Chapter 9

Visual Management Techniques

This is the third chapter in this section. The previous two chapters present concepts and principles used to design visual space. The direct application of many of these principles is the subject of this chapter. This chapter presents two of these techniques. The first is the overlay system used to help preserve the scenic viewshed of the Antietam National Battlefield. The second example is the Visual Management System developed by the Forest Service. It demonstrates that visual management can be managed as any of the resources. It lays to rest the notion that "scenic beauty" or the visual landscape can be assessed and managed to achieve management goals.

Overlay Districts

An overlay district is a zoning approach used in addition to the normal zoning. It is a zoning plus approach. In historic preservation, it can be used in addition to traditional of easements and outright purchase to protect the historical integrity of the viewshed. The approach offers some management advantages and compromises in park management. The benefits of this approach are illustrated in the differences in managing the viewsheds of the Gettysburg and Antietam National Battlefields.

<b>*Background* – The area surrounding Antietam National Battlefield is rural farmland. It resisted development or it began to experience development long after development occurred at Gettysburg. The more popular Gettysburg National Battlefield received considerable development surrounding the park disrupting the viewshed (figure 9.1 and figure 9.2). If nothing was done to protect the viewshed of Antietam, it was likely that over time a same fate would befall to it as Gettysburg. Anticipating development and intrusion to the viewshed, efforts were taken by the State of Maryland to protect Antietam's viewshed.

Figure 9.1 – Gettysburg viewshed Culp Hill Tower – Caption: Providing a contrast with Antietam is a view of Gettysburg from the observation tower on Culp's Hill. A hospital and numerous modern buildings are visible in the viewshed. Gettysburg, Pennsylvania – Source: Author [file:\fig0901-Gettysburg010.JPG]

Figure 9.2 – Gettysburg viewshed – Caption: In-holdings are often troublesome. In summer, the foliage on the trees will most likely hide the building next to the road from view of auto tour road in the park. Near Culp's Hill, Gettysburg, Pennsylvania – Source: Author [file:\fig0902-Gettysburg017.JPG]

Enlarging the national battlefield was not a viable alternative. In the eastern portion of the United States, many of the parks were carved out of private land holdings. Although parks may stimulate tourism, the parks do not pay property taxes which are the primary source of revenue for local municipalities including schools. The larger the park the less revenue. Since many of the parks were cared out of private lands, there is often a reluctance by the local population to protect the park's viewshed by expanding the boundaries of the national park.

The Antietam Battlefield overlay system became the primary solution (DeHart and Frobuck, 1993). It is a zoning plus approach that protected the integrity of the viewshed while minimizing the impacts to the local community. It was a compromise between the protecting the viewshed and protecting the economy of the local community. Also, it is an example of interagency cooperation to protect the viewshed. The overlay system is one of several land management approachs that are available to planners (figure 9.3). Also, many of the approaches listed in figure 9.3 can be used in conjunction with each other.

Figure 9.4 – View from Visitor's Center – Caption: One of the many views of Antietam battlefield from the NPS visitor center observatory. The auto tour road is visible in the foreground. The Red Hill area is visible in the middle ground on the right of the photo and Gaithland and Greenbrier State Parks are located on the mountain ridges in the distant background. – Source: Author [file:\fig0904-Antietam[1].JPG]

Figure 9.3 – Open Space Techniques – Caption: A summary table of different approaches to manage open space resources. – Source: Grant DeHart [file:\fig0903-hdt-land_mgmt_approaches.pdf]

<b>*Conceptual Approach* – The overlay district seeks to protect the scenic integrity of the viewshed while minimizing the impact to the local community. The *viewshed* is defined as everything in the surrounding landscape that can be seen from within the park and more specifically from the auto road. The viewshed can be prioritized in terms of which items in the viewshed are more sensitivity and need additional protection. For example, scenes visible from the visitor's center are important to protect because of their high visitor use (figure 9.4). Scenes viewed from the roads used in the battlefield tour are important to protect also. Lying outside the National Battlefield, the protection of the middle ground in the Red Hill area was identified as an important area of the viewshed needing protection that was visible from the automobile tour road (figure 9.5). The scenes in the viewshed visible from less traveled areas receive lower priority.
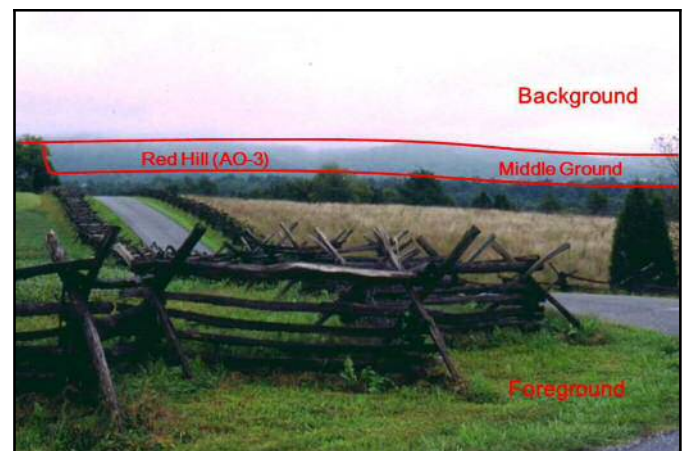

Figure 9.5 – Red Hill Area of Antietam– Caption: The Red Hill Area lies outside of boundaries of the Antietam National Battlefield. Readily visible from the auto tour road, it is in need of protection to protect the viewshed. – Source: Author [file:\fig0905-Antietam[4].JPG]

Strength and Weaknesses of Different Open Space Techniques

Comprehensive Planning:

Strengths:
1. Broad coverage
2. Proactive to the future
3. Legally okay
4. inexpensive

Weaknesses:
1. it is changeable
2. tends to be too general

Agriculture Zoning (e.g. 25-50 acres)

Strengths:
1. Prevents development
2. Low assessments
3. Limits development
4. Inexpensive

Weaknesses:
1. Not a comprehensive solution
2. Temporarily changeable
3. Politically enforceable

TDR (Transferable Development Rights):

Strengths:
1. Provides money to developer (apparent)
2. Voluntary
3. Permanent
4. Politically feasible
5. Trading "windfalls" for potential development

Weaknesses:
1. Complex and hard to implement
2. Opportunity to develop at receiving end

Fee Purchase:

Strengths:
1. Complete Control
2. It is "up front"
3. Provides Public Access
4. Durable, Permanent, etc.
5. You can target vulnerable properties
6. Provides natural resource protection

Weaknesses:
1. It is expensive
2. It reduces development
3. You must manage and operate the land
4. Removes or reduces property taxes in the community
5. Not Comprehensive

Easement Gifts:

Strengths:
1. Tax free
2. Land specific
3. Voluntary
4. Permanent
5. No money up front
6. "Warm and fuzzy feeling"

Weaknesses:
1. Not equitable since it favors the wealthy
2. Complicated and not intuitive

Cluster Development:

Strengths:
1. Concentrates Development
2. Reduces Development Costs
3. Contains Population
4. Preserves Open Space
5. Private Open Space Management
6. Inexpensive
7. Reduces Utility Costs
8. *Note: should be used with easements and/or covenants to restrict future development and urban sprawl.*

Weaknesses:
1. Loss of or less privacy
2. Generally, considered less desirable by public
3. Concentrates Traffic
4. It is another form of urban sprawl
5. It can create more urban sprawl (Note: see Item #8 above)

Property Tax Relief:

Strengths:
1. Saves taxes for farmers (i.e. taxes at current use; not at highest value use)
2. Slows farm conversions

Weaknesses:
1. Provides short term protection
2. There are no restrictions on the property
3. Rewards speculation of farm property
4. Loss of tax revenues
5. No BMP (Best Management Practice)

Overlay Zones (Historical Overlays):

Strengths:
1. Creates unique character
2. It is versatile and flexible (i.e. tailor to needs)

Weaknesses:
1. Only limited to appearance

Performance Ordinance:
(e.g. forest, wetlands, steep slope, water/sewage restrictions)

Strengths:
1. Limits Development
2. Increases Quality of Life
3. Multiple Challenges: where one thing is used to do another purpose (i.e. hidden agenda)

Weaknesses:
1. Loopholes in Standards
2. Viewed as Unfair
3. Hidden Agenda - where one thing is used to do another purpose
4. Viewed as a Taking
5. Cumulative Impact

Factors to Consider:
1. **Enforceable** – Is the approach legally enforceable?
2. **Scope** - Is it too broad or site specific?
3. **Durability** - How long will is it in effect?
4. **Permanence** - Is it temporary or ephemeral (zoning) or permanent (fee purchase)?
5. **Cost Effectiveness** – Is the measure cost efficient?
6. **Political Feasibility** – Is the approach politically feasible?

Source: Grant Dehart, Department of Natural Resources, Maryland.

Conceptually, the *overlay district* is a zoning approach used in addition to traditional zoning. It is zoning plus approach. It is used in conjunction with other approaches. Its basic approach is delineated below.

> The purpose of the Antietam Overlay District is to provide mechanisms for the protection of significant historic structures and land areas by requiring development and land subdivision to occur in a manner that
>
> 1) preserves the existing quality of the viewshed of the Antietam battlefield and ...
>
> 2) ensures that development of certain lanes adjacent to the major roads which provide public access to the Antietam battlefield is compatible with the agricultural and historic character of the area. The "AO" (Antietam Overlay) District is an overlay zone meant to enhance, not substitute for the existing underlying zoning designation which regulates land use. (Viewshed and Approach Protection, 1999)

<b>*Planning Process* – Development of an overlay district follows the usual planning process. First, it identifies those areas in the viewshed in need of protection. These may be areas seen from the visitor center or auto tour road. Or they maybe areas that are easily visible from access roads to the national park. Both the views in figure 9.4 and figure 9.5 are areas in need of protection visible from the visitor center and auto tour road.

Next, the planning process prioritizes these areas in terms of their vulnerability. Last, a protection strategy is developed using the limited resources available (DeHart, G., 1993). Figure 9.6 presents a map of those areas currently under some form of protection, those areas in the process of being protected, and those in need of future protection.

Those areas identified in figure 9.6 as being protected utilize several of the traditional protection methods (see figure 9.3). These include the outright purchase and purchase of easements. Although *outright purchase* is a possible approach, this approach is normally not used for properties lying outside the park since the objective is protect the viewshed without expanding the park. There are numerous variations to this approach. The purchase can be done on an installment basis. There is the *right-of-first refusal, followed by fee simple purchase*. This is where if the owner decides to sell the park has right of first refusal. An option to purchase upon death of the owner with right of first refusal. In the *purchased and leased back* approach, the government buys the
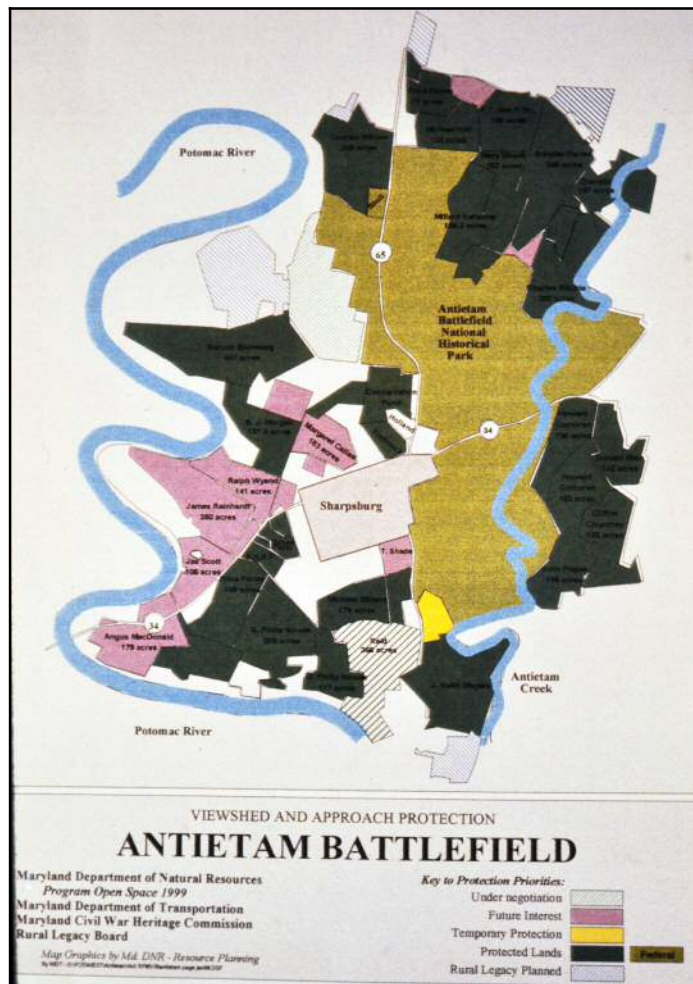

Figure 9.6 – Map-Antietam Overlay District – Caption: In addition to normal zoning, the overlay district is an additional zoning system designed to protect the viewshed. Source: Maryland DNR [file:\fig0905-ANB overlay district map002.jpg]

land and then leases it back to the seller. This enables the original owner to receive payment up-front or to receive installment payments.

A scenic or conservation easement could be purchased. The focus is on the purchase of one or more property rights. A *easement* is the purchase of a partial property right. The property right may include developmental rights where the property will remain as a farm or it could include the colors that buildings are painted. Advantages of purchasing scenic easements are that they are less expensive than outright purchase, people are compensating for the "taking" or loss, and it facilitates better community relations. The main disadvantage of scenic easements is that they can be difficult to manage. A variation of this approach is the *purchase of reserved interest deed of easement.* This is the converse of a scenic or conservation easement were all rights are purchase except those specifically reserved to the landowner.

In addition, the park can take steps itself to effectively mange the viewshed (figure 9.7). Whether by design, by accident, by natural succession, or in an effort to conform with the historical Matthew Brady photo (figure 9.8), the line of trees behind the Dunkard Church in figure can effective create a visual barrier. In this case, the trees block out the middle and background views except for the sky.

Figure 9.7 – Dunkard Church today – Caption: The trees effectively create a visual barrier that limit the viewer's vision to the foreground. Source: author [file:\fig0907-Antietam[2].jpg]

Figure 9.8 – Civil War Dunkard Church – Caption: Compare the Matthew Brady Civil War picture of the Dunkard Church with the present day version. – Source: Matthew Brady [file:\fig0908-Antietam[3].jpg]

A quick examination of the map in figure 9.5 reveals that Antietam Battlefield National Park effectively increased its boundaries without actually increasing its physical boundaries. Federal and state agencies cooperated in this venture. The use of overlay districts helped to maintain the viewshed integrity of Antietam battlefield. In addition, it didn't destroy the local tax base by taking additional lands off of the tax roles. It was a win, win, win situation for the national park, the State of Maryland, and the local community.

Conceptually, most people will note the carryover of techniques covered in other chapters. Students will note the similarity with the ROS approach (see chapter xxx). The ROS determines the visual sensitivity of the resource on factors including the distance for the objects (foreground, middle ground, and background). Also, the visual management concepts discussed in the chapter regarding the organization of space relate to these concepts.
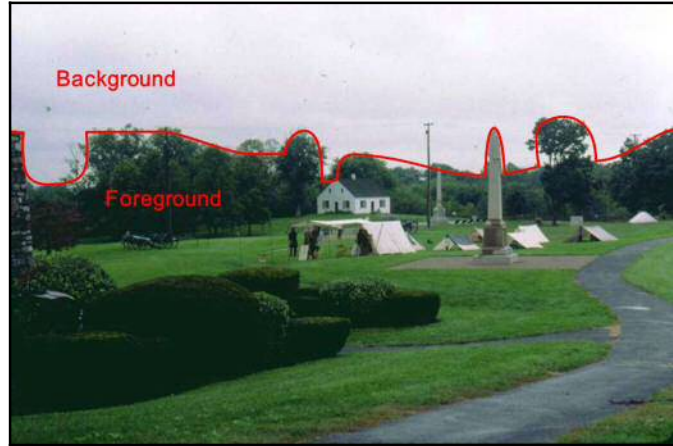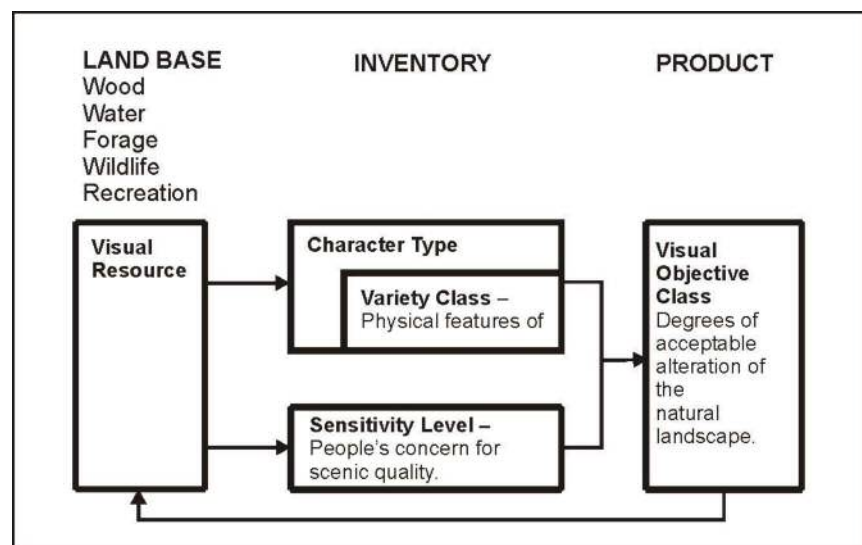
Visual Management System (VMS)

The basic purpose of the VMS system is to determine those areas of the resource under a multiple use concept that have the maximum visual impacts and to manage them to minimize the negative visual impacts. Conversely, the system determines those areas that are most tolerant to visual impacts and allows more potentially conflicting use of those areas. An example of the former would be timber located next to a popular backcountry trail. From a recreation user's perspective, this area would be less tolerant to timbering and would most likely be preserved. An example of the later is an area of timber located a half mile from the same trail or is located outside of the visual zone of the trail. From a visual management perspective, harvesting this timber would have less visual impact to recreational users.

This section presents an abbreviated version of the Visual Management System (VMS) used by the Forest Service. It uses Bacon's (1979) article of the VMS which is an abbreviated version of the VMS as the basic framework of the following discussion. The full explanation of the system is available online and those interested in a fuller explanation of the system should review the full manual. Again, the purpose here is to present a basic methodology regarding how the scenic amenities can be managed for multiple uses.

The objective of Chapter 1 of the VMS is to provide a system which:

1. Establishes criteria for identification and classification of scenic quality....
2. Establishes quality objectives alteration of the visual resource.
3. Provides all disciplines involved in land management the freedom to explore viable alternatives in order to attain the appropriate visual quality objectives.
4. Inputs the visual resource into the established as well as the proposed land use and multiple use methods of planning and operation.
5. Recognizes the great variation in visual strength of the various types of natural landscapes and their inherent capabilities to accept alteration.

The main components of the Visual Management System are diagramed schematically in figure 9.9. There are three main phases including *land base, inventory*, and *product*. Working backwards, the *product* is to determine the Visual Object Class or the degree of acceptable alteration to the natural visual landscape. The degree to which the landscape can be altered or modified is based on the *inventory* of visually related factors and the *land based* uses of the resource. These are the *character type, variety class* and *sensitivity level*. These factors will be discussed in the following sections. Both the inventory and product phases are based on the *land based* uses of the resource, the first level in the model.

Visual Resource Management. (From U.S. Forest Service 1974. "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, p. 9.)

Figure 9.9 – VMS Model – [file:\fig0909-USFS-VSM.jpg]

Along with other acts, the Forest Service is managed under the Multiple Use and Sustain Yield (MUSY) Act of 1960. Essentially, the MUSY Act codified through an act of Congress the management philosophy that dated back to Gifford Pinchot (Steen, 1977). Pinchot studied forestry in Europe and brought to this country the concept of harvesting timber much as a farmer plants corn. In contrast to the corn farmer, the harvest cycle for timber can be several decades. With the passage of the MUSY Act, in theory or at least in statute, *outdoor recreation, range, timber, water*, and *wildlife and fish* were given equal use consideration. In the model, these five land base uses are listed as having impacts on the visual resource.

These five uses can be competing with each other and they can potentially conflict or impact each other. The impact includes visual impacts. There are other management objectives that may require trade-offs. The system needs to account for all these factors, any of which can mitigate the visual landscape. In this respect, the visual management system can be used to minimize the visual impacts.

Character Type – Character type consists of an overall *character type*. Character type refers to the physiographic factors of the general area. For example, in the Pacific Northwest there are 16 major visual character types identified (figure 9.10). In some cases the character type may be too broad in its diversity and may need to be subdivided into *character subtypes* (not shown).

> **Figure 9.10 – Character Type** – Caption: The 16 major character types for the Pacific Northwest. – Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, p.9. [file:\fig0910-CharacterType.jpg]

In terms of the VMS model and the inventory process, the importance of character type is that it creates the frame for the *variety class*. In terms of the model, this explains why the variety class is nested inside of the character type.

Variety Class – The variety class classifies the natural landscape into three broad based categories. These three classes of scenic quality are:

> Class A – Distinctive
> Class B – Common
> Class C – Minimal

The classification is based on landform, rock form, vegetation, lake features, and stream features. Figure 9.11 provides a table used to categorize the resource into one of the three classifications. Based on this analysis, an overlay map is formulated depicting the landscape in terms of these variety classes (figure 9.12).

> **Figure 9.11 – Determining Variety** – Caption: Variety Classes. – Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, p.14. [file:\fig0910-VarietyClassDetermine.pdf]

Important Terms

To effectively use the Visual Management System one must have a working knowledge of the following terms:

Character Type and Subtype
Characteristic Landscape
Distance Zones
Dominance Elements
Management Activities
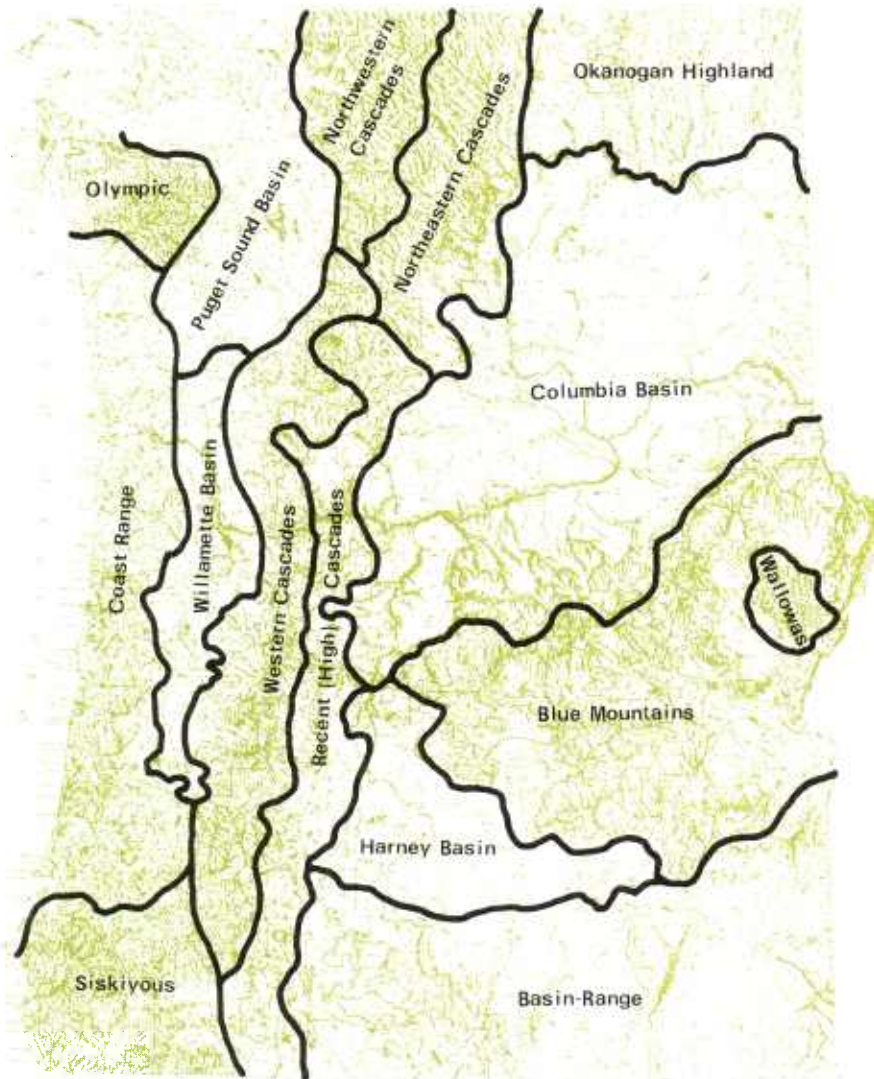
Visual Character Types of the Pacific Northwest

Character Type

An area of land that has common distinguishing visual characteristics of landform, rock formations, water forms, and vegetative patterns is called a character type. Its establishment is based on physiographic sections as defined by Nevin M. Fenneman.[3]

This map indicates the 16 major visual character types of the Pacific Northwest.

Character types are used as a frame of reference to classify physical features of a given area as to their degree of scenic quality. (See section on Variety Class).

[3]Fenneman, Nevin M. 1931 Physiography of the Western United States. New York and London: McGraw-Hill Book Company

Variety Class Matrix			
	CLASS A **Distinctive**	CLASS B **Common**	CLASS C **Minimal**
Landform	Over 60 percent slopes which are dissected, uneven, sharp exposed ridges or large dominant features.	30-60 percent slopes which are moderately dissected or rolling.	0-30 percent slopes which have little variety. No dissection and no dominant features.
Rock Form	Features stand out on landform. Unusual or outstanding avalanche chutes, talus slopes, outcrops, etc., in size shape and location.	Features obvious but do not stand out. Common but not outstanding avalanche chutes, talus slopes, boulders and rock outcrops.	Small to nonexistent features. No avalanche chute, talus slopes, boulders and rock outcops.
Vegetation	High degree of patterns in vegetation. Large old-growth timber. Unusual or outstanding diversity in plant species.	Continuous vegetative cover with interspersed patterns. Mature but not outstanding old growth. Common diversity in plant species.	Continuous vegetative cover with little or no pattern. No understory, overstory or ground cover.
Water Forms, Lakes	50 acres or larger. Those smaller than 50 acres with one or more of the following: (1) Unusual or outstanding shoreline configuration. (2) reflects major features, (3) islands, (4) Class A shoreline vegetation or rock forms.	5 to 50 acres. Some shoreline irregularity. Minor reflections only. Class B shoreline vegetation.	Less than 5 acres. No irregularities or reflections.
Water Forms, Streams	Drainage with numerous or unusual changing flow characteristics, falls, rapids, pools and meanders or large volume.	Drainage, with common meandering and flow characteristics.	Intermittent streams or small perennial streams with little or fluctuation in flow of falls, rapids, or meandering.
Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, p. 13.			

<b>*Sensitivity Levels* – Sensitivity is a measure of people's concern for the scenic quality. The process considers several different factors to determine sensitivity. The process reviews all the travel routes within the resource and determines the percent of users who would have concern for the scenic quality of the area. Then for all the travel routes it determines the visual impact based on viewing distances. The analysis builds upon the concept of visual zones and scenic corridors. It is assumed that all land will be seen from somewhere within the forest including aircraft travel and will therefore have some sensitivity level. Even so, some level of sensitivity can be determined for the entire land area. In addition, the manual notes that sensitivity is difficult to quantify and additional research is needed to determine sensitivity levels.
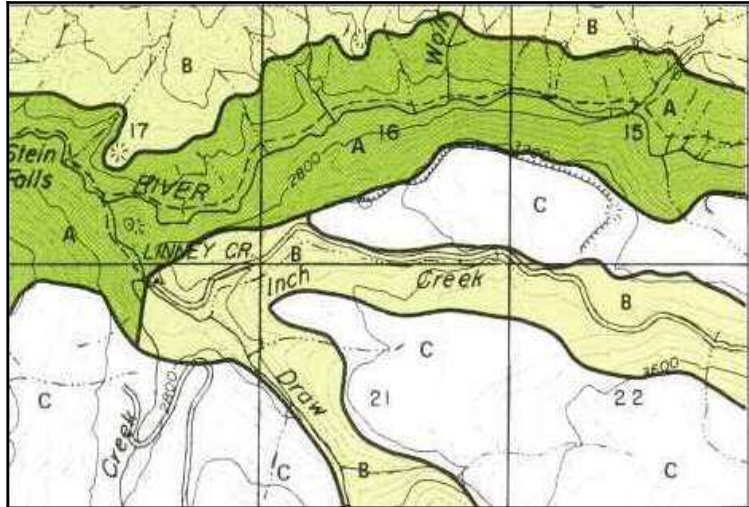

Figure 9.12 – Overlay Map – Variety Classes – Caption: Variety Classes. – Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, p.15. [file:\fig0912-VarietyClassOverlay.pdf]

Three sensitivity levels are employed. These are:

> Level 1 – Highest Sensitivity
> Level 2 – Average Sensitivity
> Level 3 – Lowest Sensitivity

<c>**Sensitivity Level** – The sensitivity level is determined by identifying all the travel routes and the percent of people would have concern for the scenic quality of that area. To a degree the determination of the sensitivity level is based on use with greater use favoring increased sensitivity. For example, on remote trails or in remote campsites it is not unexpected that less than 1/4 of all users would have concern for the scenic quality of these areas. Because there are few visitors, it would be rated as a level 3 or as the lowest sensitivity area. As part of the analysis, travel routes are subdivided into primary and secondary travel routes and each classification is rated in terms of its sensitivity. Based on this overall analysis, an overlay map is created categorizing these three levels of sensitivity.

<c>**Distance Zones** – The distance zones assess the visual impact of the foreground, middle ground, and background for all the travel corridors. The assessment of all the travel corridors incorporates the concepts discussed earlier in this chapter regarding visual zones
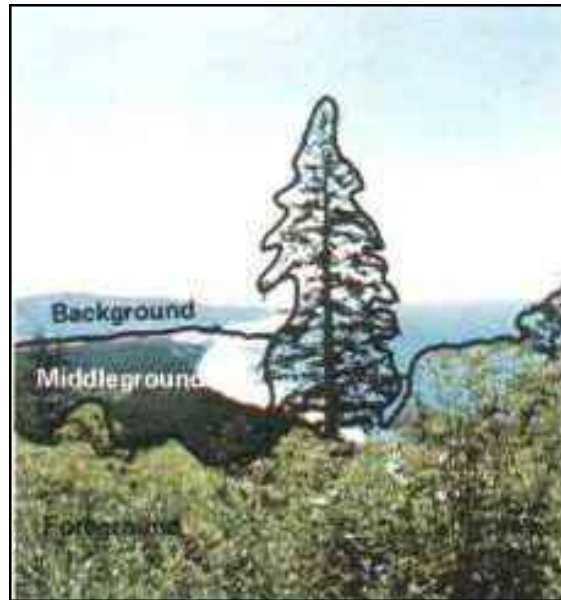

Figure 9.13 – Distance Zones – Caption: Discusses the effect of distance on visual perception. It includes dominance elements such as form, line, texture, and color (see figure 9.55). Also, it incorporates the principles discussed in figure 7.22 and figure 7.23. Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, p.7. [file:\fig0913-DistanceZones.pdf]

and scenic corridors. Also, the effect of distance on visual impact was discussed in chapter 7 and is directly applicable to this discussion (see figure 7.22 and figure 9.13). Complementing this analysis is the influence of the dominance elements depicted in the example in figure 9.14. In the example, form is the strongest and texture is the weakest.

<c>**Most Restrictive Sensitivity Level** – The objective of this process is to determine the most restrictive sensitivity level. This is a concept where the highest level of sensitivity will require the highest level of visual management. The sensitivity levels and distance zone analysis are combined for each travel corridor. When there are overlaps, the most sensitive level is used. This is because in managing for the most sensitivity level all other lesser levels are also addressed. The sensitivity levels and distance zone analyses are mapped on the overlay map in figure. 9.15. The potential categories are listed below. Think of it this way. Level 1 is the most restrictive sensitivity level. If an impact occurs in the foreground or the highest impact area, the most restrictive sensitivity level is fg1 (foreground). Managing for this level will address all lower level sensitivities. If the level 1 doesn't occur in the foreground but does in the middleground, its most restrictive sensitivity level is mg1. The same is true for the background. If there are no level 1 in the background, then most restrictive sensitivity is a level 3 only. Figure 9.14 is an example of the analysis of the visual landscape in terms of its sensitivity.

> fg1 – Foreground Level 1
> mg1 – Middleground Level 1
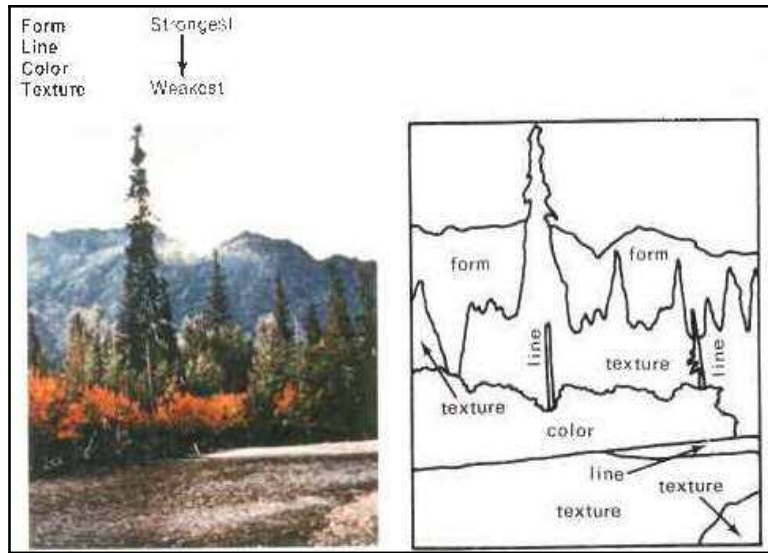> bg1 – Background Level 1
> Level 3 only

Figure 9.14 – Dominance Elements – Caption: In this Pacific Northwest example, the dominance elements are identified. They are the simplist visual recognition parts which make up the characteristic landscape. Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, p.8. [file:\fig0914-DominanceElements.pdf]
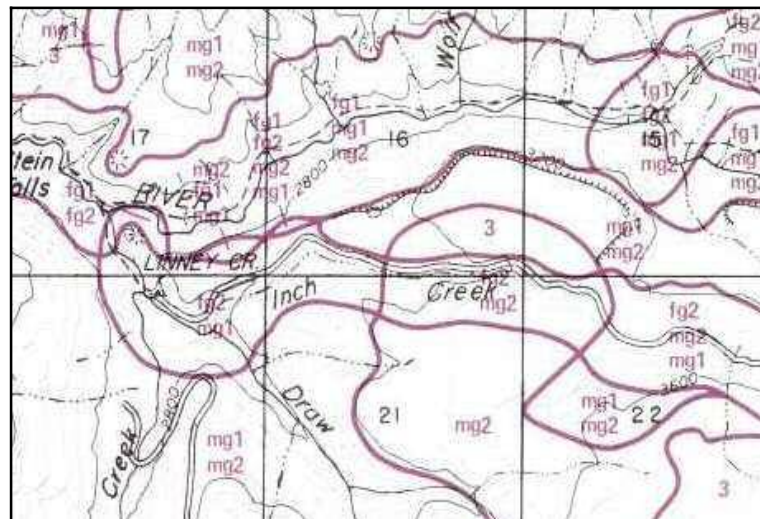

Figure 9.15 – Sensitivity Overlay –Caption: The sensitivity overlay is the most restrictive sensitivity level. In this Pacific Northwest example, the dominance elements are identified. They are the simplest visual recognition parts which make up the characteristic landscape. Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, p.8. [file:\fig0915-SensitivityOverlay.pdf]

<b>**Quality Objectives** – The product phase in the model is to determine the *quality objectives*. Combining the *character type* and *sensitivity level* overlays, the product is five scenic management objectives. Figure 9.16 provides brief descriptions of the objectives. The USFS (1974) manual provides more detailed characteristics and pictorial examples for each objective category. Except for the preservation category, each of the quality objectives denotes a degree of acceptable modification and alteration of the natural landscape.

Figure 9.16 – Quality Objective– Caption: Quality Objectives. Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, pp. 28-42. [file:\fig0916-QualityObjectives.pdf]

Figure 9.16 is a conversion table that mergers the *character type* (figure 9.53) and the *sensitivity overlays* (figure 9.56) to determine the *quality objectives*. The Sensitivity Level is the most restrictive sensitivity level. For example, a *foreground* with *level 1* sensitivity coupled with a *variety class A* land form would intuitively suggest a retention visual management objective.

Figure 9.17 – Conversion Table – Caption: Quality Objectives. Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, pp. 28-42. [file:\fig0917-QualityObjectives.pdf]

Figure 9.18 displays the quality objective map. It contains important information from the overlays used to construct it. It includes the Distance Zone, Sensitivity Level, Variety Class, Quality Objective and Management Goal (optional).

Figure 9.18 – Quality Objective Map – Caption: Quality Objectives Map. Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, pp. 28-42. [file:\fig0918-QualityObjectives.pdf]

Summary

This chapter provides two examples where the principles discussed in the previous chapters on visual management can be directly applied to the management of the visual resource. The first example utilized an overlay system to manage the viewshed surrounding the Antietam National Battlefield. In addition, to the technical aspects of managing the visual viewshed which can extend for miles beyond the park, are the political considerations. The approach offers an approach where the viewshed of the park can be protected without destroying the local economy.

The second example describes the Visual Management System which is a tool used by the Forest Service to systematically assess and mange the visual landscape. In doing so, it utilizes many of the previously discussed principles involving visual management. Using the assessment, it produces a management tool which can be used to manage the visual landscape. Even if the system is not implemented, understanding the principles and relationships behind the system can aid students in the location of park facilities to either minimize their visual impact or maximize their visual benefits.
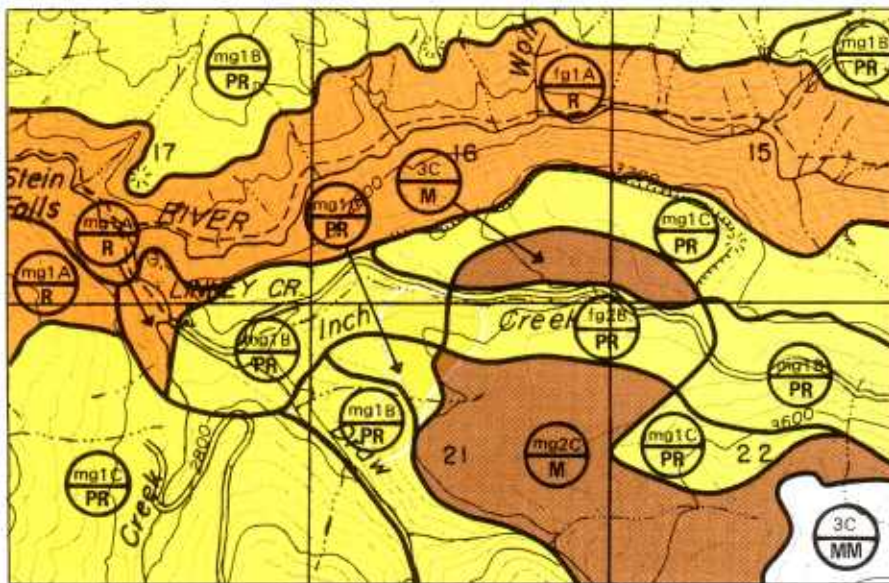
Quality Objectives	
Title/Label	**Description:**
Preservation P	This visual quality objective allows ecological changes only. Management activities, except for very low visual impact recreation facilities are prohibited.
Retention R	This visual quality provides for management activities which are *not visually evident*.
Partial Retention PR	Management activities remain visually subordinate to the characteristic landscape when managed according to the partial retention visual quality objective.
Modification M	Under the modification, visual quality objective management activities may visually dominate the original characteristic landscape. However, activities of vegetative and land form alteration must borrow from naturally established form, line, color, or texture so completely and at such a scale that its visual characteristics are those of natural occurrences within the surrounding area or character type. Additional parts of these activities such as structures, roads, slash, root wads, etc., must remain visually subordinate to the proposed composition.
Maximum MM Modification	Management activities of vegetative and landform alterations may dominate the characteristic landscape. However, when viewed as background, the visual characteristics must be those of natural occurrences within the surrounding area or character type. When viewed as foreground or middle ground, they may not appear to completely borrow from naturally established form, line, color, or texture. Alterations may also be out of scale or contain detail which is incongruent with natural occurrences as seen in foreground or middle ground.
Unacceptable Modification	One or more of these characteristics are indicative of unacceptable modification: • Size of activities is excessive or poorly related to scale of landform and vegetative patterns in characteristic landscape. • Overall extent of management activities is excessive. • Activities or facilities that contrast in form, line, color, or texture are excessive. All dominance elements in the management activity are visually unrelated to those in the characteristic landscape.
Rehabilitation reh	Landscape rehabilitation is a short term management alternative used to restore landscapes containing undesirable visual impacts to a desired visual quality....
Enhancement e	Enhancement is a short-term management alternative that may be achieved through addition, subtraction, or alteration of vegetation, rock, earthforms, or structures, to create additional variety of forms, edges, colors, textures, patterns, or spaces.
Source: USFS (1974). "The Visual Management System." National Forest Landscape Management. Vol II. Washington, D.C.: U.S. Government Printing Office, pp.28-42.	

Conversion Table to Determine Quality Objectives							
		[Most Restricted] Sensitivity Level					
		fg1	mg1	bg1	fg2	mg2	bg2	3
	class A	R	R	R	PR	PR	PR	PR
	class B	R	PR	PR	PR	M	M	M / MM
	class C	PR	PR	M	M	M	MM	MM

		Sensitivity Level						
		fg1	mg1	bg1	fg2	mg2	bg2	3
Variety Class	class A	R	R	R	PR	PR	PR	PR
	class B	R	PR	PR	PR	M	M	M* / MM
	class C	PR	PR	M	M	M	MM	MM

Objective Map

Symbol	Objective	Color Code
R	RETENTION	
PR	PARTIAL RETENTION	
M	MODIFICATION	
MM	MAXIMUM MODIFICATION	

Preservation does not appear on the chart but is indicated by:

| P | PRESERVATION | |

Assign Preservation Objective to all existing and proposed (within 10 years) Special Classified Areas.

2. On the combined overlay indicate the appropriate visual quality objectives. These are determined by comparing, on the chart, the variety class (A, B, or C) with the sensitivity level (fg1, mg2, etc.). By using a split-circle symbol and color codings, an appropriate objective (and the information from which it was determined) can be shown on each area of the map.

*If a 3B area is adjacent to a RETENTION or PARTIAL RETENTION visual quality objective, select the MODIFICATION visual quality objective. If adjacent to MODIFICATION or MAXIMUM MODIFICATION objective areas, select MAXIMUM MODIFICATION.
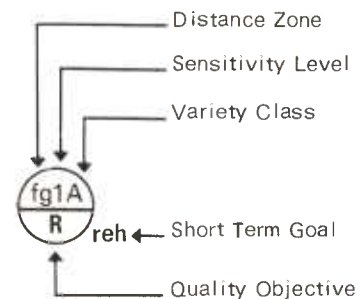
Note those areas in need of either rehabilitation or enhancement by the appropriate symbol beside the quality objective, e for Enhancement and reh for Rehabilitation. Rehabilitation should be noted when management activities in a particular area do not conform to an agreed upon quality objective. Enhancement notation should come from a detailed landscape management plan for a particular area.

The Visual Management System thus produces a map of visual quality objectives. This becomes the means by which National Forest landscape management objectives are recommended for consideration in land use planning if done at the broad scale, and project decision making if done at a more detailed level.

References:

[\FA03 Visual Management.ppt]

[\FA05-Antietam.ppt]

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