

County of Los Angeles

Department of Public Works

**Soft-Bottom Channel Maintenance Plan for
the Annual Clearance of Earth-Bottom
Flood Control Channels**

Prepared and Submitted by Flood Maintenance Division

March 2005

Maintenance Plan for the Annual Clearing of Earth-Bottom Flood Control Channels

The following outlines the Department's plan for clearing existing earth-bottom channel facilities to maintain design flood flow capacity:

Soft Bottom Channel Clearing Approach

This approach meets the maintenance standards established in November 1997 for the 100 channel reaches identified in the 1997 permits issued by the U.S. Army Corps of Engineers, the California Department of Fish and Game, and the California Regional Water Quality Control Board to clear vegetation from the earth-bottom channels throughout Los Angeles County.

Reach No. 1: Bell Creek - MTD 963 MCI, SD3

The channel clearing work will involve hand cutting a 15-foot-wide "tunnel" through the vegetation to the right-of-way boundary to train flows to the center of the channel inlet.

The Operator shall not impact the 0.27 acre of vegetation that was allowed to remain in 1997.

Reach No. 2: Dry Canyon (Calabasas) PD T1845, SD3

The channel clearing work will involve maintaining and clearing a 20-foot-wide path along the center line of the channel. A canopy of vegetation (trees along both banks) will be left in place. Hand clearing will be performed annually to keep the center portion of the channel clear and vegetation will be removed from the openings in the crib walls to the extent necessary to prevent structural damage to the crib walls.

The Operator shall not impact the 0.39 acre of vegetation that was allowed to remain in 1997. Trees with a 3-inch DBH or greater shall not be removed. All exotics shall be selectively removed from the area during maintenance activities.

Reach No. 3: Santa Susana Ck MCI, SD5

Hand cutting and clearing vegetation and trees will be done in an 18-foot-wide area by 75-foot-long area at the inlet to the channel. Oak trees will be left in place.

Reach No. 4: Browns Creek, SD5

Mechanical equipment will be used to keep clear all vegetation from bank to bank within the rail and timber revetment.

Reach No. 5: Caballero Creek MCI (West Fork) and Reach No. 6: Caballero Creek MCI (East Fork), SD3

The vegetation clearing work will involve hand clearing a 20-foot-wide path along the center line of the channel.

The vegetation (0.36 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities. Exotics shall be removed during maintenance activities.

Reach No. 7: Bull Creek MCO, SD3

The work will involve hand clearing dead vegetation and trimming tree limbs along the banks to ensure clear flow within the channel. This work will be done only in the first 400 feet of natural

channel downstream from the concrete channel outlet to ensure that flow does not back up into the concrete channel upstream of Victory Boulevard.

The trimming and removal of dead vegetation along the bank within the 400 linear feet shall not exceed a width of 15 feet on each bank. The Operator shall not impact the 1.45 acres vegetation that was allowed to remain in 1997.

Reach No. 8: Project 470 Outlet, SD3

All vegetation in the channel will be kept clear during the dry season using hand clearing methods.

Reach No. 9: Project 106 Outlet, SD3

Brush and tree trimming will be performed where needed to keep growth at the levels that were left in November 1997.

Impacts shall not exceed 0.12 acre.

Reach No. 10: Project No. 469, SD3

Due to a recent toxic spill, no work was performed in November 1997, since virtually all of the vegetation was killed. Vegetation and dead vegetation will be mechanically removed to the extent necessary to prevent restricting flows in the storm drain upstream of Victory Boulevard. This will require clearing the channel for approximately 4,000 feet downstream of Victory Boulevard. The reach will be maintained clear of all vegetation during the dry season.

The Operator shall not impact 2.11 acres of vegetation that was allowed to remain in the channel in 1997.

Reach No. 11: Rowley Channel, SD5

No vegetation existed in November 1997. Mechanical or manual clearing methods will be used to maintain the reach clear of all vegetation during the dry season.

Reach No. 12: Haines Cyn MCO, SD5

Hand clearing of all vegetation will be used to keep the reach clear of vegetation, except for vegetation that was allowed to remain. This process will be repeated annually to prevent growth from restricting flows at the outlet to the channel.

Reach No. 13: Project No 5215 unit 1, SD5

The channel clearing work involve mechanical clearing of the earthen outlet channel with a backhoe and hand cutting all vegetation from the first 250 feet of channel bottom (12- foot wide) downstream at the end of Christie Avenue. Bank vegetation and the remaining 300 feet of the channel will not be cleared.

Reach No. 14: May Channel (MOO into Pacoima Canyon), SD3

Hand clearing work will be preformed to keep reach clear of all vegetation.

The operator shall not impact the 0.5 acre of vegetation that was allowed to remain in 1997.

Reach No. 15: Pacoima Wash, SD3

Mechanical equipment and hand cutting will be used to keep the reach cleared of all vegetation.

The Operator shall not impact 0.01 acre of vegetation that was allowed to remain in 1997.

Reach No. 16: Verdugo Wash – Las Barras Cyn (chnl inlet), SD5
Hand clearing work will be used to keep the reach clear of all vegetation.

Impacts shall not exceed 0.07 acre.

Reach No. 17: Sheep Corral Chnl, SD5

All vegetation will be hand cleared within the channel bottom and portions of the banks for a length of 300 feet.

Impacts shall not exceed 0.14 acre.

Reach No. 18: Engleheard Chnl, SD5

Hand clearing work will only involve dead vegetation and tree branches from between the pipe and wire revetments. All vegetation will be cleared by manual methods during the dry season.

Reach No. 19: Pickens Cyn, SD5

Manual removal of all vegetation adjacent to or growing out of the crib structure will be performed.

Reach No. 20: Webber Chnl (strm @private bridge), SD5

Mechanical equipment will be used to keep the channel clear of all vegetation.

Impacts shall not exceed 0.13 acre (115 linear feet by 50 feet wide)

Reach No. 21: Webber Chnl (main channel inlet d/s bridge), SD5

Hand clearing work will be performed to keep the reach clear of all vegetation.

Impact shall not exceed 0.03 acre.

Reach No. 22: Halls Canyon, SD5

Manual removal of all vegetation adjacent to or growing out of the crib structures will be performed.

Reach No. 23: Flint Cyn MOO, SD5

Hand clearing work will be performed to keep the reach clear of all invasive vegetation.

Impact shall not exceed 0.13 acre.

Reach No. 24: Compton Creek – Los Angeles River to Artesia Freeway, SD2

Mechanical equipment will be used to keep the channel clear of all vegetation.

Reach No. 25: Los Angeles River – Willow Street to Pacific Coast Highway, SD4

Using mechanical equipment, all exotic vegetation will be removed throughout this reach. Riparian vegetation will be kept in place at the level that was left in November 1997.

The Operator shall not impact the 9.37 acres of vegetation that was allowed to remain in 1997 and maintenance activities shall not extend beyond the area cleared in 1997.

Reach No. 26: Project 74 – 500 feet Upstream of Vermont Avenue to Dominguez Channel, SD2
The channel will be cleared using hand labor. Hand labor will be used to trim the vegetation which has been allowed to remain. New growth will not be allowed to become established and will be removed annually by manual methods.

Reach No. 27: Wilmington Drain, Harbor Freeway to Pacific Coast Highway, SD4
All vegetation from the channel in the area upstream of Lomita Boulevard will be kept cleared. Between Lomita Boulevard and Pacific Coast Highway, vegetation will be kept clear from the two channels, but the island will remain. The work will be done with mechanical equipment.

Reach No. 28: Triunfo Ck (PD T2200), SD3
The channel clearing work will involve removing all vegetation from the ungrouted rock levee, hand clearing all vegetation along the levee from the base to a distance of 20 feet.

The Operator shall avoid all impacts to southwestern pond turtles. Clearing shall not extend beyond the area that was cleared in 1997 or as stated in the maintenance plan without prior approvals from the Department. Surveys for sensitive species (i.e., pond turtles) may be required if additional clearing is needed. No native trees shall be removed with a 2 inch diameter at breast height or greater. The 0.2 acre of vegetation that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 29: Las Virgenes Creek (PD T1684) MCI, 803
The channel clearing work will involve hand clearing a 30-foot-wide strip along the watercourse low flow from the debris posts to the right-of-way boundary.

The Operator shall avoid all impacts to southwestern pond turtles. The Operator shall not impact the 0.61 acre of vegetation that was allowed to remain in 1997. No native tree shall be removed with a 2 inch diameter at breast height or greater.

Reach No. 30: Las Virgenes Creek (PD T1350 unit 2) Outlet, SD3
Hand clearing work will be performed to keep the reach clear of all vegetation.

Impacts shall not exceed 0.11 acre. No native trees shall be removed with a 2 inch diameter at breast height or greater.

Reach No. 31: Las Virgenes Creek (PD T2055) 503
Hand clearing work will be performed to keep the reach clear of all vegetation.

Impacts shall not exceed 0.09 acre. No native trees shall be removed with a 2 inch diameter at breast height or greater.

Reach No. 32: Stokes Cyn Channel (PD T043), SD3
The work will involve hand clearing of all vegetation between pipe and wire. Embankment vegetation outside the pipe and wire channel will be left in place.

Reach No. 33: Medea Creek (PD T1378 u.2), SD3
The work will involve mechanical clearing of all vegetation in the channel.

The Operator shall avoid vegetation clearing due to sensitive resources. If any vegetation needs to be cleared during future maintenance activities, the Operator shall provide additional mitigation for those impacts. The entire 0.69 acre mod. area is vegetated. Therefore, if clearing

all vegetation, need to mitigate for an additional 0.69 acre of riparian vegetation. Vegetation shall be removed by hand clearing only. No native trees shall be removed with a 2 inch diameter at breast height or greater.

Reach No. 34: Medea Creek (PD T1005) Main Channel Outlet, SD3

Hand clearing work will be performed to keep reach clear of all vegetation.

Impacts shall not exceed 0.19 acre. No native trees shall be removed with a 2 inch diameter at breast height or greater.

Reach No. 35: Medea Creek Main Channel Inlet, Under Route 101, SD3

Hand clearing will be performed to keep reach clear of all vegetation.

Impact shall not exceed 0.14 acre. No native trees shall be removed with a 2 inch diameter at breast height or greater.

Reach No. 36: Cheseboro main Channel Inlet, SD3

The clearing work will involve hand cutting/ trimming three two-inch diameter trees. New vegetation will be cleared annually to prevent blockage of the inlet during the dry season.

The Operator shall not impact the 0.05 acre of vegetation that was allowed to remain in 1997. The vegetation that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 37: Medea Ck/ Cheseboro Ck Outlet, SD3

Hand clearing work will be performed to keep reach clear of all vegetation.

No work was done and 0.25 acres of vegetation was present in the channel in 1997. The vegetation that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 38: Lindero MCO, SD3

Hand clearing work will be performed to keep reach clear of all vegetation.

Impacts shall not exceed 0.19 acre. No native trees shall be removed with a 2 inch diameter at breast height or greater.

Reach No. 39: Beatty Channel Outlet @ SGR 25+99.00 SD1

This is not an earth-bottom channel. Mechanical equipment will be used to keep the channel outlet clear of all vegetation.

Reach No. 40: San Gabriel River – Santa Fe Dam to Thienes Ave., SD1

From Santa Fe Dam to the San Bernardino Freeway, most of the vegetation consists of mule fat interspersed with various exotic species. In this reach, a 10-foot-wide strip was hand cleared along the toe of each levee to provide room to maintain and inspect the levee. The 10-foot-wide strips along the levee toes will be kept clear of all vegetation annually using a combination of mechanical equipment and hand labor. In the center of the channel, the mule fat was mowed using various types of mowing equipment. The root structures of the plants were not disturbed. Two strips of vegetation, varying from 50 to 75 feet in width, were allowed to remain along each side of the channel invert. In subsequent years, mowing will be accomplished in alternate cycles between the center portion of the channel and the two strips of vegetation.

From the San Bernardino Freeway to Thienes Avenue, portion of the reach will be kept clear of all vegetation using mechanical equipment and hand labor, except for the riparian vegetation allowed to remain in place in November 1997. This process will be repeated annually.

If the Department determines that interim habitat is provided, no additional mitigation will be required for the 44.2 acres. However, if the Department determines that it does not provide interim habitat, the Operator shall provide additional mitigation at a 1:1 ratio.

Reach No. 41: Walnut Creek – San Gabriel River to Baldwin Park Boulevard, SD1

Mechanical equipment will be used to keep the channel clear of all vegetation, except for the riparian habitat allowed to remain in November 1997. Hand work will be necessary to remove some of the vegetation growing in the rock riprap along the channel sides and on the riprap at the downstream end of the concrete channel. Some trimming of the riparian vegetation may be necessary to reduce the impact on flow in the channel as future growth occurs.

Reach No. 42: San Jose Creek – Outlet of concrete channel downstream 1000 ft., SD1

The vegetation will be cleared using mechanical equipment, except for riparian vegetation allowed to remain in November 1997. Trimming of the riparian vegetation may be necessary in the future as growth occurs. This process will be repeated annually.

Reach No. 43: San Gabriel River – Whittier Narrows Dam to Beverly Boulevard, SD1

Mechanical equipment will be used to keep the channel clear of all vegetation, except for the riparian vegetation allowed to remain in November 1997. Trimming of the riparian vegetation may be necessary in the future as growth occurs.

Maintenance activities shall not extend beyond the area cleared in 1997. The vegetation (5.27 acres) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 44: San Gabriel River – Rubber Dams, SD1, 4

Mechanical equipment will be used to keep the channel clear of all vegetation, except for the riparian vegetation allowed to remain in November 1997. Trimming of the riparian vegetation may be necessary in the future as growth occurs.

Maintenance activities shall not extend beyond the area cleared in 1997. The vegetation (5.70 acres) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 45: Sand Canyon (PD T1307) Main Channel Inlet, SD5

Mechanical clearing will be performed to keep reach clear of all vegetation.

Impacts shall not exceed 0.05 acre. No native trees shall be removed with a 2 inch diameter at breast height or greater.

Reach No. 46: Sand Canyon (PD T1307) Main Channel Outlet, SD5

Mechanical clearing will be performed to keep clear of all vegetation.

Impacts shall not exceed 0.06 acre. No native trees shall be removed with a 2 inch diameter at breast height or greater. If additional areas need to be impacted, the areas shall be quantified in the annual report and mitigation for impacts to vegetation will be required.

Reach No. 47: Santa Clara River Main Channel (PDT 1733-Unit 1) SD5

The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.

The Operator shall not impact the 4.51 acres of vegetation that was allowed to remain in 1997. Impacts shall not exceed 0.76 acre (1656 linear feet by 20 feet wide along each levee). Clearing shall not extend more than 20 feet beyond the toe of the levee.

Reach No. 48: Mint Cyn Channel between Sierra Highway and Adon Avenue, SD5

Mechanical and hand clearing work will be performed to keep reach clear of all vegetation.

Reach No. 49: Mint Cyn Channel between Adon Avenue and Scherzinger Lane, SD5

Mechanical and hand clearing work will be performed to keep reach clear of all vegetation. This process will be repeated annually during the dry season.

Reach No. 50: Mint Cyn Channel between Solamint and Soledad, SD5

Mechanical and hand clearing work will be performed to keep reach clear of all vegetation.

The vegetation (0.01 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 51: Mint Cyn MCO (PD 1894)/ Santa Clara River Main Channel, SD5

The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.

Impacts shall not exceed 0.9 acre (932 linear feet by 20 feet wide along each levee). Clearing shall not extend more than 20 feet beyond the toe of the levee. The vegetation (0.01 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 52: Sierra Hwy Rd Drainage (CDR 523.203), SD5

Mechanical and hand clearing work will be performed to keep reach clear of all vegetation.

Impacts shall not exceed 0.4 acre.

Reach No. 53: Santa Clara River Non-main Channel (PD 832) Main Channel Inlet, SD5

Mechanical and hand clearing work will be performed to keep reach clear of all vegetation.

Impact shall not exceed 0.03 acre.

Reach No. 54: Santa Clara River Non-main Channel (PD 832) Main Channel Outlet, SD5

Mechanical and hand clearing work will be performed to keep reach clear of all vegetation.

Impact shall not exceed 0.31 acre.

Reach No. 55: Santa Clara River Main Channel (PD's 910, 832, 1758, & 1562 Unit 2), SD5

The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.

Impact shall not exceed 2.75 acre. Clearing shall not extend more than 20 feet beyond the toe of the levee.

Reach No. 56: Santa Clara River Main Channel (PD 1562 Unit 2), SD5

The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.

Impacts shall not exceed 0.47 acre. Clearing shall not extend more than 20 feet beyond the toe of the levee.

Reach No. 57: Whites Cyn (PD T704 MCI), SD5

Mechanical or hand clearing work will be performed to keep clear of all vegetation.

The vegetation that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 58: Santa Clara River Main Channel (PD 374), SD5

The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.

Impacts shall not exceed 0.95 acre. Clearing shall not extend more than 20 feet beyond the toe of the levee.

Reach No. 59: Santa Clara River Main Channel (PD 374), SD5

The channel clearing work will involve mechanical and hand removal of all vegetation within 20 feet from the levee slope lining along the entire reach.

Impacts shall not exceed 0.60 acre. Clearing shall not extend more than 20 feet beyond the toe of the levee.

Reach No. 60: Santa Clara River Main Channel (PD 1339 & 374), SD5

The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.

Impacts shall not exceed 1.50 acre. Clearing shall not extend more than 20 feet beyond the toe of the levee.

Reach No. 61: Santa Clara River Main Channel (PD 659), SD5

The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.

Impacts shall not exceed 0.75 acre. Clearing shall not extend more than 20 feet beyond the toe of the levee.

Reach No. 62: Santa Clara River Main Channel (PD 659 & 754), SD5

The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the levee slope lining along the entire reach.

Impacts shall not exceed 2.80 acre. Clearing shall not extend more than 20 feet beyond the toe of the levee.

Reach No. 63: Oak Ave Rd Drainage (CDR 523.081), SD5

The channel clearing work will involve mechanized removal of all vegetation bank to bank.

Impacts shall not exceed 0.85 acre.

Reach No. 64: Soledad Cyn Rd Drainage (CDR 523.071 D Outlet), SD5

The channel clearing work will involve clearing an 8-foot-wide path along the center line of the channel. All vegetation will be removed by hand labor.

Impacts shall not exceed 0.10 acre (8 feet wide by 577 linear feet).

Reach No. 65: Soledad Cyn Rd Drainage (CDR 523.071 E Outlet), SD5

The channel clearing work will involve clearing a 12-foot-wide path along the center line of the channel. All vegetation will be removed by hand labor.

Impacts shall not exceed 0.08 acre.

Reach No. 66: Santa Clara River Main Channel (PD 1538), SD5

The channel clearing will involve mechanized removal of all vegetation within 20 feet from the slope lining along the entire reach.

Clearing shall not extend more than 20 feet beyond the toe of the levee.

Reach No. 67: Bouquet Cyn Upper (PD's 1201, 802, 700B, & 625B), SD5

The channel clearing work will involve mechanical clearing and grading of all vegetation, except for a 10-foot-wide strip near the center line of the channel. This process will be repeated annually, except that the 10-foot strip left will alternate from one side of the channel to the other.

The vegetation (1.33 acres) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 68: Haskell Cyn Channel (PD T1930 MCI), SD5

Mechanical clearing work will be performed to keep reach clear of all vegetation.

The vegetation (0.61 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 69: Bouquet Cyn Middle (PD's 722, 773, 1365, 1065, & 451), SD5

The channel clearing work will involve mechanical clearing and grading of all vegetation, except for a 10-foot-wide strip near center line of the channel. This process will be repeated annually, except that the 10-foot strip will alternate from one side of the channel to the other.

The vegetation (0.62 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 70: Bouquet Cyn Lower (PD's 544 & 345), SD5

The channel clearing work will involve mechanical clearing and grading of all vegetation, except for a 10-foot-wide strip near the center line of the channel. This process will be repeated annually, except that the 10-foot strip left will alternate from one side of the channel to the other. The vegetation (0.02 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 71: Santa Clara River Main Channel (PD 1946), SD5

The channel clearing work will involve mechanized removal of all vegetation within 20 feet from the base of the slope lining along the entire reach.

Clearing shall not extend more than 20 feet beyond the toe of the levee.

Reach No. 72: South Fork – Santa Clara River (Smizer Ranch MCI), SD5

The channel clearing work will involve hand clearing dead vegetation and cutting invasive and trimming riparian vegetation that would obstruct flows. Tree canopy will be retained, yet a clear “tunnel” path will be provided to convey flows.

Reach No. 73: Wildwood Cyn Channel (PD T361) Main Channel Inlet, SD5

Mechanical and hand clearing work will be performed to keep reach clear of all vegetation.

Impact shall not exceed 0.05 acre.

Reach No. 74: Wildwood Cyn Channel (PD T361), SD5

Mechanical or hand clearing work will be performed to keep reach clear of all vegetation.

Impact shall not exceed 0.02 acre.

Reach No. 75: South Fork – Santa Clara River (PD's 725, 916, 1041, & 1300), SD5

The channel clearing work will involve mechanical clearing and grading of all vegetation bank to bank from Lyons Avenue to Orchard Village Road.

Mechanical grading and clearing of invasive vegetation from bank to bank will be performed from Orchard Village Road to the confluence with Newhall Creek.

Mechanical clearing of all vegetation will be done along the base of the concrete levee from the confluence with Newhall Creek to Magic Mountain Parkway. A 20-foot-wide strip will be maintained clear along the entire length of the levee and 45 degree grading of low-flow channels from side outlets to the center of the watercourse will also be maintained clear of all vegetation to minimize pounding and blockage of side outlet flows. A center line watercourse low flow 12-foot wide will be maintained clear of all vegetation and will be graded along the entire length in this reach. Two island areas supporting mature trees will be left in place as well as the riparian vegetation. Tree pruning of dead branches and limbs that could obstruct flow will be removed by hand labor.

The vegetation (15.37 acres) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 76: Pico Cyn (PD 813), SD5

The channel clearing work will involve bank-to-bank removal of all vegetation using mechanical equipment.

Reach No. 77: Newhall Ck Outlet, SD5

Mechanical equipment will be used to maintain the reach clear of all vegetation.

The vegetation (0.89 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 78: Placenta Creek, SD5

Mechanical equipment will be used to maintain the reach clear of all vegetation.

The vegetation (0.01 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 79: South Fork – Santa Clara River (Valencia Blvd Bridge Stabilizer), SD5
Mechanical equipment will be used to maintain the reach clear of all vegetation.

The vegetation (0.02 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 80: South Fork – Santa Clara River (PD's 1947 & 1946), SD5
The channel clearing work will involve mechanical removal of all vegetation within 20 feet from the toe of the concrete levee along the entire length.

Clearing shall not extend more than 20 feet beyond the toe of the levee. The vegetation (2.05 acres) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 81: Santa Clara River Non-main Channel (PD 2138), SD5
Mechanical equipment will be used to maintain the reach clear of all vegetation.

Reach No. 82: Santa Clara River Main Channel (PD 2278), SD5
Channel clearing work will involve mechanically removing all vegetation within 20 feet from the toe of the concrete levee along the entire reach.

Future maintenance activities shall involve mechanical means and shall not extend more than 20 feet beyond the toe of the levee, impacts within this reach shall not exceed 0.40 acre.

Reach No. 83: Santa Clara River Non-main Channel (PD T1074) Lateral A.8 Inlet, SD5
Mechanical equipment will be used to maintain the reach clear of all vegetation.

Impacts shall not exceed 0.33 acre (103 linear feet by 140 feet wide).

Reach No. 84: Santa Clara River Non-main Channel (PD T1074) Main Channel Inlet, SD5
Mechanical equipment will be used keep all vegetation clear in this reach.

The vegetation (0.02 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 85: Santa Clara River Non-main Channel (PD T1074) Main Channel Inlet, SD5
Mechanical equipment will be used to maintain the reach clear of all vegetation.

Impact shall not exceed 0.16 acre (140 linear feet by 50 feet wide).

Reach No. 86: Violin Cyn MCO, SD5
Mechanical equipment will be used to maintain the reach clear of all vegetation.

The vegetation (0.41 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 87: The Old Road Drainage (CDR 525.021D) Outlet, SD5
The channel clearing work will involve hand cutting and clearing a 20-foot path from the riprap outlet to the main watercourse, Castaic Creek.

Reach No. 88: Hasley Canyon Upper (PD T1496), SD5

The channel clearing work will involve mechanical equipment to remove all vegetation from bank to bank from Sharp Road to 755 feet upstream. From 330 feet downstream of Sharp Road to Sharp Road, hand clearing will be done.

Impacts shall not exceed 0.42 acre (1085 linear feet by 17 feet wide).

Reach No. 89: Hasley Canyon South Fork (PD T1496), SD5

The channel clearing work will involve hand labor clearing of alluvial sage scrub.

The vegetation (0.02 acre) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 90: Hasley Canyon Lower (North Fork PD T1496), SD5

The channel clearing work will involve hand clearing and mechanized removal of vegetation. Portions of the channel bottom will be denuded of vegetation while leaving the earthen bank vegetated, clusters of mature growth in the channel bottom will remain to the level it was left in November 1997.

The vegetation (0.19 acre) that was allowed to remain in 1997 shall be impacted during future maintenance activities.

Reach No. 91: San Martinez Chiquito Cyn Channel u/s of Keningston Rd, SD5

The channel clearing work will involve removal of all vegetation within the pipe and wire channel using hand labor, but the embankment vegetation will be left in place.

Reach No. 92: San Martinez Chiquito Cyn Channel unnamed tributary, u/s of Keningston Rd (N. Fork), SD5

The channel clearing work will involve removal of all the vegetation within the pipe and wire channel using hand labor, but the embankment vegetation will be left in place.

Reach No. 93: San Martinez Chiquito Cyn Chnl between Keningston Road and Val Verde Park, SD5

The channel clearing work involve removal of all the vegetation within the pipe and wire channel using hand labor, but the embankment vegetation will be left in place.

Reach No. 94: San Martinez Chiquito Cyn Chnl between Val Verde Park to d/s of Madison St, SD5

The channel clearing work will involve removal of all the vegetation within the pipe and wire channel using hand labor, but the embankment vegetation will be left in place.

Reach No. 95: Project No. 1224, SD5

The channel clearing work will involve removal of all vegetation within the pipe and wire channel using mechanical equipment, but the embankment vegetation will be left in place.

Reach No. 96: PD 1591, Calabasas, SD3

The channel clearing will involve removing all vegetation from the inlet and outlet approaches to the box culvert under Vicasa Drive. Clearing work will be done by hand labor and only within the dedicated right of way.

Reach No. 97: PD T1982, Castaic Creek, SD5

The channel clearing work will involve hand cutting and mechanized removal of all vegetation and trees along the entire length of the levee at a width of 20 feet and clearing and grading 45-degree, 12-foot-wide low flows from the side outlets to the center of the main watercourse.

The Operator shall leave a total of 1.17 acre of vegetation (1.17 acres) that was allowed to remain in 1997 shall not be impacted during future maintenance activities.

Reach No. 98: Walnut Creek – Channel Inlet, SD1

To the extent that a storm flows do not keep the inlet free of vegetation, mechanical equipment will be used to keep the inlet clear of all vegetation. No regrowth will be allowed to remain.

Impact shall not exceed 0.03 acre.

Reach No. 99: Kagel Canyon – Tujunga Wash, SD5

Hand clearing work will be performed to keep all vegetation clear in this reach.

Reach No. 100: Dry Canyon, Calabasas Creek Inlet, SD3

The channel clearing work will involve hand clearing all vegetation at the channel inlet. Bank vegetation will be left in place.