

Midpeninsula Regional Open Space District

Board Policy Manual

Trail Use	Policy 4.07 Chapter 4 – Acquisition & Maintenance of District Lands
Effective Date: 11/14/90	Attachment: Trail Use Guidelines and Mitigation Measures
Prior Versions: 11/14/90, 7/12/00, 11/13/13	Revised Date: 6/24/15

PREAMBLE

One of the District’s basic policy statements is that it will “follow a land management policy that provides proper care of open space land, allowing access appropriate to the nature of the land and consistent with ecological values.” As a result of the rapidly increasing level of trail use and the increased types of trail use, it is necessary to adopt more specific policies on trail use in order to effectively implement this basic policy statement.

The District is concerned both with the safety of all trail users and the enjoyment of their open space experience. The purpose for which people use open space trails varies depending on individual or group needs. Visitors may come to observe nature in a protected environment, experience tranquility, exercise in a non-urban setting, or any combination of these. The means by which visitors use trails also varies—be it hiking, running, on bicycle, on horseback, or in a wheelchair. Motorized vehicles are prohibited, except electric wheelchairs and other power-driven mobility devices as further set out in the Board Policy on Other Power Driven Mobility Devices.

The combination of trail conditions, level of use, and the mix of uses may lead to conflicts. Conflicts result in negative environment impacts, unpleasant user experiences, or unsafe situations. Conflicts are related to several factors, including:

- The relative speeds of different users
- Existing trail conditions, such as poor line-of-sight, narrowness, steep slopes and wide-open stretches of trail that might encourage excessive speed.
- A lack of knowledge of, or disregard for, trail use etiquette and regulations by all types of users
- A high concentration of use in certain areas

This set of policies is intended as a guide in establishing trail use designations throughout the District which will promote safe and enjoyable experiences for all who use the District lands. These policies are not intended to restrict who may use the District trails, but they may restrict how, or under what conditions, the trails are to be used.

POLICIES

1.0 The District will endeavor to provide a variety of satisfying trail use opportunities on open space preserves throughout the District. More specifically, the District will endeavor to:

1.1 Provide multiple use on individual trails where such use is consistent with the balance of these policies.

1.2 Protect the opportunity for tranquil nature study and observation, especially in those areas identified as providing a unique wilderness experience.

2.0 The District will designate appropriate use(s) for each trail. Uses will be allowed that are consistent with District's objectives for sound resource management and safe and compatible use. More specifically, the District will:

2.1 Allow trail use appropriate to the nature of the land and consistent with the protection of the natural, scenic and aesthetic values of open space.

2.2 Within budgetary and staffing constraints, make reasonable efforts to provide safe conditions for trail users.

2.3 Evaluate trail user needs, concerns, quality of experience, impacts, and the compatibility of various uses. Those uses creating the least conflict among trail users and the least environmental impact will be given greatest preference in trail use planning.

2.4 Ensure that all District trails will be accessible to hiking. When consistent with this policy, if a non-hiking use adversely impacts user safety, the use may be restricted or redirected. The intention is not to restrict access by any individual, but rather to limit incompatible uses and means of travel.

2.5 The District will strive to provide multi-use trail access (including bicycles) to dedicated sections of the Bay Area Ridge Trail and other regional trails by allowing exceptions to preserve bicycle closures for the Ridge Trail. The District will also strive to provide multi use trail access to regional trails connecting urban areas to the Ridge Trail. Access to such regional connecting trails will be evaluated on a case-by-case basis, including consideration of availability of suitable regional trailhead staging, the availability of other alternative multi-use trail connections in the same region, and the completion of the CEQA process.

The district will encourage other agencies to provide Ridge Trail and regional trail connections on the same basis.

3.0 The Board of Directors will adopt qualitative and quantitative trail use guidelines to aid the Board and staff in determining trail use designations in the implementation of these policies.

3.1 As a planning tool to aid the Board and staff in determining future trail use designations, the District will consider, along with the Trail Use Guidelines and these

Policies, a guideline target trail use designation ratio of 60% to 65% multi- use trails (including bicycles) to 35% to 40% hiking or hiking-and-equestrian trails (excluding bicycles). This will not be a quantitative restriction, but a flexible planning tool to consider. Actual use designation of trails and preserves will only be established after the Use and Management Planning Process and CEQA process have been completed.

4.0 Specific trail use designations will be established and reviewed periodically through the Use and Management Planning Process, and will be subject to adopted Public Notification Procedures. Trail use designations may change if use patterns develop that are in conflict with these policies.

4.1 In extreme cases where there is not sufficient time to comply with the Use and Management Planning Process, the Board of Directors or General Manager may make an interim decision to limit use while providing an evaluation process and timeline for final determination of the designated use.

5.0 The District will endeavor to provide trail access for a variety of physical capabilities and user needs (including persons with physical limitations) in a manner consistent with resource protection goals, budgetary constraints, and state and federal regulations.

6.0 The District will carry out management programs necessary for the implementation of these trail use policies. The designation of appropriate trail use as a method of minimizing trail use conflicts and environmental impacts will require a significant increase in trail use measures such as education, physical improvements to trails, and enforcement of trail use regulations. More specifically, the District will:

6.1 Support trail use actions with a strong educational program. The District recognizes that education in proper trail etiquette and low-impact use is a key measure towards the reduction of negative trail use impacts.

6.2 Monitor trail use conditions on a regular basis. The purpose of a monitoring program will be to evaluate current conditions and to determine whether or not trail management programs, including maintenance, reconstruction, education, and use regulations, are effective in addressing user conflicts and environmental impacts, and to recommend changes if necessary.

6.3 Include implementation costs in determining the feasibility of trail use designations and regulations.

7.0 The District will work with other agencies, interest groups, and private landowners in an effort to promote an interconnecting trail system throughout the region. The District recognizes that connections should be compatible with other jurisdiction designations and land owner objectives as well as these policies and trail use guidelines.

8.0 The District recognizes that existing trail use characteristics such as the types of use, conflicts, and impacts may change over time so that certain policies may no longer be

appropriate or a new policy may be required. Hence, these policies will be subject to review and revision as deemed necessary by the Board of Directors, following adopted Public Notification procedures.

TRAIL USE GUIDELINES AND MITIGATION MEASURES

Adopted by
Board of Directors
January 27, 1993

This document represents a comprehensive strategy for implementing the Midpeninsula Regional Open Space District Trail Use Policies. It is comprised of two major components, trail use guidelines and mitigation measures. Section I addresses trail use guidelines which establish a procedure for designating appropriate trail use on the District's vast and diverse trail system. Section II, mitigation measures, analyzes methods designed to augment trail use guidelines in reducing trail use conflicts. Both components are equally important in providing a safe and enjoyable trail experience and protecting the natural resources. (See Appendix A for supplemental information.)

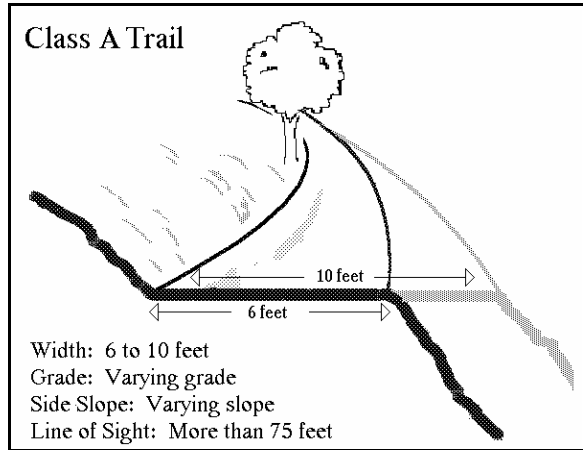
Section I Trail Use Guidelines

Trail Use Guideline	Comments
<p>1.0 Trail Inventories</p> <p>1.1 Physical conditions of all trail segments will be documented.</p>	<p>Data will be gathered relating to trail width and grade, side slopes, line of sight, surface condition and natural obstacles.</p> <p>The surveys will be conducted in a consistent manner to insure continuity in the decision making process. The survey comprises documentation of trail conditions at 500 foot intervals, noting exceptional and unusual features along the way.</p>
<p>2.0 Trail Class Designation</p> <p>2.1 Three trail classifications will be used to characterize physical conditions of the trail system.</p> <p>2.2 Trail class designations only suggest suitable trail uses. Other factors must be considered to determine a trail use designation.</p>	<p>A trail class designation portrays the physical conditions, generally existing over 75% of a trail's length. The length of trail segment is determined from one trail junction to the next.</p> <p>Three class designations characterize the major portion of the District's trail system (Refer to Trail Class study following this table). Not all trails will fit into the three class designations. Exceptions must be evaluated on a case by case basis.</p> <p>Suitable trail uses for a trail class designation are not based solely on physical characteristics. Other factors such as trail use on adjacent parklands and anticipated trail use may be equally important in determining trail use designation.</p>
<p>3.0 Past, Present and Future Trail Use</p> <p>3.1 Trail use information relating to levels and types of trail use will be evaluated.</p> <p>3.2 Existing trail use will not be considered an over-riding factor in determining trail use designations.</p>	<p>Historical and existing trail use information will be gathered from field staff and informal surveys. Trends in trail use will be valuable information in attempting to project future use.</p> <p>Trends may also indicate that trail users have been displaced because of undesirable conditions, incompatible user groups or increased levels of use. It is conceivable that an existing trail use prevents others from a safe and enjoyable trail use experience or has deleterious environmental impacts, whereby consideration may be given to redirecting one user group to an alternate route.</p> <p>Existing and anticipated low trail use levels may allow for variations of multi-use (ie; equestrians and/or bicyclists) where, 1) a trail's class designation would indicate multi-use is not suitable or, 2) a trail has been found to be an exception to the three class designations.</p>
<p>4.0 Trail Use Conflicts</p>	<p>Field reports will be reviewed to examine accidents and violations. Records will</p>

Trail Use Guideline	Comments
<p>4.1 Available records will be evaluated to gain understanding of current trail use conflicts.</p> <p>4.2 Future trail use conflicts will be anticipated and will be an important consideration.</p>	<p>include public communications. Consideration will be given to the possible subjective nature of these communications.</p> <p>Trail use conflicts may be anticipated, based on changes in use and management or new recreational equipment that may be adapted to trail use.</p> <p>Analyzing trail use conflicts may reveal information about users having been displaced to other parks and preserves where conflicts are not so prevalent.</p>
<p>5.0 Adjacent Land Use</p> <p>5.1 Trail use designations will be compatible with adjacent parklands in respect to trail use and regulations.</p> <p>5.2 Undesirable trail use on private lands will be discouraged.</p>	<p>Where trails are connecting with adjacent public lands, a survey of trail use and regulations will be undertaken. Consultation with public agencies will identify existing and planned land use and trail use that may influence the District's decision making process. Every attempt will be made to develop, in cooperation with other agencies, a connecting trail system that is consistent in terms of trail use and regulations.</p> <p>The District needs to be sensitive to private landowners who do not want public trail use or specific user groups. In cases where a landowner may be receptive to allowing public trail use, attempts will be made to designate compatible trail use on connecting trails.</p>
<p>6.0 Trail Use Opportunities</p> <p>6.1 Attempts will be made to provide loop trails and regional trails for all user groups.</p> <p>6.2 Attempts will be made to provide all user groups equal access to facilities and attractive areas of a preserve.</p> <p>6.3 Equal access opportunities for equestrian and bicyclists will be considered when trail conditions will not permit both user groups.</p>	<p>Loop trails of moderate length will be explored to accommodate pedestrians while longer loop trails will be sought for equestrians and bicyclists.</p> <p>When conditions exist, whereby a direct regional connection for a particular user group is not feasible, alternate trail routes will be pursued if they do not unnecessarily duplicate the trail system.</p> <p>Providing all user groups access to attractive portions of the preserve may also be achieved by providing alternate routes if they are not unnecessarily duplicating a trail system.</p> <p>When trail conditions do not accommodate both equestrians and bicyclists, decisions will not be based solely on historical and existing trail use. Other factors contained in these guidelines will be taken into consideration.</p>
<p>7.0 Trail Use Constraints</p> <p>7.1 Environmental impacts and persistent conflicts are critical in determining trail use designations.</p> <p>7.2 Trail use by a user group may be prohibited on trails that lead directly to trails found not appropriate for that use.</p> <p>7.3 Trail use by a user group may be prohibited when 25% of a trail's length does not comply with a trail class designation and mitigation measures can not reasonably reduce trail conflicts.</p>	<p>When a trail exhibits satisfactory conditions for specific uses but high levels of trail use result in degradation of the trail or persistent trail use conflicts, consideration will be given to prohibiting the use causing the greatest impact. Prior to closing a trail to specific uses, mitigation measures that adequately address the trail use problems will be explored.</p> <p>Trail use designations will be compatible with interconnecting trails. A trail may exhibit satisfactory conditions for a particular user group, but if that trail leads directly to a trail which does not exhibit satisfactory conditions, the use will not be permitted on either trail.</p> <p>When a trail exhibits satisfactory conditions over 75% of it's length, mitigation measures may be employed to make the remaining 25% acceptable. Minor rerouting of a trail segment may bypass natural obstacles like a tree limb or rock outcropping. Advisory signs and passing areas may mitigate narrow trail segments.</p>
<p>8.0 Use and Management Plans</p>	<p>Many elements in a preserve's use and management plan can potentially impact the trail system. It is imperative that consideration be given to planning elements</p>

Trail Use Guideline	Comments
8.1 Trail use designations will be compatible and facilitate other elements of the use and management plan.	such as new parking areas, environmental education programs, and equestrian facilities. These uses can seriously contribute to trail use conflicts if they are not recognized in advance.

Trail Class Designations



Trail Use Suitability

Hiking Equestrian
 Running Bicycling

Examples

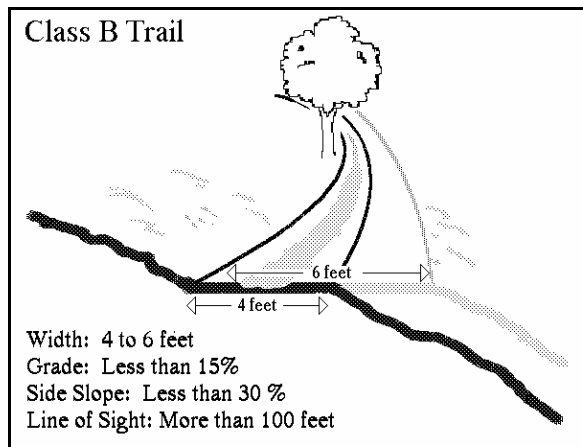
Monte Bello - Upper & Lower Canyon Trail
 Russian Ridge - Ridge Trail

Statistics

Represents approximately 60% of District trails

Significant Problems

Speed increases on wide trails and roads



Trail Use Suitability

Hiking Equestrian
 Running Bicycling

Examples

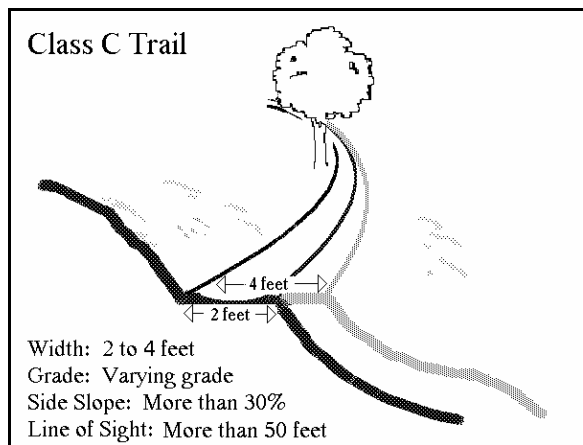
Long Ridge - Parking to Peters Creek
 Monte Bello - Parking lot to Skyline

Statistics

Represents approximately 10% of District trails

Significant Problems

Passing often requires moving off trail



Trail Use Suitability

Hiking
 Running

Examples

Purisima Creek Redwoods - Soda Gulch Trail
 St. Joseph's Hill - Jones Trail

Statistics

Represents approximately 5% of District trails

Significant Problems

Speed is alarming on blind turns

Section II Mitigation Measures for Trail Use Conflicts

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
1.0 EDUCATION									
1.1 Etiquette Brochure (Project complete)	<ul style="list-style-type: none"> · Assists those unfamiliar with regulations · Most helpful if available on all preserves · Most useful if brief and to the point · Should be available with preserve brochure · Irresponsible users will probably not read · Not everyone will stop to read · Too general to address specific problems · Needs to be made widely available · Needs to be included in mailings & handouts · Provide etiquette brochures to conservation & recreation organizations and retail stores · Attention enhanced by ranger distribution · Need a better interpretation for "yield" 	M	M	M	L	M	L		M
1.2 Volunteer Patrols	<ul style="list-style-type: none"> · Positive peer group contact is helpful · Serves as eyes and ears; volunteers can not enforce District rules and regulations · Offers a needed presence & surveillance · Organizing, training and scheduling is difficult and costly; can be facilitated with core group of volunteers · Training by staff necessary to insure high quality program · Some volunteers may take possessory interest & not be receptive to trail closures if needed · Can convey valuable info on maintenance problems as well as user related issues · Ineffective without reasonable level of ranger enforcement to reinforce volunteer efforts · Multi-agency volunteer program is possible · Limited success at other public agencies · Need uniforms, identification and radios · Participation & enthusiasm can wane due to time commitment · Irresponsible users may react in an abusive manner to volunteers contacting them · Bicycle and equestrian patrols should not be used where bicycles & horses are not allowed · Organizations like ROMP could participate · Program needs to be re-energized by staff 	L	H	M	H	H	H	H	M

L = Low M = Moderate H = High

1.0 EDUCATION (Continued)

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
1.3 Education Videos	<ul style="list-style-type: none"> · Potentially can reach broad audience · Could be used in schools, retail shops and private organizations · May reach irresponsible users · Could be undertaken by university or private organization such as Trail Center · Could be eligible for grant program · Include in bicycling classes such as one offered at West Valley College · Could locate videos at some trailhead 	H	H	H	L	H	H	H	M
1.4 District Special Events and Hikes	<ul style="list-style-type: none"> · Trail use information could easily be combined with other scheduled events · Problematic users do not attend these events · Limited audience · Participants will spread the word 	L	H	L	H	L	H	H	M
1.5 Trail Signs	<ul style="list-style-type: none"> · Value for safety related issues · Required to convey regulations · Conveys site specific information · Renegade users tend to ignore signs · Too many signs detract from quality of experience and are confusing if they conflict · Adds support to enforcement effort · Trail conditions & closures should be more apparent at the trailheads · Provide trail courtesy signs at trailheads 	M	H	L	L	H	M		H
1.6 Information Stations	<ul style="list-style-type: none"> · Ability to contact specific users of preserve · Ineffective without reasonable level of ranger enforcement to reinforce education · Positive peer group contact is helpful · Trail system having multiple entry points will require multiple stations to be effective · Need to be dedicated over long time period · Participation & enthusiasm can wane due to time commitment · Irresponsible users may react in an abusive manner to volunteers contacting them · Scheduling and participation are critical · Staff operated stations may be more effective with some user groups than volunteer stations 	L	H	L	L	L	H	H	M

L = Low M = Moderate H = High

1.0 EDUCATION (Continued)

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
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1.7 Outreach to Schools, Retail Stores and Organizations	<ul style="list-style-type: none"> · Difficult to direct to irresponsible users · Staff could include message when speaking to organizations, school career days, etc. · May not fit into existing school curriculum · May discourage some from visiting trails · Message could reach new users that are unfamiliar with rules · Could result in more use and conflicts · Could combine with existing outreach from organized groups such as ROMP 	L	M	H	M	L	M	L	M
1.8 Safety Events	<ul style="list-style-type: none"> · Probably not well attended unless combined with fun event · Difficult to organize and manage event · Enthusiasm tends to wane · Safety events could be combined with school, retail and organizational events 	M	H	H	M	L	H	H	L
1.9 Press Releases and Interviews	<ul style="list-style-type: none"> · Reaches large audience · Not much control over content and editing · Good contacts with press necessary · Good method of public outreach · May discourage some from visiting trails 	L	L	M	L	L	L		M

2.0 REGULATIONS								
2.1 Bicycle Helmets	<ul style="list-style-type: none"> · Promotes general safety and awareness · May reduce severity of head injuries · Contact with violators could include increased education · Violators could be irresponsible users otherwise difficult to contact · Leads to confusion when user reaches preserve not knowing of requirements · Requirement should be compatible with adjacent lands (Santa Clara Co. requires) · Continuity throughout District lands needed · Ordinance revisions necessary · Need public relations program to spread word; work with retailers to educate users · Consider stipulating helmet standard (ANSI) 	M	H	M	L	M	M	H

L = Low M = Moderate H = High

2.0 REGULATIONS (Continued)

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
2.2 Restrict Use to Trail	<ul style="list-style-type: none"> · Required to reduce resource degradation · Could inhibit informal access for picnics, photography, etc. · Could be directed to specific users such as equestrians and bicyclists · Trailhead sign could state "Bicycles must stay on trail" · Specific problem areas could be signed to state "Closed - Not a Trail" · Using "Closed Area" sign is too restrictive and unclear as to where boundaries are 	M	M	L	L	M	M		M
2.3 User Permit or Pass	<ul style="list-style-type: none"> · Etiquette brochure could accompany permit · Retailers could assist in issuing permits · Extremely difficult to administer and may require permit officer · Leads to confusion; user reaches preserve not knowing of permit requirements · Too many entry trails to regulate · More rangers & volunteers to check permits · Permit fee probably could not offset costs · Taking permit for reckless behavior could be very subjective · Violations must be observed by ranger in order to confiscate permit · Coordination needed with adjacent park agencies 	H	H	H	H	M	H	M	L
2.4 Periods of Use (Days or Hours)	<ul style="list-style-type: none"> · Leads to confusion when user reaches preserve not knowing of restrictions · Considered very restrictive · Bicyclists could still injure themselves · Concentrated bicycle use may be a problem · Too many entry trails to regulate · May not be compatible with adjacent lands · Need to apply to all preserves for continuity 	M	H	H	L	M	M		L
2.5 Limit Number of Users	<ul style="list-style-type: none"> · Leads to confusion when user reaches preserve not knowing of restrictions · May not be compatible with adjacent lands 	M	H	H	H	M	M		L

L = Low M = Moderate H = High

2.0 REGULATIONS (Continued)

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
	<ul style="list-style-type: none"> · Too many trails and impossible to regulate · Acceptable level of use is very subjective · Bicyclists will still injure themselves 								
2.6 Bicycle Speed Limit	<ul style="list-style-type: none"> · Very important since speed relates so closely to fears and safety problems · Can be in designated area or District-wide · Can be specific to passing and blind turns · Requires radar guns and training to enforce · Need increase level of signs and enforcement · Courts likely to uphold enforcement with radar gun if they understand the problems · Radar guns may have undesirable image · Speed estimating and enforcement without radar gun unlikely to be upheld in court · Bicyclists warn others of speed traps · Bicyclists have difficulty monitoring speed without speedometer · Marin Water & San Mateo County and E.B.R.P.D have speed limits and use radar · Ordinance revisions necessary 	M	H	M	M	H	H		H
2.7 Bicycle Walking Zones	<ul style="list-style-type: none"> · Use only in exceptionally dangerous conditions · Compliance is usually very poor · Needs to be a short distance · Signs and brochures need to be clear · Beginning and end need to be clear · Difficult to enforce when applied to runners · Indirectly warns all users to use precaution · May reduce accidents even though compliance is terrible 	H	H	L		M		M	L
2.8 Temporary Trail Closures	<ul style="list-style-type: none"> · May be closed to all use or closed to specific user group · Annual closures required for restoration · Protects sensitive areas · Seasonal closures required for winterization · Closures may occur for hazardous conditions · Equestrian and bicycle closures are very effective when trail is uncompacted & wet 	L	H	L	L	L	L		M

L = Low M = Moderate H = High

2.0 REGULATIONS (Continued)

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
	<ul style="list-style-type: none"> · Generally accepted by public when closure is short term · Advanced warning needed at parking areas & roadside trailheads and interconnecting trails where part of longer loop trail system 								
2.9 One-way Trails	<ul style="list-style-type: none"> · Leads to confusion when user reaches preserve not knowing regulation · Signs and brochures need to be clear · Legal direction may prove difficult or too long; user can not turn around · Steepness may require high level expertise · User group needs input into feasibility · Conflicting reports on degree of compliance · Irresponsible users learn patrol patterns and continue to violate · May be useful on short trail sections to bypass steep and unsafe trail conditions · Uphill trail use could open up steep trails 	M	H	M	L	M	M	M	M
3.0 ENFORCEMENT									
3.1 Ranger Bicycle and Equestrian Patrol	<ul style="list-style-type: none"> · Some users may find this offensive · Some users may feel this promotes objectionable use · Bicycles and horses should not be used where they are not allowed · Patrol procedure would never permit fast pursuits · More trail patrolled in less time · Would require union meet and confer · Variety and sizes of equipment needed to fit all rangers - donations possible · Potential increase of staff injuries · Increased training · Users give advance warning to others · Could build goodwill with all user groups · Could reduce vehicle traffic, pollution and vehicle maintenance 		H	L	M	M	M		M

L = Low M = Moderate H = High

3.0 ENFORCEMENT (Continued)

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
	<ul style="list-style-type: none"> · Increase ranger presence in more areas · Set a proper example for bicyclists by demonstrating trail etiquette · Some agencies report successful and effective ranger bicycle and equestrian patrols 								
3.2 Update Ordinance	<ul style="list-style-type: none"> · Last revisions were in 1983 · Any new regulations require revising ordinance · Staff needs to prepare draft · Legal counsel needs to review · Board needs to adopt revised ordinance · Regulations need to be clear at preserves and in brochure · Courts need to be advised of trail use problems to gain support · Need liaison with local district attorneys 	L	H	L	L	L	M		M
3.3 Ranger Patrol and Profile	<ul style="list-style-type: none"> · Most violations observed result in citations · Education is included when citations and warnings are issued · Increase patrols where problems exist · Word spreads when patrols stepped up · Take transportation away from offenders, including bicycles & horses · Confiscating bicycles and horses may create liability for District and riders may not be able to walk out · Saturate patrol where problems persistent · Adds support to volunteer efforts · Increased foot patrols limits emergency response capabilities · Patrol vehicles provide warning 	L	H	M	M	H	L		M
3.4 Community Service	<ul style="list-style-type: none"> · Court unlikely to grant community service as option to violator · Infractions do not require court appearance 								

L = Low M = Moderate H = High

3.0 ENFORCEMENT (Continued)

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
<p>3.5 Bail Schedule for Violations</p>	<ul style="list-style-type: none"> · District recommends bail schedule to court · Fee structure consistent with other agencies · Court sets bail schedule; not District · Excessively high bails increase ranger court appearances · Court costs increase bail · Need a graduated schedule to penalize repeated offenders · Graduated schedules difficult to manage · Publicize amount of fines over \$100 to encourage compliance · Education is included when writing warnings · Juveniles do not pay same fine as adults · Revise ordinance so equestrian and bicycle infractions have same fine · Ordinance revisions necessary · Publicize fine schedule at trailhead 		M	L	L	L	H		M
4.0 IMPROVEMENTS									
<p>4.1 Improved Trail Surface</p>	<ul style="list-style-type: none"> · Requires imported non-native materials · Soil type and moisture are major factors in providing smooth, stable compacted trails · Initially requires specialized heavy equipment · Increases accessibility to many users · Can detract from natural environment · Confine to persistent problem areas · Very expensive and labor intensive 	M	H			H	H		M
<p>4.2 Passing Areas</p>	<ul style="list-style-type: none"> · Allows passing within reasonable distance · Should be placed within users view · Viable alternative to wider trails · Allows users to negotiate on where they want to be passed · Requires increased cut and fill 	L	M			L	L	L	M

L = Low M = Moderate H = High

4.0 IMPROVEMENTS (Continued)

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
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	<ul style="list-style-type: none"> · Requires removal of more vegetation · Can detract from natural environment 								
4.3 Wider Trails	<ul style="list-style-type: none"> · Increases passing space for multi-use · Desirable width for multi-use is > 6' · Requires increase in cut and fill resulting in visual impacts · Requires removal of more vegetation · Can detract from open space experience · Increased expense and labor intensive · Bicyclists may increase their speed · Volunteers could assist in finishing work · Wide switchbacks difficult to construct · May increase problems with erosion 	H	H			H	M	L	H
4.4 Alternate Routes	<ul style="list-style-type: none"> · Use to increase opportunities for passive experience · Redirect less passive use to alternative routes · Too many alternates can duplicate trail system and negatively impact environment · Most users will choose most attractive route · Alternate routes used to redirect specific user group away from where conflicts exist · Does not reduce conflicts within specific user group · Seek desirable and scenic alternate routes 	H	H			H	H	L	M
4.5 Loop Trails	<ul style="list-style-type: none"> · All users prefer loop trail experience · Will lead to better compliance · Different user groups have different needs in regards to length · Loop trails can disperse trail use · May need interagency cooperation 	H	H			H	H	H	M
4.6 Barriers & Stiles	<ul style="list-style-type: none"> · Use to prohibit specific uses · In using, they may make areas less accessible to physically limited · Horse stile inhibits physically limited · No barrier prevents bicycle access · Stiles needed to prevent motorcycle access in remote areas 	M	H			M	L		L

L = Low M = Moderate H = High

4.0 IMPROVEMENTS (Continued)

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
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	<ul style="list-style-type: none"> · Use pedestrian/wheelchair stile in combination with equestrian stile · May cause visitor to stop and read signs 								
4.7 Volunteer Construction and Maintenance	<ul style="list-style-type: none"> · Indirectly benefits when volunteers gain understanding of trail use impacts · Volunteers can assist in repairing surfaces, widening and other physical improvements · District's volunteer program can be expanded to repair trail damage · Maintenance provides more awareness of user related problems · Mixing user groups can foster better understanding of trail use needs · Volunteers may take possessory interest and not be receptive to trail closures if needed · Projects need to be directed by staff to insure quality and low maintenance · Partnership between staff and volunteers strengthens when working together · Increases interest in caring for land · Is not free but requires good deal of staff attention and direction 	H	H	H		M	H	H	M
4.8 Speed Bumps	<ul style="list-style-type: none"> · Present a hazard and liability problem · Difficult to make visible and not intrusive · Could injure inexperienced bicyclists · Needed more on roads than trails · Tend to breakdown when driven over · Degrades passive users experience · Hard on patrol vehicles · Need warning signs alongside · Irresponsible users may still speed 	L	M			L	H		L
4.9 Trail Maintenance	<ul style="list-style-type: none"> · Trail maintenance is required to keep trail width and surface in good condition · Keep trail shoulders brushed for passing · Maintain trails to required width to accommodate designated trail use · Volunteers are helpful maintaining trails 		H	M	L	M	M	H	M

L = Low M = Moderate H = High

Mitigation Measure	Public and Staff Comments	Planning	Operations	Public Affairs	Administration	Material Costs	Implementation	Volunteers	Effectiveness
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5.0 MONITORING 5.1 Visitor Conflict Reports	<ul style="list-style-type: none"> · Visitor conflict form needs to be readily available to trail users · Visitor may lack objectivity and report may be unreliable · Reporting procedure needs to be explained in signs and brochures · Visitors must be encouraged to report conflicts to rangers · Return address cards need to be provided 	L	M	L		L	M		L
5.2 Violation and Incident Reports	<ul style="list-style-type: none"> · Rangers provide valuable information for understanding and resolving trail conflicts · Number of reports not as useful as content (how, when, where, and why) · Reports need to be comprehensive, objective, & consistent 		M			L			M
5.3 Trail Condition Reports	<ul style="list-style-type: none"> · Monitoring effectiveness of mitigation measures is necessary · Need guidelines to ensure consistency · Volunteers may be too subjective (eye of the beholder) · Need base line information and regular reports to determine increase in damage · Need in conjunction with visitor survey to determine relationship of use 	M	M			L	M		M
5.4 Visitor Surveys	<ul style="list-style-type: none"> · Need user type, numbers and attitudes · Extend over time to compensate for unusual weather, special activities, etc. · Survey method and delivery must be consistent for accountable data · Numerous entry points and long days require numerous participants · Extremely difficult to coordinate with volunteers · Commitment & boredom are a problem · Could contract for survey · Only way to substantiate levels of use · Will not indicate if hikers have diminished due to other incompatible trail uses · Need data for benefit & dissatisfaction levels 	H	M	H	M	H	H	L	M

L = Low M = Moderate H = High

APPENDIX A - SUPPLEMENTAL INFORMATION

Section I Trail Use Guidelines

What are trail use guidelines?

Trail use guidelines are quantitative and qualitative factors considered in determining trail use designations. Quantitative factors include physical characteristics of a trail such as trail width and grade, line-of-sight and side slopes. Qualitative factors are more subjective in nature and address existing trail use conflicts, other preserve activities, trail use on adjacent lands, and past, present and future trail use.

Trail use guidelines are designed to assist the District staff and Board of Directors in implementing adopted trail use policies. The guidelines are meant to be principles that direct the judgement and decision making process. They are intended to provide flexibility in the planning and management of the District's trail system.

The District is currently developing accessibility plans that comply with the Americans with Disabilities Act (ADA). As part of the process, trail access for visitor's having disabilities is being addressed. When completed, trail use considerations contained in the ADA Plan will be incorporated into the trail use guidelines.

Why are trail use guidelines being developed?

Trail use guidelines are being developed to comply with the existing Trail Use Policies, adopted by the Board of Directors in November 1990. The purpose of the policies is to promote safe and enjoyable experiences for all who use the District lands. Trail Use Policy 3.0 states "The Board of Directors will adopt qualitative and quantitative trail use guidelines to aid the Board and staff in determining trail use designations in the implementation of these policies." As pointed out in the preamble to the policies, this policy is not intended to restrict those who may use the District trails, but they may restrict how or under what conditions the trails are to be used (Refer to Trail Use Policies dated November 14, 1990)

How are trail use guidelines going to be used?

Trail use guidelines will be applied to each preserve on an individual basis. A particular trail system will be examined in a comprehensive manner along with all other elements of the preserve's use and management plan. This is to insure that land use decisions relating to such things as environmental education, parking areas and observation platforms become factors in determining appropriate trail use. Use and management plans are reviewed by the Board of Directors in accordance with District's planning process and subject to the Public Notification Procedures.

Trail use guidelines and the planning process.

The trail use guidelines are presented in the following table. They are, generally, in the order they will be considered in the use and management planning process. Many of these guidelines can be applied simultaneously during the process.

What are trail class designations?

The District's trail system is characterized by a wide variety of physical trail conditions. These trails range from level to steep, narrow to wide, and with natural features making each trail somewhat unique. Many of the trails, though, can be grouped together when examining similarities in trail width and grade, side slope, and line of sight. In fact, the majority of trails fall into three classes which are described, herein, as Class A, B and C. Together, these three classes are believed to represent approximately 75% of the District's trail system.

The four physical characteristics that determine a trail class designation are;

- Trail Width - represents the width of the trail pad or graded area including the path in which trail users travel and the shoulders of the path which in many cases may be overgrown.
- Trail Grade - describes the steepness of a trail. It is based on the change in elevation between two points along the length of the trail.
- Side Slope - represents the steepness of the area adjacent to a trail. It is based on the change in elevation between two points along a line perpendicular to a trail.
- Line of Sight - describes the distance a trail user can see along the length of a trail. Large trees, rocks or embankments can limit the line of sight and ability to see oncoming trail users. Line of sight is based on the average height of a trail user travelling in the middle of the trail.

Section II Mitigation Measures for Trail Use Conflicts

What are trail use conflict mitigation measures?

In the future, increasing trail use and changing modes of travel will escalate trail use conflicts. Trail use guidelines and designations may reduce trail conflicts but will not completely resolve them. Unfortunately, trail users will always have different expectations, irresponsible and illegal trail use will continue, and accidents will happen even under the best conditions. It is, therefore, necessary to employ trail use conflict mitigation measures.

Mitigation measures are an array of actions that may be undertaken to augment trail use guidelines and designations. They are essentially the tools used to reduce significant trail use conflicts to an acceptable level. They vary greatly in their scope and application and therefore need to be evaluated on individual merit. These

tools include such things as educational videos, bicycle helmets and one-way trails. Generally speaking, mitigation measures can be grouped into the following five categories.

■ Education

Methods for increasing public awareness and understanding of diverse trail use needs and conflicts

■ Regulations

Rules that may be applied and enforced widespread on District preserves or specific areas and trails

■ Enforcement

Number of rangers and the manner in which regulations are enforced by rangers and administered by the courts

■ Improvements

Construction and maintenance measures that can be undertaken to improve trail use conditions

■ Monitoring

Data gathering and analysis of trail use impacts, trail use guidelines and mitigation measures

What mitigation measures have been undertaken to date?

- An etiquette brochure titled Sharing the Trails, has been developed and made available at preserves and included in mailings and handouts; portions were published in the San Jose Mercury News.
- Signs prohibiting particular trail uses are placed at trail entry points and trail junctions to clearly indicate regulations.
- Bicycle advisory signs stating "Bicyclists - Caution 15MPH", "Reduce Speed - Steep Grade", and "Reduce Speed - Call Out When Passing" are being tested at Fremont Older Open Space Preserve.
- New map signs and brochure maps have been placed at Skyline Ridge and Russian Ridge Open Space Preserves emphasizing trail use designations, distances and terrain.
- Increased ranger patrols are occurring in hotspots where problems are persistent, including a recent ranger information barricade program at Fremont Older Open Space Preserve.
- Seasonal trail closures occur on specific trails to prohibit bicycle and equestrian use during winter months when the trails can be easily damaged.

How are mitigation measures going to be employed?

Many trail use conflicts are related to physical conditions of a trail and levels of trail use. Each situation where conflicts occur may be unique and require individual attention. Other situations may be widespread and mitigation measures can be applied more broadly. In other words, bicycle helmets may be considered appropriate District-wide while one-way uphill trails may be developed in specific areas of a preserve.

The mitigation measures that have been addressed in the attached table can be considered a shopping list when

trying to resolve specific trail use conflicts. Some mitigation measures may not be the panacea they first appear to be. Without fully understanding the relative effectiveness of a measure and budgetary impacts, it may be premature to consider implementation. The purpose of compiling the comprehensive list is to understand the multitude of available tools and weigh their individual merits. Many of the measures will require further evaluation and Board consideration before they can be implemented. On the other hand some measures can be more easily implemented when they are relatively effective and do not require detailed fiscal analysis.

What is included in the Mitigation Measures table?

The following table includes an analysis of mitigation measures that have been identified during the course of this study. The left portion of the table represents comments expressed by the public, staff, and Board committee. Comments are not necessarily supported by each and everyone who participated in the planning process. They are presented to fairly represent those who have commented and believed to add valuable insight into the planning process.

The right portion of the table represents the Board committee's view (based on staff input) of the resources, complexity and relative effectiveness of each measure. The first four columns project the staffing levels that may be needed in respect to planning, operations, public affairs and administrative programs. The fifth column indicates the potential cost that may be associated with materials, publications and contract services. Cost projections do not include staff salaries which are indirectly included in staffing levels. The implementation column represents the complexity and time that may be involved in implementing a particular measure. The seventh column projects the amount of volunteer support and commitment necessary. The last column, and most subjective part of the analysis, is an opinion of relative effectiveness of a measure in respect to other mitigation measures in the table.