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Trails Management - Summary of Techniques

This document has been compiled by the Santa Barbara Mountain Bike Trails Volunteers. The document summarizes and describes a number of commonly used and contemporary trail management techniques. These techniques can be used to build a successful trail system and community. The techniques included are:

- Land management agency and non-profit partnerships
- Inventory, Assessment and Survey of Trails
- Trails Training
- Trails Signage
- Trail Education
- Volunteer Trail Patrols
- Sustainable Trail Maintenance and Modification
- Alternating Access

Techniques to be included and described in the future:

- Risk Management

Land Management Agency and Non-profit Partnerships:

Summary:

Partnerships between land management agencies and non-profit trail groups can provide an opportunity for the building of relationships that may work to develop safe and sustainable trails networks for the community. Non-profit trail organizations may assist the agencies in the management of the trails under their responsibility. This assistance may include the development of trail planning, trail design and maintenance, risk management, trail use, trail user, and volunteer guidelines and to assist in the implementation of these guidelines.

Pros:

- Can bridge jurisdictional gaps that make it difficult for agencies to cooperate on trail management issues.
- Provides a structure for coordinating trail planning, developing community-wide trail standards, trail sign, educational, and interpretive materials.
- Provides the coordination needed to gather trail data, perform, community surveys, and assist the agencies in developing accurate information about the trails.

- Allows the agencies to focus on larger trail management issues while partnering organizations focus on trail education, patrolling, operations, and maintenance.
- Assures that trail construction, maintenance, education activities, and other trail related projects are completed according to the terms and guidelines established by the land management agencies.

Cons:

- It may take time to define partnership details, responsibilities and activities.

Inventory, Assessment, and Survey of Trails

Summary:

The trail assessment process benefits all trail users and land management agencies in a variety of ways by providing standardized, objective information about the availability and condition of existing trails to all trail users. Information gained from trail assessment will also assist in the development of trail planning and design guidelines.

Pros:

- Availability of accurate, reliable information about trail conditions
- Consistent information from trail to trail, or park to park, or region to region
- Ability to develop trails management guidelines from objective data
- Increased participation in trail activities by all types of users.
- Increased safety through knowledge of trail conditions
- Ability to match trail conditions to personal abilities or desired trail experience
- Improved information for maintenance
- Promotion of opportunities for trail use

Cons:

- Requires funding and coordination.

Safety Improvement:

- Trail sustainability, safety, and user guidelines can be developed from the data.

Resource Protections:

- Trail sustainability, safety, and user guidelines can be developed from the data.

Feasibility

- Excellent. Trail assessment and survey contractors are available in California. Many local trail organizations have needed knowledge to conduct inventories, assessments, and surveys.

Trails Training:

Summary:

The goal of trails training is to bring land management staff, agency staff, and trails people up to speed and current knowledge in the following areas: safety and environmental protection, sustainable trail planning, design, construction, maintenance, operation, and assessment, the land planning and development process, land developments that incorporate well-planned and connected trails and greenways, the economic and market value of greenways and trails, and strategies for expanding the greenways and trails network in the local area.

Pros:

- Bringing training to Santa Barbara saves scarce travel funds, reduces travel time, and eliminates the need to obtain out-of-area travel permission.
- Staff and volunteers receive training they could not get without significant time and travel expenditures.
- Increased coordination between land management agencies, trail organizations, and volunteers.
- Volunteers with better training will do work with more value.
- Youth are better educated for future employment in outdoor recreation and natural resources fields.
- The availability of skilled volunteers and staff reduces the cost of local trail projects and provides more significant matching services.
- Better training of local trail project sponsors will result in better trails built at a lower cost to be more sustainable and accessible over the long term.

Cons:

- Requires funding and coordination

Safety Improvement:

- Knowledgeable staff and volunteers can successfully work together to develop trail management, sustainability, safety, and user guidelines

Resource Protections:

- Knowledgeable staff and volunteers can successfully work together to develop trail management, sustainability, safety, and user guidelines

Feasibility:

- Excellent. Numerous trail building and training organizations are available for hire across the country. There are existing trails training programs in California.

Trail Head Signage:

Summary:

Informational and educational signage on the Santa Barbara front country trails is non-existent. Given the large number local trail users and of out of town visitors, and the first hand accounts of users who were unaware of our trail characteristics, improved signage is required. Significant informational trail head signage is the norm for high use urban interface trails. Our local front country trails are an exception, not the norm. Trail head signage should include details on the individual trail, general trail etiquette information for all users, and focused messages on trail safety and resource protection.

Pros:

- Educational information will always be present.
- Increased awareness of trail responsibilities and safety issues among trail users.
- Relatively inexpensive.
- Does not require extensive on-going coordination and volunteer activity.
- Gives official sanction to current signage efforts.

Cons:

- Not everyone reads signs.
- Vandalism (signs make good shooting targets).
- Esthetic concerns.

Safety Improvement:

- Decreased number of irresponsible trail users.
- Increased understanding among diverse users and better understanding of other users.
- Community spirit fosters a helping attitude and greater concern for the well being of other users.

Resource Protections:

- An educated trail community may have an inherently lower impact on resources.
- Littering, vandalism, illegal trail building activity, and trail tread damaging activities are all reduced.

Providing opportunities for growing trail user population

- Increasing trail population increases the need for signage. Users need to know what is acceptable and what is not.
- Educational signage does not alienate any current or future users from the trails.
- Signage easily modified to encompass changes in trail use patterns.

Feasibility

- Funding can be secured quickly.
- Can be implemented quickly.
- Requires no change in USFS, County, and City policies or procedures.
- Educational trail head signage is common throughout the country.

Trail Education:

Summary:

The recent SBMTV run trail head education program has made a significant improvement in trail etiquette, respect, and safety used by mountain bicyclists and other users on trails. However, to fully realize the potential of trail user education the program must be a multi-user-based program under an umbrella organization or the local land management agencies. This would develop an inclusive educational message, give all users a stake in the program, and bring together members of diverse user groups.

Trail user education is a proven tool in changing user behavior, protecting resources and increasing the level of stewardship among forest users. The ubiquity of “only you can prevent forest fires”, “tread lightly” and “take only pictures, leave only footprints” is strong testament to the power of user education.

Pros:

- Fosters stronger trail community, stewardship, and awareness of trail use and responsibility.
- No long term enforcement liabilities
- Self-propagating. Increasing awareness of users will increase the amount of education taking place.
- Local programs can be used as templates.
- Quick to implement.

Cons:

- Difficult volunteer work / volunteer burnout. Volunteers need encouragement and support.
- Not everyone will be open to educational message.
- Requires on-going coordination.
- May require incentives to maintain volunteer participation.
- Requires some degree of training for volunteers.

Safety Improvement:

- Decreased number of irresponsible trail users.
- Increased understanding among diverse users and better understanding of other users.
- Community spirit fosters a helping attitude and greater concern for the well being of other users.

Resource Protections:

- An educated trail community had an inherently lower impact on resources.
- Littering, vandalism, illegal trail building activity, and trail tread damaging activities are all reduced.

Providing opportunities for growing trail user population

- Education does not alienate any current or future users from the trails.
- Education program easily modified to encompass new trail uses that may arise in the future.
- Brings new users into the trail community.

Feasibility

- Successful SBMTV program.

- Program coordinated by umbrella organization or agencies will expand volunteer base and education information.
- Program may not require USFS, County, or City resources or change in current management policies.
- Education programs have a track record of success.

Volunteer Trail Patrols:

Summary:

Taking the concept of trail head education to the next level, an umbrella organization or the land management agencies can initiate a volunteer trail patrol program. This effort should be multi-user based with hiking, mountain bike riding and horse riding patrollers working in a coordinated effort. Operation of the patrol would be similar to the SBMTV run Bicycle Assistance Unit and the Volunteer Wilderness Rangers. Multi-user based trail patrols are in operation in many places throughout the country. They prove very effective in taking the responsible trail use message to the people, reducing resource damage, and fostering a spirit of cooperative community.

Pros:

- Supplies trail inspection, hazard identification, accident reporting, and on the fly maintenance.
- Significantly strengthens trail head education and trail head signage efforts.
- Provides trained volunteers to assist in emergency situations
- Provides a much needed "sanctioned" presence on the front country trails.
- Provides mechanism for gathering trail use data.
- Fosters increased cooperation between members of the trail community.

Cons:

- Difficult volunteer work / volunteer burnout.
- Requires significant volunteer training.
- Requires on-going coordination.
- May require incentives to maintain volunteer participation.
- Not everyone will be open to educational message.

Safety Improvement:

- Places trained "sanctioned" personnel on the trails.
- Patrollers can administer first-aid and facilitate emergency response in critical situations.

Resource Protections:

- Patrollers can monitor and report activities damaging resources.
- Littering, vandalism, illegal trail building activity, and trail tread damaging activities are all reduced due to increased official presence on trails.

Providing opportunities for growing trail user population

- Program easily expanded to encompass new trail users.
- Brings new users into the trail community.

Feasibility

- Requires dedicated volunteers.
- Requires volunteers service agreement with land managers
- Requires training and certification of volunteers.
- Similar patrols exist in many locations throughout the country.

Sustainable Trail Maintenance and Modification Guidelines:

Summary:

The local trails were never designed to be sustainable or for recreational use. They are very susceptible to erosion and inherently increase conflict. Many subtle, and not so subtle, trail modifications will reduce user conflict and increase the trails ability to sustain current and future use. Sections of trail can be re-designed to slow bicycle traffic, allow safe passage for all users, provide short alternate routes, increase sustainability, and continue enjoyment.

Pros:

- Permanent on trail solutions do not require enforcement and will reduce over all trail maintenance needs
- Increased trail sustainability
- Reduction of user conflicts
- Increased trail user enjoyment experiences.

Cons:

- Requires initial trail modifications which include agency and volunteer time.
- Requires some funding.

Safety Improvement:

- Bicycle traffic would be slowed in locations determined to have risk.
- All users would more opportunities to safely pass each other
- Mitigation of erosion issues could reduce tripping, falling, crashing incidents.

Resource Protections:

- Trail beds become more stable, trail last longer, require less maintenance.
- Soil deposition reduced in creeks and/or watersheds.

Providing opportunities for growing trail user population:

- Trail population would be able to enjoy trail with increased usage and less risk.

Feasibility:

- Currently implemented on a small scale. Very feasible if agencies and trail organizations make concerted efforts to cooperate, develop plans, and actively work.

Alternating Access:

Summary:

Rotating access restricts types of trail use on trails on alternating days.

Pros:

- Has been successful in areas that have the need support structures in place, including cooperating organizations, trail patrols, education, maintenance programs, and extensive informative signage.
- Potentially eliminate conflicts between members of the different user groups.
- Potentially eliminate perceived conflicts.
- Increase trail user awareness of trail conflict issues and responsibility.

Cons:

- Santa Barbara area does not have needed support structures in place, including cooperating organizations, trail patrols, education, maintenance programs, and extensive informative signage.
- Requires change in current USFS, County, and City trail use policies.
- Requires extensive education, signage, and publicity.
- Land management agencies do not have enforcement resources.
- Increased animosity between trail users if plan is not viewed as equitable to all users.
- Potential for confusion on what trails are open to what users on what day.
- Possibly increase aggression of some trail users.

Safety Improvement:

- Potential reduce hazardous trail user encounters.

Resource Protections:

- Increased potential for illegal trail construction and use.
- Focuses impacts of trail use types.

Feasibility

- Requires change land management polices
- Requires support structures to be in place.
- May require ongoing enforcement and/or community education
- Can be successful if majority of local and visiting trail users cooperate.