton Regional Park which expands the woodland portion significantly. Third, woodlands as a whole is decreasing as suburbia expands into the areas surrounding Wheaton Regional Park.



**Figure 17.19 – Feature Gardens – Brookside Gardens** – The master plan identifies at least 15 diverse feature gardens. These gardens are the primary attraction for visitors to Brookside. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001p12featuregardens.pdf]



**Figure 17.20 – Water Gardens – Brookside Gardens** – The water gardens are the formal water attractions and fountains embedded within several of the feature gardens. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001p14watergardens.pdf]



**Figure 17.21 – Woodland Reserves – Brookside Gardens** – Although a small portion of Brookside, woodland reserves interface with the surrounding woodlands of Wheaton Regional Park which embodies Brookside Gardens. Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001p16woodland.pdf]

<d>***Fauna*** (2.3.3.2) - Fauna includes any and all wildlife that can be present onsite. Generally, there are two ways to determine the fauna or wildlife present. The first is by inference. Since fauna is generally related to vegetation type, general landscape characteristics, and habitat present, the potential presence of species is identified. The second approach is to actually survey the site for signs of wildlife. This can include actual onsite surveys using visual identification or motion sensitive cameras. Or, it can include secondary sources such as the identification of skat, vacant nests, or other indicators of their presence. Often this information is available from existing studies done as part of the wildlife plan.

Unless there was a population study done by a biologist or qualified professional, determination of the wildlife present onsite is an inferred process. This inference is based on the vegetation and habitat present and it is a good approximation of what is available onsite. In most instances, it is satisfactory.

For Brookside, the wildlife is inferred for the most part. However, their problem with deer is quite evident in the master plan. Deer within the gardens would constitute more than a nuisance. They would quickly destroy the gardens. There is a twelve-foot fence constructed around Brookside and there are deer guards installed at each of the entrances.

<d>***Endangered Species*** (2.3.3.3) - It is important to identify if there are any endangered or threatened species (USFWS 2013). Under the Endangered Species Act of 1973, “*endangered*” means a species is in danger of extinction throughout all or a significant portion of its range. “*Threatened*” means a species is likely to become endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. For the purposes of the Act, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments.

It is important to identify any endangered or threatened species and make arrangements to accommodate them or avoid them. Most state departments of natural resources or their equivalent departments have identified endangered species and their probable locations. Contacting them or conducting an internet search will usually reveal their probable location. Again, endangered species is an example of “management by avoidance.”

<b>***Operations and Maintenance*** (2.4) – It is important to consider support services within the master planning process. Three areas are identified for consideration. These are maintenance, safety and concessions.

Illustrating the importance of considering operations in the master planning process was the discussion of what Disney learned from the problem of servicing vendors in Disneyland discussed in Chapter 1. When developing the Magic Kingdom at Disney World, Disney elevated Main Street to the second floor and created a series of tunnels, service corridors, and facilities to service main street stores located in the basement. This was all done to increase the efficiency of operations.

Chapter 11 discussed transitioning and circulation. The same principles apply to operations and maintenance.

<c>***Maintenance*** (2.4.1) – The site needs to be maintained. Trash needs to be collected. Buildings need to be accessed by carpenters, plumbers and electricians. The gardens and their plantings at Brookside need to be maintained. Employees need to access these areas. A pickup truck needs an eight-foot wide path. An ATV can access narrower paths. Steps are barriers to vehicles. Maintenance personnel need to transport their materials and equipment.

Emphasizing the importance of considering maintenance, the original section of the River Walk in San Antonio was designed and constructed without consideration for maintenance. Maintenance including minor construction, trash collection and watering plants is performed from boats (Figure 17.22). If heavy equipment is needed, the river can be drained and the riverbed can be used as the roadway for access.



**Figure 17.22 – Maintenance on the San Antonio River Walk** – The original section of the River Walk in San Antonio was designed without considering maintenance. All maintenance functions including watering the plants must be done by boat. – San Antonio, Texas. Source: author – [file:\pwrpt045maintenance.pdf]

<c>**Safety** (2.4.2) – Safety has many of the same considerations as maintenance. Consider safety from two perspectives, the participant and those patrolling. Safety from the perspective of the participant is an issue of feeling secure. This involves the density, lighting, and perceived presence of security. Consider the main promenade at Venice Beach, California pictured in Figure 17.23. Most people would feel secure on the promenade. There is the presence of the police and there are an ample number of people present.

The second consideration is from the perspective of those providing the security. Again, consider the photo of the police car on the main promenade at Venice Beach in California (Figure 17.23). Is the police car really out of place on a promenade designed for pedestrians? Also, police in police cars are removed from the environment surrounding them and they are not interacting with people on the promenade. Would security and safety be better served with police on bicycles or walking a beat?



**Figure 17.23 – Safety on Venice Beach** – The main promenade at Venice Beach is restricted to pedestrian use. There is a trail for bikes and roller skaters that parallels the promenade. The police car provides a presence of visitor safety. However, would they be better served with police on a bicycle or walking a beat. – Venice Beach, California. Source: author – [file:\Venice207[gd].pdf]

<c>**Concessions** (2.4.3) – Concessions require servicing in terms of personnel and supplies. Locating concessions on the perimeter allows them to be serviced from the back of the facility. Locating concessions in the center of a park or facility is more convenient for visitors. However, it can easily lead to design issues that Disney addressed with underground facilities and tunnels used to service concessions in Disney World.

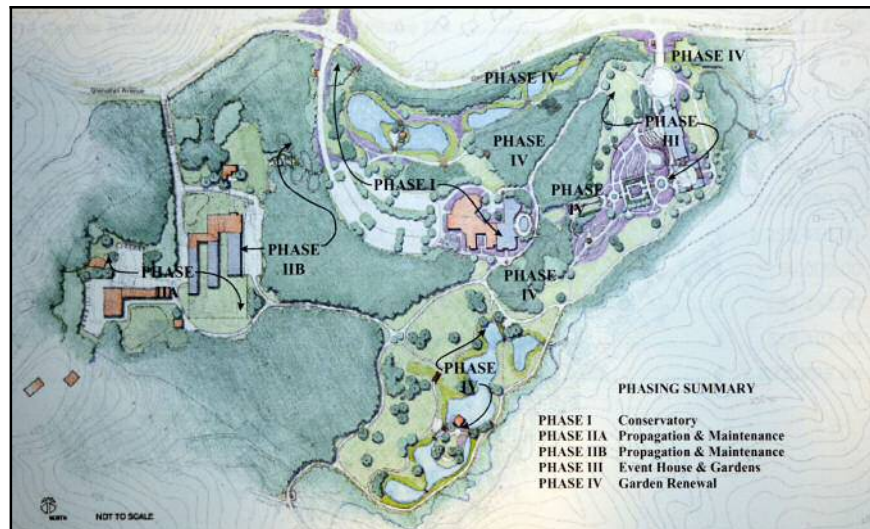
## Implementation Plan (3.0)

The third phase in the master planning process is the development of an implementation plan. In terms of Copeland's (2011) five components, the implementation plan incorporates the costs and financial resources necessary for the plan to be implemented in this phase of the master planning process. The implementation plan is a practical plan that aligns resources to development in an effort to complete vision delineated in the master plan. The implementation plan focuses on what will be done and when it will be done. Often, it is done in phases. Completion in phases may be due to funding and financing. It includes practical considerations also.

As a practical matter, the first step in developing an implementation plan is to develop the phases of development. The phases are really projects. Next, identify the costs associated with completion of each project. Third, prioritize the completion of the phases. Since the three steps affect each other, they are actually developed somewhat concurrently.

<b>**Identify Projects** (3.1) –

The first step in developing



**Figure 17.24 – Phasing Summary** – The map identifies the five developmental phases in the Brookside Master Plan. (See also Figure 17.22) Source: 2001 Brookside Gardens Master Plan [file:\BSMP2001p22phases.pdf]



**Figure 17.25 – Entrance and Parking Lot Expansion Construction** – In 2015, the entrance (Phase I) and the parking lot expansion (Phase II) were combined and completed as one construction project. Source: author – [file:\BSG-065.pdf]

the implementation plan is to break down the vision into one or more definable projects. These projects can be viewed as steps, stages, phases or projects. Their purpose is to develop a feasible plan in terms of completion and funding, prioritize the projects, and implement the vision of the master plan. A feasible project is one that matches the costs of the project with possible sources of funding.

The initial implementation plan in the 2001 master plan for Brookside Gardens was broken into five phases (projects) (Figure 17.24). In 2004, the master plan was revised. In the 2004 master plan, the five phases were expanded into 15 phases. It was necessary to have 15 phases in order that the available funding could match the projected construction costs identified for the phases.

In the 2001 master plan, Phase I included the entrance, parking lot expansion, Visitor Center renovation and Conservatory. In the 2004 plan, the entrance became Phase I, the parking lot expansion became Phase II, the Visitor Center renovation became Phase X, and the Conservatory became Phase XIII. During construction in 2015, the entrance (Phase I) and the parking lot expansion (Phase II) were combined and completed as one project (Figure 17.25).

<b>*Determine Costs* (3.2) – Next, determine the projected costs of each project. In addition, determine the projected funding sources for each of these projects. This may be done with a formal capital budget or informally. A capital budget simply matches the cost of capital projects with sources of funding. In addition, consider feasibility and practical considerations. Consider how many projects can be handled at once by the staff and disruptions in flow and circulation patterns.

For Brookside Gardens, the development of phases was both a cost and practical consideration. Because funding for the total project could not be provided at the beginning of the process, five phases were developed to correspond with funding opportunities. The cost of Phase 1 was slightly less than 11 million dollars. In the 2004 revised master plan, the five phases were expanded into 15 phases. Phase I (Entrance) and Phase II (Parking Lot Expansion) were costed at \$543,693 and \$823,120 respectively (Figure 17.26 and Figure 17.27). Eventually, both phases were combined into one project and completed during 2015. At 1.4 million dollars, the project was logical in that it made sense to do both the entrance and parking lot together. Also, it was feasible in terms of its funding at the reduced amount of 1.4 million dollars.

**Figure 17.26: Phase I: 1800 Glenallan Entry**

• Design Guidelines:	\$ 80,000
• Buildings:	\$ 24,000
• Gardens:	\$ 219,450
Subtotal Phase I	\$ 323,450
2004 Construction Cost Increase (20%)	\$ 64,690
Permits	\$ 10,000
Contingency (20%)	\$ 64,690
Design/Management (25%)	\$ 80,863
<b>Total Phase I</b>	<b>\$ 543,693</b>

Source: 2004 Brookside Gardens Master Plan, p.14.

**Figure 17.27: Phase II: Parking Lot Expansion**

• General Site:	\$ 492,800
Subtotal Phase II	\$ 492,800
2004 Construction Cost Increase (20%)	\$ 98,560
Permits	\$ 10,000
Contingency (20%)	\$ 98,560
Design/Management (25%)	\$ 123,200
<b>Total Phase II</b>	<b>\$ 823,120</b>

Source: 2004 Brookside Gardens Master Plan, p.14.

<b>*Prioritize Projects* (3.3) – The third step is to prioritize the projects or phases. If the project can't be completed in one phase, the projects will need to be prioritized. A multitude of factors enter into the prioritization including availability of funding and need. Again, consider the three steps as somewhat concurrent since they interact and affect each other.

Availability of funding is an important consideration in the prioritization. The prioritization process is a process of matching projects with available funding over time. If more funding is available in the future, then more costly projects would be deferred to a later time period. Or, a donor may contribute for a new facility which may move it up on the priority list.

A second consideration is need. For Brookside Gardens, parking was identified as a bottleneck and a problem that limited program development. Without it, the delivery of programs was severely limited. Therefore, it received a high prioritization and was completed as the first project in the 2004 master plan.

## Review and Final Plan (4.0)

The final phase in the master planning process is the review and development of the final plan. It is the formal reentry of the constituent groups into the process. It consists of two phases, the preliminary and the final plans. Use public hearings, focus groups, and charets to obtain feedback on the proposed master plan. It provides constituent groups with the opportunity to “buy-in” into the proposed master plan.

In developing the master plan, the owner, agency or developer works closely with the architect or consultant responsible for developing the master plan. During the development of the plan, it is easy to exclude public involvement until later in the process. For this reason, the operative term regarding public involvement is “formal.” Good planning involves determining the key players or constituent groups early in the process and keeping them involved in the process. This enables the identification of any problems or issues early in the process so that they can be addressed as the master plan is developed rather than at the end of the process when it becomes more difficult to change and when the major players have egos and entrenched positions to protect. The following example with Runnymede Park illustrates what can happen when key players and constituent groups are not included in the process until after the plan has been developed.

Runnymede Park is 90 acres of parkland located in Herndon, Virginia. Fifty acres of the park consists of low lying areas in the flood plain. As such, this land is suitable for little else other than nature oriented activities. The remaining forty acres is uplands suitable for buildings, ballfields and other development.

The town council favored the development of forty acres of upland with ballfields, miniature golf and other developed recreation. They hired a consultant to develop a plan for the park and consistent with the desires of the town council, the proposed master plan favored the development of the uplands into ball fields and a miniature golf course. The remaining fifty acres would remain as a natural area.



**Figure 17.28 – Wildflower Meadow at Runnymede Park** – Include key players and constituent groups early in the master planning process. The chair of the town council had this non-descriptive five-acre wildflower meadow mowed in the hopes of ending the controversy. The nature group wanted it retained as a meadow. The planners and town council were out-of-step with their constituents and promptly voted out-of-office in the next election. – Runnymede Park, Herndon, Virginia. Source: author – [file:\RunnyMeade004.pdf]



Unfortunately, the town council did not include all the constituent groups within their planning process including a nature group which consisted of a large portion of the citizenry who moved into the area to escape urban congestion and who sought more natural areas. The plan was published, the public hearings occurred, and metaphorically, the lines were drawn in the sand between the two sides. Clearly, the town council was out of step with a significant constituent group and unfortunately, it was too late in the process for them to change course. In an effort to end the controversy, the chair of the town council had the non-descriptive five-acre wildflower meadow pictured in Figure 17.28 mowed. The epitaph was that when the next election occurred every member of the town council who was up for reelection was voted out of office.

The lesson is to identify the key players and constituent groups early in the process. Include them as best as possible throughout the process and don't wait until the end of the process after the draft of the master plan is published to get their reaction. With Runny Meade Park, the town council paid dearly for not including the nature group.

<b>*Preliminary Plan* (4.1) – The final plan is really a continuation of the preliminary master plan. In the preliminary plan phase, there is a formal reentry of consulting with the constituent groups as part of the process. Use public hearings, focus groups, and charets to obtain feedback on the proposed master plan. Unlike the Runnymede Park example, the preliminary plan should be fairly complete at this point in the process and need minor only minor tweaking.

<b>*Final Plan* (4.2) – Based on the input obtained from public hearings, focus groups and charets the preliminary plan should move quickly to the final plan. The term “final plan” may be misleading since the use of final plan should be viewed more organically. It grows and changes to meet changing circumstances. Brookside Gardens formally revised their 2001 plan in 2004. When the site development plan for the entrance was developed in 2008, they combined Phase I and Phase II from the 2004 master plan into the site development plan (Evans, 2008). This is an example of the process being organic and adaptable. If the divergence between the final plan and what is actually occurring becomes significant, it may be a signal that it is time to revise and update the master plan.

## Chapter Summary

Master planning provides a vision for guiding an agency, program, park or facility to meet the needs of the present and the challenges of the future. Essentially, the purpose of the master planning process presented in this chapter is to develop a plan to implement the vision for the future park and facility. It creates this plan by first inventorying the site and facility in terms of its market and potential users, desired program, site and facilities, and operations and maintenance. Then it develops an implementation plan which breaks the vision into manageable and affordable projects that are prioritized in terms of their completion. The implementation plan consists of the prioritized projects. In this way, the master plan implements the plan for completing these projects and implements the future vision for the site and facility.

The focus of this chapter is on developing a master plan for a park and facility site. It was delimited to this type of setting. In addition, the chapter notes how the focus of the master plan can easily be modified to accommodate other purposes also.

This chapter leads into the next chapter on the site planning process. The site planning process develops the prioritized projects identified in the master plan.

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