

Urban Forest Management Plan Grant Program

January 26, 2012

California Urban Forest Council

San Rafael

Workshop One

Funded by: US Forest Service
Cal Fire

WELCOME!!!



Project Staff

- ▣ David Roger - Project Manager
- ▣ Nancy Sappington – Project Coordinator
- ▣ Fred Roth – Project Advisor

Today's Agenda

- ▣ 9:30 – 10:30 Participant Introductions
- ▣
- ▣ 10:30 – 11 Scope of the Urban Forest Management Plan
- ▣
- ▣ 11 – 11:15 BREAK
- ▣
- ▣ 11:15 – noon Introduction to the Toolkit Website
- ▣
- ▣ Noon – 12:45 LUNCH
- ▣
- ▣ 12:45 – 1:45 Logistics and Benchmarks

Official Grant Information

- ▣ Applicant : California Urban Forest Council
- ▣ Grantor: State of California Department of Forestry and Fire Protection (CALFIRE)
- ▣ Project Title: Urban Forest Management Plan Toolkit Phase II
- ▣ Grant Agreement Number: 8CA11404
- ▣ Grant Completion Date: December 1, 2012

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Scope of the Grant Project

- ▣ Background
- ▣ Funding
- ▣ Put on 4 half day work shops
- ▣ Participate n 4 one hour webinars
- ▣ Participate in 4 on site visits
- ▣ Complete plan by September 30, 2012
- ▣ Review and Edit plans during October 2012
- ▣ Submit final plans to Cal-Fire by November 1, 2012 for review.
- ▣ Finalize plans and project by November 30, 2012

General Principles of Management

- ▣ What do you have?
- ▣ What do you want?
- ▣ How do you get what you want?
- ▣ Implementation Plan
- ▣ Are you getting what you want?



Steps for Developing an Urban Forest Management Plan

Step One: Why do you need a plan?

Step Two: Assess what you have.

Step Three: What are your needs?

Step Four: Develop your action plan.

Step Five: Implementation; Who is going to do what?

Steps for Developing an Urban Forest Management Plan

Step Six: Budget and Funding

Step Seven: Complete Documents

Step Eight: Adoption

Step Nine: Are you getting what you want?

Step One - Why? Why do you need a Plan?

- ▣ We believe that a plan is needed for a variety of reasons.
- ▣ We believe that a plan is important to insure adequate and consistent funding and to educate the community and elected officials about the value and need to manage the urban forest.
- ▣ We believe a plan helps demonstrate effective use of public funds.

Why is a Plan Important to Your Agency?

- ▣ Most critical question for you to explore.
- ▣ It is at the beginning of your plan.
- ▣ It must be convincing!
- ▣ It will gain acceptance.
- ▣ It is the first thing you will do.
- ▣ It is your first **assignment**.



Step 2 – Assess what you have?

- ▣ Tree Inventory
- ▣ Existing Ordinances and Policies
- ▣ Existing Tree Management Practices
- ▣ Existing way of doing things ie who does what? Engineering, Planning, Parks, Streets etc.
- ▣ Existing maintenance practices ie BMP's ?

What you have?

- ▣ Determine public values toward trees ie Community values.
- ▣ Determine the Organization's values. Gather from public meetings, or user feedback, staff, mgt, and elected officials.
- ▣ **Assignment:** List all of the above.

Tree Inventory

- ▣ Scope of plan
- ▣ Complete inventory?
 - Street Trees
 - Park Trees
 - Open Space
 - Other
- ▣ Adequate Detail
- ▣ Strengths and Weaknesses

Step 3 - What do you want?

- ▣ Identify Needs & Establish Goals and strategies!

Identify Stakeholders

- ▣ **Who** are the people and groups of people that need to be on board in order to get **by in** from them.
- ▣ These include all levels of personnel in the Dept, other Depts, upper management, elected officials, Community Leaders, Community Activists, Environmental Groups, and Citizens at large that might have an interest in this.
- ▣ **Assignment** - Identify all of the potential stakeholders.

Step 3 What do you want?

- ▣ Identify - Community Needs; Urban Forest Resource Needs; and Urban Forest Program Needs
- ▣ Identify Issues and Trends in the Community
 - For Example, has an hazardous tree assessment been completed?
 - Is there adequate species diversity and what condition are they in?
 - What about age diversity?

What do you want?

- ▣ Identify problems that will need to be corrected or avoided in the future.
- ▣ Do you have an aging forest?
- ▣ Plan for increased maintenance costs as trees age.

What do you want?

- ▣ Identify needs and prioritize goals.
 - Canopy Cover
 - Tree and Forest Health
 - Management Needs
 - Community Needs
- ▣ Can you vet these using your community values?

Step 4 – Developing Action Plans

- ▣ What are some strategies and tasks for completing the following objectives?
 - Pruning component
 - Planting component
 - Removal & Replacement component
 - Community ordinances related to trees
 - Ordinance enforcement
 - Tree Advisory Board or Commission
 - Public education component
 - Others?

Step 5 – Implementation

- ▣ **Who does what?**
- ▣ Assign responsible parties the various strategies as tasks to complete.
- ▣ Are you on schedule? Have you attached a timeline to each task?

Step 6 – Budget and Funding

- ▣ Create a budget and look at funding options.
- ▣ Tie budget to strategies.
 - Planting Program
 - Trimming Program
 - Removal Program
 - Young Tree Maintenance

Funding

- ▣ What are some funding options?
 - Gas Tax
 - City Wide Assessment District
 - Grants
 - Community groups such as ReLeaf
 - Fines from Ordinance Violations
 - General Fund
 - Other Departments or Agencies?

Step seven – Compile Documents

- ▣ Compile supporting documents.
- ▣ Put it all together.
- ▣ September is the goal for this step

Step eight - Adoption

- ▣ Adopt plan or components of plan.
- ▣ It is really important if not vital to get this plan adopted by your Boards and Commissions and then the City Council.
- ▣ Or by other Governing Bodies.
- ▣ Once approved by them it is a lot easier to keep funding consistent and keep to the program.

Step nine – Are you getting what you want?

- ▣ Develop review mechanisms.
- ▣ Set up a monitoring program.
 - Who do you report to and what information is needed to be conveyed to them. For example, how many trees trimmed, planted, customer service turn around time etc.

Monitoring Program

- ▣ Continually evaluate how it is working; how is it functioning. Build it into your regular weekly and monthly meetings and reports.
- ▣ Report regularly to elected officials. (Year end, mid-year, & at budget time)
- ▣ Report to co-workers, residents, management group.
- ▣ Adjust the plan as needed.

Step Review

- | | |
|-------------|--|
| Step One: | Why do you need a plan? |
| Step Two: | Assessing what you have. |
| Step Three: | What are your needs? |
| Step Four: | Develop your action plan. |
| Step Five: | Implementation; Who is going to do what? |
| Step Six: | Budget and Funding |
| Step Seven: | Compile Documents |
| Step Eight: | Adoption |
| Step Nine: | Are you getting what you want? |

URBAN FOREST MANAGEMENT TOOLKIT

Urban Forest Management Plan Toolkit



Developed by: Ted Swiecki & Elizabeth Bernhart, Phytosphere Research
In conjunction with the Inland Urban Forest Council
Funded through a Grant from Cal-Fire

Urban Forest Management Plan Toolkit

[Getting Started](#)
[Management Planning Process](#)
[UFMP Outline](#)
[Resources](#)

The **Urban Forest Management Plan (UFMP) Toolkit** web site can be used by anyone managing a large population of trees in or near urban areas. The Toolkit web site is intended to help urban forest managers develop management plans that are appropriate for their urban forests.

This is a project of California Urban Forests Council, and the Inland Urban Forest Council.



It's Free!
GET STARTED NOW

You can view the contents of the Toolkit website without registering, but [registration](#) is required to take advantage of the online editing capabilities.

Watch now!
INTRODUCTORY TOUR

What is an urban forest?

“The sum of all woody and associated vegetation in and around dense human settlements, ranging from small communities in rural settings to metropolitan regions.”

From Urban Forestry, Planning and Managing Urban Greenspaces by Robert W. Miller: 1988. New Jersey: Prentice Hall.

What is urban forestry?

“A planned and programmatic

Develop a management plan for your urban forest

The UFMP Toolkit provides

- an overall framework for developing an urban forest management plan;
- an overall process to organize the steps involved;
- a list and descriptions of elements that may be included;
- an online work plan tool;
- an online editing tool to assist in the development of a complete detailed plan outline with notes input by multiple collaborators.



- ▣ Urban Forest management planning considers a range of scales in time and space
- Plans need to span many levels - from overall framework to specifics
- Should have consistency across all levels - working towards same goals





Urban Forest Management Plan Toolkit

The Toolkit

- ▣ Provides overall conceptual framework
- ▣ Process
- ▣ Elements of plan
- ▣ Examples
- ▣ Online tools for developing plan
 - Collaborative multi-user platform
 - Work plan
 - Plan outline and text

Urban Forest Management Plan Toolkit

[Getting Started](#)[Management Planning Process](#)[UFMP Outline](#)[Resources](#)[Home](#) > [Getting Started](#) > [How to use this website](#)[How to use this website](#)[Initial questions](#)

How to use the UFMP Toolkit web site



The UFMP Toolkit web site provides an overall roadmap to help you and your project team develop an urban forest management plan. The Toolkit presents a series of steps for developing a plan. Use the navigation links at the end of each page to follow these steps.

You may set up a free UFMP Toolkit account. This will allow you to create and edit your own work plans and plan outline. Your information will be stored on the California Urban Forest Council's server and be available to you whenever you log in to your account.

Many pages have tools to aid in plan development. Color-coded headings mark each tool. These tools are described below:

Example

Examples from existing urban forest plans are included to provide further ideas.

Planning questions

These questions will help you think about what to include in your urban forest management plan.

Work plan

Work plans include checklists, matrices, and other information that you can use to organize, track, and manage the process of developing your plan. These include:

- time/action schedules,
- checklists of information to gather, and
- persons responsible for specific tasks involved in developing the plan.

You must log into your UFMP Toolkit account to enter information into the worksheets online. Whenever you log into your account, information you have entered will appear and be available for editing. You can also [download](#) completed or blank work plan forms in Microsoft Word format.

Outline

The UFMP Toolkit includes a generic overall plan outline. Once you log into your UFMP Toolkit account, you can customize the outline by omitting sections that do not apply to your plan. You may enter notes to be included under any given outline heading. On certain pages, you can transfer information from the work plan directly to your outline file.


Most urban forest management plans are complex documents with many charts, tables, and images. We have not attempted to provide a platform to allow you to compose your entire plan online. However, you can download the outline you develop online to serve as a framework for your plan document. You can [download](#) your customized outline in Microsoft Word format at any point.

[PREVIOUS](#)[NEXT STEP](#)[BACK TO TOP](#)

Urban Forest Management Plan Toolkit

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Details

Management Plan completeness
25% 

Number of Users: **4**

Account Created: **Jan 18, 2010**

Best work with: **Firefox, Safari, or Internet Explorer 8.**

Need help?
Contact our [web administrator](#)









Settings

Profile

User manager

Comments

To give access to a new user, click the **Add User** button below:

	FIRST NAME	LAST NAME	EMAIL	USER TYPE	EDIT	DEL.
1.	Nancy	Silverton	NancySilverton@hotmail.com	Administrator		
2.	Michael	Romano	MichaelRomano@gmail.com	User		
3.	Susan	Towersee	S.Towersee@mail.com	User		
4.	Patrick	O'Connell	12oconnell@gmail.com	User		

[ADD USER](#)

What do you have?

What do you want?

- Vision and mission statements
- **Data synthesis**
- Establish goals
- Set objectives

How do you get what you want?

Are you getting what you want?

Comments

☒ ALL ☐ MY TEAM ☐ PUBLIC

Aliona Feb 2, 2010 / 1:40 pm
Looks like a very good program,
for a tree management...

Sergey Feb 1, 2010 / 11:27 am
Thanks a lot, i find the information
very usefull...

Sergey Feb 1, 2010 / 10:28 am
Useful, to have been proven to be
a very easy to use...

Data synthesis and needs assessment

Example

Planning questions

Work plan















Use this worksheet to plan and track the synthesis of data gathered in the assessment process.

INCLUDE	NEEDS/ACTION AREAS	DATA SYNTHESIS BY	TARGET DATE	COMPLETED	EDIT
1. <input checked="" type="checkbox"/>	Tree and forest	Nancy Silverton	Jan 18, 2010	Jan 25, 2012	save
2. <input checked="" type="checkbox"/>	Management	Michael Romano	Dec 18, 2009	Jan 18, 2010	
3. <input checked="" type="checkbox"/>	Community interactions	Susan Towersee	Nov 22, 2009	Jan 18, 2010	

ADD OTHERS

Outline

Add content related to tree and forest needs/action areas:

✓	7. 3. 1. Monitoring methods		
✓	7. 3. 2. Responsible parties		
✓	7. 3. 3. Timeframe		
✓	8. Appendix		
✓	8. 1. Technical guides and standards		
✓	8. 2. Assessment methods		
✓	8. 3. Planning documents / policies		
✓	8. 4. Ordinances		
✓	8. 5. Other		
✓	Implementation plan		
✓	1. Responsible parties		
✓	2. Timetable		
✓	3. Funding		
✓	4. Budget		

INCLUDE DOCUMENT SECTION

WORK PLAN OUTLINE

SELECT: ☒ WORK PLAN ☐ OUTLINE

DOWNLOAD

PRINT

BACK TO TOP

Getting Started



Why?

Why is the plan needed?

Who?

Who are the people/groups that need to be on board before the plan can be developed?

What/where?

What overall planning scope can be justified/approved?

What portions of jurisdiction/site will the plan address?



Urban Forest Management Plan Toolkit

[Sign Up](#) [Log In](#)[Getting Started](#)[Management Planning Process](#)[UFMP Outline](#)[Resources](#)[Home](#) > [Getting Started](#) > [Initial questions](#) > [What/where?](#)☒ INCLUDE IN PLAN ☐ NOT INCLUDED

How to use this website

Initial questions

- Why?
- Who?
- **What/where?**
- When?
- How?

What/where?



As you gather support for developing your plan, you will need to indicate what the overall scope of the plan will be. More to the point, what planning scope is likely to be approved and funded? Depending on your level of support, it may be necessary to take an incremental approach rather than going for the most comprehensive plan possible in the first attempt.

One important component of scope is the "where" - what portions of the urban forest will be included in the plan? The plan may apply only to certain geographic areas (e.g., downtown area) or to only certain classes of trees (e.g., street trees only; city trees only as opposed to public and private trees).

Especially for cities and counties, the UFMP will be only one of many plans that may overlap and interact to varying degrees. These interactions should be considered when developing the scope as discussed below.

Planning Scope

Trees included in an urban forest management plan may include:

- planted horticultural trees in urbanized settings (most trees in developed areas)
- retained native trees in urbanized settings
- native trees in relatively undisturbed settings (open space lands, etc.)

Different types of management actions and monitoring methods may be appropriate for these various tree classes.

In addition most city or county urban forests include trees managed by multiple entities. These may include:

What / where ? - Work Plan

Trees included within the scope of the plan.

Use this form to indicate which aspects and segments of the urban forest will be included in the plan.
Note that there may be overlap between some categories. Blank lines are provided for customized topic areas.

INCLUDE	WHAT WILL BE ASSESSED	MANAGED BY (?)	GEOGRAPHIC LIMITS (?)	OTHER-SPECIFY	EDIT
1.	Canopy cover				
2.	Street trees				
3.	Facility trees	Xxxxxx	Xxxxxx	Xxxxxx	
4.	Parking lot trees	Xxxxxx	Xxxxxx	Xxxxxx	
5.	Park trees				
6.	Heritage trees				
7.	Open space trees				

ADD OTHERS

Relationship of plan to other planning documents

Cities and counties, as well as other public districts, typically have multiple layers of planning documents. A key question to answer before developing an urban forest management plan in these jurisdictions is how the UFMP will be related to other plans and regulations. These may include:

- general plan
- specific plans
- redevelopment plans
- open space element
- design and landscaping guidelines
- ordinances, including the local tree ordinance

Relationship to other planning documents

- General plan
- Specific plans
- Ordinances
- Landscaping guidelines



When?

Duration of the plan

Timeline for developing the plan

How?

Funding/resources needed
to develop the plan



Urban Forest Management Plan Toolkit

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Developing a plan – an overview



Developing an urban forest management plan is a demanding task. It requires input from many people and data sources, thoughtful analysis, vision, good organizational and writing skills, and time. Urban forest management plans are usually developed through the collaborative efforts of multiple staff members and consultants. A member of the organization developing the plan normally serves as project manager and provides overall project coordination. An important part of developing the plan is developing consensus among various stakeholders and interested parties. Plans developed by cities or other public entities require public input, which occurs at various stages of plan development.

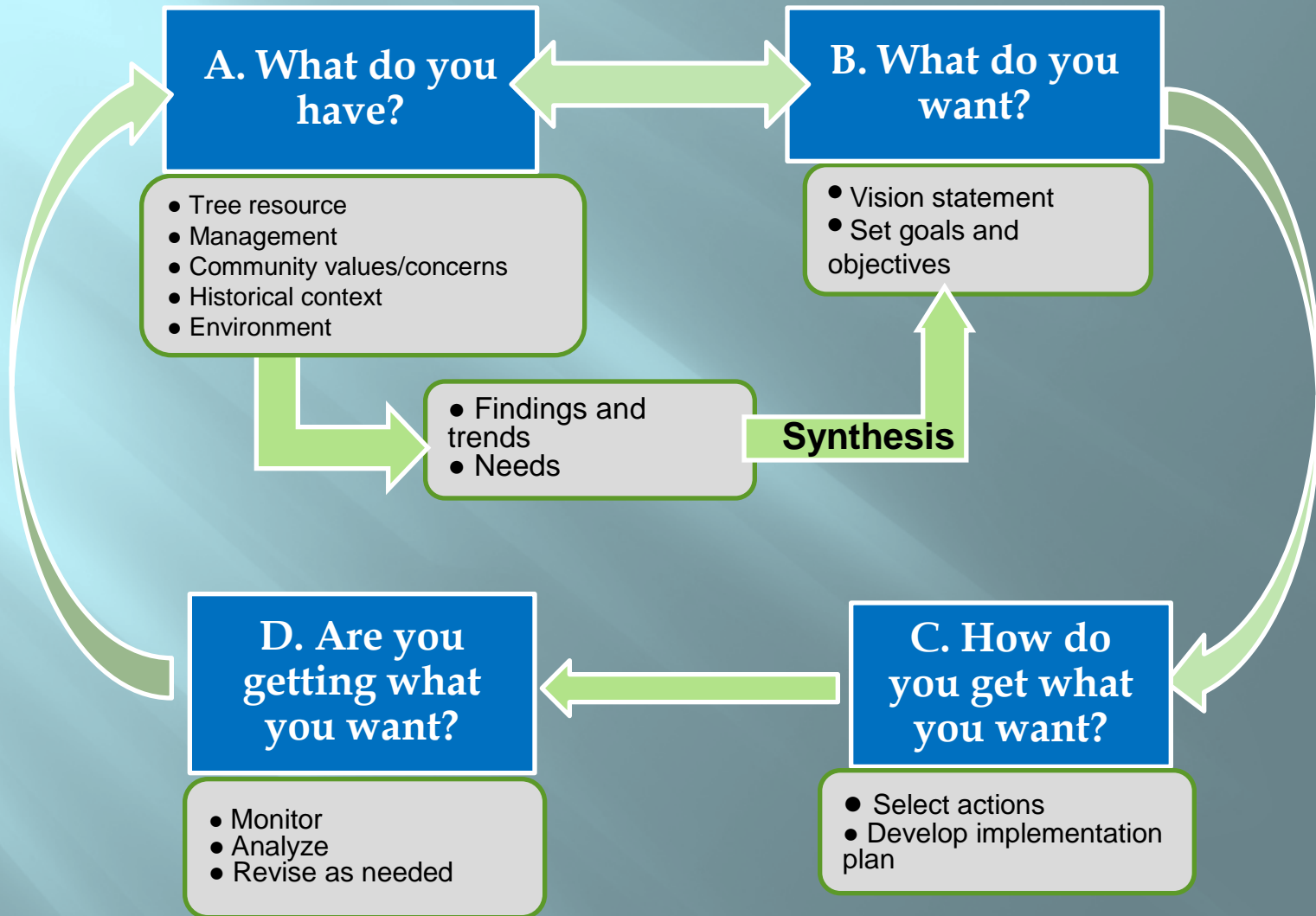
This Toolkit steps through plan development in a linear fashion. However, plan development may actually require a more looping, iterative process. New issues may be identified as the plan is developed that may require additional analysis. Changes or compromises may be needed to obtain support. Resources may limit what can be done. You may need to revise sections of the plan multiple times to account for changes in scope or direction. You can expect that it will take an extended period, at least many months, to complete a plan. Complex plans that involve public hearings and several levels of administrative approval may require one to two years from inception to final approval and implementation.

An overall sequence of steps involved in developing an urban forest management plan is summarized below. The web site sections described below begin after the next page, which describes how to use the UFMP Toolkit web site.

Authorization and scoping

The starting point for most plans is the authorization to develop a plan. The authorization will normally provide a general scope for the plan. Your organization will have to commit to

Overall Planning Model Framework



What do you have?

What do you want?

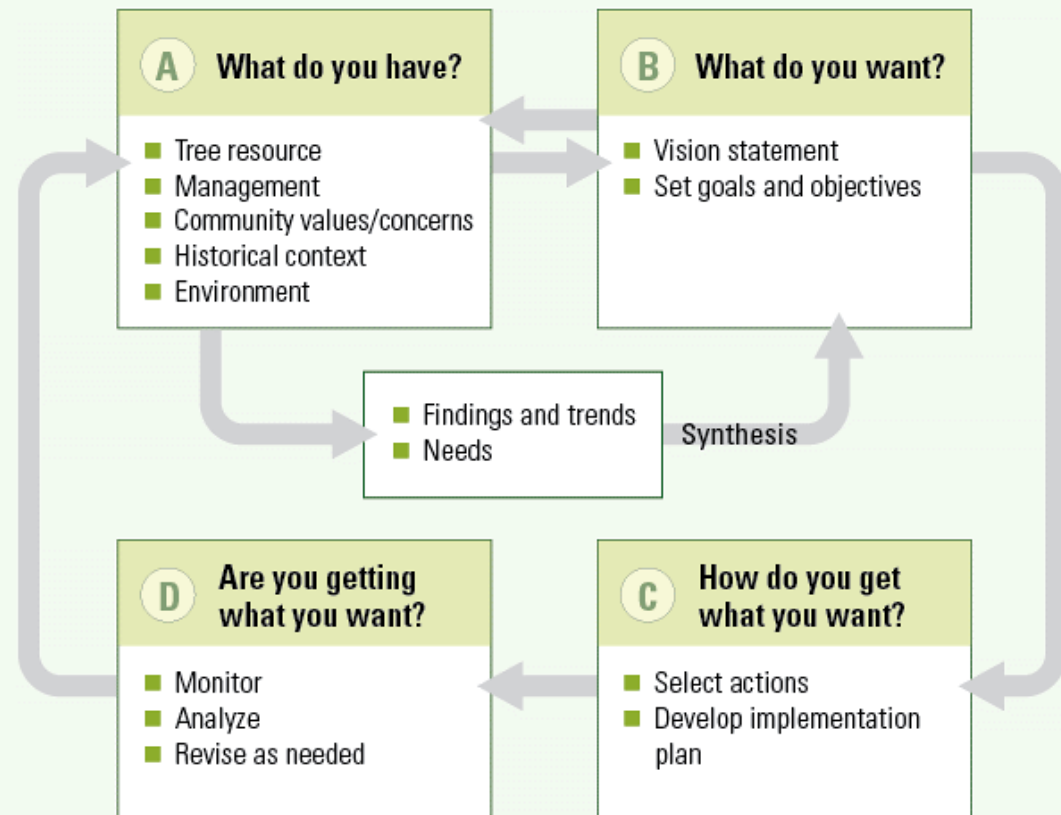
How do you get what you want?

Are you getting what you want?

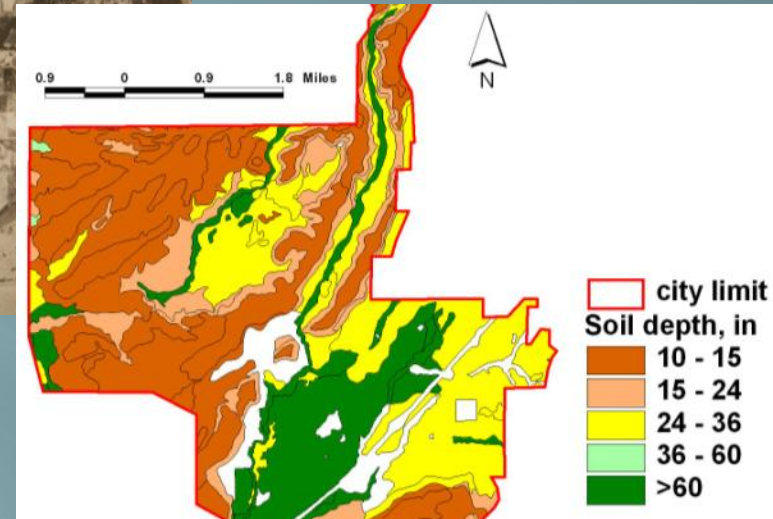
Management Planning Process



The overall management planning process used in this web site follows the model illustrated below. This process is referred to as adaptive management. It is commonly used for management planning and resource management (Miller 1988). This model provides a good conceptual framework for the process of developing a management plan. You can also use other variations of this general framework.



Although the steps shown above are represented as a continuous cycle, it is common to go back and forth between the first three steps when developing a plan. Steps A and B are



What do you have?



What do you have?

What do you want?

How do you get what you want?

Are you getting what you want?

Comments



[0] [Read all](#)



[Leave comment](#)

What do you have?



Planning for the future of the urban forest starts with an understanding of the current state of the forest and its management. Knowledge of past practices and events is the key to understanding the present condition of the urban forest. By looking back, you can assess trends that have developed over time and factors that have influenced these trends.

In this portion of the planning process, you will examine both what you have and how you got to your current situation. This can provide valuable insight into how to plan for the future.

Assessing the urban forest

Before you start to assess your current urban forest, you will need to answer several basic questions:



What is being measured? Determine the scope of what will be assessed (this should already have been decided as part of Getting Started > [What/Where](#)).



What is your vision for the urban forest? Although [vision](#) can be thought of as part of the "What do you want?" step, resources for developing urban forest master plans are not unlimited. The vision statement describes the future state of the urban forest. It can be helpful to have at least an initial vision for the urban forest to guide you in choosing the areas to include in the assessment.

Organizations commonly develop mission statements in support of their vision statement. In the context of urban forest planning, a mission statement summarizes the role that a given organization or group has in helping to achieve the overall urban forest vision.



What information is needed? Consider the information that you are interested in. For example, what characteristics of the tree population (species, size, age, condition, planting site conditions, etc.) do you need to know? Your preliminary ideas about "what you want" will be helpful in deciding what information to collect. You can use the forms provided in the linked pages below to fill in this information and export it to the outline.



What is the most efficient and cost-effective method to get the information? There is no substitute for data in evaluating the current status of the urban forest and the urban forest program. Anecdotal evidence is often biased in one direction or another. Data

What do you have?

- Assess history
- Assess environment
- **Assess trees**
 - Canopy cover
 - Street trees
 - Facility trees
 - Parking lot trees
 - Park trees
 - Heritage trees
 - Open space trees
- Assess management
- Assess attitudes

What do you want?

How do you get what you want?

Are you getting what you want?

Comments



Aliona Feb 2, 2010 / 1:40 pm
Looks like a very good program,
for a tree management...

Sergey Feb 1, 2010 / 11:27 am
Thanks a lot, i find the information
very usefull

Assess the tree resource



Every urban forest management plan should include an assessment of existing tree resources. Some of the factors to consider:

- location (e.g., zone within the plan area, tree location relative to streets or structures),
- extent (e.g., number, canopy cover percentage or area),
- composition (e.g., species, size/age distribution),
- condition (e.g., health, hazard potential, pruning needs),
- management responsibility (e.g., public vs. private, agency/department/unit).

You may organize your assessment of the urban forest using those categories that are most meaningful to you. Some possibilities:

- location: street trees, park trees, open space trees
- land use: residential, commercial, industrial, public facilities
- management zones: building envelope, parking lots, lawns, trails
- responsible department: public works, parks

You will also need to select the methods you will use to assess the trees in each category. Possibilities include:

- tree inventories,
- sample surveys,
- canopy cover analyses,
- targeted studies for special situations (e.g. fuel management areas).

Researchers have developed various models that you can use to estimate the [economic value of the urban forest](#). These models measure the economic value of tree benefits and

Tree Resources

Management intensity varies by location

- Street trees

- Facility trees

- Parking lot trees

- Park trees

- Open space trees

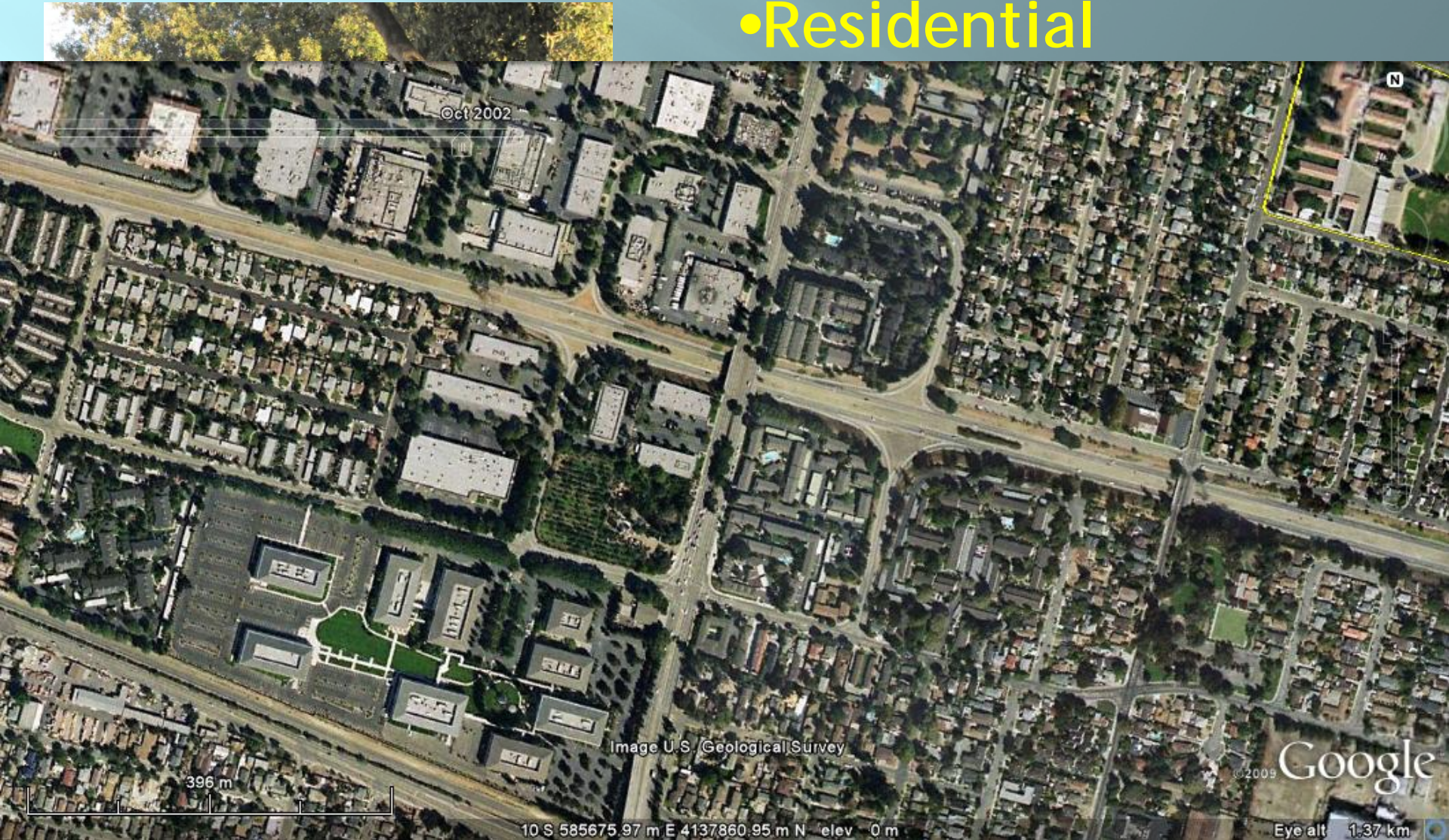


Tree Resources

Ownership/land use

Public

•Residential



Tree Resources

Ownership/land use

Private

•Commercial

Public



Tree Resources

Ownership/land use

Private

•Interface

Public



Urban Forest Management Tools

- Economic benefits
- Tree care standards
- Evaluating and monitoring trees
- Soils and roots
- Choosing trees

[Guides to Urban Forest Management Planning](#)[Example Urban Forest Management Plans](#)[About the Toolkit](#)[Contact us](#)[Site map](#)**Urban forest management tools**

The pages in this section include descriptions of tools and techniques used in urban forest management. Links to resources available on other sites are also listed. If you know of other useful resources, submit a link using the Comments box.

Economic benefits of the urban forest

- [i-Tree](#)
- [CITYGreen](#)

Tree care standards and guidelines

- [Pruning standards and guidelines](#)
- [Guideline specifications for nursery tree quality](#)
- [Tree protection in construction sites](#)

Evaluating and monitoring tree populations

- [Tree inventory](#)
- [Sample survey](#)
- [Tree canopy cover assessment](#)
- [Tree risk assessment](#)

Soils and roots

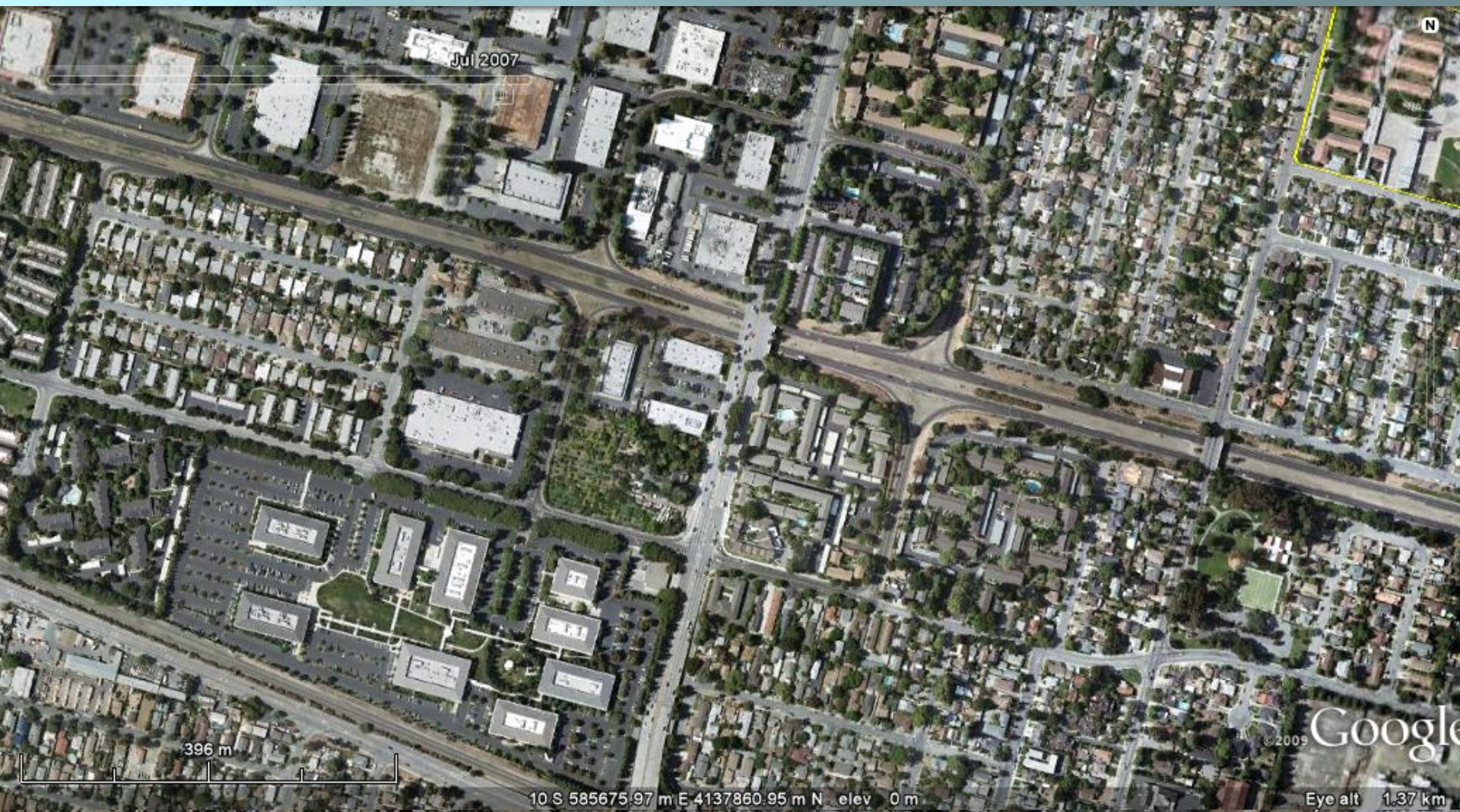
- [Soil survey data](#)
- [Structural soil](#)
- [Pervious pavement](#)
- [Tree roots and sidewalk/curb damage](#)

Canopy cover

Aerial imagery

- Applicable to all trees:
Street, park, open space,
private
- Limited information on
individual trees
- Historical trends from
older imagery





Jul 2007

396 m

10 S 585675.97 m E 4137860.95 m N elev 0 m

© 2009 Google

Eye alt 1.37 km

Tree population and condition

-Sample survey

- Applicable to most trees: Street, park, open space, private if visible
- Wide range of information: species, condition, size class, etc
- Rapid and relatively inexpensive
- Historical trends if use permanent plots



Tree population and condition

-Inventory

- Applicable to some tree types: street, park, limited areas
- Wide range of information: species, condition, size class, etc
- Slower and more expensive
- Historical trends if inventory is updated



What do you have?

- Assess history
- **Assess environment**
- Assess trees
- Assess management
- Assess attitudes

What do you want?

How do you get what you want?

Are you getting what you want?

Comments

[\[0\] Read all](#)[Leave comment](#)

Assess environmental factors



The environment affects what trees you should plant, how well they will grow, and how they should be cared for. The plan should discuss the environmental conditions that occur in the plan area.

If the plan area is small, the environment may not vary across the site. In larger or more diverse areas, soil, microclimate, wind exposure, or other factors may vary across the site. If so, it may be useful to identify zones for tree selection and maintenance.

Some factors, such as rainfall, are clearly beyond the control of the urban forest manager. Other factors, such as soil conditions, can be modified. Some environmental factors to consider are noted below.

- **Soil conditions** A wide variety of soil properties can affect tree selection and performance. These include:
 - soil texture (sand/silt/clay balance)
 - soil compaction
 - rootable soil depth
 - soil water holding capacity
 - soil drainage characteristics
 - depth to water table
 - soil salinity
 - concentrations of specific toxic ion

Soil survey data can provide soil information, but where soils have been altered through cut and fill or imported top soil, the soil survey data will no longer apply.

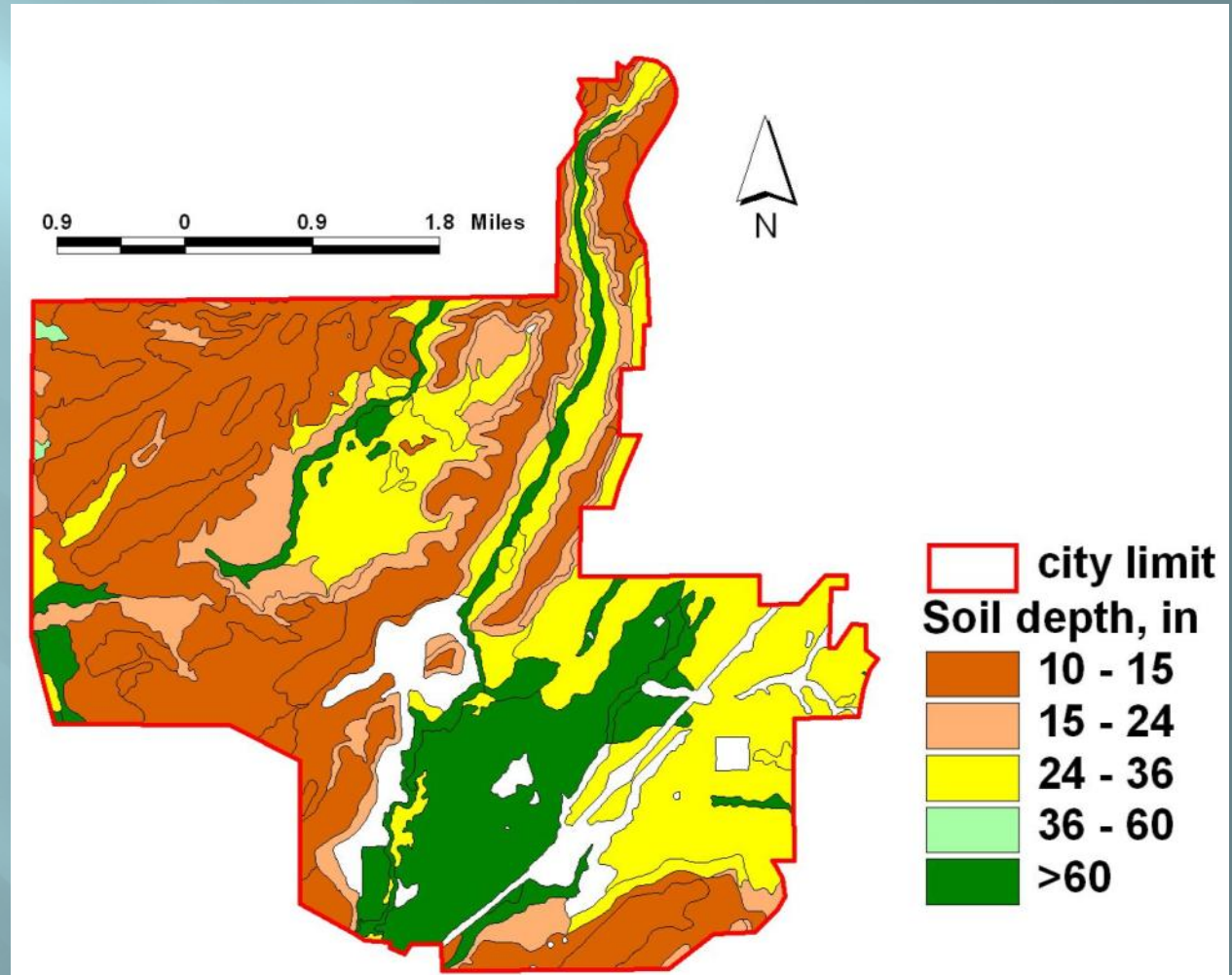
Planting sites in urban areas vary with respect to the amount of rootable soil volume, impervious soil cover, presence of underground utilities, irrigation, and other factors that affect tree growth. Some of these factors may be noted in existing tree inventories.

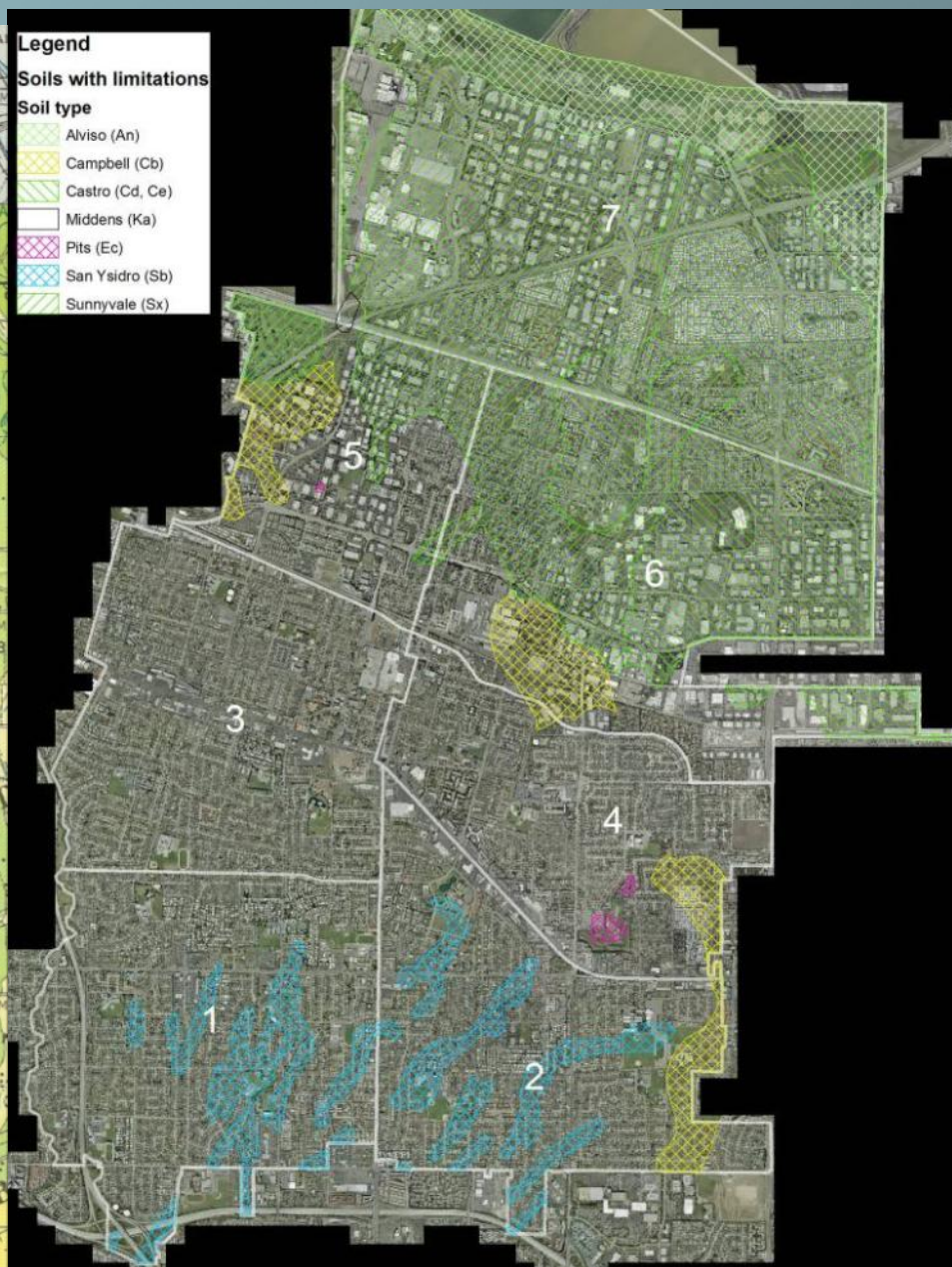
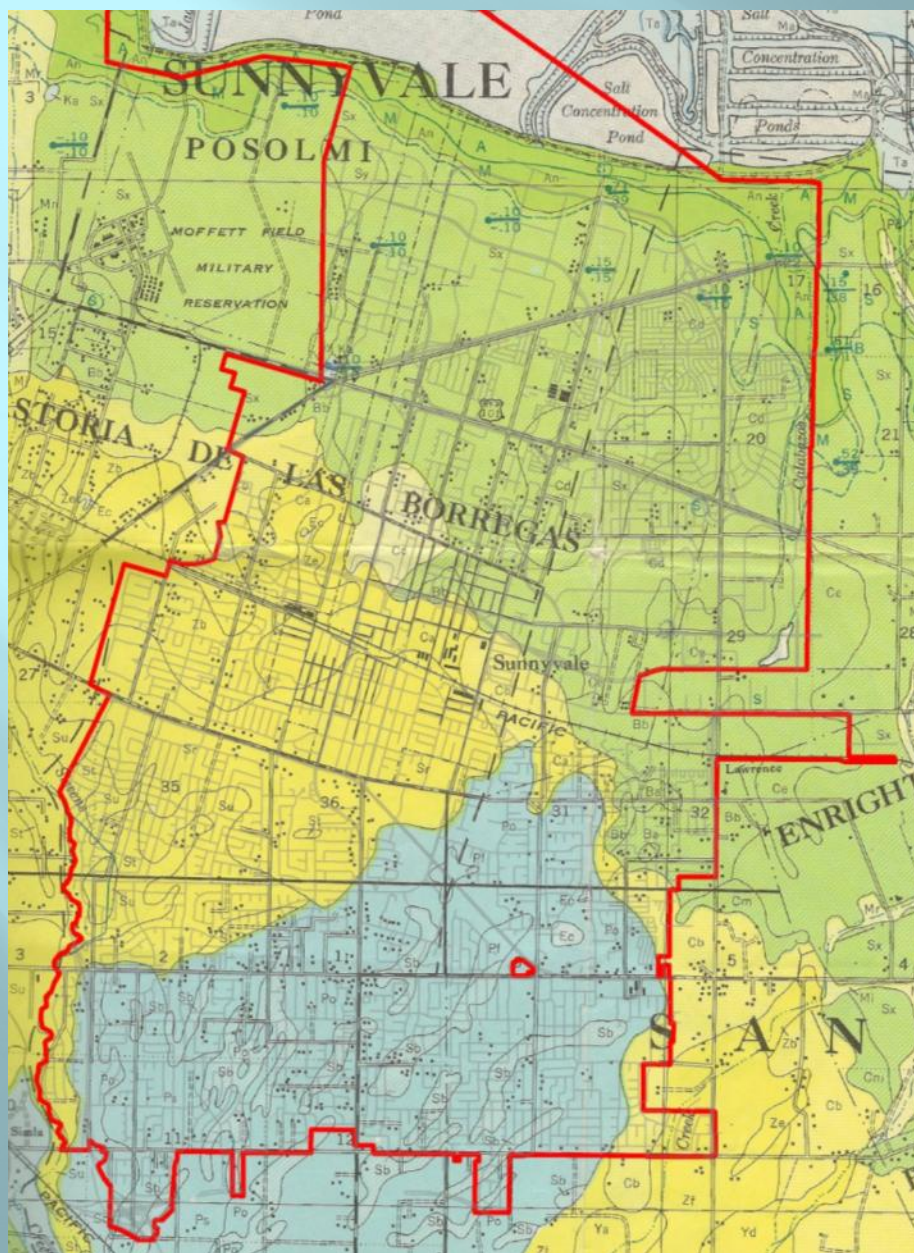
- **Climate zones** In hilly areas or near the coast, climate characteristics may vary across the plan area. Factors to consider include minimum and maximum temperatures, fog influence, and wind exposure. Significant differences in microclimate may occur between planting sites due to slope and aspect, shade from buildings or landforms, wind patterns, or reflected heat

Environmental factors

-Soils

- Soil depth
- Water holding capacity
- Drainage
- Depth to water table
- Salinity





Review existing tree management practices



- tree care practices-
planting, maintenance,
removals
- existing ordinances,
regulations and
enforcement
- planning regulations and
guidelines that affect
trees
- activities that impact
trees: city departments,
public utilities, businesses,
residents

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What do you have?

- Assess history
- Assess environment
- Assess trees
- **Assess management**
- Assess attitudes

What do you want?

How do you get what you want?

Are you getting what you want?

Comments

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Review existing tree management policies, responsibilities, and practices



Example

Planning questions



Below are some additional questions to consider regarding assessment of tree management.

- What tools and programs have been implemented to date and how effective have they been?
- Are our standards and practices up to date and based on the best available information and research?
- Do we have adequate staff, budget, and training to cover our tree care needs?
- How will tree care needs change over time and how will that affect management needs?
- Are the various entities that affect trees working with the same vision and towards the same end?
- Is our regulatory framework adequate or does it need to be updated or expanded?

Work plan



Fill in the tables below to record how you plan to gather information.

Activities of departments/units that affect trees-Who does what? How do they manage the urban forest?

INCLUDE DESCRIPTIONS

COLLECTED/Written UP BY

TARGET DATE

COMPLETED

EDIT

What do you have?

- Assess history
- Assess environment
- Assess trees
- Assess management
- Assess attitudes

What do you want?

How do you get what you want?

Are you getting what you want?

Comments



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Review stakeholder attitudes



Identify stakeholder attitudes and perceptions about the urban forest and its management.

The desires, attitudes, and perceptions of stakeholders and decision-makers can have a large impact on your urban forest plan. You may need cooperation from multiple groups to develop, fund, and implement the plan. A site-level plan may only need the

support of the property manager or administration. In contrast, municipal plans typically require wider public input and support. You can use various methods to assess the attitudes and opinions of stakeholder groups. For small groups (e.g., site management or staff), meetings and interviews may be used. For larger stakeholder groups (e.g., city residents), similar meetings can be held with representative focus groups. Alternatively, you can use public polling methods to assess larger samples of the population. The goal of this step is to identify attitudes and perceptions. You can also assess how strong attitudes or opinions are by presenting what-if scenarios. Many companies and some universities provide services related to polling and assessing attitudes. **Public polling**

Polls are commonly used to assess opinions. The concepts behind public polling may seem simple enough, but survey reliability can be affected by a wide range of factors. If survey design or execution are flawed, results may be meaningless or misleading. Interviews or self-completed questionnaires are the main ways to conduct polls. If a provider / client relationship exists, user feedback surveys (mail or online) can be used to assess client satisfaction. The table below summarizes some characteristics of survey methods that may be appropriate for a local area.

SURVEY METHOD	COST	NOTES
Telephone interview	Moderate for local area	— in local area, sample may not include people that use mobile phones only (no land line) — high refusal rate possible
Door-to-door interview	High	— can target specific local geographic areas
Public area interview	Moderate	— interviews at local shopping centers or public events — sampling bias may be a problem
Mail survey	Moderate	— low return rate can be a problem
Online survey	Low	— very easy to execute — sampling bias may be a problem

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[What do you have?](#)

What do you want?

- [Vision and mission statements](#)
- [Data synthesis](#)
- [Establish goals](#)
- [Set objectives](#)

[How do you get what you want?](#)

[Are you getting what you want?](#)

Comments



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What do you want?



In this phase of the planning process, you will decide what you want in your urban forest. In other words, what specific outcomes are you trying to achieve through the plan? What do you want the urban forest to look like at the end of the planning period? How will the urban forest be managed? What will be the community's role in maintaining the urban forest? As you develop the plan's goals and objectives, you spell out what you want to achieve.

Your synthesis of findings from the assessments provides a good starting point for setting goals and objectives. The data synthesis tells you what you have and can show how you arrived at your current state. Your findings should help you identify issues, trends, and needs that you may want to address in the plan.

The plan will also be shaped by the overall vision you have for your urban forest. Data synthesis can help you identify issues and needs. However, you will have to decide which issues and needs the plan will address. If you have not yet done so, this is a good time to develop a formal vision statement for your urban forest. Stating the overall outcomes you are working toward in a clear vision statement can help you formulate your plan's goals and objectives.

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[NEXT STEP](#)

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- Data synthesis
- Establish goals
- Set objectives

[How do you get what you want?](#)[Are you getting what you want?](#)[Comments](#)[\[0\] Read all](#)[Leave comment](#)[Vision and mission statements](#)[Example](#)[Planning questions](#)

In the examples shown below, the vision statements include elements that describe both the urban forest itself and how it is cared for and valued by the people that manage it. This includes city government departments, residents, and organizations. The City of Seattle's Urban Forest Management Plan has a brief and succinct vision statement:

“Seattle's urban forest is a thriving and sustainable mix of tree species and ages that creates a contiguous and healthy ecosystem that is valued and cared for by the City and all of its citizens as an essential environmental, economic, and community asset.”

City of Seattle Urban Forest Management Plan, April 2007

The City of Portland, OR, uses a more extensive vision statement. Four paragraphs are used to describe the vision of the city's urban forest in 2020.

PORTLAND'S URBAN FOREST IN 2020

“The view from the eastern foothills of Mt. Hood to the ridgelines of the West Hills is a panorama of a healthy and diverse forest with groves of tall native evergreens that identify Portland as a Pacific Northwest city. The health of this urban forest, a mosaic of the planted landscape and the remnant native forest, is a reflection of the city's health, well-being and livability. These trees and

Vision

Assessment

History

Environment

Management

Trees

Community
values

Findings

Findings

Findings

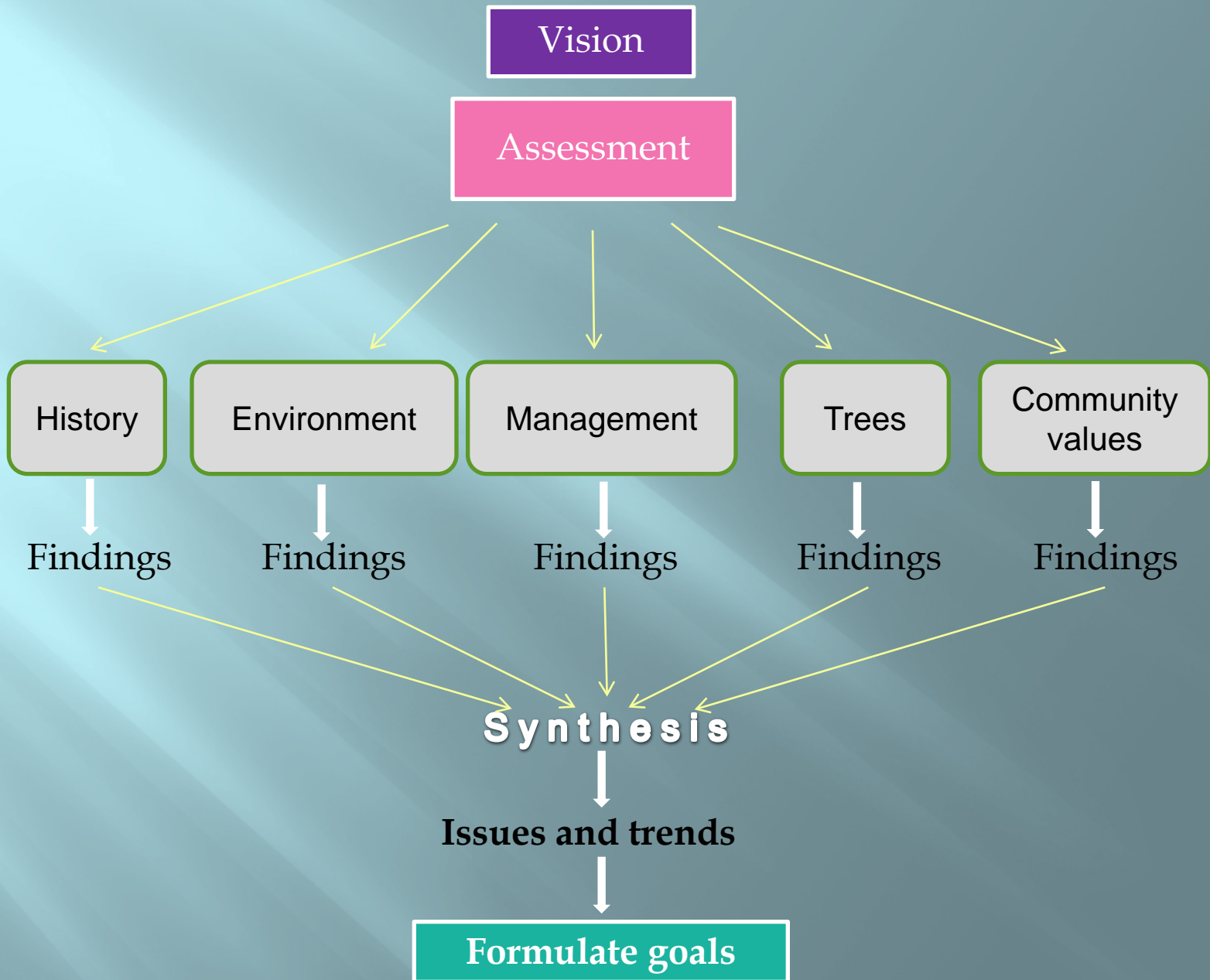
Findings

Findings

Synthesis

Issues and trends

Formulate goals



What do you have?

What do you want?

- Vision and mission statements
- **Data synthesis**
- Establish goals
- Set objectives

How do you get what you want?

Are you getting what you want?

Comments



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Data synthesis and needs assessment



In the preceding assessments, you analyzed the status of your urban forest. Analysis involves breaking down a complex situation into its component parts. In this step, you will put the parts back together to identify issues, trends, and needs.

In the data synthesis, you will pull together the information on what you have and try to determine **why**. For instance, why is canopy cover decreasing? Perhaps more trees are removed than are planted. But what if planting outpaces removal? It may be that new trees are still too small to offset the canopy lost by the trees they replaced. How will the situation change over time? If small-statured trees (e.g., crape myrtles) have been planted to replace large trees (e.g., coast live oaks), tree canopy cover may not be restored even when new trees reach their mature size.

In the data synthesis step, you will try to determine how the urban forest arrived at its current state. You can also project what the urban forest is likely to look like in the future based on current conditions and practices. You can now identify needs related to the urban forest. One way to organize the data synthesis is to consider the needs related to major urban forestry program areas. These areas are:

- Tree and forest needs
- Management needs
- Community needs

These program areas are not mutually exclusive. Many urban forestry issues combine aspects that involve two or all three of these areas. Potential areas to consider include:

Tree and forest needs – Needs related to the tree resource itself and processes that maintain the forest, including:

- species and age diversity
- tree planting
- protection and maintenance of existing trees
- compatibility of species and planting sites

Management needs – Needs of the urban forest program and the people involved with the short- and long-term care and maintenance of the urban forest. Needs might include:

Identify issues and trends



- Increased maintenance needs as street trees age

Identify issues and trends



Tree / hardscape
conflicts



Identify issues and trends

Hazardous trees



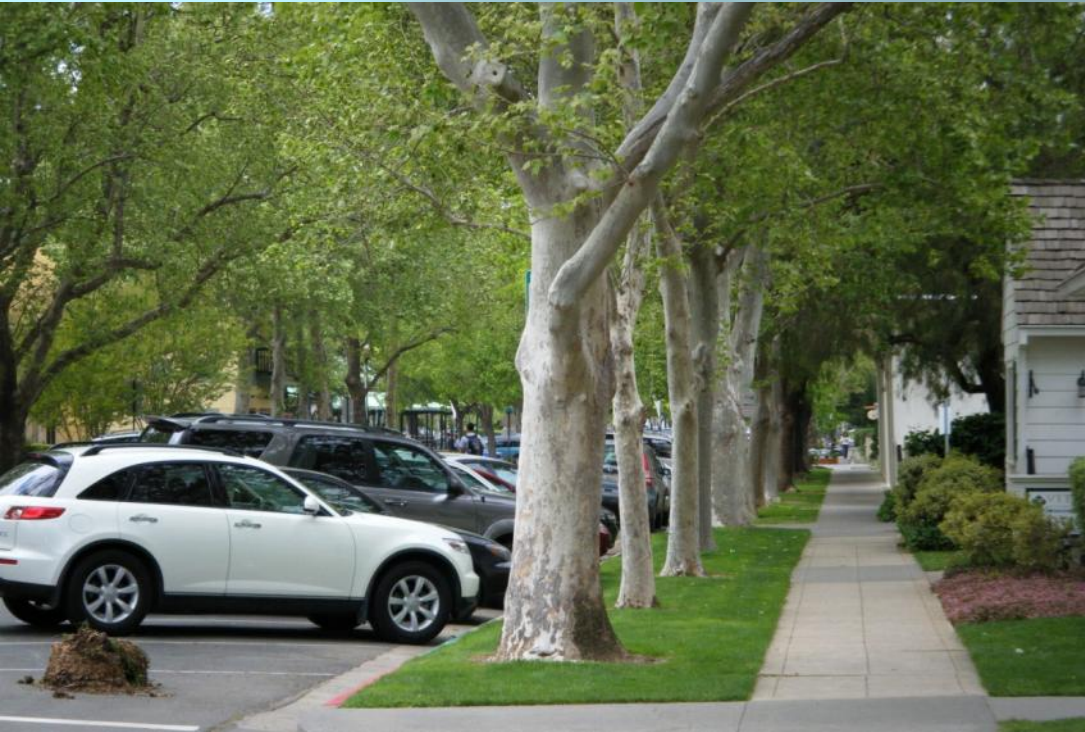
Identify issues and trends



Identify problems
to correct and
avoid in future



Identify issues and trends

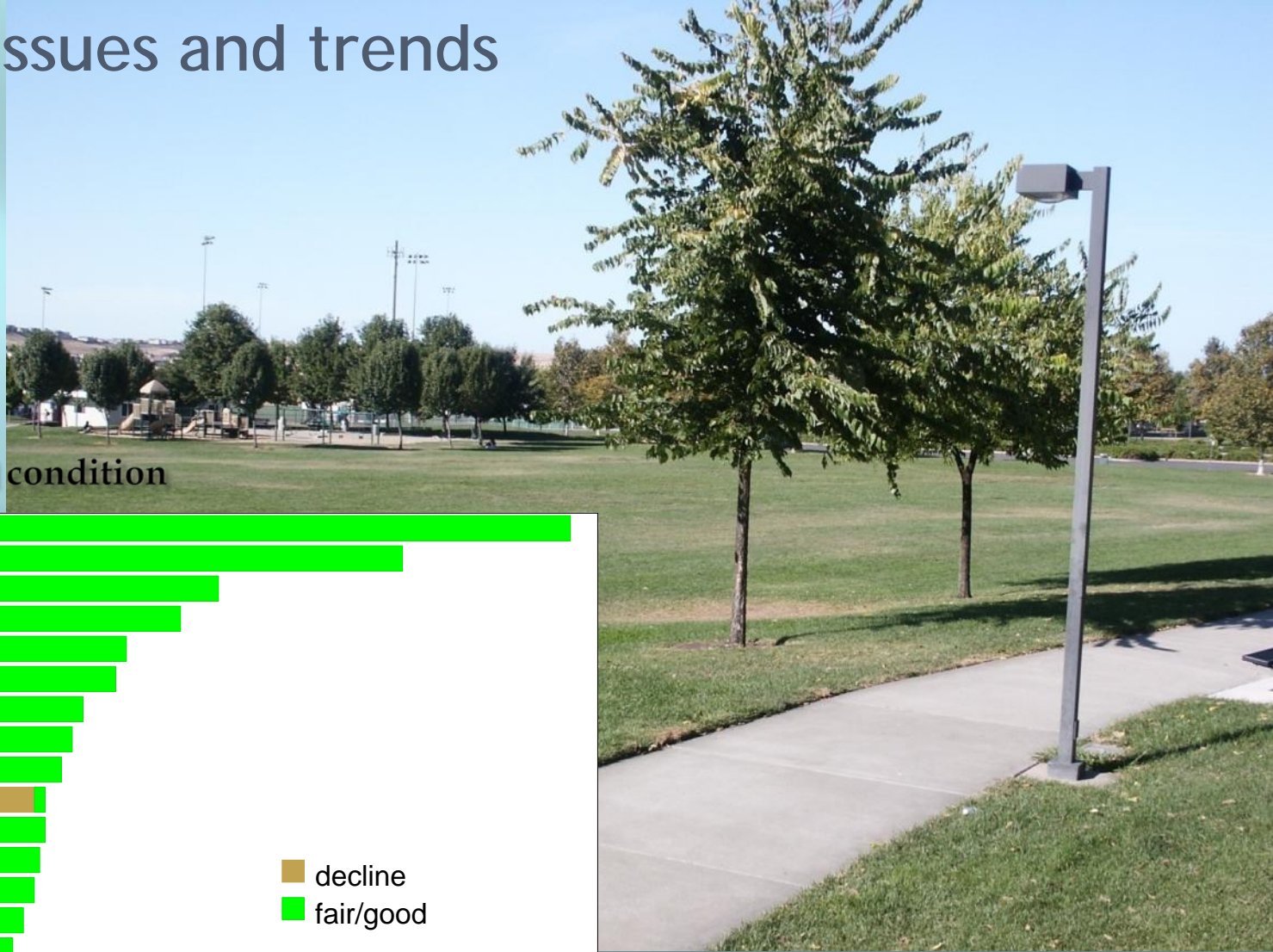
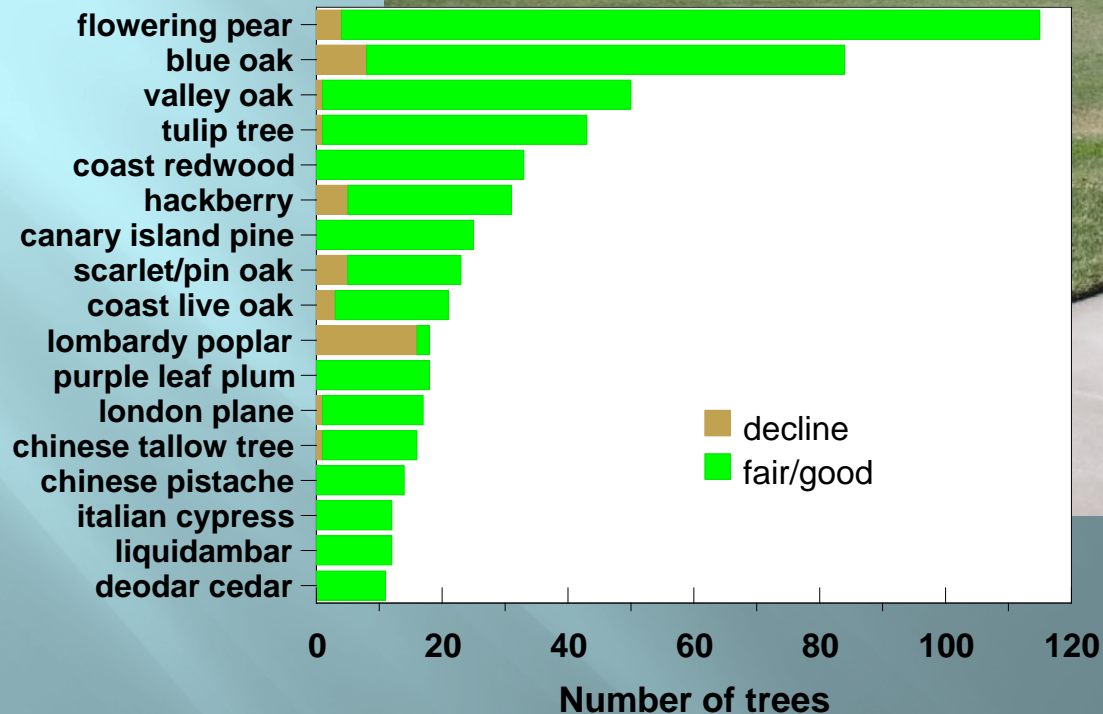


Identify successes
to continue and
expand



Identify issues and trends

Sample survey data:
species diversity and condition





Identify and prioritize goals

Tree and forest health



Canopy



Community



Management



Assessments



Needs and trends



Goals



Objectives



What do you have?

What do you want?

- Vision and mission statements
- Data synthesis
- Establish goals
- **Set objectives**

How do you get what you want?

Are you getting what you want?

Comments

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Set objectives for each goal



Example

Planning questions



The following examples list goals and their corresponding objectives. In many municipal plans, objectives are stated as policies. The examples are grouped under the general categories (tree resources, management, and community) used previously.

“ **Tree Resources**

Goal 3. Choose and locate new trees to maximize tree-related benefits.

- *Objective 3.1. Match species to sites to the greatest degree possible.*
- *Objective 3.2. Increase the use of large-canopy trees where practical to maximize tree benefits relative to costs.*
- *Objective 3.3. Locate new tree plantings in areas that will maximize energy conservation in buildings and shading of pavement.*



[Planning for the Future of Rocklin's Urban Forest Prepared for the City of Rocklin Community Development Department, September 2006](#)



“ [Goal] 3. Preserve and Protect Native, Significant, and Historical Treescapes.

- *Promote protection guidelines for conservation of historical treescapes through the City of Walla Walla's Heritage Tree Ordinance. (Municipal Code 12.50)*
- *Plant potential trees or groves to attain significant historical and aesthetic value.*
- *Promote memorial and honorary tree groves.*



[Urban Forest Management Plan, City of Walla Walla, WA, September 2006](#)

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What do you have?

What do you want?

How do you get what you want?

- Select actions and tools
- Monitoring plan
- Compile plan
- Plan review
- Plan approval
- Implementation plan

Are you getting what you want?

How do you get what you want?



The goals and objectives in your plan should provide a clear picture of "what you want" for your urban forest. The next question to answer is "How do you get what you want?". In this step, you will:

- consider and select actions and tools to achieve your goals and objectives;
- design a monitoring plan to track progress towards your goals and objective;
- develop an implementation plan to make sure your plan moves from paper into the field;
- compile your plan into a document;
- solicit public comment;
- submit your plan for approval.

Comments



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How much detail?



PLAN TYPE	DETAIL	APPROVAL
Strategic	broad steps and tools	Council / upper management
Implementation	Specific tools, personnel, timing, and budgeting	Department
Work	management of specific trees, events, etc.	Staff



What do you want?

How do you get what you want?

→ **Select actions and tools**

- Monitoring plan
- Compile plan
- Plan review
- Plan approval
- Implementation plan

Are you getting what you want?

Comments



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Example

Planning questions



The following examples are presented under the categories of tree resources, management, and community.

Tree resource goals

“ *Goal 3. Choose and locate new trees to maximize tree-related benefits.*

- *Objective 3.1. Match species to sites to the greatest degree possible.*

Actions

Provide guidelines on tree selection and placement to residents to promote planting the right tree in the right place and avoid tree/site combinations that will result in shortened tree life or excessive maintenance costs (e.g., redwoods on thin soils, big trees planted in small places, tall trees under electric distribution lines, etc.)

Continue to select suitable species and place trees appropriately to minimize conflicts with infrastructure along streets (e.g., signs, traffic signals, streetlights).

- *Objective 3.2. Increase the use of large-canopy trees where practical to maximize tree benefits relative to costs.*

Actions

Include large-statured trees in planting plans for parks, streets, and other public lands where practical.

- *Objective 3.3. Locate new tree plantings in areas that will maximize energy conservation in buildings and shading of pavement.*

Actions

Provide homeowners with information on how to place trees to maximize energy conservation.

Use the planning and design review processes to encourage the use of parking lot and streetscape designs that provide greater amounts of pavement shading.



Goal: Increase tree canopy cover

Objective: Increase tree population through planting

Possible actions:

- street tree planting
- tree planting in parks, open spaces, or around public facilities
- improved standards for nursery stock and planting site preparation to increase survival of new plantings
- more closely monitor and enforce replanting of empty spaces in commercial landscapes such as parking lots
- encourage tree planting by residents and local groups on private land

- person is designated to run the program
- prepare and distribute educational materials by print, online
- plan and conduct workshops or field days
- publicize program in local media and using other means
- measure impact of program by record keeping or surveys

Select actions and tools

Tree resource

GIS inventory

Revised species list

Tree risk management program

Planting site specifications

Plant material standards

Phased replacement program



Select actions and tools

Urban forest management program

Centralized tree management

Plan check protocols

Supporting other department goals

Coordination of maintenance schedules

Recognize positive efforts by others

Select actions and tools

Community interactions

Regulations / ordinances

Planning guidelines

Tree protection standards

Fuels management programs

Education & outreach

Assistance/incentive programs

Licensing tree care contractors

Example

Planning questions

The City of Redmond, WA, developed a [plan](#) for managing its forested parklands. The plan's monitoring section includes a "Balanced Scorecard". The scorecard shows how monitoring will occur for the three key elements identified in the 20-year plan: fieldwork, community, and resources. It also sets specific monitoring criteria for plan objectives.

Table 15: Green Redmond Partnership Balanced Scorecard

OBJECTIVE		MEASURE
<i>Restore and maintain 1,035 acres of forested parkland by 2029.</i>		<i># of acres restored to annual goal</i>
<i>Fieldwork: All 1,035 acres are restored by 2029</i>		
<i>Evaluate</i>	<i>Evaluate conditions and prioritize sites for restoration</i>	<i># sites evaluated, prioritized</i>
<i>Plan</i>	<i>Develop an annual work plan</i>	<i>-Annual work plan identifying active management sites completed</i>
<i>Implement</i>	<i>Implement management projects optimizing ecological function</i>	<i>-# of site management plans completed -# of acres entered into active management -Best practices updated</i>

Monitoring data can supply the information needed to determine what happened. This information can be used to choose appropriate corrective actions that would allow you to

Implementation plan

A photograph of a residential street lined with mature green trees. Several cars are parked along the sides of the road. In the foreground on the right, a person wearing a white helmet and a backpack is riding a bicycle. The sky is overcast.



Who does what?

Budget and funding sources

Prioritization

Time schedule

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Are you getting what you want?

Comments



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Monitor, evaluate, and revise as needed



When you start to implement the management plan, you should also start to monitor outcomes. The [monitoring plan](#) you developed should indicate:

- what data you will be collecting,
- when to collect and analyze the data;
- who is responsible for data collection, analysis, and reporting.



The monitoring step is the last step of the [adaptive management process](#). Your completed plan provides a defined structure for monitoring. New programs started through the plan may require different assessment methods than those you used for developing the management plan.

Monitoring is designed to measure progress towards the management plan's goals. As you implement planned actions and assess results, you will be able to see if progress is being made. You will assess if standards are being met. This feedback tells you how well the various parts of the management plan are working.

monitor
re-evaluate
report
adjust

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The **Urban Forest Management Plan (UFMP) Toolkit** web site can be used by anyone managing a large population of trees in or near urban areas. The Toolkit web site is intended to help urban forest managers develop management plans that are appropriate for their urban forests.

This is a project of California Urban Forests Council, and the Inland Urban Forest Council.



It's Free!
GET STARTED NOW

You can view the contents of the Toolkit website without registering, but [registration](#) is required to take advantage of the online editing capabilities.

Watch now!
INTRODUCTORY TOUR

What is an urban forest?

“The sum of all woody and associated vegetation in and around dense human settlements, ranging from small communities in rural settings to metropolitan regions.”

From Urban Forestry, Planning and Managing Urban Greenspaces by Robert W. Miller: 1988. New Jersey: Prentice Hall.

What is urban forestry?

“A planned and programmatic

Develop a management plan for your urban forest

The UFMP Toolkit provides

- an overall framework for developing an urban forest management plan;
- an overall process to organize the steps involved;
- a list and descriptions of elements that may be included;
- an online work plan tool;
- an online editing tool to assist in the development of a complete detailed plan outline with notes input by multiple collaborators.





