

# Natural Yard Care Program – 2019 Evaluation Report City of Kirkland



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## Purpose

This evaluation report has been developed in response to City of Kirkland's National Pollutant Discharge Elimination System (NPDES) Phase II Western Washington Municipal Stormwater Permit requirements. To demonstrate compliance with permit conditions for the Public Education and Outreach Section (S5.C.2.b), Kirkland shall conduct a new evaluation of the effectiveness of an ongoing behavior change campaign (program required under S5.C.1.a.ii and S5.C.1.c of the 2013 Permit) if this evaluation will benefit the behavior change program.

## Introduction

The City of Kirkland has implemented a natural yard care education and outreach program since 2003, reaching out to Kirkland residents regarding yard care practices that can potentially impact surface water quality.

The City of Kirkland used its natural yard care education and outreach program to comply with requirements from the Public Education and Outreach section of the 2013-2019 *Western Washington Phase II Municipal Stormwater Permit* (NPDES permit).

Completed program evaluations and modifications:

- Evaluated the 2015 natural yard care program and submitted evaluation report. The report assessed the understanding and adoption of a targeted behavior by a targeted group (required under S5.C.1.a.ii and S5.C.1.c of the 2013 NPDES Permit).
- By February 2, 2016, made modifications to the natural yard care program based on evaluation. City of Kirkland used the resulting recommendations to direct education and outreach resources more effectively, as well as to better evaluate changes in adoption of the targeted behaviors.

Current evaluation:

- Per section S5.C.2.a.ii.(b) of the 2019-2024 NPDES permit, conduct a new evaluation of the effectiveness of City of Kirkland's ongoing natural yard care program (required under S5.C.1.a.ii and S5.C.1.c of the 2013 Permit). Document includes lessons learned as well as recommendations for which option to select from S5.C.2.a.ii.(c).

## 2019 Program Activities

The City of Kirkland contracted with Tilth Alliance to deliver a series of classes and workshops on natural yard care practices in 2019. Tilth Alliance educators regularly work with audiences of all ages and backgrounds on adopting environmentally-friendly gardening practices and natural yard care practices.

Programming was offered in the spring and fall. Weekday evening classes were held at the Kirkland Justice Center and Kirkland City Hall, while the weekend hands-on workshops were held at the Tilth Alliance education center at McAuliffe Park.

During the spring, Tilth Alliance taught four classes:

- **Water Smart in the Garden** - May 8, 2019. Evening weekday class at the Kirkland Justice Center – 16 participants.

Topics: building healthy soil, garden mapping, climate zones and microclimates, plant choices for the northwest, lawn care, managing water in the landscape, stormwater management.

- **Drip Irrigation** – May 11, 2019. Outdoor weekend daytime workshop at McAuliffe Park – 25 participants.

Topics and Activities: Why drip irrigation is used, how to use it, the different methods of installing, different supplies you can use. Hands on demonstration of the parts to a drip system and opportunity to work with it.

- **Gardening with Nature** – May 15, 2019. Evening weekday class at the Kirkland Justice Center – 16 participants.

Topics: Building habitat in your garden, Integrated Pest Management techniques, beneficial insects, concerns about pesticide use, plant choices to improve habitat, lawn care needs.

- **Hands on Natural Lawn and Yard Care – May 18, 2019.** Outdoor weekend daytime workshop at McAuliffe Park – 17 participants.

Topics and Activities: Hands on exploration of lawn care tools and techniques for over-seeding, hand weeding, aerating the lawn. Planting techniques in the garden, including soil amendments, plant choices and correct planting techniques.

During the fall, Tilth Alliance taught three classes:

- **Design a Yard Your Plants Will Love - September 18, 2019.** Evening weekday class at Kirkland City Hall – 21 participants.

Topics: mapping your garden, soil conditions, site conditions, growing zones and plant choices, basic needs of a lawn, planting techniques, mulching, fall planting for health of the plant.

- **Rain Barrels, Cisterns and Rain Gardens - September 25, 2019.** Evening weekday class at Kirkland City Hall – 21 participants.

Topics: pollution from stormwater, stormwater management, soil health, cistern basics, seasonal rains in the northwest, cistern maintenance needs, rain garden benefits and description, siting a rain garden, rain garden planting and maintenance.

- **Autumn in the Garden – September 28, 2019.** Outdoor weekend daytime workshop at McAuliffe Park – 1 participant.

Topics and Activities: Preparing the garden for winter – included planting a garden bed in the vegetable garden with cover crop seed, mulching beds with compost and burlap, mulching with leaves and burlap, walking tour of the rain garden and cistern on site, walking tour of the woodland native plant area.

The natural yard care classes and workshops were offered to Kirkland residents, advertised via direct mail (letter and flyer), the Kirkland Conserves email listserv, the City of Kirkland website, Tilth Alliance, Eventbrite, and City of Kirkland and Kirkland Conserves social media.

Participants attended one or multiple classes or workshops, resulting in a wide range of exposure to natural yard care instruction. The expected result of the program is that participants learn about and adopt yard care and gardening practices that reduce their use of pesticides and other chemicals, which reduces their impact on local surface waters.

## Program Evaluation

Program evaluation included feedback from participants, as well as staff observations. Participant feedback was collected via post-class questionnaires and an emailed follow-up survey (sent out 2 months after spring classes). Responses were received from participants who attended one or more class and/or workshop.

## **EVALUATION METHODS**

Post-class questionnaire: At the end of the classes and workshops, participants were asked to complete a questionnaire to identify changes in their knowledge and understanding of class topics. The format was a retrospective pre-post questionnaire where participants self-assess how much they knew prior to an educational session and how much they know after a session. Participants were also asked how likely they are to change their yard care or gardening practices based on what they heard in class, and what information they're likely to use.

Follow-up survey: A link to an online survey was sent to program participants 2 month after spring classes. The survey included questions regarding:

- natural yard care techniques that respondents have implemented or plan to implement
- topics that they would like to learn more about in future classes
- other resources that City of Kirkland could provide to assist in implementation of natural yard care techniques.

## **RESULTS**

Spring Classes: Feedback in the post-class questionnaire (Appendix A) was positive for all classes and workshops and most participants reported an increase in knowledge about class topics (self-reporting on their level of knowledge before class and immediately after class).

Participants reported strong intentions to either modify their current yard care practices and/or to start a new practice. They shared areas they would focus on in their own yards as a result of the classes.

Practices Participants Intended to Adopt:

- eliminate lawn, replace with shrubs
- use more mulch
- use timers for irrigation
- map their yards
- top dress lawns
- pay attention to chemical use in the garden
- use planting zone and watering zone information
- choose the right plant for the right place
- use IPM techniques
- stop using weed and feed
- planting techniques
- aerating the lawn
- how to get weeds out of the lawn
- which tools to use for lawns
- add drip irrigation to their yard

Participants who responded to a follow-up survey (Appendix B), sent after spring classes, reported implementing yard care technique that they learned about in class.

Practices Implemented by Participant's, 2-months After:

- Aerated, de-thatched and top-dressed my lawn with compost.
- Mulched garden beds. (3 respondents)
- Chose plants for my yard that are the best fit for my site's conditions. (2 respondents)
- Provided habitat for wildlife in my yard. (2 respondents)
- Removed lawn from areas where it can't thrive.
- Installed a drip irrigation system.
- Installed soaker hose watering system on a timer as a beginner step toward drip irrigation next year.
- Planting more native and drought resistant plants. Planning to reduce the amount of grass over time and looking into drip irrigation.
- Others reported not yet implementing techniques learned about in class. (3 respondents)

Fall Classes: Feedback in the post-class questionnaire (Appendix A) was mostly positive for all classes and most participants reported an increase in knowledge about class topics.

Of note, the 'Autumn in the Garden' workshop was only attended by one person, an anomaly of the program. We think the forecast for stormy weather scared people away!

In total, the participants reported strong intentions to either modify their current yard care practices and/or to start a new practice. They shared areas they would focus on in their own yards as a result of the classes.

Practices Participants Intended to Adopt:

- map the yard, make garden plan
- add native plants to the yard
- add flowers into different areas for pollinators
- work on hillside vegetation plan
- get a soil test
- continue sheet mulching with wood chips
- manage noxious weeds
- convert sloped area to native plants
- choosing the right plants for an area of the yard
- evaluate soil composition
- add bird friendly plants
- mulch the garden and use compost in the garden

Due to an oversight by staff, no follow-up survey was sent after the fall classes.

Future Topics: Participants were interested in learning more about natural yard care and how to effectively take care of their gardens. They were interested in attending future classes depending on day, time, and topic. Below is a list of the specific topics that spring and fall class and workshop participants were interested in for future classes. All the topics were listed by at least one respondent.

Requested Future Class Topics:

- Natural pest control (IPM, common garden pests, deer control, plant disease, fungus)
- Organic nutrition for yard (organic fertilizer, mulch with mycorrhizae)
- Sprinkler maintenance
- Edible plants (vegetable gardening, edible weed identification)
- Beekeeping
- Backyard composting
- Moss control
- Natural lawn care
- Container gardening
- Guidance on plant choice (especially natives), when to plant them, which conditions are best for them, how to prune, etc.

In addition to classes, participants were also interested additional fact sheets, guides, and technical assistance.

### Effectiveness of 2016 Program Changes

Kirkland's natural yard care program was modified in 2016, based on evaluation of the 2015 program.

Modifications made to program in 2016	Effectiveness of changes
An outdoor hands-on and/or demonstration component was incorporated into each class, with the first part of the workshop having a lecture component and the second half being a demonstration or hands-on activity.	Combining lecture and field work did not work well. When combined, there was too much transition time between each component and not enough time for either component. Separating out lectures and hands-on activities was more effective. People can come prepared for either working outdoors or being in the classroom.
Class times were moved to the weekends to facilitate the outdoor components and to accommodate parents.	Attendance at weekend classes varied greatly, depending on the weather forecast and class topics. The program shifted back to having some classes in the evening, as well as keeping weekend classes, in order to accommodate more schedules.
Continued to provide door prizes that related to class topics.	Door prizes continue to be an effective incentive for participants to attend multiple classes, as well as provide an opportunity to show examples of yard care tools and materials.
Continued to offer take-home materials which were relevant to class topics.	Class participants continue to appreciate take-home fact sheets and resources, viewing materials as supplemental to in-class learning.

Continued to work as part of the regional natural yard care outreach group to share resources (including the naturallyardcare.org website) and to look for ways to work together.	The regional natural yard care website, naturallyardcare.org, continues to be an effective resource to direct residents to for natural yard care information.
Continued to promote the Garden Hotline as a way to connect class participants to experts.	The Garden Hotline continues to be an effective resource for class participants and other Kirkland residents to get gardening advice specific to their yard.

**Lessons Learned and Recommendations**

- **People are busy.** While scheduled classes and workshops continue to have moderate attendance (average of 19 attendees), overall attendance numbers have decreased over time. Consider providing information in other formats that provide more flexibility. Possible online formats to explore include short how-to videos and classes via online meeting platforms.
- **Explore additional activities and formats to reach broader audiences.** This could include adding workshops or activities as part of other City-sponsored events (to benefit from co-promotion). Other possible alternatives in-person educational formats include gardening fairs, family-friendly classes, and backyard-based classes for groups of neighbors.
- **Develop offering bases on intended audience and share out information via target audience networks** e.g. local gardener groups, parent groups, or churches.
- **Consider combining natural yard care outreach with Yard Smart Rain Rewards program.** Yard Smart Rain Rewards is a technical assistance and rebate program focused on installing small-scale stormwater retrofit projects like rain gardens, native landscaping, and cisterns on private property. Yard Smart participants are motivated to make changes in their yards. While the Yard Smart program is focused on stormwater retrofits to reduce the volume of water entering the municipal stormwater system, it is a great opportunity to educate participants on natural yard care practices. This could happen via one-on-one education during Yard Smart site assessment, natural yard care classes and workshops tailored to Yard Smart participants, and sharing natural yard care printed and online resources with Yard Smart participants.

**NPDES Permit Recommendation**

Continue offering natural yard care outreach to Kirkland residents, but select **S5.C.2.a.ii.(c)3** in which Kirkland will develop a strategy and schedule for a new target audience and BMP behavior change campaign for their NPDES permit-related behavior change outreach.

Natural yard care outreach programming at this point will benefit the most from having some flexibility to adaptively manage the outreach and test the effectiveness of new formats of outreach. The investment of staffing and resources associated with a full behavior change campaign is best directed to new programming.

City of Kirkland will benefit the most from shifting their NPDES permit-related behavior change outreach to a new audience and behavior.




## Appendix A - Post-class Questionnaire

What information from the class will you use in your garden or yard?

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Please read each statement below then answer how much did you know about the topic BEFORE today's class and how much do you know now AFTER class?

BEFORE THIS CLASS			READ THIS STATEMENT 	AFTER THIS CLASS		
Very little or no knowledge	Somewhat knew this	Knew this well		Very little or no knowledge	Somewhat know this	Know this well
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural methods for gardening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Using resources efficiently (e.g. water)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sources of more natural garden/ yard care information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. How likely are you to change your yard care or gardening based on what you heard today?

	Not at all likely	Possibly, not sure	Yes, definitely
Will <u>change</u> what I do in my garden/yard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Will <u>start</u> something new (e.g. add compost to the soil, choose the right plants for my garden)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. How do you suggest we improve the class? Would you like other topics?

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## APPENDIX B – Spring 2019 Follow-up Survey

You are receiving this email because you attended one or more of the natural yard care classes offered by the City of Kirkland and Tilth Alliance last spring.

To make these classes as useful as possible for Kirkland residents, we would like to hear from you regarding the classes and what you are currently doing in your yard.

Please take a couple of minutes to respond to the brief survey at XXXXXX.

1. Which class(es) did you attend? (please choose all that apply)
  - Water Smart in the Garden – Wednesday, May 8
  - Drip Irrigation – Saturday, May 11
  - Gardening with Nature – Wednesday, May 15
  - Hands-on Natural Yard and Lawn Care – Saturday, May 18
  
2. Did you implement any of the yard care techniques that you learned about in class? <Add options – I did this, I plan to do this, I will not do this, I need to learn more before doing this>
  - Installed a drip irrigation system
  - Tested my soil for nutrients or sent a sample to King Conservation District for testing
  - Provided habitat for wildlife in my yard
  - Aerated, de-thatched and topdressed my lawn with compost
  - Removed lawn from areas where it can't thrive
  - Chose plants for my yard that are the best fit for my site's conditions
  - Mulched garden beds
  - Other \_\_\_\_\_
  
3. What gardening or yard care topics would you like to learn more about in future classes? (please choose all that apply)
  - Backyard composting
  - Moss control
  - Container gardening
  - Streamside yard care
  - Other \_\_\_\_\_
  
4. Are there resources or assistance that the City of Kirkland could provide to assist you in implementing natural yard care practices around your home? (please choose all that apply)
  - Instructional videos
  - Fact sheets and guides

- Technical assistance
- Coupons for compost
- Other \_\_\_\_\_

5. Please share any other comments or suggestions that you have for Kirkland's Natural Yard Care program.

Thank you!

Please check out the following resources for more information on taking care of your yard naturally:

Kirkland Natural Yard Care - [www.kirklandwa.gov/yardcare](http://www.kirklandwa.gov/yardcare)

Natural Yard Care Neighborhoods - <https://naturalyardcare.org/>

The Garden Hotline - <http://gardenhotline.org/>

Cascade Water Alliance Natural Yard Care - <https://cascadewater.org/water-efficiency/natural-yard-care/>