Trail Planning??
2003 10:30

TRAIL PLANNING

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MODULE OBJECTIVES

At the end of this module, you will have information to help you plan trails that:

- Meet agency and law requirements
- Anticipate Change
- Meet the expectations of users
- Engender stewardship
- Provide a rich and continuous experience for the user
- Protect resources for the long term long term benefit

WHAT IS TRAIL PLANNING?

Trail Planning is determining how to get from an existing condition…

To a desired condition…

…may be used for either existing trails or planned new trails

IS THERE A REAL NEED AND IF SO WHAT IS IT?

- Providing public access to natural or cultural resources on existing or newly acquired lands
- Linking recreational facilities or features via a trail system (transportation & circulation)
- Linking recreational trails to internal and external trail systems to enhance public access (transportation & circulation)
- Meeting public needs for recreational activities (passive and active recreation)
- Responding to substandard conditions on existing trails

Trail planning can provide for all of these needs and more

Note: Most trails or trail systems are developed without first determining the need

WHAT LEVEL OF TRAIL PLANNING?

WHY DO TRAIL PLANNING

All trails have a social impact

All trails have an environmental impact

Social use and environmental factors affect trails

The challenge is to minimize social and environmental impacts while maximizing the benefits of the trail

TRAILS ARE A HUNDRED YEAR OR MORE INVESTMENT!

Because of this, we need to :

- Provide resource protection
- Enhance aesthetics
- Ensure high quality visitor experiences
- Promote user cooperation
- Conform with existing laws and regulations
- Be a good neighbor with adjacent land owners
- Reduce long term trail maintenance and rehab costs
- Manage for sustainability

POTENTIAL BENEFITS OF TRAIL PLANNING

- Conserve/protect the natural environment including fish and wildlife
- Provide access to remote areas and sites
- Provide opportunity for healthy physical activity for all ages
- Potentially increase land values
- Provide linkages to other trail systems
- Provide high quality user experiences
- Minimize future maintenance
- Preserve the investment

TRAILS FOR THE PEOPLE

- Instilling a sense of ownership and responsibility with the public for stewardship of trails is a key ingredient
- Planning involves lots of people
- Planning involves collaboration

STEPS IN PROJECT PLANNING

- Depending on the scope of your project, planning can take up to five years or more
- For simple trail planning projects, three years is more common and should be considered the minimum for most projects

Trail Planning Process

Identify Change Needed for Consideration

Existing Condition
Desired Condition

Establish Goals and Objectives

Define Project Scope

Data Gathering and Analysis

Management Direction
Assemble Social and Resource Data
Determine What Trail Design is Needed

Trail Planning

Develop Proposals/Alternatives to Change Existing Condition

Environmental Analyses and Decision Making

Do Site Specific Environmental Analyses and Select Preferred Alt.

Implement , Rehab and Monitor

Funding, Construction, Maintenance, Partners, Rehab needs & Monitoring

YEAR ONE – THOROUGH ANALYSIS OF THE AREA

Obtain Management Information From:

- Laws, Management Strategies, Guidance
- Management plans, general plans, activity plans, travel management plans, transportation plans, master plans, recreation area management plans
- Inventory of existing facilities
- Trail Management Objective (TMO) – Develop draft TMOs if not developed by this time
- Project plans, design guidelines, trail standards
- Does your agency own the land or have an easement, is there broken land ownership you would have to deal with?

Be sure you know the land ownership of your planning area

TRAIL MANAGEMENT OBJECTIVE

TRACS Trail Management Objectives

Region: ____ Forest: ____ District: ____

Trail Name: ____ **Trail Number:** ____

Trail Beginning Termini: ____ Beg. Milepost: ____

Trail Ending Termini: ____ End. Milepost: ____

Trail Inventory Length: ____ Miles Trail Mileage Source: ☐ Wheel ☐ GPS ☐ Map ☐ Unknown

TMO Trail Section

Sec.# ____ Section Beg. Termini: ____ Beg. Milepost: ____

Section End. Termini: ____ End. Milepost: ____

Designed Use Objectives

Trail Type (Check one)

- ☐ Standard Terra Trail
- ☐ Snow Trail
- ☐ Water Trail

Trail Class (Check one)

- ☐ 1 (Primitive/Undeveloped)
- ☐ 2 (Simple/Minor Development)
- ☐ 3 (Developed/Improved)
- ☐ 4 (Highly Developed)
- ☐ 5 (Fully Developed)

ROS/WROS Class (Check one)

Non-Wilderness

- ☐ Urban
- ☐ Rural
- ☐ Roaded Modified
- ☐ Roaded Natural
- ☐ Semi-Primitive Motorized
- ☐ Semi-Primitive NonMotorized
- ☐ Primitive

Wilderness

- ☐ WROS 1
- ☐ WROS 2
- ☐ WROS 3
- ☐ WROS 4
- ☐ WROS 5
- ☐ WROS 6

Designed Use

(Check one)

- ☐ Hiker / Pedestrian
- ☐ Pack & Saddle
- ☐ Bicycle
- ☐ Wheelchair
- ☐ Motorcycle
- ☐ All Terrain Vehicle (ATV)
- ☐ ____
- ☐ Cross-Country Ski
- ☐ Snowshoe
- ☐ Dog Sled
- ☐ Snowmobile
- ☐ ____
- ☐ Watercraft - NonMotorized
- ☐ Watercraft - Motorized

Design Parameters

(Fill in all that apply)

- ☐ Tread Width (inches)
- ☐ Grade: Target Range (%) (>90% of TMO segment)
- ☐ Grade: Short Pitch Max (%) (up to 200' lengths)
- ☐ Cross-Slope (%)
- ☐ Clearing Width (feet)
- ☐ Clearing Height (feet)
- ☐ Switchback Radius (feet)
- ☐ ____

Target Frequency

Per Year

(Fill in all that apply)

- ☐ Trail Opening
- ☐ Tread Repair
- ☐ Drainage Cleanout
- ☐ Logging Out
- ☐ Brushing
- ☐ Snow Trail Grooming
- ☐ Condition Survey
- ☐ ____

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TRAIL MANAGEMENT OBJECTIVE

TRACS Trail Management Objectives

Trail Name: _____ **Trail Number:** _____

Travel Management Strategies FSM 2353.19

Managed Use

(Fill in all that apply)*

	From Date (mm/dd)	To Date (mm/dd)
☐ Hiker / Pedestrian		
☐ Pack & Saddle		
☐ Bicycle		
☐ Wheelchair		
☐ Motorcycle		
☐ All Terrain Vehicle (ATV)		
☐ _____		
☐ Cross-Country Ski		
☐ Snowshoe		
☐ Dog Sled		
☐ Snowmobile		
☐ _____		
☐ Watercraft-NonMotorized		
☐ Watercraft - Motorized		

Prohibited Use

(Check if applicable)

	From Date (mm/dd)	To Date (mm/dd)
☐ All Motorized Use		

(Or, fill in all that apply)

☐ Hiker / Pedestrian		
☐ Pack & Saddle		
☐ Bicycle		
☐ Wheelchair		
☐ Motorcycle		
☐ All Terrain Vehicle (ATV)		
☐ _____		
☐ Cross-Country Ski		
☐ Snowshoe		
☐ Dog Sled		
☐ Snowmobile		
☐ _____		
☐ Watercraft - NonMotorized		
☐ Watercraft - Motorized		

Other Use

(Optional: Check any that apply)*

	Accept	Discourage	Eliminate
☐ Hiker / Pedestrian			
☐ Pack & Saddle			
☐ Bicycle			
☐ Wheelchair			
☐ Motorcycle*			
☐ All Terrain Vehicle (ATV)*			
☐ _____			
☐ Cross-Country Ski			
☐ Snowshoe			
☐ Dog Sled			
☐ Snowmobile			
☐ _____			
☐ Watercraft - NonMotorized			
☐ Watercraft - Motorized			

Special Considerations

(Check any that apply. Underline appropriate clarifier in parenthesis. Provide specifics and reference information below.)

- ☐ Shared System (shared with other system road or trail)
- ☐ Accessible per Current Agency Guidelines
- ☐ Mechanized Tools or Equipment Prohibited
- ☐ T&E or Sensitive Species Present (Plant / Wildlife)
- ☐ Heritage Resource Present
- ☐ Easement across Non-FS Land (Existing / Needed)
- ☐ Existing Permit or Agreement (Trail-Specific / Area)
- ☐ _____

Remarks / Reference Information

(Use continuation sheet if needed.)

Line Officer: Name _____ Signature _____

Title _____ Date _____

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Design Parameters (FSH 2309.18, Section 23.13, Exhibit 01)

Design Parameters are technical guidelines for the survey, design, construction, maintenance, and assessment of National Forest System trails, based on their Designed Use and Trail Class and consistent with their management intent[1]. Local deviations from any Design Parameter may be established based on trail-specific conditions, topography, or other factors, provided that the deviations are consistent with the general intent of the applicable Trail Class.

Designed Use BICYCLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Tread Width	Single Lane	6" – 12"	12" – 24"	18" – 36"	24" – 48"	36" – 60"
	Double Lane	36" – 48"	36" – 48"	36" – 48"	48" – 84"	72" – 120"
	Structures (Minimum Width)	18"	18"	36"	48"	60"
Design Surface[2]	Type	Native, ungraded May be continuously rough Sections of soft or unstable tread on grades < 5% may be common and continuous	Native, with limited grading May be continuously rough Sections of soft or unstable tread on grades < 5% may be common	Native, with some on-site borrow or imported material where needed for stabilization and occasional grading Intermittently rough Sections of soft or unstable tread on grades < 5% may be present, but not common	Native, with improved sections of borrow or imported materials and routine grading Stable, with minor roughness	Likely imported material and routine grading Uniform, firm, and stable
	Protrusions	≤ 24" Likely common and continuous	≤ 6" May be common and continuous	≤ 3" May be common, but not continuous	≤ 3" Uncommon and not continuous	No protrusions
	Obstacles (Maximum Height)	24"	12"	10"	8"	No obstacles
Design Grade[2]	Target Grade	5% – 20%	5% – 12%	3% – 10%	2% – 8%	2% – 5%
	Short Pitch Maximum	30% 50% on downhill segments only	25% 35% on downhill segments only	15%	10%	8%
	Maximum Pitch Density	20% – 30% of trail	10% – 30% of trail	10% – 20% of trail	5% – 10% of trail	0% – 5% of trail

10/16/2008

Designed Use BICYCLE		Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Design Cross Slope	Target Cross Slope	5% – 10%	5% – 8%	3% – 8%	3% – 5%	2% – 3%
	Maximum Cross Slope	10%	10%	8%	5%	5%
Design Clearing	Height	6'	6' – 8'	8'	8' - 9'	8' - 9'
	Width	24" – 36" Some vegetation may encroach into clearing area	36" – 48" Some light vegetation may encroach into clearing area	60" – 72"	72" – 96"	72" – 96"
	Shoulder Clearance	0' – 12"	6" – 12"	6" – 12"	6" – 18"	12" – 18"
Design Turn	Radius	2' – 3'	3' – 6'	4' – 8'	8' – 10'	8' - 12'

[1] For definitions of Design Parameter attributes (e.g., Design Tread Width and Short Pitch Maximum) see FSH 2309.18, section 05.

[2] The determination of trail-specific Design Grade, Design Surface, and other Design Parameters should be based upon soils, hydrological conditions, use levels, erosion potential, and other factors contributing to surface stability and overall sustainability of the trail.

TRAIL LAWS

Always Consider the Law

LAW EXERCISE

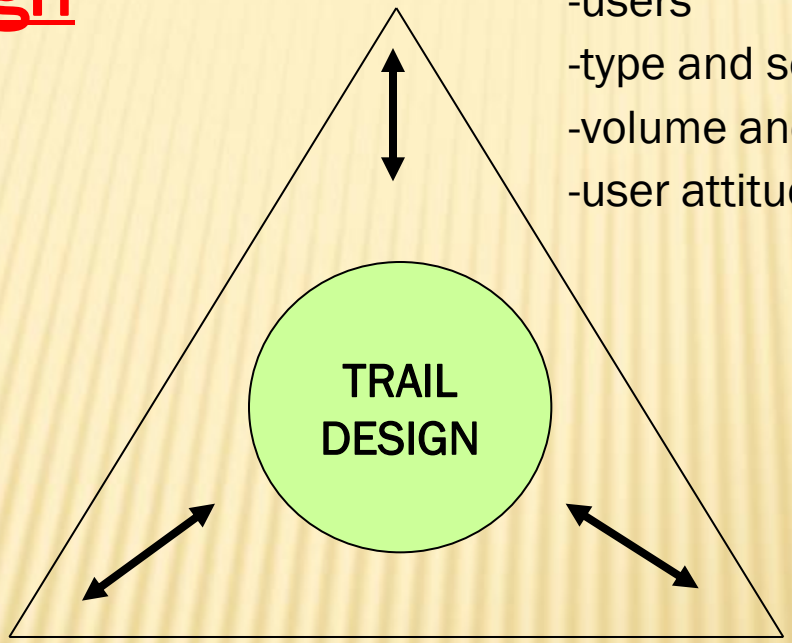
Pick a card, your card will have either a title or a description of a specific law that relates to trails

Find the person in the class who has either the law title or definition for your card and discuss with them how that law affects trail planning

You have 10 minutes, then we will have you and your partner report out

YEAR ONE
ASSEMBLE RESOURCE AND SOCIAL DATA

Trail Design Triangle



1) Use Characteristics
- -users
- -type and season of use
- -volume and intensity of use
- -user attitude and expectations

2) Environmental Conditions
- -soils, side slope, aspect, elevation, hydrology, vegetation cover, wildlife, cultural resources, land status

3) Climate and Weather
- -seasonal variations, freeze/thaw cycles, precipitation timing, volume and intensity

WHO ARE OUR CUSTOMERS?

Adjacent Land Owners, Foreign Visitors, Special Interest Groups, Eventers, Challenge Seekers, Other Resource Staff, Persons with Disabilities, etc.

IDENTIFYING USER CHARACTERISTICS

- WHO are the individuals/groups that use the area, what experience are they looking for
- WHAT mode of travel
- WHERE is the use occurring
- WHEN does use occur
- HOW are users impacted and

  HOW much use is occurring (volume, intensity)

SOCIAL CHARACTERISTICS

Complete an assessment of social characteristics:

- Physical attributes as they relate to challenge levels for users on existing trails (easy or hard for users)
- Other local recreation opportunities including facilities for services such as fuel and food, campgrounds, trailheads, and visitor centers
- Is the trail providing the desired experience?
- Safety concerns
- Accessibility considerations
- Identify the demographics of users
- Meet with interest groups to obtain current social situation
- Determine current and future user trends and desires
- Displaced users and potential opportunities

THE TRAIL EXPERIENCE

RECREATION OPPORTUNITY SPECTRUM

Provides a framework for stratifying and defining classes of outdoor recreation, environments, and experience opportunities. These are divided into six classes:

1. Primitive
2. Semi-Primitive Non-Motorized
3. Semi-Primitive Motorized
4. Roaded Natural
5. Rural
6. Urban

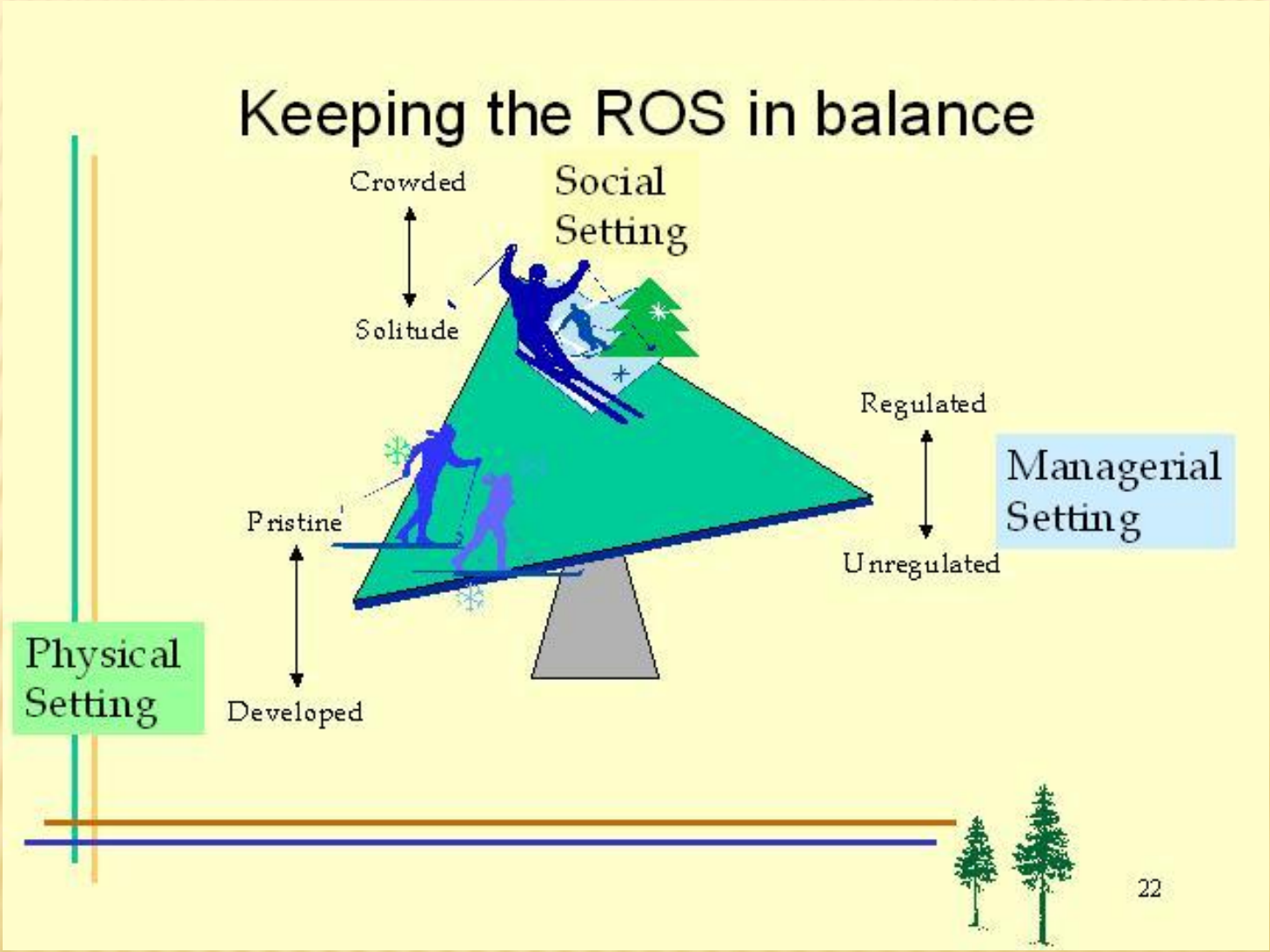
RECREATION OPPORTUNITIES FOR EXPERIENCES ALONG THE SPECTRUM REPRESENT A RANGE FROM…

From…

A high probability of solitude, self reliance, challenge, and risk

To…

A very social experience where self reliance, challenge, and risk are relatively unimportant.


Keeping the ROS in balance
Crowded
Social Setting
Solitude
Regulated
Managerial Setting
Pristine
Unregulated
Physical Setting
Developed
22

BENEFITS-BASED MANAGEMENT (BBM)

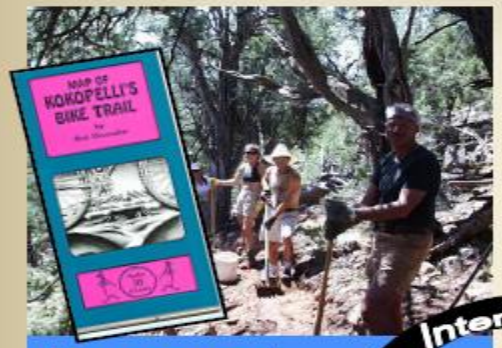
BBM is a results-oriented framework to view, plan and collaboratively deliver recreation services as a means to larger "ends" – "quality of life" or beneficial outcomes to: individuals, communities, economies and the environment.

(Note: From BLM's "Purple Book")

BBM'S CUSTOMER-ORIENTED APPROACH RECOGNIZES THE MOTIVATIONS THAT DRIVE INDIVIDUALS TO RECREATE

McInnis Canyons National Conservation Area Management Plan

MACK RIDGE Recreation Management Zone



Management

- Erect motorized barriers at 9 locations
- Close / restore the end of the road on Steve's Loop

Administration

- All motorized/mechanized use limited to designated trails & roads
- No camping

Marketing / Education

Develop comprehensive interpretive plan

Monitoring

Assure objectives/prescribed settings are being met

Interact

Physical Setting

Remoteness – Near roads
Naturalness – Generally natural in appearance
Facilities – Trailheads / trails

Social Setting

Contacts – 15–29 / day
Group Size – Avg. 12
Evidence of Use - mod.

Administrative Setting

Motorized Use - Low

Visitor Services – Maps / brochures are available for information

Mgmt. Controls – Day use area with rules clearly posted

Produce

Participating in:

Single-track day-use mountain biking

Facilitate

Experiences

- Enjoying frequent exercise
- Developing skills, abilities, and self-confidence

Personal Benefits

- Improved physical fitness
- Greater cultivation of outdoor-oriented lifestyle

Community Benefits

Heightened sense of community pride/satisfaction

Environmental Benefits

Increased stewardship and protection of Mack Ridge

Economic Benefits

- Greater recognition of Fruita as a desired destination for local & non-locals
- Increased tourism revenue

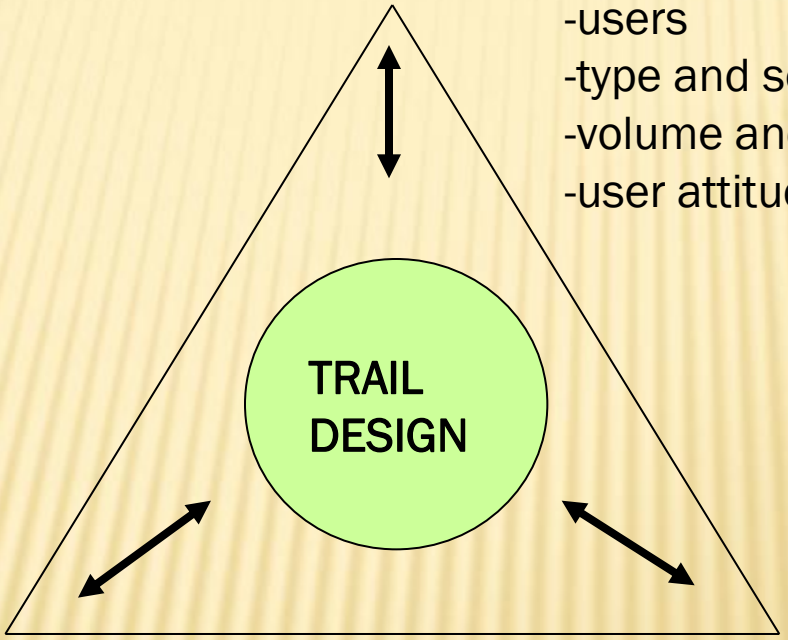
CONSIDER LANDSCAPE CHARACTERISTICS

- Topography relates to grades, elevations and drainage patterns across the site
- Surface water and hydrology are critical to designing sustainable trails
- Existing features and controls are physical features of the landscape that would add interest to the trail experience
- Location of sun and shade may affect trail users

...A CLOSER LOOK AT LANDSCAPE CHARACTERISTICS

1) **Use Characteristics**

-users
-type and season of use
-volume and intensity of use
-user attitude and expectations



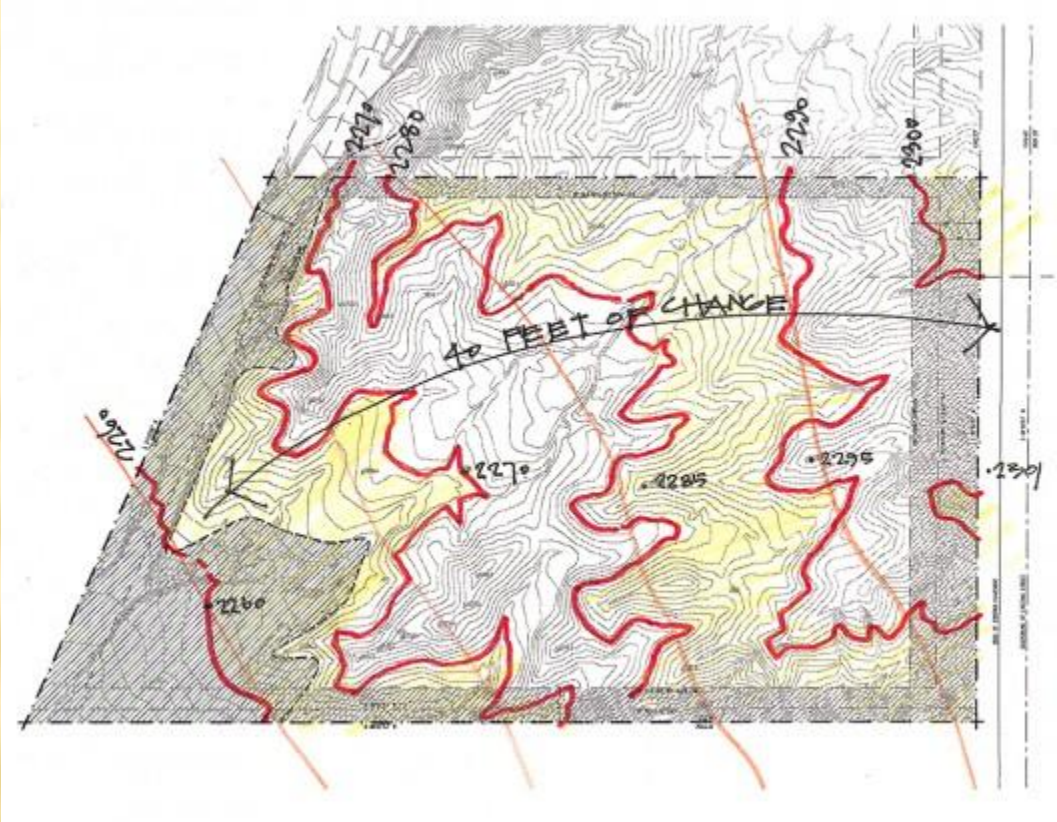
2) **Environmental Conditions**

-soils, side slope, aspect, elevation, hydrology, vegetation cover, wildlife, cultural resources, land status

3) **Climate and Weather**

-seasonal variations, freeze/thaw, precipitation timing, volume and intensity

TOPOGRAPHY



EXAMPLE

Elements (continued)	Generally good	Generally moderate	Generally marginal	Generally unsuitable	Comment/mitigation
			Soil		
Type	Most mineral soils	Nothing specified	Organic	Nothing specified	Organic sites may require trail hardening
Texture	Mixed rocky or gravelly	Loamy Silty	Clayey Sandy	Nothing specified	Poor quality soils may require capping, augmentation or trail hardening
Large rocks	Few, deep	Nothing specified	Many, at surface	Extreme rockiness	Extreme situations may require capping or major construction actions
Depth (inches)	More than 30	10 to 30	Less than10	Nothing specified	None
Moisture	Moist	Nothing specified	Consistently dry or saturated	Frequently ponded	Sensitivity of saturated and ponded sites dependant on soil texture May require fill or trail harden-ing
Water table depth (inches)	More than 30	18 to 30	Less than18	Frequently ponded at the surface	Persistent shallow water table sites may require hardened trail surface
Permafrost	None	Deep, ice free	Shallow, ice rich	Rapidly decaying	Marginal sites typically require trail hardening
Stability	Stable	Nothing specified	Loose, unstable	Sites of solifluction flows or soil creep	None
Elements (continued)	**Generally good**	**Generally moderate**	**Generally marginal**	**Generally unsuitable**	**Comment/mitigation**
			Vegetation		
Type	Most upland vegetation communities	Most mesic types Some alpine sites	Some alpine sites Wetlands Floating vegetation	Rare and endangered species sites	Wetlands and floating vegeta-tion sites may require hard-ened trail surface
Large trees	Few, well spaced	Many, well spaced	Many, tightly spaced	Pistol grip or lean-ing	Many large, tightly spaced trees may require extensive clearing and construction operations
Vegetation mat thickness (inches)	Less than 4	4 to 8	More than 8	More than 16	Deep vegetation mats may require removal and fill or other trail hardening technique

VIEWSHEDS

SURFACE WATER

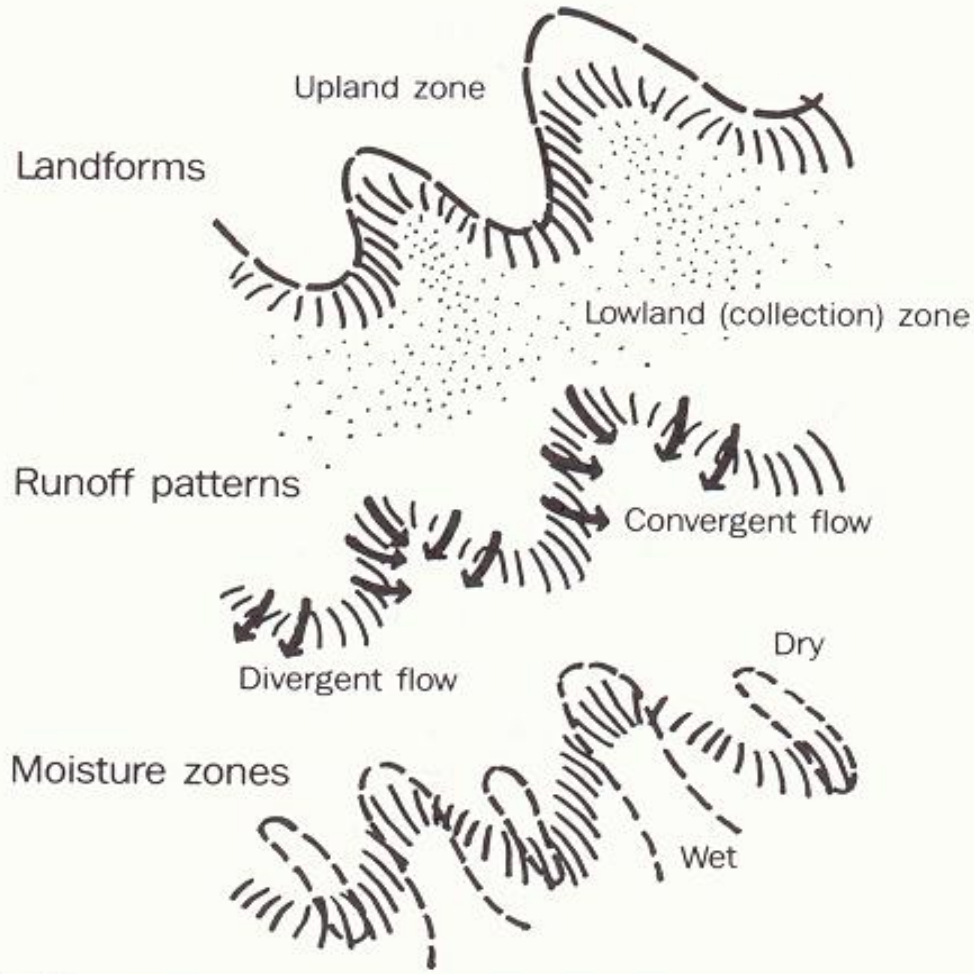
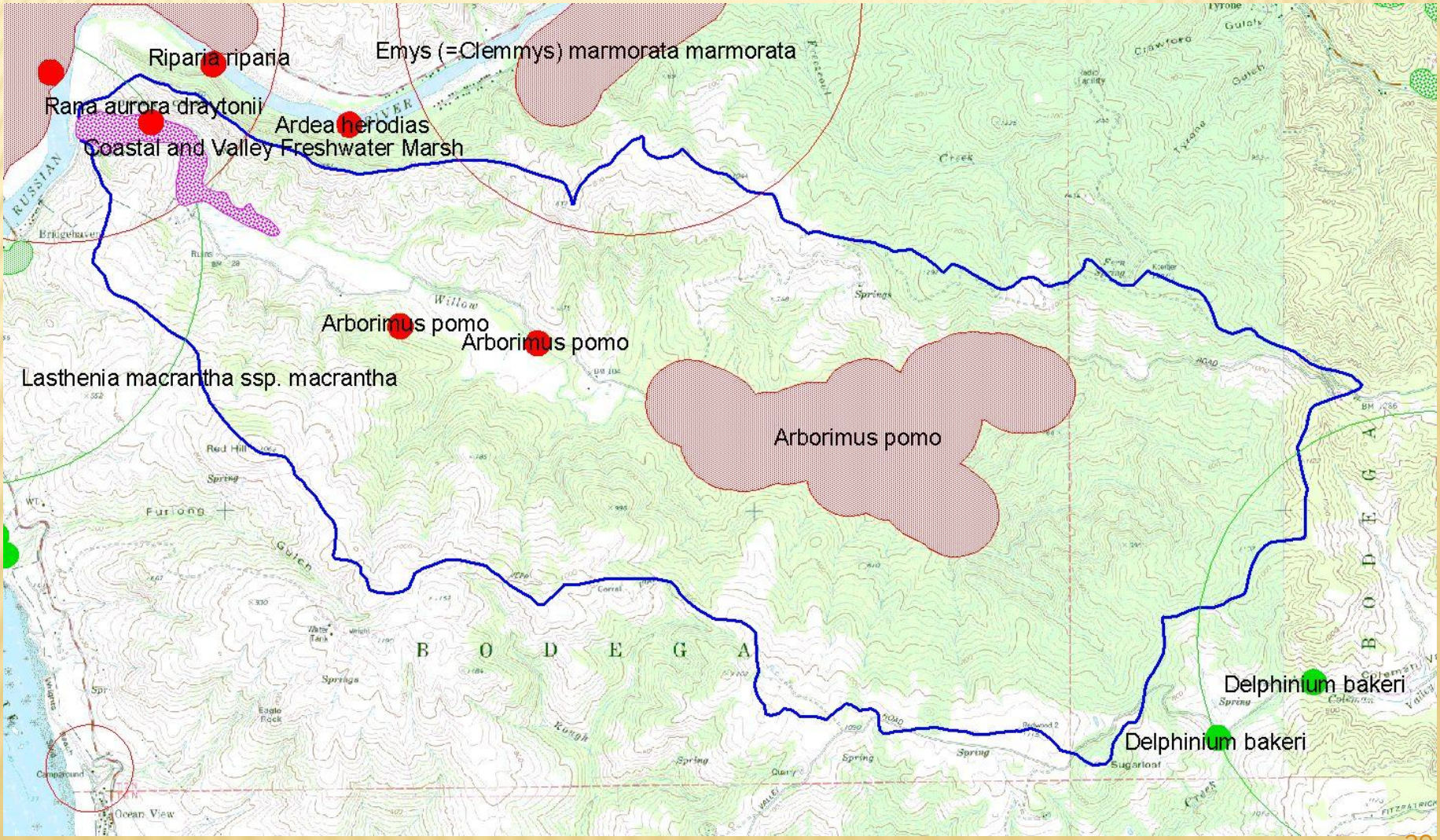


Fig. 9.10 Concave and convex edges and associated runoff patterns.

EXISTING FEATURES

CLIMATE AND WEATHER

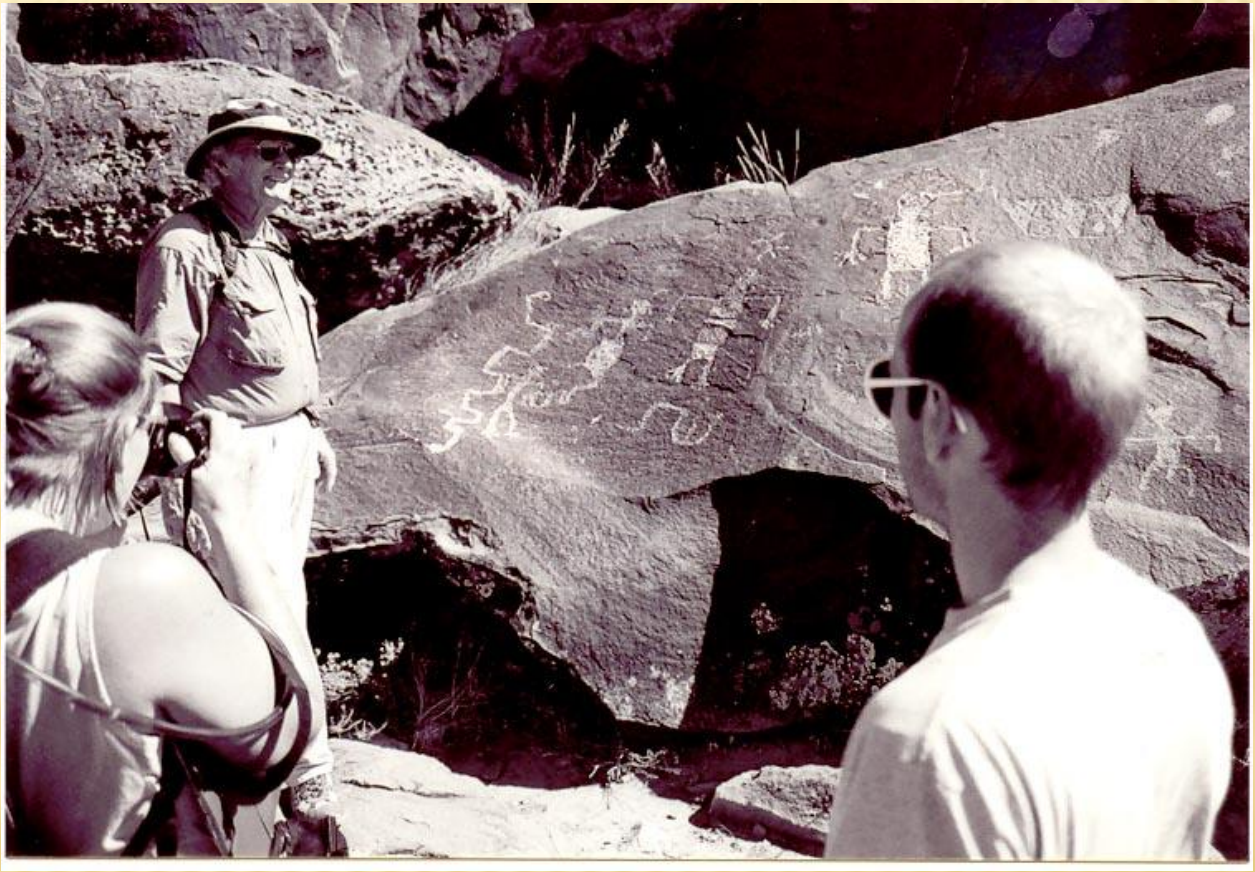
LISTED PLANTS AND ANIMALS



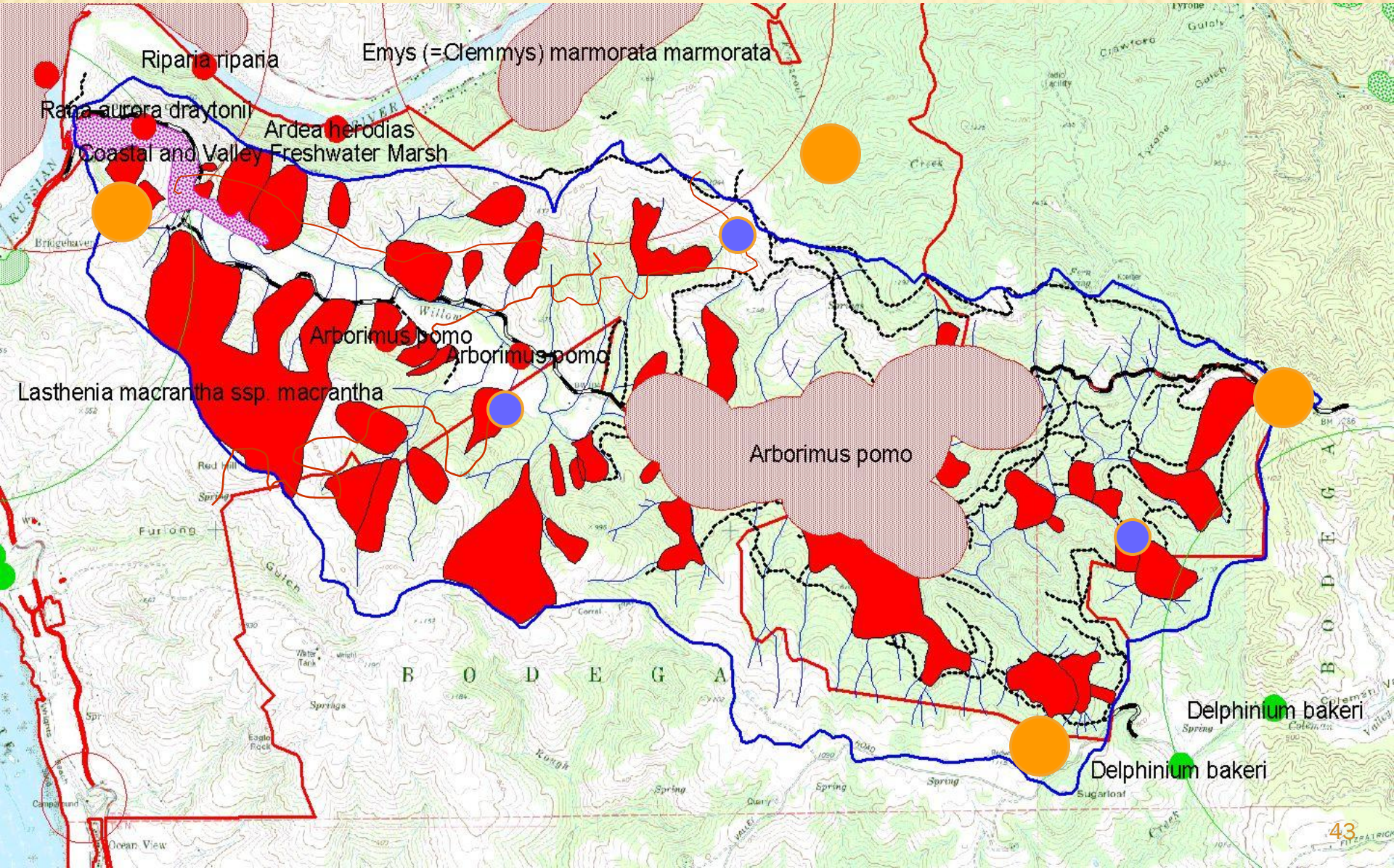
RIPARIAN ZONES AND ENDANGERED FISH OR PLANT HABITAT MUST BE CONSIDERED

WILDLIFE HABITAT & ENDANGERED SPECIES MUST BE CONSIDERED

CULTURAL RESOURCES

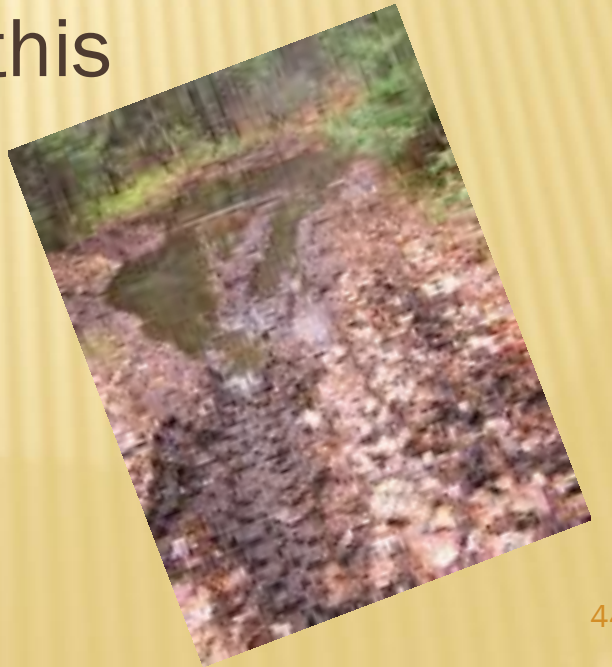


COMPOSITE OVERLAYS MAY HELP



ENVIRONMENTAL PROTECTION

- Minimizing the ecological impacts of trails is a major goal for trail planning
- Specialists such as archeologists, hydrologists, soil scientists and biologists can provide resource data to help you do this



YEAR ONE – REACH CONSENSUS WITH STAKEHOLDERS

WHAT IS CONCENSUS?

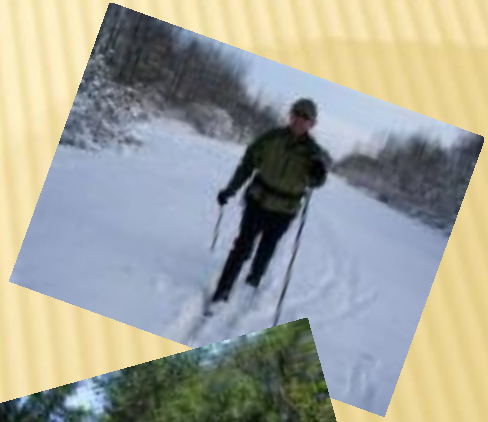
- A Decision Making Tool – where . . .everyone participates and everyone supports the outcome

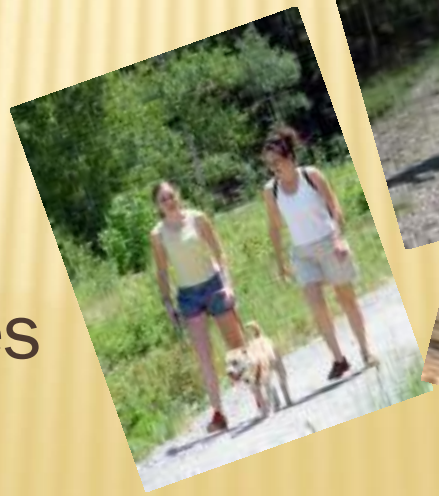
CONSENSUS IS NOT ALWAYS POSSIBLE

What you can do to improve your chances for consensus or acceptance:

Identify who your stake holders are…

- Land manager/owner
- Adjacent land managers/owners
- Public Agencies
- Clubs and user groups
- Interest groups
- Trail users
- Trail volunteers
- Persons with disabilities
- Historical societies





STAKE HOLDER BUY IN

Collect all available information on your project and have ready for presentation to stake holders

Give stake holders positive benefits of your project

- Increased trail opportunity
- Minimize natural and cultural impacts
- Maximize visitor uses and experiences
- Minimize user conflicts
- Provide transportation connections and access to special places
- Provide opportunity for healthy activity
- Provide learning opportunities

STAKE HOLDER BUY IN

Listening – understanding another person's point of view is important

Brainstorming – generates ideas and alternatives

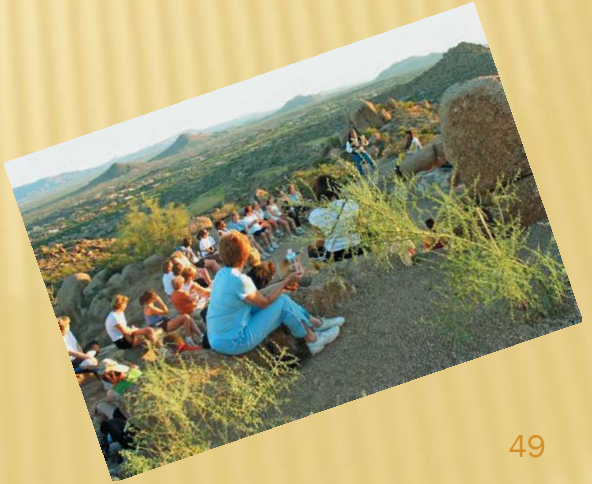
Research– Provide them with maps and other information. Give stake holders time to thoroughly think through an issue.

Charrettes – An intensive 2,3, or 4 day work session in which individuals develop alternatives

Travel the area and talk to people

Have a Public meeting, open house or site visit

Individual interviews



BEGIN THE PROCESS!

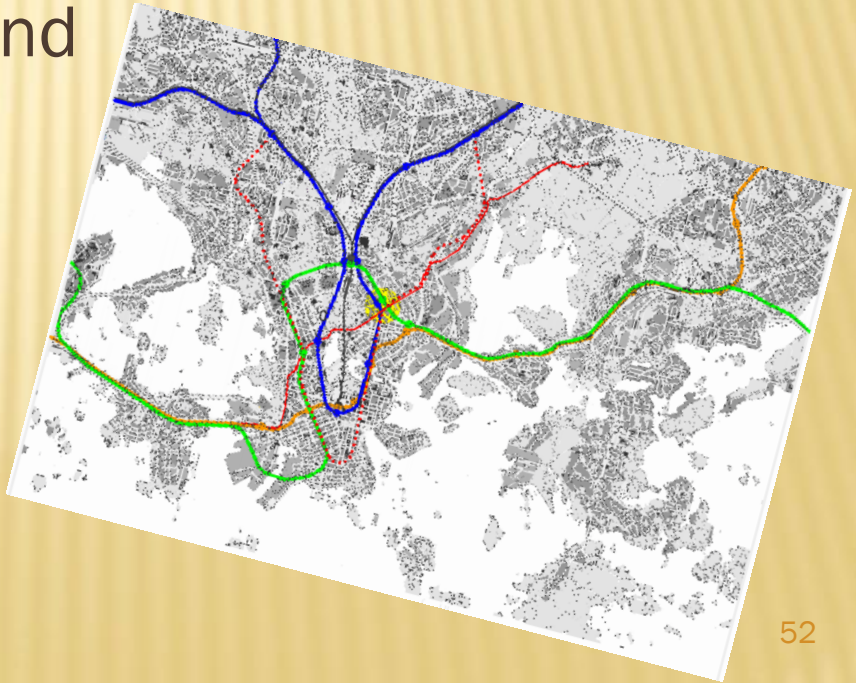
- Decide on the planning process you will use and the framework the plan will use
- Gather agency personnel, specialists, customers and interest groups together under a collaborative process to determine options

IDENTIFY THE ISSUES

- Specifically identify the problem(s) or need(s) that are to be solved or addressed through this planning effort
- What kind of trail or trail system is appropriate?
- What will the trail management objectives and trail classifications be?

DEVELOP ALTERNATIVES FOR YOUR PROJECT

- Use all data collected in your resource and social assessments - Historic and aerial photos may help
- Consider legal side boards or decision space determined from your compilation of management direction, resource data and social data collected
- Involve all user and interest groups in alternative development and communicate your decision space and sideboards
- Collaborate to obtain consensus



GOALS FOR THE SECOND YEAR

- Complete public involvement
- Get clearances from specialists
- Complete NEPA documents and issue decision

WHAT DOES "NEPA" STAND FOR

National Environmental Policy Act…

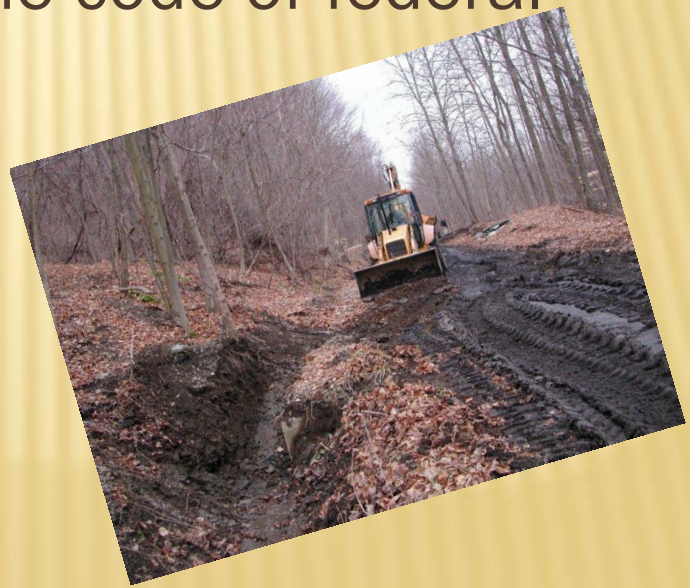
Of 1969

WHY DO NEPA?

- Analyze actions and alternatives
- Make informed decisions
- Analyze proposed action to see if impacts to the environment are significant
- To provide full disclosure to the public
- It is the law

WHAT TYPES OF PROJECTS REQUIRE NEPA

- NEPA process must be done for every federal action affecting the human and physical environment unless that activity is allowed under law or by exclusion from environmental analysis through agency procedures and policies
- Each agency was required by NEPA to develop procedures for environmental documents to supplement the regulations as described in the code of federal regulations



EXAMPLES FOR TRAILS

When is an Environmental Document Required?

- Trail maintenance
- Trail Reconstruction
- Trail Construction
- Changing Use Type

DETERMINING WHETHER AND WHEN TO INITIATE THE NEPA PROCESS

- Do not jump into the NEPA process until you have a specific proposal
- Make an informal analysis of the project before conducting NEPA analysis to identify whether changes in current decisions are needed
- NEPA requires an interdisciplinary process
- Makeup of the interdisciplinary team will depend on specific issues involved

NEPA PROCESS

- Determine the scope of the project
- Do public scoping
- Consider accessibility needs
- Determine if NEPA is required and if yes, what level: EA , EIS or Categorical Exclusion (CE)
- Prepare NEPA document and Finding of No Significant Impact (FONSI) for an EA, Record of Decision (ROD) for an EIS, or a decision record (DR) for a CE
- Follow agency policy for publishing the decision document (who, what, how long)
- Follow agency policy for appeal period and process
- Follow agency policy for appeal resolution
- Implement project

YEAR THREE

- Make preparations for project work including cost estimate and rehab needs
- Get trail maintenance, construction or reconstruction and rehab package approvals from line officer
- Shelve project if not funded

YEAR 3+

Build your trail or implement your trail system designations

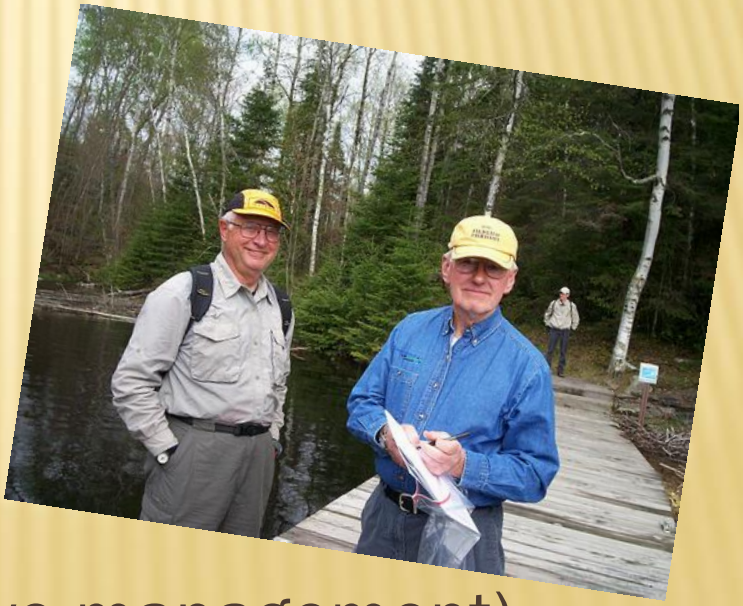
- Schedule or complete any needed rehab
- Be sure to continue To monitor the impacts to your trail and to see if it is still meeting the users needs
- Have a dedication to champion your project

MONITORING

Laws/Legal
Planning
Monitoring
VISITORS
Design & Layout
Maintenance & Construction

WHY MONITOR?

- To determine if a trail continues to meet the needs of users
- To ensure the trail continues to meet construction standards
- To assure no affects to resources
- Look for and respond to catastrophic events that may affect your trail
- To meet legal requirements
- To determine changes in use patterns
- To evaluate trail design and construction effectiveness to improve future design and construction techniques (adaptive management)



MONITORING TOOLS

- Visitor registers
- Traffic Counters
- Permits
- Surveys / direct observations

Monitoring techniques	**Review of TMO specifications provided?** (S = sometimes, if provided in original data collection	**Review of sustainable elements provided?** (S = sometimes, if provided in original data collection)	**Provides indicators of condition trend**	**Trails expertise required**	**GPS expertise required**	**GIS expertise required**	**Photo interpretation skills required**	**Statistical methods required**	**Access to computer software needed**	**Access to agency hardware/ software needed**	**Quantified data set**	**Statistically valid data set**	**Qualitative data set**	**Method: T = transverse, P = point**	**Provides detail for maintenance actions**	**Technical complexity**	**Relative equipment requirements**	**Relative time investment**	**Relative cost**
Design specifications/ sustainable compliance	Yes	Yes	Yes	Low	No	No	No	No	No	No	Yes	Yes	No	T	Partial	Low	Low	Mod-erate	Mod-erate
Maintenance needs	Yes	No	Yes	High	No	No	No	No	Mod-erate	Yes	Yes	Yes	No	T	Yes	Mod-erate	Mod-erate	High	High
Trail condition monitoring																			
Stratified point	Sample only	Sample only	Sample only	No	Mod-erate	No	No	Yes	Low	No	Yes	Yes	No	P	No	Mod-erate	Low	Mod-erate	High
Ground photo point	No	No	Varies	No	Mod-erate	No	No	No	No	No	No	No	Yes	P	No	Low	Low	Low	Low
Remote sensing	No	Partial	Yes	Low	No	Mod-erate	Mod-erate	No	Mod-erate	No	Yes	Yes	Yes	Varies	Partial	Mod-erate	Low to mod-erate	Mod-erate	Mod-erate
Repeat condition assessments																			
Updates	S	S	Yes	Low	Mod-erate	Mod-erate	No	No	Mod-erate	No	Yes	Yes	No	T	Partial	Mod-erate	High	Mod-erate	Mod-erate
Independent	S	S	Yes	Mod-erate	High	High	No	No	High	No	Yes	Yes	No	T	Partial	High	High	High	Very high
Hybrid point	Sample only	Sample only	Sample only	Low	Mod-erate	Low	No	Yes	High	No	Yes	Yes	No	P	No	Mod-erate	Mod-erate	Low	Mod-erate
Geodatabase comparison	S	S	Yes	Low	Mod-erate	Mod-erate	No	No	Mod-erate	Yes	Yes	Yes	No	T	Partial	Mod-erate	High	Mod-erate	Mod-erate

WHEN MONITORING CONSIDER…

- The displaced user
- Who will be doing your monitoring/data collection
- How often will you monitor

FUNDING ALTERNATIVES FOR TRAILS

ARRA & SURFACE TRANSPORTATION ACT

ARRA: The American Recovery & Reinvestment Act (ARRA) of 2009

Surface Transportation Act: *Reauthorization Extended at 2009 levels until 12/31/2010*

SAFETEA-LU:

- Recreational Trails Program (RTP)
- Transportation Enhancements
- Scenic Byways
- Transportation, Community and Systems Preservation Program (gary.jensen@dot.gov)
- Safe Routes to Schools

RECREATION TRAILS PROGRAM (RTP)

- Federal Highway Administration (FHWA) Assistance Program – $85 million/year under SAFETEA-LU in FY 09
- States administer the program
- States set procedures
- RTP state advisory committees are required

RTP ELIGIBLE PROJECTS (MAY DIFFER BY STATE)

- Motorized and non-motorized
- Maintenance and restoration of existing trails
- Trailside/trailhead facilities and trail linkages
- Construction of new trails
- Acquisition of easements or property
- Administrative costs and education programs (most states have spending limits)
- Trails accessibility assessments
- Non-Law Enforcement safety patrols
- Trail monitoring
- Trail related publications
- Purchase and lease of trail equipment

RTP FUNDS MAY NOT BE USED FOR…

- Property condemnation
- New Forest Service, FWS, or BLM trails that do not comply with land use plans
- Change from Motorized use on existing trails

SAFETEA-LU ADDITIONS - 2005

- Federal share may be more than 80% (may differ by state)
- Allows RTP funds to be used as match with other Federal funding programs
- Allows pre-approval planning and environmental compliance as match

RTP SPONSORS

- Municipal, County, State or Federal Agencies
- Private organizations (in some States)
- Can be for public or private lands (public access on private lands)
- Youth conservation or service programs are encouraged

TRANSPORTATION ENHANCEMENTS (TE)

- Funded from the general gas tax
- 10% of a state's Surface Transportation Program
- Administered by State DOT
  - Each state has their own procedures
  - Each state has their own match requirements
  - Are reimbursable funding
- Must be related to a surface transportation facility
- Twelve categories including:
  - Pedestrian and bicycle facilities
  - Safety and education facilities
  - Preservation of abandoned railway corridors
- Trails funded by TE MUST perform a transportation function
- http://www.enhancements.org/

NATIONAL SCENIC BYWAYS PROGRAM

- National Scenic Byway or All American Road – designated for outstanding qualities
- Matching funds awards
- Projects associated with designated roads
- Managed by State DOT and/or Tourism
- Project awards determined by FHWA

PROJECTS ELIGIBLE FOR SCENIC BYWAY PROGRAM

- Site and/or project needs to be in Byway Corridor management plan
- Eight eligible categories (examples)
    - Enhance access for recreation
    - Construction of bicycle and pedestrian facilities
    - Protection of adjacent resources

Website http://www.bywaysonline.org

TRANSPORTATION, COMMUNITY, AND SYSTEM PRESERVATION PROGRAM (TCSP)

- Open to State, tribal, regional, and local governments,
- Purpose is to address the relationships among transportation, community, and system preservation plans and practices
- Identify private sector-based initiatives to improve such relationships.
- Usually completely earmarked
- You need to get your local federal delegation involved

SAFE ROUTES TO SCHOOLS

- Part of the 2005 addition to SAFETEA-LU
- Comes from federal gas tax
- Purpose
  1. To enable and encourage children to walk and bike to school
  2. Make hiking & biking to school safer
  3. Facilitate projects what improve safety, reduce traffic, reduce fuel consumption, reduce air pollution
- Projects must be within 2 miles of a primary or secondary school
- FHWA program administered through State DOT
- safety.fhwa.dot.gov/saferoutes/

TRAILS AND THE REAUTHORIZATION OF THE SURFACE TRANSPORTAION ACT

The 2009 Act Will Continue Until 12/31/2010 at 2009 Funding Levels,
After That…???

NATIONAL PARK SERVICE RIVERS AND TRAILS

Rivers, Trails and Conservation Assistance helps with planning and State and Local Governments, non-profits, partnerships

OTHER POTENTIAL GRANTS

- State and local governments
- Non government entities such as:
  - Companies (REI, Sports Authority, Bass Pro…)
  - Clubs & Interest Groups (Rails to Trails, Continental Divide Trail Association, American Hiking Society, Tread Lightly)
- Enthusiast and user groups (AHS volunteer vacations, Backcountry Horsemen)
- Communities (church groups, service clubs, friends groups)

MORE POSSIBLE SOURCES

- Corrections Programs
- Americorps
- Youth Programs
  - May be less costly than in house
  - May be helpful in acquiring outside funds

GUIDELINES FOR OBTAINING FUNDING

- Obtain public support – identify benefits, sponsors
- Get project into a state, regional or local plan
- Have multiple partners and trail uses
- Have a workable project – consider trail needs
- Provide realistic expectations of results
- Find sources for matching funds
- Involve youth programs if possible
- Be creative or copy good examples
- Budget Realistically, DON'T low ball
- Consider potential problems – permits, environment, opposition
- Prepare a timely, good quality application
- Move quickly from project approval to implementation

FOR MORE INFORMATION

On NEPA:

- http://ceq.hss.doe.gov/welcome.html
- www.eh.doe.gov/nepa
- www.whitehouse.gov/ceq/

On Trail Planning

- www.fw.fed.us/r3/measures/TR.htm

On BLM's BBM go to:

http://www.wildwilderness.org/docs/purple.pdf