

Part II: Introducing DRAFT Forestwide Plan Components

Nantahala and Pisgah National Forests

*** Plan building blocks
are under development
& subject to change***



Feb. 2016

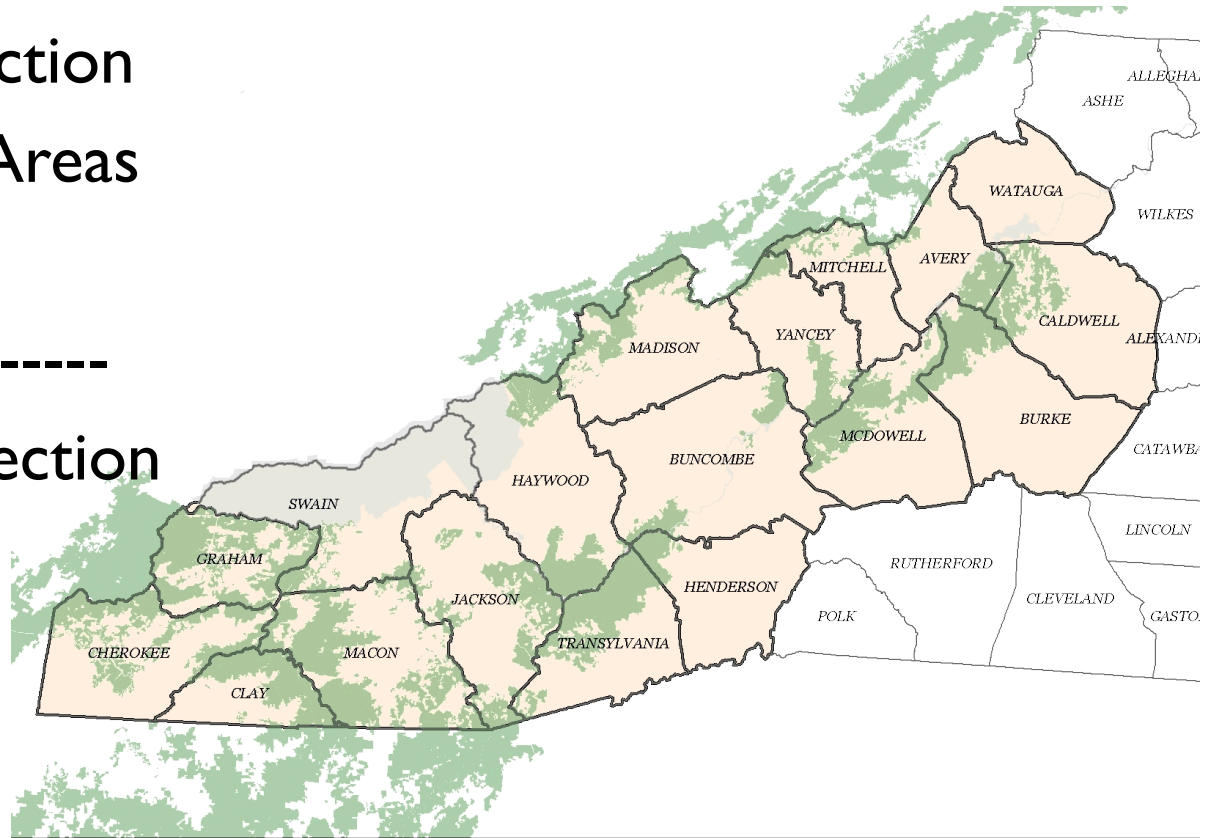
The Role of Forestwide Direction

Today we will further break this idea down....

Forestwide direction
+ Management Areas
+ Special Areas

= Total Plan Direction

(also must follow law
regulations, and policy
not written in the plan)



How do all these pieces fit
together?

What is covered in Forestwide direction?

- ▶ Geological Resources
- ▶ Soils
- ▶ Water
- ▶ Air
- ▶ Climate
- ▶ Aquatic Systems*
- ▶ Streamside Zones*
- ▶ Terrestrial Ecozones*
- ▶ Unique Habitats*
- ▶ Threatened and Endangered Species and Species of Conservation Concern*
- ▶ Vegetation Management*
- ▶ Fire
- ▶ Forest Health and Invasive Species
- ▶ Lands and Special Uses
- ▶ Facilities
- ▶ Transportation and Forest Access
- ▶ Recreation*
- ▶ Scenery
- ▶ Cultural Resources
- ▶ Tribal Resources
- ▶ Minerals and Energy Resources
- ▶ Forest Products (Nontimber)
- ▶ Community Connections
- ▶ Conservation Education

*Sections marked by * include direction for wildlife*

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- ▶ **Aquatic Systems***
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- ▶ **Terrestrial Ecozones***
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*Sections marked by * include direction for wildlife*



Where's Wildlife?

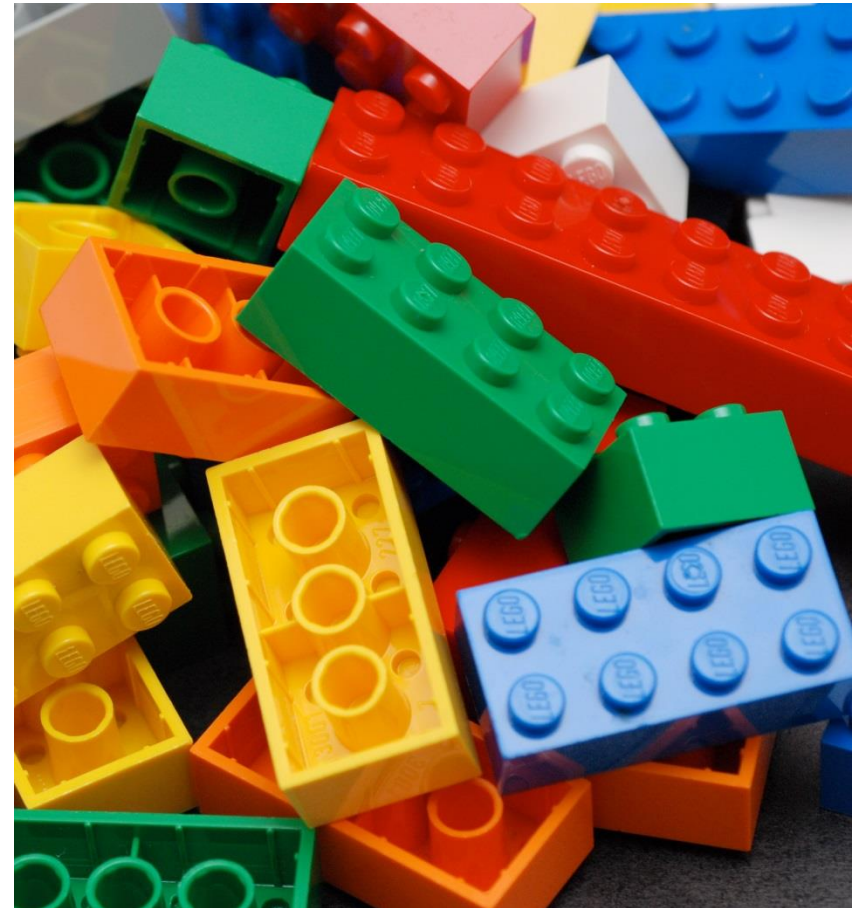
- ▶ It's not missing!!!
- ▶ Not a standalone section
- ▶ Built into the systems components
 - ▶ Terrestrial Ecozones
 - ▶ Vegetation Management
 - ▶ Riparian/Streamside Forests
 - ▶ Unique Habitats and Communities
 - ▶ Federally-listed Species (proposed, endangered, and threatened) and Species of Conservation Concern
 - ▶ Recreation

Open to considering: Are there other/better ways to organize wildlife habitat plan components for consistency and easier reference?



Reminder about plan components

- ▶ **Desired Conditions**
- ▶ **Standards**
- ▶ **Guidelines**
- ▶ **Management Approaches**





Show me a map

Think like an urban planner



City Wide

Same requirements in every part of the city:

- Electricity
- Sewage
- Trash services
- Roadway signage

Compare to forestwide direction:

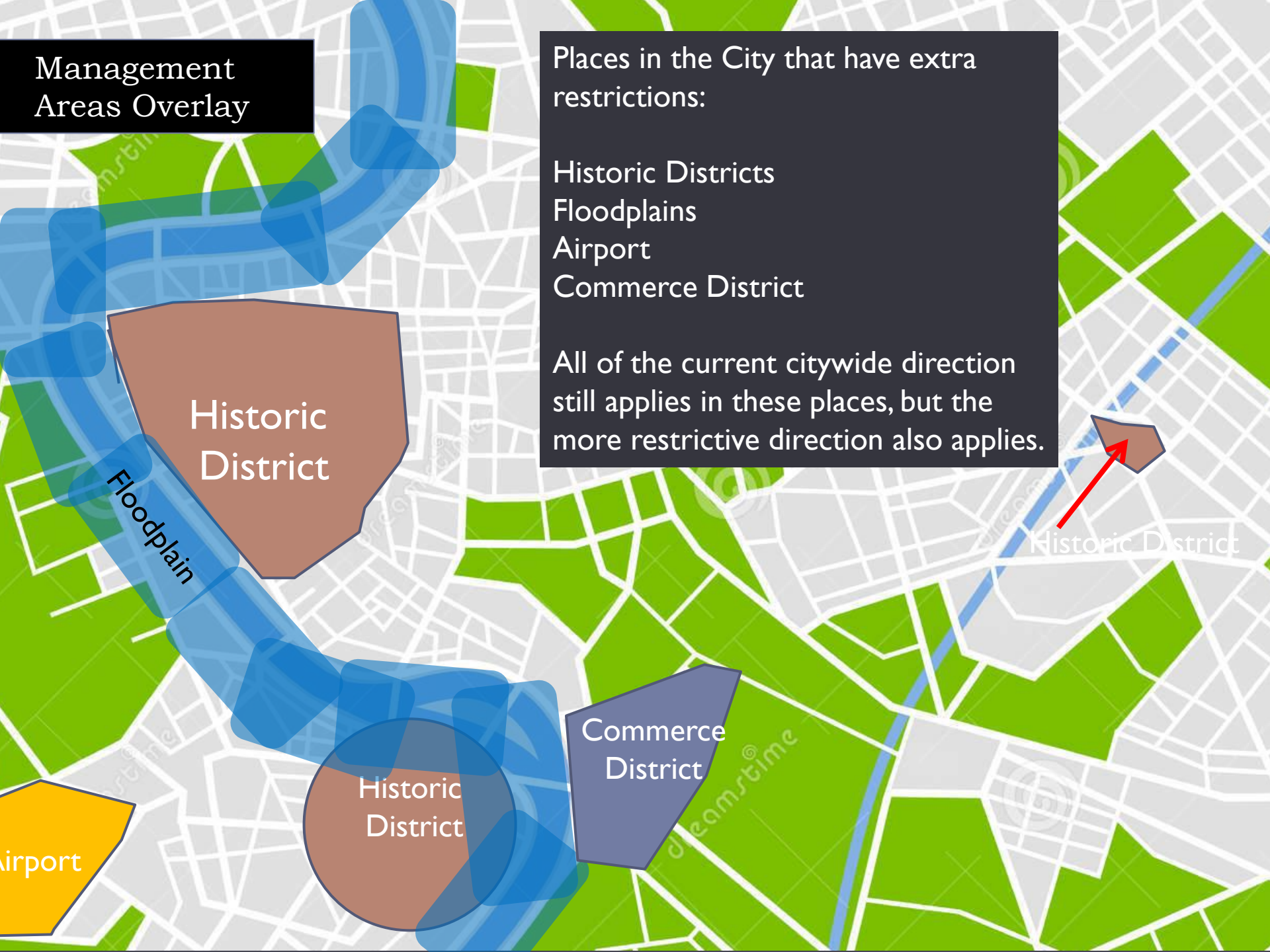
- Species
- Vegetation
- Air quality

Management Areas Overlay

Places in the City that have extra restrictions:

- Historic Districts
- Floodplains
- Airport
- Commerce District

All of the current citywide direction still applies in these places, but the more restrictive direction also applies.



Historic District

Floodplain

airport

Historic District

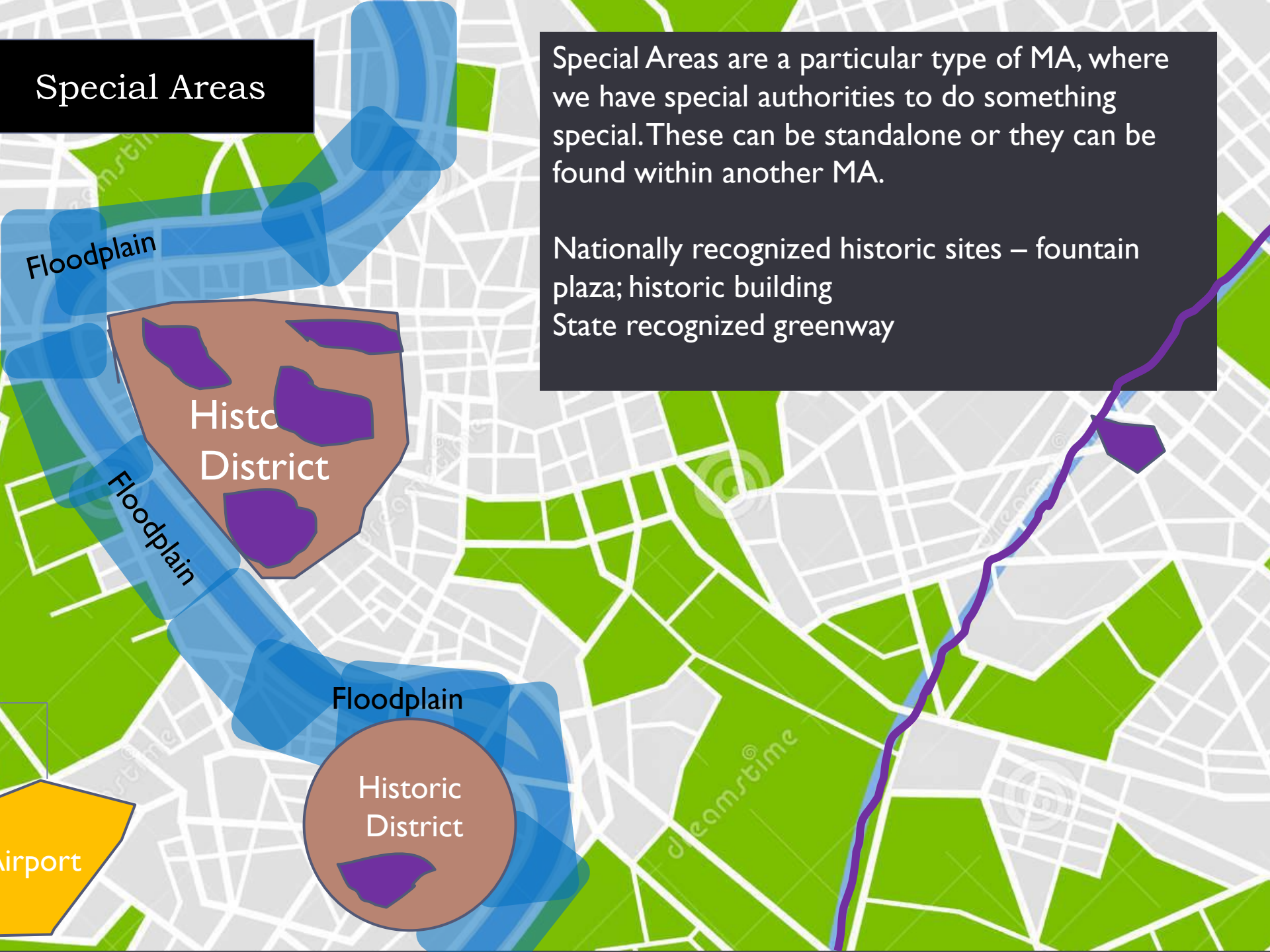
Commerce District

Historic District

Special Areas

Special Areas are a particular type of MA, where we have special authorities to do something special. These can be standalone or they can be found within another MA.

Nationally recognized historic sites – fountain plaza; historic building
State recognized greenway



Floodplain

Historic District

Floodplain

Floodplain

Historic District

Airport

Where plan components apply - example

Where you apply a plan component is important for its meaning.

- ▶ **Forestwide** everywhere a certain resource appears?
Everywhere across the whole forest.
- ▶ In a **management area**?
Everywhere within the Management Area 2 on the Forest.
- ▶ In a **special area**?
Everywhere within the Cradle of Forestry Historic Site.



Where do ecozones fit in?

Where do ecozones fit in?

- ▶ Ecozones are discrete units of land that can support a specific plant community or plant community group based under historical disturbance regimes.
- ▶ Ecozones (acidic cove forest, hardwood forest, etc) are found in each part of the forest
- ▶ They have specific management direction that will apply when you are within that type **forestwide**, independent whether you are the eastern part of the forest or the western
- ▶ In this sense, they are parallel to residential, commercial or industrial zones that occur citywide

Ecozones = forestwide direction

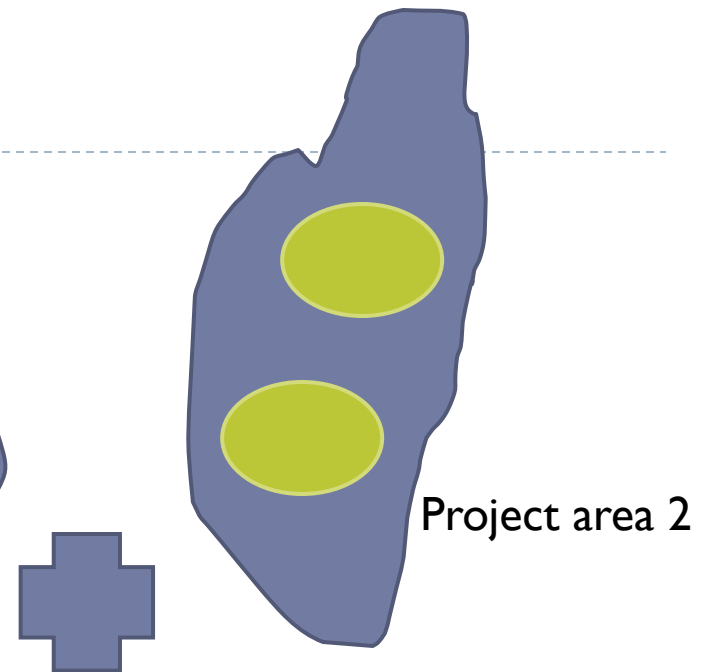
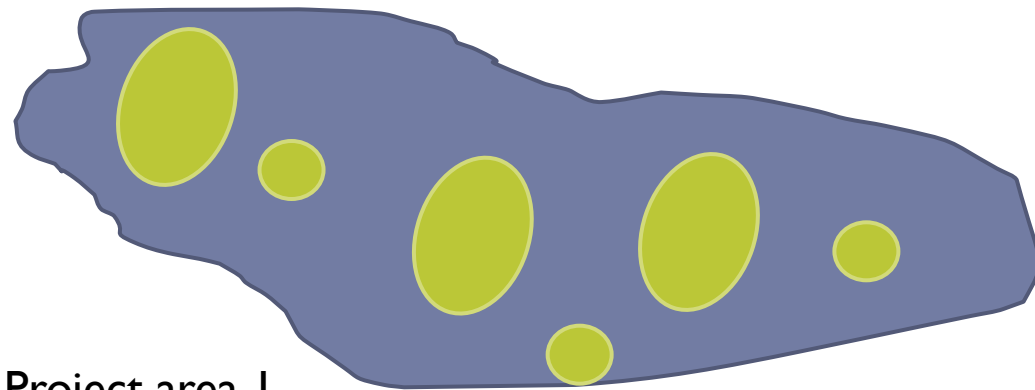


At what scale do ecozones apply?

- ▶ Ecozones DCs describe what we are seeking for the collective ecosystem to be across the whole Forest;
- ▶ Individual projects move the system toward DCs, but each project will not represent the whole diversity of the forestwide DCs – they couldn't
 - ▶ Just like the recreation DCs describe both developed and dispersed conditions and we don't expect all of that in one place
 - ▶ A ecological project will be within the range of DCs described, but it will not be the complete range of diversity
 - ▶ Some places there will be more young and open; other places will be older and more closed canopy; the DC describes the conditions being sought across the complete forest



Forestwide direction



Forestwide direction describes the desired conditions we want the complete collection of activities to be heading toward.

Each project must be moving toward the DCs, but doesn't need to have the full range of conditions in every place.



How is the N P DRAFT Ecozones section organized?

- ▶ **All terrestrial ecozones**

- ▶ (Plan direction that is the same for all zones goes here)

- ▶ Then separate direction for each ecozone

- ▶ Floodplain forest

- ▶ Rich Cove Forest

- ▶ Acidic Cove Forest

- ▶ Northern Hardwood Forest

- ▶ Spruce-Fire Forest

- ▶ High elevation Red Oak

- ▶ Mesic Oak

- ▶ Dry-mesic oak

- ▶ Dry oak

- ▶ Pine-oak

- ▶ Shortleaf pine



We're not the only ones thinking this way

Spruce Forests

DC ESD-05: Regenerating forests (0-35 years old) comprise less than 18% of system acreage and is generally in small canopy gaps. Mature forests (66 years old or older) comprise approximately 57% of system acreage. Fire is rare in this system and the canopy is predominantly closed.

Desired Structural Conditions for Spruce Forests

Structure	Early	Mid-Successional Closed Canopy	Mid-Successional Open Canopy	Late Successional Closed Canopy
% of ecological system	18	14	11	57
Age	0-35	36-65	36-65	66+

Northern Hardwood Forests

DC ESD-06: Regenerating forests occupy around 10% of the area. Late successional forests make up around 72% of the area. Since these sites are predominantly at high elevation and are mesic, fire is not a major disturbance mechanism. Weather events such as high wind, ice, heavy wet snow, and the combinations of these account for most disturbances where open canopies exist in about 10% of the area.

Desired structural conditions are patterned after the Southern Appalachian Northern Hardwood Forest System since it has a greater emphasis on closed canopy conditions which are more like the situation on the GWNF.

Desired Structural Conditions for Northern Hardwood Forests

Structure	Early	Mid-Successional Closed Canopy	Late Successional Open Canopy	Late Successional Closed Canopy
% of ecological system	10	18	10	62
Age	0-20	21-74	75+	75+

- George Washington NF Plan (2014) describes DCs for each for 9 different ecological systems

We're not the only ones thinking this way

► Kaibab, Prescott, and Apache-Sitgreaves NFs in Arizona

Background for PNVTs

Ten PNVTs have been identified for the Prescott NF landscape. The PNVTs found on the Prescott NF are responsive not only to natural and human disturbances but also to the local abiotic features of the landscape (e.g., topography, aspect, slope, soil texture, water infiltration rates).

Initial identification and classification of PNVTs resulted in 13 categories as reported in the "Prescott National Forest Ecological Sustainability Report" (Forest Service, 2009c). Additional data gathering and assessment since 2009 resulted in a refinement of the PNVT classification for the Prescott NF. Based on updated mid-scale vegetation inventory, field visits, data review, and biophysical model fitting, the number of PNVTs identified on the Prescott NF was adjusted from 13 to 10. Table 2 lists these 10 PNVTs and their proportional area. Map 1 in appendix A displays the PNVTs for the Prescott NF.

Table 2. Potential natural vegetation types (PNVTs) of the Prescott NF

PNVT Name	Acres	Percent
Semi-Desert Grassland	125,712	10
Great Basin Grassland	38,389	3
Juniper Grassland	137,274	11
Piñon-Juniper Evergreen Shrub	463,296	37
Interior Chaparral	315,445	25
Ponderosa Pine-Evergreen Oak	63,539	5
Ponderosa Pine-Gambel Oak	49,052	4
Piñon-Juniper Woodland	36,263	3
Desert Communities	5,919	< 1
Riparian Gallery Forest	12,439	1

Mid-scale (100 to 1,000 acres) Desired Conditions for Mesic Mixed Conifer/Spruce-fir

- The size and number of groups and patches vary depending on disturbance, elevation, soil type, aspect, and site productivity. Patch sizes vary, but are frequently hundreds of acres; groups and patches of tens of acres or less are relatively common.
- Forest conditions in some areas contain higher basal area than the general Forest; examples include goshawk post-family fledgling areas, Mexican spotted owl nesting and roosting habitat, and north-facing slopes.
- A mosaic of primarily even-aged groups and patches, which vary in size, species composition, and age is present. Aspen is occasionally present in large patches.
- Density ranges from 20 to 250 square feet of basal area per acre, depending upon disturbance and seral stages of groups and patches.
- The number of snags and downed logs (greater than 12 inches diameter at mid-point, over 8 feet long) and coarse woody debris (greater than 3 inches diameter) vary by seral stage. Snags 18 inches or greater d.b.h. typically range from one to five snags per acre, with the lower range associated with early seral stages and the upper range associated with late seral stages.
- Coarse woody debris, including downed logs, vary by seral stage, with averages ranging from 5 to 20 tons per acre for early seral stages; 20 to 40 tons per acre for mid-seral stages; and 35 tons per acre or greater for late seral stages.
- During moister conditions, fires exhibit smoldering low-intensity surface behavior with single tree and isolated group torching. Under drier conditions, fires exhibit passive to five crown fire behavior with conifer tree mortality up to 100 percent across mid-scale (100 to 1,000 acres). High-severity fires generally do not result in areas of mortality exceeding 1,000 acres. Other smaller disturbances occur more frequently.
- s, forb, and shrub-dominated openings created by disturbance may make up 10 to 100 percent of the mid-scale area, depending on the disturbance type. These openings provide for future regeneration.
- d other disturbances maintain overall desired tree density, structure, species composition, presence of coarse woody debris, and nutrient cycling.
- nity is mixed or high, with a fire return interval of 35 to over 200 years (Fire III, IV, and V).



Questions?

Nantahala and Pisgah Plan Revision Team
February 2016