

7A. INTRODUCTION TO THE MODEL ENHANCED PRACTICES

The Guidelines and Standards for Land Use Near Stream (Guidelines and Standards), and the corresponding Permitting Tools are the primary focus of this User Manual. However, as they developed the Guidelines and Standards, the members of the Water Resources Protection Collaborative also developed a list of additional practices, which they have entitled the Model Enhanced Practices.

The Model Enhanced Practices consist of voluntary measures which could be undertaken by streamside property owners, cities, the County, the Santa Clara Valley Water District (SCVWD) and developers to provide substantial additional benefits to streams and stream resources. By their nature, the Model Enhanced Practices are proactive in nature. Some would require concerted cooperation among adjacent property owners or jurisdictions, which cannot be easily accomplished through the permitting process.

The following list of Model Enhanced Practices will be further refined by the Collaborative in 2006, but Practices on the current list can be used and incorporated into streamside development plans to improve local environmental conditions. It is anticipated that sometime in 2006 the SCVWD Board of Directors will consider adopting a set of financial and technical incentives to help encourage use of the Model Enhanced Practices.

There is a wide range of Model Enhanced Practices. Some of the Practices can stand on their own, while others would be more effective if bundled with other Practices. Some Practices involve long-term policy and planning work, while others can be used now, and be integrated into individual development or capital improvement projects. Because some of the Model Enhanced Practices tend to require collaboration among neighbors and agencies, it is anticipated that they will provide the basis for future strategic and coordinated efforts between Collaborative member organizations, as well as property owners and developers.

The Model Enhanced Practices have been grouped into the same activity areas as the Guidelines and Standards. However, within each activity area, the Model Enhanced Practices are further divided into the following five categories:

- A. Policy and Planning Work
- B. Public Works or Local Capital Improvements
- C. Enhanced Land Use Permit Requirements/Guidelines
- D. Stream Improvement and Restoration Efforts
- E. Outreach and Education

MODEL ENHANCED PRACTICES

7B. MODEL ENHANCED PRACTICES

I. Riparian Corridor Protection Near Streams and Reservoirs

A. Policy and Planning Work

General Plans

1. Jurisdictions to incorporate stream protection or restoration goals and objectives in General Plans in cooperation with the District.
2. Jurisdictions to incorporate Source Water Protection (SWP) goals/objectives in General Plans in cooperation with the District.

General Planning

1. Jurisdictions to develop a riparian buffer of at least 40 – 150 feet from top of bank or outward dripline of riparian area (whichever is greater).
2. Jurisdictions to develop a riparian protection areas in SWP Zone A (400 ft from reservoir high water line, 200 ft from reservoir tributaries top of bank) and in SWP Zone B (2500 ft from reservoir intakes), and implement measures identified in the District's Source Water Protection Management Guide.

Ordinances

1. Jurisdictions to adopt a comprehensive stream protection ordinance.
2. Jurisdictions to update their local tree protection ordinance to expand the list of protected trees to include riparian species and the recommended planting lists to eliminate non-native invasive species and to promote native species.

B. Public Works or Local Capital Improvements

1. Jurisdiction to consider and implement the watershed stewardship plans when they develop capital improvement plans and evaluate private development proposals.

C. Enhanced Land Use Permit Requirements/Guidelines

1. Plant native vegetation in and near buffer zone to provide more habitat for wildlife and to protect existing habitat from invasive plants.
2. Remove or control non-native invasive plants, where possible, to prevent further propagation and to protect existing riparian resources.
3. Discourage and, where possible, remove other non-native vegetation planting and replace with native riparian vegetation.
4. Take measures to provide in and near-stream riparian vegetation whose canopies provide shade and nutrients for aquatic life.
5. Take measures to create stream characteristics suitable for fish habitat, including riffles, pools, gravel beds, overhanging vegetation & woody debris.
6. Remove barriers to fish passage, including dams where possible.

E. Outreach and Education

1. Improve education efforts in the county to discourage property owner from buying/planting invasive species and plant retailers/wholesalers from selling them. Where possible, coordinate with other efforts to educate retailers.

2. Local jurisdiction to work with SCVWD to implement a program to remove invasive species from watersheds

II. Bank Stability/Streambed Conditions

A. Policy and Planning Work

1. Identify reaches of stream that possess sensitive or riparian habitat values, based on Water District maps or other sources; develop measures to protect such areas. Incorporate this information into District-sponsored internet-based GIS/information system.
2. Consider decreasing the front yard setback on a specific property in order to accommodate greater setback from the stream in the back/side.

B. Public Works or Local Capital Improvements

1. Inform and/or pursue right of way dedications or offers of dedication for flood protection purposes from the property owner and trigger early consultation with District. [District will provide criteria to assist Jurisdictions]
2. Consider future District flood protection needs when zoning land or allowing structures near streams. [District to provide input to Jurisdictions through early consultation.]

C. Enhanced Land Use Permit Requirements/Guidelines

1. Reduce over bank surface runoff from existing yards, commercial and industrial facilities, maintenance roads, and planned developments.

2. Restore meanders and natural stream processes, where possible, including modifying dams, weirs, erosion control measures and water diversions;
3. Reestablish or create floodplain terraces, where possible, to improve flood protection, channel form and environmental values
4. Consider and incorporate, where possible, future District flood protection needs when zoning land or allowing structures near streams. (District will provide input to Jurisdictions through early consultation.)
5. Provide a 20-foot setback in addition to the slope stability setback for maintenance access.
6. For levee sections, recommend a 50 to 100 foot setback from outboard toe of levee to allow for future increases to a channel cross-section, relieve stress on the channel, allow opportunity for future flood protection design and create environmental value.

E. Outreach and Education

1. Develop a program working with residents, cities, and the District to properly remove and discourage non-native vegetation planting and reintroduce native riparian vegetation.

MODEL ENHANCED PRACTICES

III. Encroachments between the Top of Bank

- B. Public Works or Local Capital Improvements
 - 1. No dewatering of natural waterways to construct project.
 - 2. As part of developments, require replacement, removal or reconstruction of bridges/ structures that are not clear span, have piers/structures in the active channel, or are substandard (e.g., tree houses or patio decks).
 - 3. Require that new construction/ replacement be constructed with adequate freeboard to accommodate future widening of the bridge.
 - 4. Require that new construction/ replacement be constructed with the abutments far enough apart to accommodate floodplain widening for flood protection projects
 - 5. If feasible, provide minimum 15 feet clearance under bridge for creeks wider than 50 feet.
- D. Stream Improvement and Restoration
 - 1. Identify and require removal of existing permitted overhanging structures, which cause public health and safety problems and/ or damage to stream resources.
 - 2. Illegal water diversions will be identified and removed as appropriate.
 - 3. Establish a plan and date for the removal of all illegal in-stream dams. For legal dams, ensure there is fish passage and sufficient flows around any such dams.

IV. Erosion Prevention and Repair

- D. Stream Improvement and Restoration
 - 1. When undertaking erosion control, coordinate erosion design and repairs with upstream and downstream property owners/District.
 - 2. Property owners of streamside parcels should identify existing erosion problems in the initial stages before such problems create a significant hazard. Once identified, property owner should take proactive measures to resolve such problems using "soft" erosion control measures where possible.

V. Grading

- C. Enhanced Land Use Permit Requirements/Guidelines
 - 1. Prepare a SWPPP for any grading exceeding 3 cubic yards within 100 feet of top of bank.
 - 2. Provide BMPs, standards, and specifications for erosion control for all earth disturbing activities.

VI. Outfalls, Pump Stations and Site Drainage

- B. Public Works or Local Capital Improvements
 - 1. Jurisdictions will update their storm drain master plans to take into account stream stability and ecology.
 - 2. Retrofit or install filters in existing drainage system to reduce pollutants and include a maintenance plan for cleaning or replacing filters.
 - 3. Install Monitoring Wells near infiltration basins (consult with District).

4. Pretreat stormwater from pump stations prior to discharging to creeks or infiltration basins (retrofitting of existing systems is encouraged).
 5. Jurisdictions to place operational controls on private stormwater pumps consistent with the standard.
- C. Enhanced Land Use Permit Requirements/Guidelines
1. Consider stream stability impacts for new outfalls (if available, utilize District's Hydrologic Modification Plan for guidance).
 2. Flap gates are to be installed in manhole structure adjacent to stream.
 3. Outfall should be at least 2 feet above the stream bottom.
- D. Stream Improvement and Restoration
1. Redirect drainage to the original watershed if a proposed development already has drainage crossing watershed boundaries.
 2. Eliminate or modify existing outfalls that cause erosion.
 3. Identify stream reaches and/or outfalls where trash is a problem and install trash collectors at outfalls where feasible and include a maintenance plan for removal of trash from collectors.

VII. Channelization

- A. Policy and Planning Work
1. Local jurisdictions to use updates to existing planning documents, such as General Plans, Specific Plans and other relevant mechanisms, as an opportunity to incorporate information from other efforts about which stream reaches that have been channelized, hardened or improperly modified should be prioritized for restoration.
- C. Enhanced Land Use Permit Requirements/Guidelines
1. Require developments to daylight buried creeks unless otherwise required by a Specific Area Plan.
 2. Construct road crossings using a clear-span design that avoids impacts to the channel bed and banks. Exceptions (e.g., box culverts, pipes) will only be considered once the applicant has proven that a clear-span design is not possible.

VIII. Utility Encroachments

- C. Enhanced Land Use Permit Requirements/Guidelines
1. Aerial utility crossing will not be placed over sensitive biological resources or vegetation mitigation areas.

IX. Trail Construction

- B. Public Works or Local Capital Improvements
1. Incorporate Water Quality BMP's in design of trails (refer to SJSU Trail Standard Details and Specifications)

MODEL ENHANCED PRACTICES

X. Septic Systems

- B. Public Works or Local Capital Improvements
 - 1. Jurisdictions shall develop and implement Septic Management Plans (includes denitrification of existing systems).
- C. Enhanced Land Use Permit Requirements/Guidelines
 - 1. Consider alternative sewage management systems
 - 2. Remove existing septic and connect to alternative or municipal systems.
- E. Education and Outreach
 - 1. Provide an education program by County Department of Environmental Health (DEH).

XI. Trash Control and Removal

- D. Stream Improvement and Restoration
 - 1. Proactively organize communities to implement measures to eliminate and remove trash.
 - 2. Conduct focused efforts to identify and prevent trash production.
 - 3. Install trash collectors at outfalls/ develop plan for removal of trash from collectors.

XIII. Recycled Water

- B. Public Works or Local Capital Improvements
 - 1. New developments should be double plumbed to allow for use of recycled water, where appropriate.
 - 2. New/existing buildings or high water uses to connect to recycled water, where appropriate.

XIV. Flood Protection

- B. Public Works or Local Capital Improvements
 - 1. Jurisdictions will have at least one Certified Floodplain Manager on staff working with FEMA requirements.
 - 2. Jurisdictions will obtain a Community Rating System score of greater than 8 (<http://www.fema.gov/nfip/crs.htm>)
- C. Enhanced Land Use Permit Requirements/Guidelines
 - 1. For development within special flood hazard zones A, AE, AH, AO, design project to allow for the passage and storage of floodwater within the site and construct the lowest floor to be a minimum of 1 to 2 feet above the 1 percent water surface elevation.
 - 2. In Zone X (areas less than 1 foot of flooding), recommend that the lowest floor and highest adjacent grade be 1 to 2 feet above the existing ground.
 - 3. In zone A (areas where base flood elevations have not been determined) request that a hydraulic analysis be completed to determine the base flood elevation
- D. Stream Improvement and Restoration
 - 1. Encourage or provide incentives for private property owners to decrease storm runoff from their properties.

XV. Stream Restoration Activities

- A. Policy and Planning Work
 - 1. Local jurisdictions in conjunction with SCVWD to conduct an inventory of all or key stream in the jurisdiction (similar to San Jose's Riparian Corridor Inventory), to identify which streams and/or stream reaches have the most stream restoration potential.
 - 2. Use inventory to prioritize and conduct restoration activities.
- D. Stream Improvement and Restoration
 - 1. Encourage property owners to cooperate among themselves to identify and restore stretches of stream by providing guidance on how to do creek restorations, navigate the regulatory process, ensure that the restoration activities are compatible with the overall goals for the entire creek, and apply for grant funding, where available.
 - 2. In places where SCVWD has easement or right of way along certain stream reaches next to private property owners, SCVWD to work in concert with adjacent landowners to identify and conduct restoration and/or other environmental enhancements.

XVI. Stream Monitoring

- A. Policy and Planning Work
 - 1. Provide field team support to the District's Hydrogeomorphic Monitoring Effort to determine designs for improving creek stability and ecology.

XVII. Stream Education

- D. Stream Improvement and Restoration
 - 1. For creeks where SCVWD has prepared analyses of the creek segment cross sections needed for stable stream, distribute literature to streamside property owners showing how the desirable cross section for their creek segment can be designed as a property amenity and address stability/ecological issues on a site specific basis.
 - 2. Distribute literature to streamside property owners showing listings of desirable and undesirable plants with examples of creek-friendly landscape designs.
 - 3. City/County/District to participate and support watershed council stakeholder processes to enhance community stream awareness and develop stream protection/restoration projects.