

**Table 4. District BMPs for IPMP**

BMP ID#	Best Management Practices
1	All pesticide use shall be implemented consistent with <u>written</u> Pest Control Recommendations prepared annually by a licensed Pest Control Adviser. <u>The Pest Control Adviser shall ensure that all pesticide applications are performed at the time of year and phenological window for maximum effectiveness, thereby increasing treatment efficacy and reducing the need for follow-up applications.</u>
2	<del>Surfactants and other</del> Adjuvants shall be used and applied consistent with the District's Pest Control Recommendations.
3	Applicators shall follow all pesticide label requirements and refer to all other BMPs regarding mandatory measures to protect sensitive resources and employee and public health during pesticide application. <u>All District field crew who perform herbicide treatments shall have specialized experience and training in pesticide safety, IPM principles, and special status species.</u>
4	Pesticide applicators shall have or work under the direction of a person with a Qualified Applicator License (QAL) or Qualified Applicator Certificate (QAC). <u>As appropriate, the District shall implement QAC certification requirements for additional field staff to enhance field crew training.</u> Contractors and grazing and agricultural tenants may apply approved <del>pesticides</del> herbicides after review and approval by the District and under the direction of QAL/QAC field supervisors. <u>After review and approval by the District and under the direction of QAL/QAC, contractors may apply approved fungicides to District preserves for the research and control of Sudden Oak Death (SOD).</u> As needed for the control of mosquitos, <u>cattle grazing rangers may apply District-approved bacterial pathogens to water troughs in District preserves.</u> Employees, contractors and tenants may install approved ant and roach bait stations inside buildings in tamper-proof containers without review by a QAL/QAC. Tenants may not use rodenticides; only qualified District staff or District contractors may use approved rodenticides and these should only be used in the event of an urgent human health issue, <u>in a manner consistent with the product label, and in anchored, tamper-proof containers inside buildings.</u>
5	All storage, loading and mixing of pesticides shall be set back at least 300 feet from any aquatic feature or special-status species or their habitat or sensitive natural communities. <u>Applicators shall use an air gap or anti-siphon device to prevent backflow while loading.</u> All mixing and transferring shall occur within a contained area. Any transfer or mixing on the ground shall be within containment pans or over protective tarps <u>and away from drain inlets, culverts, wells, areas with porous or erosion-prone soil, or other features that may allow for runoff.</u>
6	<u>As deemed necessary by the Pest Control Adviser, QAL, or QAC, appropriate, non-toxic colorants or dyes shall be added to the herbicide mixture to determine treated areas and prevent over-spraying, particularly in public areas.</u>
7	Application Requirements - The following general application parameters shall be employed during <del>herbicide</del> pesticide application: <ul style="list-style-type: none"> <li>▲ Application shall cease when weather parameters exceed label specifications, when wind at site of application exceeds 7 miles per hour (MPH), or when precipitation (rain) occurs or is forecasted with greater than a 40 percent probability in the next 24-hour period to prevent <del>sediment and herbicides</del> from entering the <u>loss of efficacy and lessen the potential for pesticides to enter surface water via surface runoff;</u></li> <li>▲ All restrictions and limitations, including those on irrigation, cultivation, re-entry, etc., <u>as described on the pesticide product label shall be followed for sites treated with pesticides;</u></li> <li>▲ Spray nozzles shall be configured to produce a relatively large droplet size;</li> <li>▲ Low nozzle pressures (30-70 pounds per square inch [PSI]) shall be observed;</li> <li>▲ Spray nozzles shall be kept within 24 inches of vegetation during spraying;</li> <li>▲ <u>Application equipment shall be calibrated periodically per manufacturer specifications or frequently enough such that equipment is applying pesticides according to label directions;</u></li> <li>▲ <u>Drift and overspray avoidance measures shall be used to prevent drift in all locations. Particular attention shall be paid to areas where target weeds and pests are in proximity to special-status species or their habitat. Such measures can consist of, but would not be limited to the use of plastic shields around target weeds and pests and adjusting the spray nozzles of application equipment to limit the spray area selecting and using appropriate spray nozzles and pressures. Spray areas may also be limited by using application methods such as spot treatments and thin line treatments of one-inch wide or less.</u></li> </ul>

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	<p>▲ Due to the potential presence of temperature inversion layers, no spraying shall be conducted on designated "Spare the Air" days.</p>
8	<p>Notification of Pesticide Application – Signs shall be posted notifying the public, employees, and contractors of the District's use of pesticides. The signs shall consist of the following information: <del>signal word</del>, product name, <u>signal word</u>, and manufacturer, active ingredient,; and EPA registration number; target pest; preserve name; treatment location in preserve; date and time of application; date which notification sign may be removed; and contact person with telephone number. Signs shall generally be posted 24 hours before the start of treatment and notification shall remain in place for 72 hours after treatment ceases. In no event shall a sign be in place longer than 14 days without dates being updated. See the IPM Guidance Manual for details on posting locations, posting for pesticide use in buildings and for exceptions.</p>
9	<p>Disposal of Pesticide Containers – <del>Disposal-Cleanup</del> of all <del>herbicide pesticide</del> and adjuvant containers shall follow the product label and local waste disposal regulations. This generally consists of <del>be</del> triple rinsing with clean water at an approved site and <del>the rinsate shall be disposed of by placing it in</del> adding the rinsate to the batch tank for application. Used containers shall be punctured on the top and bottom to render them unusable, unless said containers are part of a manufacturer's container recycling program, in which case the manufacturer's instructions shall be followed. Disposal of non-recyclable containers shall be at legal dumpsites. Equipment shall not be cleaned and personnel shall not bathe in a manner that allows contaminated water to directly enter any body of water within the treatment areas or adjacent watersheds. <del>Disposal of all pesticide containers shall follow label requirements and local waste disposal regulations.</del></p>
10	<p>All appropriate laws and regulations pertaining to the use of pesticides and safety standards for employees and the public, as governed by the U.S. Environmental Protection Agency, the California Department of Pesticide Regulation, and local jurisdictions shall be followed. All applications shall adhere to label directions for application rates and methods, storage, transportation, mixing, and container disposal. All contracted applicators shall be appropriately licensed by the state. District staff shall coordinate with the County Agricultural Commissioners, and all required licenses and permits shall be obtained prior to pesticide application.</p>
11	<p>Sanitation and Prevention of Contamination - All personnel working in infested areas shall take appropriate precautions to not carry or spread weed seed or SOD-associated spores outside of the infested area. Such precautions will consist of, as necessary based on site conditions, cleaning of soil and plant materials from tools, equipment, shoes, clothing, or vehicles prior to entering or leaving the site.</p>
12	<p>All staff, contractors, and volunteers shall be properly trained to prevent spreading weeds and pests to other sites.</p>
13	<p>District staff shall appropriately maintain facilities where tools, equipment, and vehicles are stored free from invasive plants.</p>
14	<p>District staff shall ensure that rental equipment and project materials (especially soil, rock, erosion control material and seed) are free of invasive plant material prior to their use at a worksite.</p>
15	<p>Suitable onsite disposal areas shall be identified to prevent the spread of weed seeds.</p>
16	<p>Invasive plant material shall be rendered nonviable when being retained onsite. Staff shall desiccate or decompose plant material until it is nonviable (partially decomposed, very slimy, or brittle). Depending on the type of plant, disposed plant material can be left out in the open as long as roots are not in contact with moist soil, or can be covered with a tarp to prevent material from blowing or washing away.</p>
17	<p>District staff shall monitor all sites where invasive plant material is disposed on-site and treat any newly emerged invasive plants.</p>
18	<p>When transporting invasive plant material off-site for disposal, the plant material shall be contained in enclosed bins, heavy-duty bags, or a securely covered truck bed. All vehicles used to transport invasive plant material shall be cleaned after each use.</p>
19	<p>Aquatic Areas – <del>Shortly before treatment. A</del> District-approved <u>qualified biologist or other District-approved personnel</u> shall survey <del>all the</del> treatment sites <del>prior to work</del> to determine whether any aquatic features are located onsite. <del>In addition, o</del>On a repeating basis, grassland treatment sites shall be surveyed once every five years and brushy and wooded sites shall be surveyed <u>by a District-approved biologist</u> once every five years. Brush removal on rangelands will require biological surveys before work is conducted in any year. Aquatic features are defined as any natural or manmade lake, pond, river, creek, drainage way, ditch, spring, saturated</p>

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	<p>soils, or similar feature that holds water at the time of treatment or typically becomes inundated during winter rains. <u>Treatment sites are defined as areas where IPM activity, including manual, mechanical, and chemical treatment, is expected to occur.</u> If during the survey it is found that aquatic features are present within 15 feet of the proposed treatment area, the District shall either eliminate all treatment activities within 15 feet of the aquatic feature from the project (i.e. do not implement treatment actions in those areas) or if the District chooses to continue treatment actions in these areas, it shall <u>use pesticides and adjuvants labeled for aquatic use and</u> follow the requirements of the mitigation measure for special-status wildlife species and the CDFW Streambed Alteration Agreement.</p>
20	<p>Application of <del>herbicides</del> pesticides shall be conducted in accordance with the California Red-Legged Frog Injunction (Center For Biological Diversity v. U.S. Environmental Protection Agency (2006) Case No.: 02-1580-JSW) in known or potential California red-legged frog habitat specifically by: not applying specified pesticides within 15 feet of aquatic features (including areas that are wet at time of spraying or areas that are dry at time of spraying but subsequently might be wet during the next winter season); utilizing only spot-spraying techniques and equipment by a certified applicator or person working under the direct supervision of a certified applicator; and not spraying during precipitation or if precipitation is forecast to occur within 24 hours before or after the proposed application. Preserves in which these precautions must be undertaken are: Miramontes Ridge, Purisima Creek Redwoods, El Corte de Madera, La Honda Creek, Picchetti Ranch, Russian Ridge, Sierra Azul, Tunitas Creek, Skyline Ridge, Rancho San Antonio, Monte Bello and Coal Creek OSPs and Toto Ranch.</p>
21	<p>A District-approved biologist shall survey all selected treatment sites <del>prior to</del> <u>shortly before</u> work to determine site conditions and develop any necessary site-specific measures. <u>Treatment sites are defined as areas where IPM activity, including manual, mechanical, and chemical treatment, is expected to occur.</u> In addition, on a repeating basis, grassland treatment sites shall be surveyed <u>by a District-approved biologist</u> once every five years and brushy and wooded sites shall be surveyed once every five years. Brush removal on rangelands will require biological surveys before work is conducted in any year. Site inspections shall evaluate existing conditions at a given treatment site including the presence, population size, growth stage, and percent cover of target weeds and pests relative to native plant cover and the presence of special-status species and their habitat, or sensitive natural communities.</p> <p>In addition, annual worker environmental awareness training shall be conducted for all treatment field crews and contractors for special-status species and sensitive natural communities determined to have the potential to occur on the treatment site by a District approved biologist. The education training shall be conducted prior to starting work at the treatment site and upon the arrival of any new worker onto sites with the potential for special-status species or sensitive natural communities. The training shall consist of a brief review of life history, field identification, and habitat requirements for each special-status species, their known or probable locations in the vicinity of the treatment site, potential fines for violations, avoidance measures, and necessary actions if special-status species or sensitive natural communities are encountered.</p>
22	<p>Nesting Birds - For all IPM activities that could result in potential noise and other land disturbances that could affect nesting birds (e.g., tree removal, mowing during nesting season, mastication, brush removal on rangelands), treatment sites shall be surveyed <u>within two weeks prior to initiating activity</u> to evaluate the potential for nesting birds. Tree removal will be limited, whenever feasible, based on the presence or absence of nesting birds. For all other treatments, if birds exhibiting nesting behavior are found within the treatment sites during the bird nesting season: March 15 – August 30 for smaller bird species such as passerines and February 15 - August 30 for raptors, impacts on nesting birds will be avoided by the establishment of appropriate buffers around active nests. The distance of the protective buffers surrounding each active nest site are: <del>500</del> <u>1,000</u> feet for large raptors such as buteos, <del>250</del> <u>500</u> feet for small raptors such as accipiters, and 250 feet for passerines. The size of the buffer may be adjusted by a District biologist in consultation with CDFW and USFWS depending on site specific conditions. Monitoring of the nest by a District biologist during and after treatment activities will be required if the activity has potential to adversely affect the nest. These areas can be subsequently treated after a District biologist or designated biological monitor confirms that the young have fully fledged, are no longer being fed by the parents and have left the nest site. For IPM activities that clearly would not have adverse impacts to nesting birds (e.g. treatments in buildings and spot spraying with herbicides), no survey for nesting birds would be required.</p>

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23	San Francisco dusky-footed woodrat and Santa Cruz kangaroo rat – All District staff, volunteers or contractors who will implement treatment actions shall receive training from a qualified biologist on the identification of dusky-footed woodrat, Santa Cruz kangaroo rat, and their nests <u>or burrows</u> . Generally, all San Francisco dusky-footed woodrat <u>and their nests, and</u> Santa Cruz kangaroo rat <u>and their burrows</u> nests will be avoided and left undisturbed by proposed work activities. If a nest site <u>or burrow</u> will be affected, the District will consult with CDFW. Rodenticides, snap traps, and glue boards shall not be used in buildings within 100 feet of active San Francisco dusky-footed woodrat nests or Santa Cruz kangaroo rat <u>nests burrows</u> ; instead rodent control in these areas will be limited to non-lethal exclusion and relocation activities including relocation of nests if approved by CDFW. Tenants will contact the District for assistance in managing rat populations in buildings and under no circumstances will be allowed to use rodenticides.
24	Where appropriate, equipment modifications, mowing patterns, and buffer strips shall be incorporated into manual treatment methods to avoid disturbance of grassland wildlife.
25	Rare Plants – <del>Shortly before treatment, a</del> All selected treatment sites shall be surveyed <u>by District-approved personnel with environmental awareness training (BMP #20)</u> prior to work to determine the potential presence of special-status plants. <u>Rare plant surveys shall also be conducted during the appropriate season to assess the occurrence, if any, of dormant or overwintering plant species that may not be visible during the pre-treatment survey. If special-status plants are reported, information such as species and location shall be uploaded into an electronic inventory system and a biomonitor shall be present to oversee the planned IPM treatment.</u> On a repeating basis, grassland treatment sites shall be surveyed <u>by a District-approved biologist</u> once every five years and brushy and wooded sites shall be surveyed once every five years. Brush removal on rangelands will require biological surveys before work is conducted in any year. <u>Treatment sites are defined as areas where IPM activity, including manual, mechanical, and chemical treatment, is expected to occur. A 1530-foot buffer shall be established from special-status plants. No application of herbicides shall be allowed within this buffer. Non-herbicide methods can be used within 1530 feet of rare plants but they shall be designed to avoid damage to the rare plants (e.g., pulling).</u>
26	Cultural Resources – District staff, volunteer crew leaders, and contractors implementing treatment activities shall receive training on the protection of sensitive archaeological, paleontological, or historic resources (e.g., projectile points, bowls, baskets, historic bottles, cans, trash deposits, or structures). In the event volunteers would be working in locations with potential cultural resources, staff shall provide instruction to protect and report any previously undiscovered cultural artifacts that might be uncovered during hand-digging activities. If archaeological or paleontological resources are encountered on a treatment site and the treatment method consists of physical disturbance of land surfaces (e.g., mowing, brush cutting, pulling, or digging), work shall avoid these areas or shall not commence until the significance of the find can be evaluated by a qualified archeologist. This measure is consistent with federal guidelines 36 CFR 800.13(a), which protects such resources in the event of unanticipated discovery.
27	Post-Treatment Monitoring – District staff shall monitor IPM activities within two months after herbicide treatment (except for routine minor maintenance activities which can be evaluated immediately after treatment) to determine if the target pest or weeds were effectively controlled with minimum <del>effect</del> <u>impact</u> to the environment and non-target organisms. Future treatment methods in the same season or future years shall be designed to respond to changes in site conditions.
28	Erosion Control and Revegetation - For sites with loose or unstable soils, steep slopes (greater than 30 percent), where a large percentage of the groundcover will be removed, or near aquatic features that could be adversely affected by an influx of sediment, erosion control measures shall be implemented <u>before or after treatment as appropriate</u> . These measures could consist of the application of forest duff or mulches, straw bales, straw wattles, other erosion control material, seeding, or planting of appropriate native plant species to control erosion, restore natural areas, and prevent the spread or reestablishment of weeds. Prior to the start of the winter storm season, these sites shall be inspected to confirm that erosion control techniques are still effective. <u>When possible, applicators may select vegetation control techniques <del>select herbicides to maintain sufficient vegetative cover to mitigate erosion.</del></u>
29	Operation of noise-generating equipment (e.g., chainsaws, wood chippers, brush-cutters, pick-up trucks) shall abide by the time-of-day restrictions established by the applicable local jurisdiction (i.e., City and/or County) if such noise activities would be audible to receptors (e.g., residential land uses, schools, hospitals, places of

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	<p>worship) located in the applicable local jurisdiction. If the local, applicable jurisdiction does not have a noise ordinance or policy restricting the time-of-day when noise-generating activity can occur, then the noise-generating activity shall be limited to two hours after sunrise and two hours before sunset, generally Monday through Friday. Additionally, if noise-generating activity would take place on a site that spans over multiple jurisdictions, then the most stringent noise restriction, as described in this BMP or in a local noise regulation, would apply.</p> <p>For IPM sites where the marbled murrelet has the potential to nest, as identified in the District's 2014 maps (see attachment) if noise-generating activities would occur during its breeding season (March 24 to September 15), the IPM activities would be subject to the noise requirements listed in the most current in the CDFW RMA issued to the District (see attachment).</p>
30	All motorized equipment shall be shut down when not in use. <del>Idling of e</del> Equipment and off-highway vehicles <del>idling</del> will be limited to 5 minutes.
31	<u>Grazing Animals – Some herbicides, such as Milestone, Transline, and Capstone contain label language restricting grazing and/or use of compost. Always read and follow label directions.</u>
32	<u>Surface and Groundwater Protection – Applicators shall use BMPs regarding the prevention of drift, runoff, erosion, and water quality impairment. All work shall be in compliance with the 3 CCR § 6800 (Groundwater Protection). When possible, plant covers such as landscaping shall be established on bare soil and hillsides to minimize pesticide and sediment runoff. Pesticides without an aquatic label shall not be applied to: 1) permeable soils, soils prone to or with evidence of erosion without containment strategies (e.g., vegetative buffers, sediment barriers); or 2) in areas where aquatic habitats are located within 15 feet of the application site. In no cases should pesticides be applied to surface water bodies unless appropriate permits are obtained.</u>
33	<u>Application of glyphosate and cholecalciferol shall be conducted in accordance with the Goby -11 Injunction (Center for Biological Diversity v. EPA, Case No. 07-2794-JCS (N.D. Cal.), May 30, 2007) in applicable and relevant habitats for those species named in the Injunction that occur within the District. Applicable habitats for each species named in the Injunction are defined in the 2010 court order for the Center for Biological Diversity v. EPA. Because the interim protective measures (i.e., no-use buffer zones adjacent to certain features within certain geographic areas) established in the 2010 order vary depending on the species at issue and the pesticide being used, the USEPA webpage should be consulted: <a href="https://www.epa.gov/endangered-species/interim-use-limitations-eleven-threatened-or-endangered-species-san-francisco-bay">https://www.epa.gov/endangered-species/interim-use-limitations-eleven-threatened-or-endangered-species-san-francisco-bay</a>. In addition, District internal special status species mapping resources, buffer zones established on the CNDDDB webpage, and an interactive species location map (<a href="https://www.epa.gov/endangered-species/san-francisco-bay-area-map-tool-identify-interim-pesticide-use-limitations">https://www.epa.gov/endangered-species/san-francisco-bay-area-map-tool-identify-interim-pesticide-use-limitations</a>) should be consulted. The interim use limitations remain in effects until USEPA completes effects determinations for four pesticides named under the 2015 revised settlement agreement for the Center for Biological Diversity v. EPA. The effects determinations are expected to be completed by 2020.</u>
34	<u>Glyphosate Use Reduction – Where feasible, the District shall reduce the use of glyphosate in its preserves. For IPM projects currently utilizing glyphosate as a management tool, the District shall identify suitable sites to implement alternative treatment methods. The District shall seek to replace glyphosate with the safest available, broad-spectrum, post-emergent herbicide with minimal residual soil activity.</u>
35	<u>Trails – To reduce potential staff and visitor exposure to pesticides, no-spray trail buffers shall be established at least 5 feet from any trails, trailheads, or parking lots unless a 24-hour trail closure is observed.</u>
36	<u>Annual Pesticide Literature Review – To inform updates to the IPM Program, the District shall conduct an annual pesticide literature review of all newly published toxicological research and court proceedings related to pesticides on the “Approved Pesticides List.”</u>

In addition, the Mitigation Measure 4.2-1a has been modified because the list of Species of Special Concern, for which the mitigation measure was intended to be all-inclusive, is no longer accurate in light of the listing of California giant salamander, and Santa Cruz black salamander (changes shown in underline/strikeout):