Annual Reporting for FY 2016-2017

Training and Outreach

San Francisco Bay Area
Small MS4 Permit Implementation

March 2018
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Introduction

This report provides information on regionally implemented activities complying with portions of the Small Municipal Separate Storm Sewer System (MS4) Phase II Permit issued by the State Water Resources Control Board (Water Board). The Phase II Permit covers stormwater discharges from 24 municipalities and special districts (Permitees) in the North San Francisco Bay Area. In June 2014, the Bay Area Stormwater Management Agencies Association (BASMAA) sent a letter to the San Francisco Bay Regional Water Quality Control Board’s Executive Officer on behalf of the Region 2 Phase II Permittees. The letter indicated that the Phase II Permittees would fulfill the outreach and education requirements within their jurisdictional boundaries through a combination of options including contributing to a regional effort through BASMAA. This report covers training and outreach activities implemented by BASMAA related to the following Phase II Permit provisions:

E.7.a.(ii)(c) and F.5.b.2.(ii)(c) Develop and convey a specific stormwater message that focuses on the following:
1) Local pollutants of concern
2) Target audience
3) Regional water quality issues

E.7.a.(ii)(d) and F.5.b.2.(ii)(d) Develop and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g., the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

E.7.a.(ii)(f) and F.5.b.2.(ii)(e) Distribute the educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy;

E.7.a.(ii)(g) and F.5.b.2.(ii)(f) Convey messages to explain the benefits of water-efficient and storm water-friendly landscaping, using existing information if available;

E.7.a.(ii)(i) and F.5.b.2.(ii)(i) Develop and convey messages specific to proper application of pesticides, herbicides, and fertilizers;

E.7.a.(ii)(j) and F.5.b.2.(ii)(j) Within the Permittee’s jurisdiction, provide independent, parochial, and public schools with materials to effectively educate school-age children about storm water runoff and how they can help protect water quality habitat in their local watershed(s);

E.7.a.(ii)(k) and F.5.b.2.(ii)(k) Develop (or coordinate with existing, effective programs) and convey messages specific to reducing discharges from pressure washing operations, and landscape irrigation and for E.7.a.(iii)(k) only, organized car washes and mobile cleaning.
E.7.a.(ii)(l) and F.5.b.2.(ii)(l) Conduct storm water-friendly education for organized car wash participants and provide information pertaining to car wash discharge reduction.

E.7.a.(ii)(m) Develop and convey messages specific to mobile cleaning and pressure wash businesses.

E.15.d Diazinon Total Maximum Daily Load TMDL: Conduct outreach to residents and pest control applicators on less toxic methods of pest control (requirement applies only to cities, towns and counties named in the TMDL and/or in Attachment G of the Phase II Permit);

One or more of the following three regional programs or projects conducted by BASMAA addresses the following Permit provisions.

<table>
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<th>BayWise Website</th>
<th>Our Water, Our World Program</th>
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These regionally implemented activities are conducted under the auspices of BASMAA, a 501(c)(3) non-profit organization comprised of the municipal stormwater programs in the San Francisco Bay Area, including the Permittees. Most of the 2016-2017 annual reporting requirements of the specific Permit provisions covered in this report are completely met by BASMAA projects and programs, except where otherwise noted herein or by Permittees in their reports. Development and implementation of scopes, budgets, and schedules for BASMAA projects and programs follow BASMAA's operational Policies and Procedures as approved by the BASMAA Board of Directors.
Permittees, through their program representatives on the Board of Directors and its committees, collaboratively authorize and participate in BASMAA projects and programs. All BASMAA members have shared in the regional costs of the projects and programs described herein.

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**Mobile Cleaning Training and Recognition Program**

This program addresses the following Phase II Permit provisions:

E.7.a.(ii)(k) and F.5.b.2.(ii)(k) Develop (or coordinate with existing, effective programs) and convey messages specific to reducing discharges from pressure washing operations, and landscape irrigation and for E.7.a.(ii)(k) only, organized car washes and mobile cleaning.

E.7.a.(ii)(l) and F.5.b.2.(ii)(l) Conduct storm water-friendly education for organized car wash participants and provide information pertaining to car wash discharge reduction.

E.7.a.(ii)(m) Develop and convey messages specific to mobile cleaning and pressure wash businesses.

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BASMAA’s long-standing Surface Cleaner Training and Recognition program addresses these aspects of the provision by focusing on the most common type of outdoor cleaning – cleaning of flat surfaces like sidewalks, plazas, parking areas, and buildings. Individual Permittees address the inspection and enforcement aspects of the provision.

Previously, BASMAA, the Regional Water Board, and mobile businesses jointly developed best management practices. The BMPs were packaged and delivered in training materials (e.g., Pollution from Surface Cleaning folder), and via workshops and training videos. The folder and the training video have since been translated into Spanish. Cleaners that take the training and a self Quiz are designated by BASMAA as Recognized Surface Cleaners. BASMAA also created and provides marketing materials for use by Recognized Surface Cleaners. Previously, BASMAA converted the delivery mechanism to being online so that mobile businesses would have on-demand access to the materials and the training. BASMAA continues to maintain the Surface Cleaner Training and Recognition program. Cleaners can use the website to get trained and recognized for the first time or renew their training and recognition, as required annually. Recognized cleaners can also download marketing materials from the website. Potential customers, including Permittees can use the site to verify the recognition status of any cleaner, as can municipal inspectors.

In July 2014, the State Water Board adopted a temporary Emergency Regulation for Statewide Urban Water Conservation that directly affected some of the surface cleaning activities and best management practices of the Surface Cleaner Training and Recognition Program. Among other actions, the emergency regulations “prohibited, except where necessary to address an immediate health and safety need:....
2) The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use;

3) The application of potable water to driveways and sidewalks;”

The regulation was to remain in effect for 270 days, unless extended by the State Water Board due to ongoing drought conditions.

Of particular concern was item 3), which prohibited many of the activities conducted by surface cleaners if an immediate health and safety need could not be demonstrated and would require significant changes in the Surface Cleaner Training and Recognition Program. However, both the term and content of the emergency regulations were temporary and the State Water Board might need to change either with minimal notice. Given the uncertain long-term future of the emergency regulations, BASMAA adopted a two-part strategy:

1) track the status of the emergency regulations with a plan to make the necessary changes to the Surface Cleaner Training and Recognition Program if the regulations became permanent, and

2) alert the cleaners that are in the Surface Cleaner Training and Recognition Program to the emergency regulations.

To effect part 2), in August 2014, BASMAA sent a notice to all the Recognized Cleaners alerting them to the emergency regulations (see attachment). Regarding part 1), in May 2015, the State Water Board amended and readopted the emergency regulation extending its effectiveness to February 2016. In February 2016, the State Water Board extended the emergency regulation through October 2016 (into FY 16-17). In May 2016, the State Water Board replaced the emergency regulation adopted in February 2016 and extended the regulation through February 2017. In February 2017, the State Water Board extended the emergency regulation for 270 days (approximately November 2017) unless the State Water Board determines that it is no longer necessary due to changed conditions. In discussions with BASMAA in late March 2017, State Water Board staff indicated that they plan to propose the regulations be made permanent in November 2017, that the regulations would regulate water use and not the discharge, and the regulations would regulate the use of potable water. BASMAA continues to track any developments and will work with the State Water Board as they develop and adopt a permanent regulation to try to ensure that necessary outdoor surface cleaning activities can be conducted in accordance with both stormwater regulations and urban water conservation regulations.

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**BayWise Website**

This project addresses the following Small MS4Phase II Permit provisions:

E.7.a.(ii)(c) and F.5.b.2.(ii)(c) Develop and convey a specific stormwater message that focuses on the following:

1) Local pollutants of concern

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1 1) not applicable so not included intentionally
2) Target audience
3) Regional water quality issues

E.7.a.(ii)(d) and F.5.b.2.(ii)(d) Develop and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

E.7.a.(ii)(l) and F.5.b.2.(ii)(l) Conduct storm water-friendly education for organized car wash participants and provide information pertaining to car wash discharge reduction. E.15.d Diazinon TMDL: Conduct outreach to residents and pest control applicators on less toxic methods of pest control (requirement applies only to cities, towns and counties named in the TMDL and/or in Attachment G of the Phase II Permit);

BASMAA assists with this provision by using the regional website: BayWise.org to list or link to member programs’ lists of points of contact and contact information for the stormwater agencies in the Bay Area (http://baywise.org/about-us).

Our Water, Our World Program

The Our Water, Our World program: addresses the following Small MS4 Permit provisions:

E.7.a.(ii)(c) and F.5.b.2(ii)(c) Develop and convey a specific stormwater message that focuses on the following:
1) Local pollutants of concern
2) Target audience
3) Regional water quality issues

E.7.a.(ii)(d) and F.5.b.2(ii)(d) Develop and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

E.7.a.(ii)(f) and F.5.b.2(ii)(e) Distribute the educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy;

E.7.a.(ii)(g) and F.5.b.2(ii)(f) Convey messages to explain the benefits of water-efficient and storm water-friendly landscaping, using existing information if available;

E.7.a.(ii)(i) and F.5.b.2(ii)(i) Develop and convey messages specific to proper application of pesticides, herbicides, and fertilizers;
E.7.a.(ii)(j) and F.5.b.2(ii)(j) Within the Permittee's jurisdiction, provide independent, parochial, and public schools with materials to effectively educate school-age children about storm water runoff and how they can help protect water quality habitat in their local watershed(s).

E.15.d Diazinon Total Maximum Daily Load TMDL: Conduct outreach to residents and pest control applicators on less toxic methods of pest control (requirement applies only to cities, towns and counties named in the TMDL and/or in Attachment G of the Phase II Permit).


- Continued the makeover of the look and content of the Our Water, Our World materials from the previous fiscal year with relatively minor content changes to the Pest or Pal Activity Guide for Kids and an alternative shelf tag that uses the word “effective” rather than “less-toxic” for use on select products, particularly fertilizers (see attachment).

- Coordinated program implementation with major chains Home Depot, Orchard Supply Hardware (OSH), and Ace Hardware National. Corporate office of OSH (San Jose) and Home Depot (Atlanta) directed support of the program with their stores (see attachments).

- Maintained an inventory of the following: fact sheets, shelf tags, literature rack display signage, 10 Most Wanted brochures, Pest or Pal Activity Guide for Kids, custom-designed product guide dispensers, and three versions of product guides (OSH, Home Depot, and generic), from which participating agencies could purchase materials.


- Coordinated employee trainings and tabling events at Our Water, Our World stores.

- Compiled information and provided outreach specific to current issues:
  - Drought and water conservation (see flyers attached)
  - Mosquito control and the Zika virus
  - Asian Citrus Psyllid and Huanglongbing (see flyer attached)

- Maintained Our Water, Our World website.

- Provided Ask-the-Expert service—in which the Bio-Integral Resource Center (BIRC) provides 24-hour turnaround on answers to pest management questions. BIRC researched and provided answers to about 80 questions in FY 16-17.
• Provided and staffed exhibitor booths and made presentations to attendees (see photos attached).
  • Excel Gardens Dealer Show, Las Vegas (August 2016)
  • L&L Dealer Show, Reno (October 2016)
  • NorCal trade show, San Mateo (February 2017)

• Provided on-call assistance (e.g., display set-up, training, IPM materials review) to specific stores (e.g., OSH, Home Depot)(see attachment).

• Participated in UCIPM Continuing Education for IPM Advocates.

Although effectiveness information need only be provided in the 2019 annual reports (C.9.g), below are some outputs and outcomes for FY 16-17:
• 124 Our Water, Our World Store Trainings
• 1,017 employees trained at Our Water, Our World stores
• 107 Tabling events at Our Water, Our World stores
• 6,577 customers contacted by Advocates at tabling events at stores
• 80 questions researched and answered by technical expert
• Increases over last year in trainings by 11%, trainees by 16% and customers reached at tablings by 30%.
• Home Depot reported that Scott’s Miracle Gro increased the sales of their less toxic pesticide product line Nature’s Care by 49%.

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2,3,4 Funded by permittees at local level.
Attachments

Mobile Cleaner Training and Recognition Program

Emergency Drought / Water Conservation Regulation Notice
Hello,

As a Recognized Surface Cleaner qualified by the Bay Area Stormwater Management Agencies Association (BASMAA), you need to be aware of emergency drought regulations adopted by the State Water Resources Control Board, which went into effect on July 28, 2014.

The new regulations prohibit:

- Application of potable water to any sidewalk or driveway
- Use of potable water in any way that causes runoff onto "adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures"
- Washing vehicles without a shutoff valve on a hose

These regulations will be in effect until April 25, 2015, unless canceled or extended. Agencies may assess a $500/per day fine for violations. Exemptions will be granted "where necessary to address an immediate health and safety need or to comply with a term or condition in a permit issued by a state or federal agency."

More information is on this page:  

The full text of the regulations is posted in English here:  

The full text of the regulations is posted in Spanish here:  

If you have questions about the regulations or their applicability to your work, call the State Water Board's drought hotline: (916) 341-5342.

Thank you for your attention! We will be updating the best management practices and recognition test to include information about the drought regulations in the near future.

Best regards,

Bay Area Stormwater Management Agencies Association
Attachments

Point of Purchase Outreach

Alternative *Our Water, Our World* shelf tag

![Eco-friendly Effective Product!](image-url)
Attachments

Point of Purchase Outreach

Home Depot Letters of Support
Interoffice
MEMORANDUM

DATE: January 14, 2016

TO: California Store Managers, D28 ASMs and Department Heads

FROM: Ron Jarvis

CC: Steve Knott

SUBJECT: Our Water Our World training

OUR WATER, OUR WORLD is a coalition of organizations whose purpose is to encourage consumers to use less toxic pest controls in and around their homes. They specialize in retail friendly education. Their goal is not to alienate consumers by telling them what they can’t use. Their information focuses on less toxic pest management and ties into products currently on our shelves.

An Our Water, Our World (OWOW) representative will be in your store to help train employees and label less-toxic products with shelf-talkers. The representative may also schedule a tabling event to educate consumers. This ties in well with “How-to” weekend events. The representative will display a sampling of excellent less toxic and Eco Options products off our shelves. They will provide free informational literature and a wealth of knowledge and experience. Please enjoy this worthwhile demonstration.

A representative will contact you before the training or demonstration date to arrange details. Please contact Annie Joseph at (707) 373-9611 if you have any questions. Thank you.

Thank you
Ron
July 28, 2017

Geoff Brosseau
Executive Director
Bay Area Storm Water Management Agencies Association
P.O. Box 2385
Menlo Park, CA 94026

Geoff,

Thank you for the support again this year of the Our Water Our World program in our Home Depot Bay Area stores. Rainfall in the area increased gardening activity, but with that rainfall came additional pest concerns, so Annie Joseph and her team of IPM Advocates have been an important resource this selling season.

Annie and team have worked closely with our associates this year to raise awareness about the Asian Citrus Psyllid potential to spread the deadly Huanlongbing disease to citrus trees, as well as two invasive species of mosquitoes that can spread Zika Virus. The Advocates have made sure our associates are well versed in these pests, as well as services offered by local agricultural departments and local Mosquito and Vector Control Agencies. Our associates then shared this valuable information with our customers.

The team's engagement, commitment, and IPM expertise continues to make them an essential partner for our Lawn & Garden business.

On behalf of The Home Depot, thank you for your partnership and support.

Ron Jarvis
Vice President Sustainability/SER
Attachments

Point of Purchase Outreach

Our Water, Our World Feature from Home Depot Annual Responsibility Report
Our Water Our World (OWOW) – California

OWOW is a collaboration of regional and local water pollution prevention agencies in Northern California. Since 2003, Home Depot has collaborated with OWOW to raise awareness about less toxic pest management strategies and products that can help protect local waterways. Today, OWOW is active in 59 of our San Francisco Bay area and Sacramento area stores assisting customers and training associates on IPM (Integrated Pest Management) practices.
Attachments

Point of Purchase Outreach

Drought and Water Conservation Flyers
Ten Tips for Water-Wise Gardening

In most of California, we enjoy a Mediterranean climate found in only 2% of the world’s land mass. This climate gives us mild, wet winters and hot, dry summers. But droughts are part of our natural weather cycle, and when winter rains are minimal our water becomes even more precious. Over half of our residential water is used on landscapes, so conserving water in the garden can have a huge impact on our water supplies. You don’t need to give up a beautiful, lush landscape when you create a water-wise garden. Here are some tips for creating a healthy, inviting garden requiring minimal resources and less effort and expense.

1. Go With the Low Flow - Use soaker hoses for irrigation, or invest in a drip system that can cut water use by as much as 90%. Consider installing a ‘smart controller’ for your irrigation system that can save water by helping to calculate your water requirements and adjusting to changes in water needs. Be sure to check regularly for leaks.

2. Irrigate Early – Watering early in the morning when temperatures are cooler and there is less wind will minimize evaporation. This also discourages pests like snails and fungal diseases like black spot that need wet foliage at night.

3. Go Deep – Water less often and more deeply. This encourages deeper root systems that can better tolerate dry periods.

4. Get in the Zone - Group plants with similar water needs together to make watering easier and more efficient. Place pots and thirsty plants near the house where you can keep an eye on them, and use native or Mediterranean plants farther away where they may need very little water once established.

5. Mulch Like Mad – Create a 1” to 3” layer of organic material such as bark or shredded leaves over the top of the soil and a drip irrigation system. You will be amazed at what a huge difference this makes in reducing moisture loss from soil, in moderating soil temperatures, in controlling weeds that compete for water, and in returning nutrients to the soil. Be sure to keep mulch a few inches away from the stems or trunks of plants.

6. Count on Compost – Add organic matter like compost to the soil to increase the soil’s ability to absorb and hold water, and to slowly release nutrients to plants keeping them less stressed and susceptible to pests. If you feed plants, use a slow-release, organic fertilizer to discourage excessive plant growth that attracts pests and increases water needs.

7. Go Native! – You will find a wonderful variety of water-wise plants in local nurseries. Look for plants that are native to a Mediterranean climate, or for California natives that grow in dry conditions. These plants are adapted to our hot summers and usually more resistant to pests. Once established, many of these plants can survive on rainfall alone. Consider replacing declining plants with a species better suited to our climate.
8. **Fall into Planting** – When working on a large planting project, remember that the best time to plant is in the fall when the weather starts to cool. Winter rains will help these plants establish deep, healthy root systems before they have to tolerate the summer heat.

9. **Lessen the Lawn** – Lawns need a lot of water, so consider reducing or replacing your lawn with water-wise groundcovers, low-maintenance perennials or a porous hardscape. If you plant a lawn, chose drought-resistant varieties such as buffalo grass. Mow less often and raise the height of your mower blade to 3” since longer grass will shade roots, lessen evaporation, and inhibit weed growth. Your city or local water agency may offer you a cash rebate for replacing lawns and installing efficient irrigation.

10. **Get Wise to Weeds** – Keep up with weeding since weeds will compete for water. A drip system, mulch and landscape fabric will help you prevent weeds.

### Additional Tips for Water-Wise Vegetable Gardening

In addition to a drip system, mulch and compost, here are some ideas for saving water when growing vegetables:

- Choose early ripening varieties and plant close together in blocks instead of rows to create shade for roots and reduce evaporation.
- Choose plants that fit your growing conditions and try heirloom varieties adapted to hot climates.
- Harvest fruits and vegetables as soon as they are ready, and pick up fallen and over-ripe fruits that may attract pests.
- Grow fewer varieties and choose vegetables that will produce a lot of food on one plant, like tomatoes, squash and peppers.

### Resources

- **Our Water Our World**: [www.ourwaterourworld.org](http://www.ourwaterourworld.org) Fact sheets with tips on healthy gardening, caring for roses, lawn care, and managing common pests.
- **UC Statewide IPM**: [www.ipm.ucdavis.edu](http://www.ipm.ucdavis.edu) Extensive information on managing pests and diseases that may affect drought-stressed plants.
- **Plants and Landscapes for Summer-Dry Climates**, EBMUD, 2004. A perfect resource for choosing appropriate plants and designing your garden.
- **WaterSmart Gardening**: [www.watersmartgardening.com](http://www.watersmartgardening.com) Plant lists, visual tours of gardens, watering guides, and resources all organized by county.
- **UC Davis Arboretum All Stars**: Great information on 100 beautiful plants recommended for California gardens.
- **Your local water district**: Many districts provide recommended plant lists, watering guidelines, rebates for removing lawns and saving water, and water saving tips.
- **Greywater Action**: [www.greywateraction.org](http://www.greywateraction.org) – Ideas for using water from sinks, showers and washing machines to irrigate your garden.

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Tidd 2014
Droughts can be part of our natural weather cycles. But when drought conditions persist for long periods of time, it can significantly impact plant health in a number of ways. Lack of water limits a plant’s ability to produce food, and stressed plants can release chemicals that can attract pests. Excessive heat can accelerate the reproduction time of pests. But there are a number of strategies that can help protect plants during extensive drought conditions.

**How Plants React During a Drought**
When a plant is stressed from lack of moisture, it closes the pores (stomata) in its leaves to reduce water loss. As a result, the plant does not absorb the carbon dioxide it needs for photosynthesis. The lack of water also limits the plants ability to move food and essential minerals around. Both these factors limit the plants ability to grow and develop, so plants may show stunted growth, chlorotic leaves, leaf drop, a thinning crown, or poor shoot growth. It may take trees and large shrubs a couple of years to recover following a severe drought.

**Pests and Diseases**
During fall and winter, rain can help wash insect pests like mites and aphids from plants, and cool temperatures keep pests from reproducing. But during a drought, warm temperatures can accelerate pest reproduction rates and the pests can quickly outnumber the populations of beneficial insects that prey on them.

When plants are water-stressed they produce fewer defensive compounds, which makes them more susceptible to pests. Some plants may even begin to emit chemicals, such as ethanol and alph-pinene, which can actually attract pests like borers and bark beetles. Some insect pests, such as spider mites and whitefly, flourish in dry, dusty conditions and their populations may increase during a drought. Nutrients may be more concentrated in water-deficient plants, providing a substantial food source for these pests.

Some plant diseases, such as canker diseases, usually affect older or drought-stressed trees and shrubs. But fungal diseases that usually live on dead wood can invade living tissues when plants are moisture stressed, causing dieback in younger plants.

**Drought Stressed Trees**
There are many factors that impact a tree’s ability to survive a drought, such as the length of the drought, the plant species, and how well the soil holds water and nutrients. Other environmental stresses may impact the plant as well, such as competing with turf for water, heat from pavement and buildings, soil compaction, and air pollutants. Symptoms of drought stress include wilting, leaf drop, chlorosis, leaf margins that turn brown, stunted new growth, browning and loss of needles on conifers, and eventually twig and branch dieback.

Drought stressed trees can attract insect pests and diseases such as borers, bark beetles and cankers. Borers are common in drought-stressed plants. As they feed on the tree’s inner bark, their tunnels inhibit the movement of water and nutrients. Bark beetles are common on conifers like pines. Their tunnels can impede the plants ability to transport water and they sometimes bring in a fungus which speeds up the plant’s decline.
Strategies for Protecting Plants During a Drought

- **Drought-Resistant Plants**
  Choose plants adapted to having less-water and drier conditions. You may be able to get of list of recommended plants from your local University Extension Service or water district.

- **Install Efficient Irrigation Systems**
  Even water-wise plants will need water to get established. Drip irrigation systems or soaker hoses for trees and shrubs can substantially cut down on water loss and be more efficient in delivering water directly to a plant. Water early in the morning when there is less wind creating evaporation, and water less often and more deeply to encourage deeper roots. In many areas, water providers offer rebates for installing efficient irrigation systems.

- **Apply Mulch**
  Covering the soil with a layer of organic material like wood chips, bark, straw and leaves, can have a huge impact in the health of plants and the landscape. The mulch reduces water loss through evaporation, feeds the soil organisms, keeps weeds from germinating, and improves the soil’s ability to hold moisture. Apply 2” to 4” of mulch around plants, but keep the mulch 2” to 3” away from the stem or trunk of a plant.

- **Use Organic Fertilizers**
  Applying fertilizer during a drought will not necessarily encourage plant growth, because lack of water limits the plant’s ability to take up nutrients and move them around in the plant. In addition, high salt fertilizers can actually injure the plant when the salts build up in dry soils. To help minimize the stress of drought and maintain soil fertility, use organic, slow release fertilizers. These will be most effective when the rainy season begins. Many organic fertilizers contain the spores of benefical microbes, called mycorrhizal fungi. This symbiotic fungus can aid a plant during drought by helping roots access water and nutrients.

**Pruning**
Remove dead limbs that may be harboring insect pests or diseases. Light pruning on shrubs to permit circulation may deter insect pests like whitefly that like dry conditions. But in general, avoid significant pruning of live plant material to reduce additional stress and create wounds that attract pests.

- **Anti-Transpirants**
  An anti-transpirant is a compound sprayed on foliage to provide a barrier to water loss. These products have a short-term benefit, but can be especially useful on young plants or new plantings.

- **Pest Management**
  Keeping plant stress to a minimum through efficient irrigation, mulch, and slow-release fertilizers will help deter pests. Monitor plants frequently to identify and manage any problems as soon as they occur. If pest problems persist, use soaps, oils and biological controls (such as spinosad) to manage problems. Use any pesticides sparingly to reduce the impact on the beneficial insects that can help keep pest problems in check.

For More information:

*Drought and Landscape Plants*, article by B. Fraedrich, Bartlett Tree Research Labs.

*How Does Drought Stress Influence Plant-Insect Interactions?* Article by University of Illinois Extension: http://hvg.ipm.illinois.edu/pastpest/200516f.html

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Attachments

Point of Purchase Outreach

Citrus Leaf Miner Flyer
Citrus leaf miner has recently arrived in Northern California, but is native to Mexico. It is also in Arizona and other Citrus growing states. The small, light-colored moth lays eggs singly on the underside of the leaf. Eggs hatch and larvae start feeding immediately in shallow tunnels in the leaves, called mines. As larvae get bigger you begin to see evidence of excrement filling the mine with frass.

Citrus leaf miners are active midsummer through late fall depending on location, and can damage young trees under 4 years of age. Most mature trees tolerate leaf damage without impacting the tree growth or yield. The most damage is seen in nurseries and new plantings where leaf miners can retard new growth. Coastal lemons that have several flushes of growth can be affected throughout their life.

**Monitoring for Citrus Leaf Miner:**
- Watch for tunnels on leaves. The leaves may also look distorted and begin to curl.
- Pheromone traps can be set out in March through November to catch the adult males. These traps will alert you to the egg-laying activity and proper timing for pesticides if needed.
- Traps need to be placed inside the tree at shoulder height.

**Cultural Controls:**
- Avoid pruning live branches more than once a year to avoid cycles of flushing which attracts the pest, and don’t prune during most active season.
- Do not apply fast release nitrogen fertilizers when leaf miner populations are high, as new growth will be damaged.
- Trim vigorous shoots that develop on branches above the graft union on trunks of mature trees. These produce new growth that can attract the miner.

**Biological Controls:**
- Green lacewing larvae, parasitic wasps and parasitoids.

**Chemical Controls:**
- Use oils and neem oil to suffocate eggs.
- Spinosad is also listed as a control for leaf miner, and can be somewhat effective for citrus leaf miner.
Attachments

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Photos from trade shows

Presentation to attendees

Trade show booth
Attachments

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Store Partnership Flyer
Introducing the Home Depot and Our Water Our World Store Partnership Program

The Our Water Our World Program is a collaboration of regional and local water agencies in Northern California. This program raises awareness about the connection between pesticide use and water quality, and provides information to consumers about pest management strategies and less-toxic alternatives that can help protect water quality. These management strategies are based on IPM or integrated pest management.

Since 2003, Home Depot and Our Water Our World have partnered to reduce toxic runoff from fertilizers and pesticides into local waterways. This continued partnership is intended to reduce the amount of pesticides entering creeks and the Bay through local sewers and storm drain systems. The program will increase your store’s visibility as an environmentally friendly business while maintaining or increasing sales of pest management products.

We look forward to working with you!

What is IPM?

Integrated pest management is a common-sense strategy for managing pests that uses a variety of practices while minimizing risks to people and the environment. IPM does not mean completely avoiding pesticides—but it does emphasize identifying the pest, understanding its life cycle, and starting with the least-toxic practices first.

Here are some of the practices used in IPM:

**Monitoring**
Using traps to pests and diseases to catch any problems early.

**Biological Control**
Encouraging beneficial organisms, such as lady beetles, lacewings, and nematodes, to help manage pests.

**Cultural Control**
Choosing the right variety of plant for the right place and using disease-resistant varieties. Fertilizing with slow-release, organic fertilizers will keep plants healthy and more resistant to pests and diseases.

**Physical Control**
Keeping pests out without chemicals by using barriers and traps, such as copper barriers for snails, caulk in crevices where ants enter structures, sticky barriers for whiteflies, and traps for yellowjackets.

**Chemical Control**
Using pesticides only when needed, choosing the least-toxic product first, and using a pesticide appropriate for the specific pest.
**Tips For Working With Customers**

- Less-toxic products may take longer to work than traditional pesticides.

- Timing of application is important since many less-toxic products break down faster. To be successful, you need to understand the target pest and when applying a pesticide would be most effective.

- Most less-toxic products are not broad spectrum, so beneficial insects are less at risk.

- Remember to spot treat – it is not always necessary to spray the whole plant.

- Apply soaps and oils early morning or late afternoon to avoid burning plants. Soaps are less effective in hard water because the minerals impact the fatty acids that are used to manage pests.

- If releasing beneficial insects, give them time to manage the pests, and don’t use pesticides since they will damage the beneficial populations.

**Elements of the OWOW Program**

**Shelf Talkers**
Shelf talkers are placed underneath products to identify less-toxic choices and organic soils & amendments.

**Fact Sheet Rack**
There are 15 different fact sheets available to your customers with information on strategies for managing common pests and protecting water quality.

**Staff Training**
We can schedule a training for your staff with information on answering customer questions and tips for using/selling products.

**Customer Outreach**
We can staff a table with samples of less-toxic products and answer your customers’ questions on pest management, how to keep soil healthy and water-wise plant choices.

**End Caps**
Working in conjunction with your vendors, we can help set up and label end caps highlighting organic and less-toxic products.