
Small Acreage Landholder Outreach Program 2018 Annual Report

Submitted to Clark County Public Works, Clean Water Program

Submitted by WSU Clark County Extension

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WSU Clark County Extension



Department of Public Works
Clean Water Program

Executive Summary

The Program served 936 people (Table 1). The 222 participants who did not attend the Expo or the Harvest Celebration owned 1,068 acres. Almost all respondents agreed they would use what they learned to change their land management practices.

	Participants	Acreage Owned	% Learning Something	Intend to Make Changes N (NR)
BMP Workshops	40	291	46%-96%	22 (18)
Tours	28	117	66%-96%	20 (8)
LOL	28	135	81%-98%	15 (7) average
Septic/Well WS	126	525	94%	89 (37)
Expo	109			
Harvest Celebration	605			
	936	1,068		

Task 1 - Best Management Practices (BMPs) Guidelines

Task 1a – Information Resources

Throughout the year, the Coordinator adds announcements for all events and relevant materials where appropriate to the WSU Extension calendar (<http://extension.wsu.edu/clark/calendar/>); Small Acreage webpage (<http://extension.wsu.edu/clark/naturalresources/smallacreageprogram/>) and to the program Facebook page (<http://www.facebook.com/smallacreageprogram>).

The program also tracks public use of the many resources available on our website to determine demand and ascertain use. This includes factsheets, video clips, announcements, and general program information (Table 2). For example, users visit the main page most often, where the program posts new classes and links to the different program areas. Traffic to the main program webpages remain about the same as in 2017, but while visits to the main page increased, those to the Living on the Land page were only half of 2017. The most downloaded factsheet continues to be *Reduce Mud and Keep Water Clean: Sacrifice Areas* while users also continue to view the *Manure Management* video clip the most often.

Issues and Recommendations. Traffic to the program factsheets remains low, and it may not be possible to track the factsheet views. The Program will check with WSU IT to see why the analytics stopped tracking factsheets.

Task 1b – Publications

The Coordinator wrote an article for *The Reflector* to promote the Living on the Land (LOL) class series and the land stewardship principles it promotes. Published August 8, the article covers the major topic areas in the LOL classes: property inventory, soil, water, waste, grazing, and weeds. Secondly and beyond the scope of work, *The Reflector* also published an article on the streamside planting workshop (Appendix A).

Rainwater Harvesting Factsheet. Due to the departure of the Coordinator going half-time in mid-August and then leaving in late September, this factsheet is the main deliverable not met. The Director will write this in the first quarter of 2019.

Table 2: Small Acreage Webpage Activity Highlights

Factsheets	Qtr 1	Qtr 2	Qtr 3	Qtr 4	YTD
Reduce Mud and Keep Water Clean: Sacrifice Areas	62	25			87
Save Time and Money - Properly Landscape Your Septic System	4	2			6
Don't Let Your Dollar\$ Go Down the Drain! Septic Tank Additives	20	11			31
How Green is Your Grass? Five Steps to Better Pasture & Grazing Mgmt.	3	22			25
Do You Qualify For Reduced Property Taxes? Current Use Taxation		2			2
Total	53	39			
Video Clips					
Manure Management	1036	1106	982	391	3515
Five Quick Steps to Reduce Mud	275	165	101	18	559
Reducing Mud on Small Acreages	37	18	0	2	57
Five Ways to Protect Riparian Areas	57	114	23	43	237
Livestock Exclusion and Off Channel Watering	12	6	13	95	126
Managing Manure	7	15	4	0	26
Doing Our Part for Clean Water	3	5	0	3	11
Total Views	1424	1424	1123	552	4531
Website Visitors					
Small Acreage Web Page	726	783	1403		2912
BMP Video Web Page / Publications and Videos Page	22	34	7		63
Living On the Land Web Page	71	90	85		246
Total Visitors	219	907	1495	0	3221

Issues and Recommendations. There are none at this time. One factsheet remains to be written.

Task 2 - Public Education & Outreach

Task 2a – Establishing a Wider Mailing List

The program sent 425 postcards (example in Appendix A) to small acreage homeowners within the Whipple Creek Watershed in early April to advertise several upcoming events including the Small Acreage Expo, a horse property tour, a Well & Septic Inspection class, and the Manure Composting & Management class. The program sent an additional 765 postcards in late summer to promote the Living on the Land series, a pasture management class, the last Well & Septic Inspection class, and a Riparian Restoration class. The response has been modest so far, but this remains one way to target watersheds.

Issues and Recommendations. There are none at this time.

Task 2b – Living on the Land: Stewardship for Small Acreages

The Living on the Land class series ran 12 Wednesdays, from August 29 to November 14. The Coordinator promoted the LOL series at all events.

While the 30 participants from 24 households enrolled, two spouses did not come to many classes. The LOL class series graduated 28 people in 24 households. The syllabus remains similar to past years with the exception of a couple of different speakers and a half evening class on agroforestry.

While a quarter of graduates (28%) heard about the LOL class through email, almost the same number heard through online promotion, primarily Facebook. Sixteen percent heard through events as they did through other organizations, word of mouth, or directories (Table 3). This data can be somewhat misleading since some participants heard about the course in multiple ways.

Table 3: How Participants Learned About the LOL Class

Source	Responses* (NR)
Small Acreage Events	4
E-mails (office listservs, local partner newsletters)	7
Media (Small Acreage Facebook / Extension Website)	6
Flyers (feed stores, veterinarians, and libraries)	
Newspaper PR / Ads (The Reflector, Post-Record, The Columbian, and FYI)	1
Word of mouth	2
Small Acreage Postcard	
Other	4
Total	24 (5)

* = includes multiple responses

Of the 28 graduates, 21 (75%) attended at least three-quarters of the 12 class sessions, while three attended every session (Table 4). Except for two classes held at CASEE, all classes were held at the 78th Street Heritage Farm.

Of the 24 households in the class, 22 came from Clark County and two from Oregon (Table 5). Compared to previous years, few came from central Clark County, while the most in any previous class came from south Clark County, with a little fewer coming from northern parts of the county.

Table 4: LOL Attendance

Classes Attended	# Graduates	As % of Graduates
12	3	11%
11	6	21%
10	8	29%
9	4	14%
8	1	4%
7	4	14%
6	2	7%
Total	28	100%

Table 5: Geographic Distribution of Graduates

Location	2003-2017	2018	City Totals
Amboy	30		30
La Center	82	1	83
Ridgefield	103	8	111
Yacolt	76	1	77
Woodland (Clark Co.)	40		40
Subtotal	331	10	341
Battle Ground	270	2	272
Brush Prairie	127		127
Subtotal	397	2	399
Camas	144		144
Vancouver	89	12	101
Washougal	94	2	96
Subtotal	327	14	341
Out of County	34	2	36
Totals	1089	28	1117

Participants owned at least 135 acres, with the average 7.1 acres well below the overall average of 10.5 since 2003 (Table 6). As usual, most parcels clustered in the 5 acres or less range.

Eight keep livestock, primarily poultry, horses, sheep and goats in descending order (Table 7). Compared to past classes, fewer graduates own livestock, and those who do, own fewer livestock.

Table 6: Graduate Property Characteristics **

		2003 - 2017	2018	Total
# Graduates		470	28	498
# Properties		342	24	366
Ac Owned	Total Acreage	3685	135	3820
	Avg Ac/Property	10.5	7.1	10.3
	Smallest	0.1	0	0
	Largest	80.2	40	82
	< = 5 ac	154	12	166
	>5 - 10	94	4	98
	>10 - 20	43	2	45
	> 20 ac	41	1	42
Yrs On Land	Average	7	NA	7
	Least	0	NA	
	Most	66	NA	
Land with:	Septic System	304	16	320
	Well	257	13	270

** Not all graduates completed survey or provided all information. Excludes acreage outside Clark County.

Table 7: Number of Livestock Owned*

Livestock	2003 - 2017	2018	Total
Poultry	2631	31	2662
Alpacas	305		305
Cattle	307	3	310
Horse / Donkey	285	8	293
Goats/ Sheep	493	9	502
Swine	135		135
Llama	58		58
Rabbits	461		461
Ostrich/ Emu	6		6
Total	4681	51	4732

* Understates total since not all participants listed livestock.

Knowledge Increases. Participants were also asked to rate their knowledge on each topic before and after the workshop using a scale of one to five: a response of one equals poor, two fair, three average, four good and five excellent. Across all class topics, at least 81% (81%-98%) learned some knowledge (Table 8). At least 53% (53%-78%) of respondents learned a moderate amount to a lot about 10 of the 14 major topic areas.

When asked what management practice they might implement with a year, participants indicated they would improve pasture management, better weed control, manage riparian area, get soil tested, and better manager soils. Overall, respondents rated the entire class very well (4.6 on 5 point scale) and thought it very likely they would use the information they learned to change practices on their properties.

Table 8: LOL Participant Change in Knowledge Levels

LOL Class	Knowledge Area	Before and After Class Knowledge Change (As percent of respondents averaged)					
		Same	1	2	3	4	N (NR)*
Inventory 1	Four topic areas: Goal setting, neighbors, identifying property assets and problems, holistic framework	18%	51%	25%	6%	0%	21 (5)
Inventory 2	Four topic areas: photo documentation, identifying limitations on property goals, Clark County Codes, permits	16%	24%	38%	19%	4%	20 (4)
Soils II	Four topic areas: major nutrients for plant/soil health, soil chemistry, understanding soil tests, soil surveys	5%	24%	24%	35%	12%	22 (5)
Well & Septic	<i>See section on well and septic, not separated out</i>						
Soils I	Four topic areas: soil structure, type & texture, erosion, amendments, properly testing soil	11%	21%	33%	28%	7%	17 (5)
Pasture	Four topic areas: renovating/reseeding pasture, grass/legume species, grass life cycle, Grazing management	8%	16%	28%	30%	18%	19 (3)
Watershed Pollution & C.C. Codes	Four topic areas: the Clean Water Program, best practices to control SW, SW permit application process	9%	13%	24%	49%	4%	15 (5)
Weeds	Four topic areas: weed management plan, life cycles of weeds, identifying and controlling weeds	5%	48%	30%	16%	2%	11 (13)
Managing Animals	Four topic areas: BMPs for managing mud and manure, managing runoff, animal impacts	10%	36%	43%	12%	0%	14 (6)
	Three topic areas: Feed and forage needs, evaluating hay quality, , body condition scoring	11%	15%	26%	33%	15%	9 (7)
Wildlife & Streams	Three topic areas: creating wildlife habitat, discourage unwanted wildlife, healthy/unhealthy streams	17%	25%	29%	29%	0%	8 (8)
Place on a Stream	Four topic areas: riparian, healthy/unhealthy streams, improving stream health	6%	27%	42%	15%	10%	12 (8)
Agroforestry	Four topic areas: definition, species interaction, common systems, forest health for traditional forest management	2%	26%	22%	43%	6%	12 (9)
Business	Seven topic areas: starting a business, business planning, resources, direct marketing, assessing markets, value added	16%	31%	40%	10%	3%	11 (10)
Stewardship	Four topic areas: stewardship and sustainability, holistic goals, Developing actions, assessing progress	19%	46%	29%	0%	6%	13 (10)

Issues and Recommendations. There are no issues for 2018, although with the retirement of our pasture speaker from OSU, the Program will need to arrange a replacement in 2019.

Task 2c – Well and Septic Maintenance Workshops

During the four Well & Septic workshops, the Coordinator (or Director) opened the workshop with a summary of best practices impacting water quality, followed by Sean Hawes, Clark County Public Health, discussing septic system inspection and maintenance. Lastly, another member of Public Health presents on maintaining the potable wells. Participants paid \$15 to attend the workshops.

Of the 126 participants who attended the workshop, not quite half of respondents learned about the program through Public Health’s inspection notification, followed by newspapers ads and press

releases, Facebook and the Extension website, and the postcard mailed out by the program (Table 9). When Public Health mails out notifications, there is an increase in sign-ups from this sources.

Table 9: Responses to Promotion

How Participants Heard of Events	Responses (NR)
Program workshops \ events	3
E-mails (office listservs, local partner newsletters)	3
Media (Small Acreage Facebook / Extension Website),	9
Flyers (feed stores, veterinarians, and libraries)	
Newspaper PR / Ads (<i>The Reflector, Post-Record, The Columbian, and FYI</i>)	13
Word of mouth	9
Small Acreage Postcard	6
Septic Inspection Notification	36
Other	4
Total	83 (19)

When asked about their intent to use the information they learned, 100% of respondents indicated they would. Participants own 525 acres (Table 10).

Table 10: Well & Septic Workshops

Date	Participants	Intend to Use Information % Yes N (NR)	Acreage Owned	Workshop Location
February 22	28	100% 19 (9)	161	CASEE, Brush Prairie
May 9	29	100% 22 (7)	173	CASEE, Brush Prairie
July 31	33	100% 22 (11)	106	CASEE, Brush Prairie
October 3	36	100% 26 (10)	85 *	Luke Jensen Room
Totals	126		525	

* = Does not include acreage of LOL class participants.

Participants evaluate their knowledge about selected topics before and after attending the workshop. Evaluation results show that at least 87% (87%-97%) of respondents increased their knowledge on well and septic system maintenance and health (Table 11). On average, 68% of respondents from the four classes learned a moderate amount to a lot about the three topics under well and septic maintenance, and septic inspection. Fully 75% on average Learned something about how management practices impacted clean water.

Table 11: Well and Septic Workshop Knowledge Level Change

Workshop	Knowledge Area	Before and After Workshop Knowledge Level Change (as percent of responses)					
		Same	1	2	3	4	N (NR)*
Feb 22	Knowledge of three topic areas **	6%	27%	45%	9%	13%	18 (10)
	How my management practices impact clean water	33%	33%	22%	0%	11%	18 (10)
May 9	Knowledge of three topic areas **	5%	24%	41%	19%	13%	20 (9)
	How my management practices impact clean water	23%	27%	23%	23%	5%	22 (7)
July 31	Knowledge of three topic areas **	13%	36%	24%	17%	10%	18 (12)
	How my management practices impact clean water	26%	42%	21%	11%	0%	19 (14)
October 3	Knowledge of three topic areas **	3%	18%	37%	27%	14%	23 (13)
	How my management practices impact clean water	18%	23%	36%	18%	5%	22 (14)
All Classes	Knowledge of three topic areas **	6%	26%	37%	19%	12%	77 (49)
	How my management practices impact clean water **	25%	32%	25%	14%	5%	81 (45)

*N = number of responses; NR = no response; ** = Averaged

Issues and Recommendations. Public Health requested separating out the workshop in the fall for the LOL class and holding an extra class for the public. After talking with Public Works, this was added to the 2019 scope of work.

Task 2d – Best Management Practices Workshops

The Program held three workshops: *Manure Composting and Management, Pasture Management, and Streamside Planting with Native Plants*. Forty people signed up for the three workshops. Sixty-three percent heard about the workshops through emails and online (website and Facebook) (Table 12).

Table 12: Responses to Promotion

How Participants Heard of Events	Responses (NR)
Program workshops	7
E-mails (office listservs, local partner newsletters)	15
Media (Small Acreage Facebook / Extension Website),	10
Flyers (feed stores, veterinarians, and libraries)	
Newspaper PR / Ads (<i>The Reflector, Post-Record, The Columbian, and FYI</i>)	4
Word of mouth	
Small Acreage Postcard	
Other	3
Total	39 (1)

The manure workshop attracted 16 participants, the majority of which own horses. The Director presented and covered how to compost manure and the impacts of poor manure management on water quality. Participants ranked all three workshops above 4.3 out of 5 (Table 13).

Table 13: BMP Workshops

Date	Topic	Participants	Intend to Use Information % Yes N (NR)	Acreage Owned	Overall Rating	Workshop Location
May 17	Manure	16	100% 13 (3)	91	4.4	Public Safety Complex - Ridgefield
September 20	Pasture	11	100% 6 (5)	161*	4.7	Luke Jensen
October 13	Riparian Planting	13	100% 3 (10)	39	4.3	La Center Middle School
Totals		40		291		

* = Does not include acreage of LOL class participants.

When asked about what they learned, at least 67% (67%-96%) of respondents showed various increases in understanding the topic in all three workshops (Table 14), while 44%-87% gained a moderate to a lot of knowledge. At least 46% (46%-67%) learned how their practices can affect clean water.

Table 14: Manure Knowledge Level Change

Workshop	Knowledge Area	Before and After Workshop Knowledge Level Change (as percent of responses)					
		Same	1	2	3	4	N (NR) *
May 17	Three topic areas covering Manure management and composting	33%	23%	41%	3%	0%	13 (3)
	How my management practices impact clean water	54%	15%	8%	15%	8%	13 (3)
September 20	Four topic areas covering pasture and grazing management	4%	8%	54%	33%	0%	6 (5)
	How my management practices impact clean water	NA					
October 13	Three topic areas covering use of native plants for streamside planting	25%	17%	33%	25%	0%	3 (10)
	How my management practices impact clean water	33%	0%	67%	0%	0%	3 (10)

The Program promoted workshops through press releases to local newspapers, Facebook posts and advertisements, website content, and listserv emails, among other means. The Program continues to revise a speaker’s list for events and rank speakers.

Issues and Recommendations. There are none at this time.

Task 2e – Outreach Events and Promotional Activities

Small Acreage Exposition. The thirteenth annual *Small Acreage Expo* took place on Saturday, April 14th at the 78th Street Heritage Farm. Speakers presented on eleven session topics (Table 15). Two sessions, *Equine Health Related to Best Practices* and *Transforming Irrigation Efficiency*, were cancelled due to low registration. Participants selected from several concurrent classes during each session. The program charged \$15 for pre-registration (includes lunch) and \$25 for walk-ins. Pre-registration included lunch

from a local caterer. The Coordinator arranged an open house for eight organizations to set up booths to provide informational materials.

Table 15: Small Acreage Expo Topics

Session A 9:00-10:15	Managing Grazing for Sustainable Pastures	Gary Fredricks
	Native Plants Landscaping	Brad Meade
	Weed' Em and Reap	Kara Hauge
Session B 10:30-11:45	Septic Inspection	Sean Hawes
	Woodland Management	Matt Provencher
	Gearing Up for Goats	Amy Gustin
Lunch 11:45-12:45 - Lunch, Vendors, Open House		
Session C 12:45-2:00	Composting	Pete Dubois
	Pond Care 101	Fenwick, Doug
	Maintaining a Healthy Well	Brigette Bashaw
Session D 2:15-3:30	Sustainable Living for Small Farms	Eric Lambert
	Drainage Solutions Q&A	Seth Kenworthy

One hundred and six people attended the Expo, a similar level of attendance as last year’s event which attracted 109 attendees. Fifty-eight participants submitted evaluations for the event as a whole, a return rate of 55%. Door prize tickets were offered in exchange for completing evaluations, an effort to encourage a higher return rate. Donations for door prizes were made by Columbia River Carbonates, Wilco, Backyard Bird Shop and the Master Gardener Foundation, a value of \$520.

The Coordinator promoted the Expo widely, through Facebook and newspaper advertisements (Appendix A), listserv emails, a promotional postcard (developed under Task 2e), at Small Acreage events and other means (Table 16). Facebook was the most successful means for promoting the Expo, attracting 20 participants. Word of mouth and email are the second and third most effective means, attracting 16 and 14 participants, respectively.

Table 16: Responses to Expo Promotion

How Participants Heard of Events	Responses %	Responses (NR)
Program workshops	0%	0
E-mails (office listservs, local partner newsletters)	20%	14
Media (Small Acreage Facebook / Extension Website),	29%	20
Flyers (feed stores, veterinarians, and libraries)	0%	0
Newspaper PR / Ads (<i>The Reflector</i> , <i>Post-Record</i> , <i>The Columbian</i> , and <i>FYI</i>)	12%	8
Word of mouth	23%	16
Small Acreage Postcard	16%	11
Other		
Total	100%	69 (37)

Respondents rated the overall event 4.5 on a scale of one to five, five being highest. Nearly all respondents (98%) indicated they learned something new and intend to use the information learned to change what they do at home (Table 17).

Table 17: Overall Event Program Evaluation

	Average	N (NR) *
What overall score would you give this event?	4.5	55 (51)
Do you intend to use this information to change what you do?	98% Yes	55 (51)

*N = number of responses; NR = no response

Individual Expo Sessions

Participants assessed their learning for all of the individual sessions and indicated whether the information they learned would be used to change their practices at home. At least 84% of respondents increased their knowledge somewhat across all topics (Table 18).

Table 18: Small Acreage Expo Participant Change in Knowledge Levels

Expo Session	Knowledge Area	Before and After Class Knowledge Change (As percent of respondents)					
		Same	1	2	3	4	N (NR)
Managing Grazing/ Sustainable Pastures	Practices to improve pasture health	12%	21%	43%	15%	9%	29 (7)
	Will use information to change practices at home?	90% Yes			10% No		28 (8)
Native Plant Landscaping	Native plants benefits and uses in the landscape	16%	26%	25%	28%	5%	30 (3)
	Will use information to change practices at home?	100% Yes			0% No		33 (0)
Weed ID and Control	Weed ID and eradication	7%	11%	55%	16%	11%	11 (5)
	Will use information to change practices at home?	93% Yes			7% No		21 (4)
Sustainable Timber Harvest	Best practices for timber harvest and water health	10%	35%	13%	24%	17%	10 (7)
	Will use information to change practices at home?	40% Yes			60% No		10 (7)
Gearing Up for Goats	Selecting goats and managing their impacts	5%	17%	30%	37%	11%	28 (5)
	Will use information to change practices at home?	85% Yes			15% No		26 (7)
Septic Inspection Certification	Properly inspecting your septic system	11%	21%	25%	20%	25%	31 (3)
	Will use information to change practices at home?	88% Yes			12% No		32 (2)
Composting	How to set up and maintain a compost system	9%	20%	21%	26%	24%	28 (4)
	Will use information to change practices at home?	97% Yes			4% No		30 (2)
Pond Care 101	Best practices for proper pond maintenance	3%	18%	39%	18%	18%	11 (5)
	Will use information to change practices at home?	70% Yes			30% No		10 (6)
Keeping Your Well Water Healthy	Properly testing and maintaining your well	11%	18%	38%	20%	13%	15 (5)
	Will use information to change practices at home?	87% Yes			14% No		30 (2)
Drainage Solutions Q&A	Managing runoff, water harvesting, and drainage solutions	9%	18%	36%	22%	15%	25 (5)
	Will use information to change practices at home?	77% Yes			23% No		22 (8)
Sustainable Living for Small Farms	BMPs, social considerations and resources for land management	11%	17%	42%	26%	4%	27 (12)
	Will use information to change practices at home?	88% Yes			12% No		24 (15)

N = number of respondents; NR = estimate of non-respondents, based on registration for each session. Due to the open nature of the event, participants attend classes other than what they registered for.

For all sessions except one, at least 70% of respondents indicated that they would use the information learned to change practices at home. Only 40% of the Sustainable Timber Harvest class indicated they would use the information to change practices. Evaluation results indicate the Expo sessions increased participant understanding of topics and provided useful information.

Clark County Fair. The Program partnered with the Master Gardener Program in the past to have presence, but due to complications with space, the MG program did not participate this year.

WSU Harvest Celebration. The 20th annual Clark County Harvest Celebration took place on Saturday September 15 from 10 am to 3 pm. The event showcased ten farms, including two properties who earned *Doing Our Part for Clean Water* signs. New additions to this year’s Harvest Celebration were Mountain Peaks Therapy Llamas & Alpacas. Each farm had staff or volunteers for the full event to count attendance, except Heissen House Vineyards. Every farm displayed a poster highlighting its features and each of the three clean water signage farms displayed an additional poster highlighting the BMP’s implemented on their properties. At least 605 visitors made 1067 farm visits (Table 19). Attendance decreased from 2017, partially due to poor weather and the departure of the Program Coordinator during peak promotion times. This year’s attendance was slightly below average for the attendance since 2000.

Table 19: 2017 Harvest Celebration Attendance

Farm	Visitors	Total Farm visits
Mountain Peaks Therapy Llamas & Alpacas	151	232
White Oak Alpacas	72	92
Half Moon Farm *	31	100
Serendipity Alpaca Ranch *	44	106
Heissen House Vineyards	10	10
Greene Jungle Farm	139	220
Tangled Gardens	13	58
Botany Bay Farms	108	134
Coyote Ridge Ranch	22	84
Velvet Acres	15	31
Total	605	1067

* Farms with clean water signage.

Serendipity Alpaca Ranch earned their sign in 2017. The property does a good job managing their pastures, with no signs of erosion or compaction and very limited weeds. They control stormwater runoff on their property through gutters installed on all buildings and by diverting water away from livestock areas. The owners also remove alpaca manure from their pastures daily and compost it in a covered pile which keeps the manure from leaching nutrients into nearby water bodies.

Half Moon farm also received their sign in 2017. This eight acre property is well-managed, with the owners raising chickens to sell eggs, as well as tending 10 bee hives for honey and candle making, which they sell from a small store next to their house. Two-thirds of the property remains wooded, with a sizable wetland which the landowners protect.

The Program promoted the Harvest Celebration through press releases, at events, flyers, email lists, and with a map.

Veterinarian outreach. The program sends flyers to local veterinarians about animal related events.

Low impact development. There were no specifically LID events, although the Program does promote materials on LID practices.

Equine Community. The Program did two promotional talks to equine organizations: the first in early June to the Clark County Executive Horse Council (CCEHC) and the second November 12th to the Back Country Horsemen (BCH). These short promotions talked about events during the year that might interest horse groups. Since the Director belongs to two local groups, WTRA and BCH, more of the Program’s email promotions have been forwarded to membership.

Issues and Recommendations. There are none at this time.

Task 3 - Model Small Acreage Properties

Task 3a – Property Tours

The first property tour occurred in April 28 at a 3-acre horse property in Battle Ground. The tour demonstrated rotational grazing, use of a sacrifice area, sustainable manure management and onsite stormwater management, among other topics. Sixteen participants attended the Vossenbergs tour of a commercial stable and training center. Most people heard about the tours through program workshops, followed by email promotions (Table 20).

Table 20: Responses to Tour Promotion

How Participants Heard of Events	Responses (NR)
Program workshops	11
E-mails (office listservs, local partner newsletters)	7
Media (Small Acreage Facebook, Extension Website),	1
Flyers (feed stores, veterinarians, and libraries)	
Newspaper PR / Ads (<i>The Reflector, Post-Record, The Columbian, and FYI</i>)	2
Word of mouth	
Small Acreage Postcard	
Other	3
Total	24 (4)

All respondents indicated they intended to use the information to change their practices (Table 21) and ranked the workshops at least 4.4 on a five-point scale. Collectively, the 28 participants owned 117 acres.

Table 21: Property Tours

Date	Participants	Intend to Use Information % Yes N (NR)	Acreage Owned	Overall Rating	Workshop Location
April 28	12	100% 8 (4)	62	4.4	BG Horse Farm
November 10	16	100% 12 (4)	55	4.8	Vossenbergs Farm
Totals	28		117		

When assessing knowledge gained, 90%-96% of respondents learned at least something on all topics in the two tours, while 90% gained a moderate to a lot of knowledge on topics during the Vossenbergs

farm tour (Table 22). Over 67% of respondents from the two tours increased their understanding of how their practices impact water quality.

Table 22: Tours Knowledge Level Change

Tour	Knowledge Area	Before and After Tour Knowledge Level Change (as percent of responses)					
		Same	1	2	3	4	N (NR) *
Horse Farm	Three topic areas covering pasture mgmt., manure mgmt., managing runoff	4%	63%	21%	13%	0%	8 (4)
	How my management practices impact clean water	25%	75%	0%	0%	0%	8 (4)
Vossenbergs Stables	Three topic areas covering use of native plants for streamside planting	10%	43%	33%	13%	0%	10 (6)
	How my management practices impact clean water	33%	0%	33%	22%	11%	9 (7)

Issues and Recommendations. There are none at this time.

Task 3b – Landowner Recognition

Six property assessments took place: two in Lacamas Cr. watershed, two in the East Fork Lewis River watershed, and one each in Whipple Creek and Salmon Creek watersheds. Two Clean Water signs were awarded, one for a property in the East Fork Lewis (5 acres) and another in the eastern part of Salmon Creek (5 acres). One property in Whipple Creek only needs a downspout to qualify.

Issues and Recommendations. There are none at this time.

Task 4 - Small Farms

Task 4a – Agricultural Entrepreneurship and Business Planning

The Program organized its eleventh *Agricultural Entrepreneurship and Business Planning* class series where participants learn about business planning, marketing methods and opportunities, and how to develop or expand a small farm business. They produce a completed business plan by the last class and present their business plan to the class on the final evening. Farmers and various small business specialists serve as guest speakers, bringing valuable practical experience to the class. The ten-week class series ran from January 24 through March 28.

The schedule included some new topics including a session on Value Added Opportunities given by WSU Extension’s new agricultural faculty, Justin O’Dea; and a financial assessment class taught by Landon Macy from Northwest Farm Credit Services (Table 23).

The program charged \$100 per farm or family, which included a class notebook with syllabus, schedule, and activity worksheets. Before registering, the Coordinator spoke with participants about their intentions and what they hope to get out of the class in an effort to make sure the course and candidates were suitable and understood class expectations. Once accepted, candidates filled out a pre-survey using Qualtrics and then received a link to register on Brown Paper Tickets.

Table 23: Agricultural Entrepreneurship Course Schedule

Date	Topic	Instructor(s)
Jan 24	Introduction - Business Planning Basics <i>Vision, goals & mission statement</i>	Amber Lefstead, WSU Clark County Extension
Jan 31	Marketing: <i>Conducting Research</i> Value Added Opportunities	Supisa Oliver, Fort Vancouver Regional Library Justin O'Dea, WSU CC Extension
Feb 7	Marketing: <i>Market Analysis</i> Management & Ops: <i>Taxes, Licenses & Payroll</i>	Jordan Bolt, Vancouver Farmers Market; Donna Graham & Kim Wilcox, Wilcox & Company, PC
Feb 14	Marketing: <i>The 5 Ps</i>	Lorrie Conway, Northwest Accounting Erin Harwood, Garden Delights Herb Farm
Feb 21	Management & Operations: <i>Regulations</i> Pasture Raised Meats	Kim Hoffamann, WSDA Caleb Sturtevant, Botany Bay Farm
Feb 28	Financial Risk Management	Landon Macy, Northwest Farm Credit Services
Mar 7	Management & Operations: <i>Insurance,</i> <i>Business Structures</i>	Bob Cosgrove, Country Financial Matt Bisturis, Schwabe, Williamson and Wyatt
Mar 14	Marketing: <i>Marketing Farm Education</i>	Jacqueline Freeman, Friendly Haven Rise Farm
Mar 21	Financing: <i>Record Keeping & Basic Budgets</i>	Lorrie Conway, Northwest Accounting
Mar 28	Graduation; Present finished business plans	Students

The Coordinator promoted the course through flyers at program events, the listserv, Facebook, and press releases in local papers. The Small Acreage Listserv was the most successful advertising method this year, attracting eight registrants. Word of mouth advertising through family, friends and neighbors was the second most effective means of publicity, attracting five registrants. Small Acreage program events attracted four participants. Facebook attracted two participants and advertising in The Reflector attracted one participant.

Thirty people in nineteen households registered for the Ag Business Planning class. Seven students withdrew due to personal, health, or work reasons before the class completed which left the class with 23 students in 15 households. Fourteen students from 12 households met graduation requirements of attending seven classes (Table 24). Only three households did not have a graduating family member.

Table 24: Agricultural Entrepreneurship Attendance

Classes Attended	# Participants	As % of Participants	Cumulative %
10	6	19%	19%
9	2	6%	26%
8	1	3%	29%
7	5	16%	45%
6	4	13%	58%
5	2	6%	65%
4	5	16%	81%
3	2	6%	87%
2	2	6%	94%
1	1	3%	97%
0	1	3%	100%

Of the 12 graduating households, ten own properties, while two rent. Four (33%) graduating households currently run small farm businesses on their property, selling products such as vegetables, orchard fruit, flowers, herbs, and hay. Graduating households held 79 acres, with those owning businesses comprising 10.25 acres.

North and Central Clark County each yielded 31% of the graduates, whereas south Clark County yielded only 7% of graduates (Table 25). Four graduates (31%) came from outside of Clark County.

Location		08	09	10	11	12	13	14	15	16	17	18	City Total	Area Total
North	Amboy	0	0	0	2	0	0	0	0	0	1	0	3	64
	La Center	4	0	1	2	1	2	1	2	2	4	1	20	
	Ridgefield	5	3	0	2	2	2	0	2	5	5	3	29	
	Woodland	1	0	0	0	0	0	0	2	2	0	0	5	
	Yacolt	3	1	0	3	0	0	0	0	0	0	0	7	
Central	Battle Ground	1	7	2	3	1	1	1	4	3	1	2	26	46
	Brush Prairie	1	0	3	0	2	3	0	5	0	4	2	20	
South	Camas	1	4	1	0	3	1	0	0	1	1	0	12	93
	Vancouver	6	3	11	9	9	2	7	3	6	4	0	60	
	Washougal	2	2	1	2	3	1	4	2	2	1	1	21	
Out of County	Woodland (Cowlitz)	2	0	0	0	0	4	1	0	1	0	0	8	8
	SW WA	1	0	1	7	0	3	6	2	2	0	1	23	22
	OR	0	0	2	0	5	0	2	2	5	0	3	19	16
Totals		27	20	22	30	26	19	22	24	29	21	13	253	219

Overall, participants completing evaluations rated classes well, with nine of ten classes receiving a score of 4.0 or above on a scale of one to five, with five being highest (Table 26). One class did not rank well, which was class three on Market Analysis & Taxes. Several students indicated in their reviews that the speaker covering taxes was difficult to follow.

Table 26: Agricultural Entrepreneurship Class Evaluations

Class Session	Rank	N (NR)	Use any of this info? (% Yes)	N (NR)	Learn something new? (% Yes)	N (NR)
Intro to Business Planning	4.2	19 (3)	100%	20 (2)	100%	20 (2)
Market Research & Value Added	4.3	19 (7)	100%	20 (6)	100%	20 (6)
Market Analysis & Taxes	3.7	10 (16)	100%	13 (13)	100%	13 (13)
Marketing: The 5 Ps	4.2	14 (8)	100%	14 (8)	100%	14 (8)
Regulations & Pastured Meats	4.4	11 (10)	91%	11 (10)	91%	11 (10)
Farm Finances	4.4	13 (0)	100%	13 (0)	100%	13 (0)
Insurance and Legal Issues	4.3	13 (3)	100%	14 (2)	100%	14 (2)
Marketing	4.3	15 (1)	100%	15 (1)	87%	15 (1)
Finances & Record keeping	4.5	11 (0)	100%	11 (0)	100%	11 (0)

Participant comments indicate they learned valuable information for planning their business:

“I learned so much & feel so much more empowered.”

“This course was very well done & helpful.”

“The information that I learned from class presentations and materials was valuable and the info I learned from other farmers in class was fantastic.”

Participants assessed their knowledge before and after each class. The number of evaluations fluctuates each week due to some participants being in a hurry when classes ran late. The Coordinator encourages students to submit their evaluations immediately after the class session, but also accepts any evaluation throughout the course, and provides reminders at the end of each class to submit any evaluations.

Sixty-four to 100% of respondents increased their knowledge by at least one level on all topics during the course (Table 27). Respondents gained the most knowledge about market research, with 90% of respondents increasing their knowledge two or more levels. One-hundred percent of respondents increased their knowledge on all topics pertaining to farm insurance and legal issues. These large increases in knowledge for market research, insurance and legal issues indicate these areas as ones where attendees had limited knowledge to begin with or were especially information-rich presentations.

Table 27: Agricultural Entrepreneurship Knowledge Change Evaluation Summary

Class Session	Knowledge Area	Before and After Knowledge Change (As percent of respondents ⁺)					
		Same	1	2	3	4	N (NR)
Intro to Business Planning	Components of a business plan	10%	48%	19%	24%	0%	21 (1)
	How to develop your business' mission statement	5%	19%	43%	29%	5%	21 (1)
	How to develop goals and objectives	14%	43%	33%	10%	0%	21 (1)
	Taking a farm resource inventory	10%	24%	38%	24%	5%	21 (1)
Market Research & Value Added	Pertinent resources to find industry information	5%	40%	5%	40%	10%	20 (7)
	How to research consumers, target markets and competition	10%	0%	35%	45%	10%	20 (7)
	What "value-added" is	5%	45%	30%	15%	5%	20 (7)
	Benefits of value-added approaches	15%	30%	35%	15%	5%	20 (7)
Market Analysis & Taxes	Identifying your customer preferences, values, and demographics	8%	31%	46%	15%	0%	13 (13)
	Evaluating your potential market	23%	23%	46%	8%	0%	13 (13)
	Tax considerations for business owners	15%	23%	46%	8%	8%	13 (13)
	Getting appropriate licenses for your farm business	25%	33%	17%	17%	8%	12 (14)
Marketing: The 5 Ps	How to reach customers with marketing tools	21%	29%	29%	21%	0%	14 (8)
	Direct marketing ideas (e.g. where you will sell)	29%	36%	36%	0%	0%	14 (8)
	Creating a pricing strategy for your products	36%	36%	29%	0%	0%	14 (8)
	Approaches to branding	21%	43%	29%	7%	0%	14 (8)
Regulations & Pastured Meats	Where to find regulations that apply to your farm business	9%	18%	27%	27%	18%	11 (10)
	Licensing requirements	9%	27%	27%	27%	9%	11 (10)
	Labeling requirements	27%	27%	18%	18%	9%	11 (10)
	Starting a small farm with pasture raised animals	0%	18%	36%	45%	0%	11 (10)

Class Session	Knowledge Area	Before and After Knowledge Change (As percent of respondents ⁺)					
		Same	1	2	3	4	N (NR)
Farm Finances	Lending programs for beginning farmers	15%	8%	38%	31%	8%	13 (0)
	The 5 C's of credit-how lending decisions are made	23%	15%	23%	38%	0%	13 (0)
	How to create a balance sheet	0%	15%	38%	23%	23%	13 (0)
	How to create a cash flow budget	0%	15%	46%	23%	15%	13 (0)
Marketing Farm Education	Marketing your farm 'know-how' and other assets	7%	27%	40%	27%	0%	15 (1)
	Developing multiple marketing channels	7%	27%	47%	20%	0%	15 (1)
	Ways to improve farm profitability	7%	40%	33%	13%	7%	15 (1)
Insurance and Legal Issues	How insurance can help a small farm	0%	21%	50%	29%	0%	14 (2)
	Insurance options to manage risk for small farm and value added businesses	0%	29%	21%	50%	0%	14 (2)
	Legal issues to consider when starting a business	0%	21%	64%	14%	0%	14 (2)
	Determining the structure appropriate for your farm business	0%	21%	71%	7%	0%	14 (2)
Finances & Record keeping	Different accounting system options & advantages & disadvantages of each	0%	27%	45%	27%	0%	11 (0)
	Creating a basic budget	9%	45%	36%	9%	0%	11 (0)
	How to do effective record keeping	18%	27%	45%	9%	0%	11 (0)
	How to get info together for your accountant	27%	27%	27%	9%	9%	11 (0)

* N = number of respondents; NR = non-respondents. + May not equal 100% due to rounding

Participants rated the entire class series very well, rating the series a 4.7 on a scale of one to five, five being highest (Table 28). All respondents thought the course series answered most of their questions and felt it provided information useful for their farm business. While most respondents felt the series length was just about right, some thought it too long.

Table 28: Overall Agricultural Entrepreneurship Evaluation Summary

	Average	N(NR)
What overall score would you give this series?	4.7	10 (2)
How much will you use this information to help shape your agricultural business?	4.9	10 (2)
	% Yes	
Did this course answer most of your questions?	100%	10 (2)
Did you learn useful/helpful information?	100%	10 (2)

Issues and Recommendations. The Agricultural Entrepreneurship & Business Planning course graduated 14 people, a lower number than the target of 20 graduates. Seven students withdrew; two for health reasons; three because they got too busy; and two because of work schedule changes. Of the 24 students remaining in the class, nine did not graduate. Of those nine, four were members of households with a partner who did graduate the class. Of the five students who remained in the class but did not graduate, all were new farmers who had yet to begin a business. The Coordinator believes that farmers who have yet to start their business are less invested in the class than farmers with businesses. In the future, the program may want to focus on letting in farmers with businesses over farmers without businesses if there is high demand for the class.

Task 4b – Small Farms Workshops

Women in Agriculture Conference - The WIA day-long conference webinar based conference had 31 locations in 4 western states (WA, OR, MT, AK). Nineteen women farmers participated in the

Vancouver location. They learned about strengthening their farm operations through healthy cash flows. Featured speakers included a farm economist and farm analyst from Kansas State University Extension, and Sarah Aubrey, author and farmer, and Principal in Aubrey Coaching & Training. Participants also listened and asked questions of two successful, local women farmers. Seventeen of 18 respondents agreed they would change practices in the business based on what they learned, and all 18 agree they would tell other women the benefits of working in agriculture.

Small Farm Workshop – The Coordinator’s resignation did not allow time to schedule a small farm workshop.

Issues and Recommendations. None at this time.

Task 5: Impact Evaluation & Reporting

Task 5a – Evaluations

Workshop Evaluations. The program conducts post-event evaluations for each workshop, tour, and class where appropriate. Spouses and partners are encouraged to fill out separate evaluations. Registration and attendance is tracked and recorded, along with evaluation results and comments. Participant suggestions and comments are incorporated as appropriate in planning for future events.

Impact Reporting (follow-up surveys on workshops and tours). The Coordinator and Director sent follow-up surveys for the 2015, 2016, and 2017 *Living on the Land* classes. The results of the surveys have only begun to be input. The Coordinator and Director prepared follow-up surveys for all BMP workshop, well and septic workshop, and small acreage tours from 2016 to 2017. The surveys were sent out in May and June 2018 and the results will be listed in the first quarter report in 2019.

Information Requests. The program responded to about 175 requests for information on upcoming events, agricultural business ventures, septic systems, drainage, animal husbandry, and stormwater management. All individuals who contact the program receive relevant factsheets and flyers for upcoming events, as well as applicable links and verbal and written guidance applicable to their concerns.

LOL Impact Evaluation.

Overview. Beginning in 2004, the Director developed a survey to assess behavior changes by former participants in the *Living on the Land* series based on the knowledge participants gained while taking the course.

Methodology. The close-ended survey measures self-reported changes from *Living on the Land* from participants. Graduates through 2017 have been surveyed after they had at least one summer to implement BMPs on their properties; those in 2017 will be resurveyed due to the poor response rate. After initial mailings, staff followed-up with non-responders by email and/or telephone.

Response. The LOL 12 week class series (graduated 470 people through 2017 owning at least 3,966 acres). LOL graduated an additional 28 people (20 households) owning at least 135 additional acres in 2018.

As outlined in Table 29, 345 LOL participants returned the survey for an overall response rate of 73%. The class of Fall 2017 returned the least (17%) while the class of 2006 returned the most (91%).

Analysis. Through 2017, with a 70% response from 345 graduates, 278 graduate households (of 345 HH) implemented 726 BMPs on at least 2,388 acres affecting at least 1,795 livestock (excluding poultry). Graduates shared what they learned with over 3,518 other people.

Over 45% of responding households tested their soil, 61% of respondent households with septic systems inspected their system, and 55% of households with wells tested them, all as a result of what

Table 29: Survey Response Rate

Class	Moved	No Response			Returned Evaluations					Total Grads	As % of All Grads
		No.	% of Class	As % of All Grads	Household	Partner/Spouse	Total	As% of Class	As % of All Grads		
Fall 03	0	4	17%	1%	16	3	19	83%	4%	23	5%
Spring 04	0	8	19%	2%	26	9	35	81%	7%	43	9%
Fall 04	0	4	12%	1%	25	5	30	88%	6%	34	7%
Spring 05	1	4	15%	1%	19	3	22	81%	5%	27	6%
Fall 05	1	2	7%	0%	20	4	24	89%	5%	27	6%
Fall 06	0	3	9%	1%	25	5	30	91%	6%	33	7%
Fall 07	0	5	16%	1%	21	6	27	84%	6%	32	7%
Fall 08	1	7	23%	1%	18	5	23	74%	5%	31	7%
fall 09	0	10	43%	2%	12	1	13	57%	3%	23	5%
Fall 10	1	7	28%	1%	15	2	17	68%	4%	25	5%
Fall 11	0	6	32%	1%	12	1	13	68%	3%	19	4%
Fall 12	1	7	25%	1%	15	5	20	71%	4%	28	6%
Fall 13	0	6	22%	1%	16	5	21	78%	4%	27	6%
Fall 14	1	9	35%	2%	13	3	16	62%	3%	26	6%
Fall 15	3	7	23%	1%	13	7	20	67%	4%	30	6%
Fall 16	0	7	39%	1%	9	2	11	61%	2%	18	4%
Fall 17	2	18	75%	4%	3	1	4	17%	1%	24	5%
Total	11	114		24%	278	67	345		73%	470	100%

they learned. Over 85% thought the class was a good use of their Clean Water fee.

When asked at what level their knowledge was at before and after the course in eight general topic areas, 57% to 80% learned something to a lot about all eight topics (Table 30). The fewest respondents learned something about managing manure, but over 57% still learned at least something. Over 73% of responding graduates learned how their management impacts clean water, a heartening level since water quality is a major theme underlying much of the LOL curriculum.

Table 30: Knowledge Change Before and After Course

General Topic	No Change As % of Respondents (N)	Some to A Lot As % of Respondents (N)
Managing weeds	17% (335)	80% (335)
Keeping my pasture/hay field healthy	25% (325)	71% (325)
Managing rainwater (stormwater runoff) so that it stays clean	25% (328)	70% (328)
Soil and how it relates to managing my land	16% (331)	80% (331)
Setting realistic goals for my land	24% (333)	72% (333)
Managing animal manure	38% (328)	57% (328)
Managing / controlling mud	29% (331)	66% (331)
How my management practices impact clean water:	23% (332)	73% (332)

Impact Reporting (follow-up surveys on small farm workshops and tours). There are none to-date.

Task 5b – Reporting

Reporting. This report constitutes the third quarter and annual report for 2018.

Issues and Recommendations. There are none at this time.

Promotions. The Program uses a number of means to advertise program offerings. Looking across all quarter two events, the most successful promotions are through digital media (including Facebook, the Small Acreage Program website and email) which accounted for almost half of respondents (Table 31).

Table 31: Responses to Event Promotions

How Participants Heard of Events	Responses (#)
Small Acreage events	25
E-mails (office listservs, local partner newsletters)	46
Digital Media (Small Acreage Facebook / Extension Website),	46
Flyers (feed stores, veterinarians, and libraries)	0
Newspaper PR / Ads (<i>The Reflector, Post-Record, The Columbian, and FYI</i>)	28
Word of mouth	27
Small Acreage Postcard	17
Other	14
Septic Inspection notice	36
Total	239

Table 32: Progress Summary

Program Elements			2018 Goals	Qtr 1	Qtr 2	Qtr 3	Qtr 4	YTD	% 2018 Goals
Best Management Practices (Task 1)	Information Resources	Materials added to reference files	ongoing	1	1	1	1	4	
		Post links and resources to website	ongoing	1	1	1	1	4	
		Track web site hits	ongoing	1	1	1	1	4	
		Track web site document downloads	ongoing	1	1	1	1	4	
	Publications	Article	1			1		1	100%
		Video clip, factsheet, or PowerPoint	1					0	0%
Public Outreach and Education (Task 2)	LOL Class Series	LOL series	1				1	1	100%
		Graduation	20				28	28	140%
	Well & Septic Workshops	Well & septic workshops	4	1	1	1	1	4	100%
		Attendance	80	28	29	33	36	126	158%
	BMP Workshops	BMP Workshops	3		1	1	1	3	100%
		Attendance	30		16	11	13	40	133%
		Revise & maintain speaker's list	ongoing	1	1	1	1	4	
	Outreach Events & Promotional Activities	Small Acreage Exposition	1		1			1	100%
		Attendance	75		106			106	141%
		Clark County Fair	1					0	0%
		WSU Harvest Celebration	1			1		1	100%
		Attendance	600			605		605	101%
	Additional Events as identified						0		
Mass Mailing	Postcard mailing	1000		425	765		1190	119%	
Model Properties (Task 3)	Property Tours	Conduct tours	2		1		1	2	100%
		Attendance	30		12		16	28	93%
	Sign Recognition	Assess properties for signage program	6	2	1	2	1	6	100%
Impact Evaluation and Reporting (Task 4)	Evaluation	Summary of Attendance		28	163	649	93	933	
		Attendee Evaluations Returned	328	19	120	28	58	225	69%
		Requests for assistance		73	66	25	11	175	
	Reporting	Quarterly Reports	3	1	1			2	67%
		Annual Report	1				1	1	100%

**Appendix A:
Example Promotional Materials**

FLYER

PRESS RELEASE

REFLECTOR ADVERTISEMENT

FACEBOOK POSTS

FACEBOOK ADVERTISEMENTS

POSTCARDS

LOL Reflector Article

AUGUST 8, 2018

Outdoor Living

The Reflector C5

Classes set for Living on the Land

Annual small acreage class series to start Aug. 29

THE REFLECTOR

The Washington State University Clark County Extension is gearing up for its 16th year of teaching about small acreage stewardship as registrations are open for the Living on the Land series starting this month.

Beginning Aug. 29 the extension, in partnership with the Clark County Public Works Clean Water Program, will host a series of weekly sessions looking at ways for property owners to care and maintain their land. The classes will look at everything from water, weeds, waste and soil among other topics, bringing in experts from the area to teach best practices for their land.

WSU Clark County Extension Small Acreage Program Coordinator Amber Lefstead said that the series was a great opportunity to learn better land management, having already served nearly 500 who had graduated from the past 15 years' worth of events.

"Not only do you learn stewardship practices, but also how to effectively manage your problem areas such as muddy pastures and weeds," Lefstead said.

In anticipation of the upcoming courses Lefstead gathered some information from several local experts on a few of the topics.

Property Inventory

"The first step to stewardship requires understanding the property's assets" WSU Clark County Extension Director Doug Stienbarger said. "Taking an inventory of resources and creating a map of the property helps with goal planning."

Lefstead said a map helps landowners note specific resources, such as an orchard, barn or water body, and any problem areas, such as a weedy field or standing water. Stienbarger notes that as one plans out new goals for their property, such as expanding pasture, they can look back at their map and see how current resources support or hinder new goals.

Soil

Soil remains one of the most critical resources of the land, Lefstead said. If well cared for it supports the growth of crops and helps pastures soak up the rain.

Portland-area Concentrates Inc. manager Heather Havens said testing soil was the first step to keeping it healthy.

"A soil test will show if you need to apply fertilizer. Applying too much fertilizer can do more harm than good," Havens said. "For instance, you have to be very careful adding potassium to your soil; if you add too much, you could end up with a moonscape."

"Another way to ensure healthy soil is to avoid tilling your soil more than absolutely necessary," Camas-based LJC Feeds owner Gordon French said. "There is a whole world of beneficial insects, bacteria and fungi alive in the soil creating a network of nutrients for your plants' roots. Rototilling destroys



Following the "3-inch rule" allows better root regeneration and a better pasture for livestock.

90 percent of these beneficial soil microbes."

Water

Rivers, streams and lakes are amazing resources, Lefstead said, but livestock traffic, manure and contaminated stormwater can make them muddy and contribute to harmful algae blooms.

"People can help protect water resources by planting native trees and shrubs around waterways to filter pollutants and add shade," Clark County Public Works Clean Water Specialist Eric Lambert suggested. "Restricting livestock access with fencing keeps livestock from eroding stream banks and polluting water with manure, and limiting fertilizers and pesticides reduces other contaminants."

Waste

"Poorly maintained septic systems will result in inadequately treated or untreated sewage," Clark County Public Health Environmental Health Specialist Sean Hawes explained. "Once the septic system performance is impacted it increases the risk of wastes polluting surface and groundwater, and can create a direct exposure of sewage pathogens to people."

Haves said regular septic system inspections can reduce the chance of repairs or replacement needed down the line.

Stienbarger added that animal waste also causes problems in our rivers and streams, noting that horses and cows can produce 50 to 60 pounds of manure daily.

"Compost the manure to create a resource you can use and be sure to cover your manure pile with a tarp during the rainy season to keep the manure from running off into our local water bodies," Stienbarger said.

Grazing

Animals overgrazing is the easiest way to kill a pasture because plants need to rest, Lefstead said, adding it was important to follow the "3-inch rule."

"When grass gets grazed to 3

inches, give it a rest," Gene Pirelli, Oregon State University Extension Specialist and pasture expert explained. "This allows plants time to recover and store the stem and root energy necessary to grow high quality forage. Only return livestock to a pasture when the grass reaches at least 6-8 inches."

Weeds

Clark County Noxious Weed Control Board Coordinator Casey Gozart advised landowners to create an Integrated Weed Management (IWM) plan which combines several weed management strategies into one continuous program.

"Survey your property annually for weeds and adapt your management strategies based on your success and your goals," Gozart stated, adding that individuals should reach out to Clark County Vegetation Management for help in identifying weeds and choosing management strategies.

IF YOU WANT TO REGISTER FOR LIVING ON THE LAND

6-9 p.m. Wednesdays from Aug. 29 through Nov. 14. Advance registration required, cost is \$35 per person or \$50 for two. To register and find more information on Living on the Land visit the WSU Extension's website at go.wsu.edu/smallacreage or contact Amber Lefstead at amber.lefstead@wsu.edu or 360-397-6060 ext. 5729.

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Riparian Planting Reflector Article

C2 The Reflector

Fall Home Improvement

OCTOBER 10, 2018

Streamside planting workshop coming Saturday in La Center

Clean Water Commissioner Brendan Addis will share his techniques

DAN TRUJILLO
dan@thereflector.com

Brendan Addis, one of several Clean Water Commissioners in Clark County, wants to show people why fall is the perfect season for homeowners to install native plants to help the rivers, lakes, streams and ponds on their properties thrive.

“Water bodies benefit from plants,” Addis said. “Trees shade rivers and lakes, keeping water cool which better supports aquatic life. Shrubs and grasses stabilize slopes and slow down stormwater runoff before it enters our water bodies, filtering out harmful pollutants.”

Addis will teach a Streamside Native Plants Workshop from 10 a.m. to noon Saturday at La Center Middle School. This activity is sponsored by Washington State University Clark County Extension and the Clark County Public Works Clean Water Program.

The workshop costs \$10 per person. To register, visit streamsideplanting.brownpapertickets.com.

After a presentation at the school, Addis will lead the group on a nature walk along the east fork of the Lewis River to see and learn how native plants thrive in this environment and which plants to choose for their own property.

Addis wants to help participants choose native plants that are going to be the most aesthetically pleasing, make them aware of the ecological and environmental benefits, and explain how to be good stewards of the land.

“I want to teach them how to make the best selection for their

IF YOU GO

Streamside Native Plants Workshop

10 a.m. to noon Saturday, Oct. 13 at La Center Middle School, 700 E Fourth St.

Register for \$10 at streamsideplanting.brownpapertickets.com.

space,” Addis said. “Having that knowledge ahead of time is going to be a huge time saver and a money saver in the long run.”

WSU Clark County Extension sent out these details about the workshop.

As temperatures warm up in the spring, most people think of getting out in the garden to start planting. However, west of the Cascade Mountains, most of the rainfall comes between October and May. Fall remains the best season to start planting trees and other vegetation. The fall and winter rain helps roots establish, making plants more resistant during dry summer conditions.

“We try to encourage people to use native plants because they survive better,” said WSU Clark County Extension Director Doug Steinbarger. “If you plant them at the right time in the fall, the winter rains will help them get established.”

PHOTO COURTESY OF SOUND NATIVE PLANTS

A young Nootka rose blooms at one of Sound Native Plants’ restoration sites in Clatskanie, Oregon. Brendan Addis works for the Sound Native Plants Portland-Vancouver team and serves as one of the Clean Water Commissioners in Clark County. At 10 a.m. Saturday, Addis will teach a Streamside Native Plants Workshop in La Center.



Sample Promotional Flyer

Manure Composting & Management

Learn ways to compost, store, manage
and use livestock manure on your property.

Join Doug Stienbarger, Director of WSU Clark County Extension, to learn how to turn your mountain of manure into a resource.

This workshop will cover:

- ◇ Techniques for manure composting
- ◇ Using manure safely in pastures and gardens
- ◇ Planning manure storage for any budget
- ◇ How to use a manure spreader



Manure Composting & Management

Where: Public Safety Complex
(505 NW 179th St #110, Ridgefield)

Date: Thursday, May 17, 2018

Time: 6 to 8 PM

Cost: \$10 per person

Register at <http://managingmanure.bpt.me/>

Jointly Sponsored by: WSU Clark County Extension and Clark County Clean Water Program.



WSU CLARK COUNTY EXTENSION
Small Acreage Program



Clean Water
Program

WSU Extension programs and employment are available to all without discrimination. Reasonable accommodations will be made for persons with disabilities and special needs who contact 360-397-6060 ext 0 at least two weeks prior to an event.

Sample Press Release

Contact: Amber Lefstead
WSU Extension Clark County
Tel: 360-397-6060 ext. 5729
Fax: 360-759-6524
E-mail: amber.lefstead@wsu.edu

Learn How to Manage Your Mountain of Manure

Vancouver, WA – Have more manure than you know what to do with? Join the Small Acreage Program for a workshop that teaches manure composting, storage, options for using or getting rid of your manure, and how to use manure as a fertilizer. “Participants will learn how to reduce manure pile size, create a valuable soil amendment, improve animal health, reduce pests, and keep our water clean,” says Doug Stienbarger, WSU Clark County Extension Director and natural resources specialist. As speaker, Stienbarger will teach the class and provide participants with excellent resources. “Large livestock produce 50-60 lbs of manure each day which requires effective management strategies,” adds Stienbarger. This is a great workshop that will teach strategies for turning waste into a valuable resource.

The Small Acreage Program, co-sponsored by Washington State University Clark County Extension and Clark County Public Works Clean Water Program, will provide information, handouts, and answer landowners’ questions at the workshop.

“Manure Composting and Management”

Thursday, May 17, 2018

6:00 to 8:00 PM

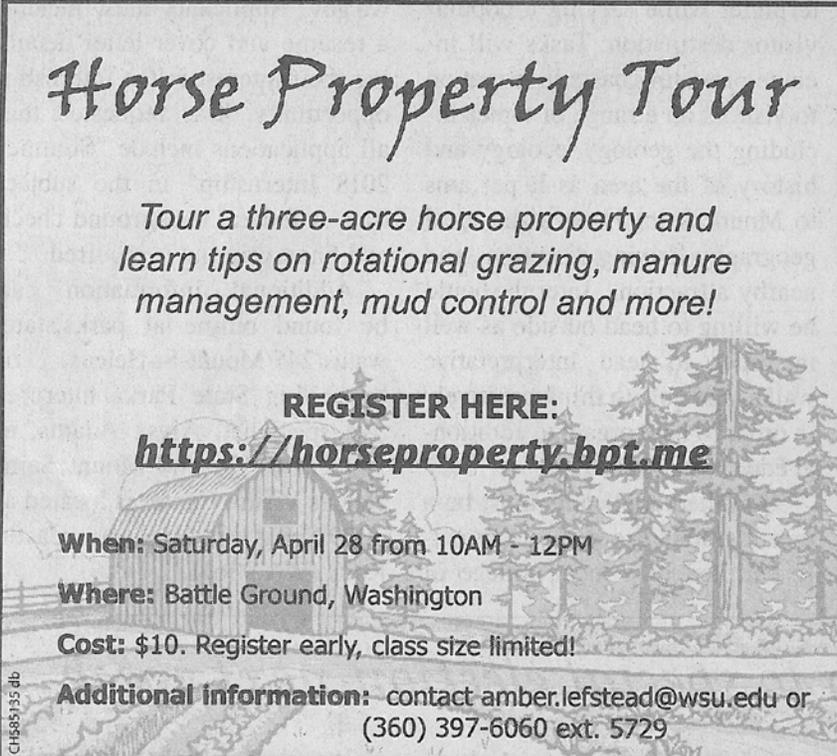
Ridgefield, WA

Registration is \$10 per person and class size is limited. To register and find more details visit <https://managingmanure.brownpapertickets.com/> or call 360-397-6060 ext. 5729 or email amber.lefstead@wsu.edu

WSU Extension programs and employment are available to all without discrimination. Persons requiring special accommodations should call WSU Clark County Extension at (360) 397-6060 ext. 0 at least two weeks prior to the event.

###

Sample Reflector Advertisement



Horse Property Tour

Tour a three-acre horse property and learn tips on rotational grazing, manure management, mud control and more!

REGISTER HERE:
<https://horseproperty.bpt.me>

When: Saturday, April 28 from 10AM - 12PM
Where: Battle Ground, Washington
Cost: \$10. Register early, class size limited!
Additional information: contact amber.lefstead@wsu.edu or (360) 397-6060 ext. 5729

WSU Extension programs are available to all without discrimination.
Persons requiring special accommodations should call WSU Clark County Extension at (360) 397-6060 ext. 0 prior at least two weeks prior to the event.

Learn About:

- Sacrifice area design and use
- Pasture rotation and management
- Drainage and mud control
- Manure management
- AND much more!!!

WASHINGTON STATE UNIVERSITY EXTENSION
Small Acreage Program
Sponsored by:
WSU Clark County Extension
Clark County Public Works
Clean Water Program

CH585135 ab

Sample Facebook Posts

WSU Extension Small Acreage Program added an event. April 17 at 3:02pm

Tour a local small acreage farm in Battle Ground, and get stewardship ideas for your property by seeing practices in action.

Participants will have the opportunity to see rotational grazing in action, and learn about practices to manage runoff and reduce mud. This model property is a great property to tour for any acreage owners who are thinking about adding horses or other large livestock to their land. Come learn about how the landowners achieved recognition as a model pr... [See More](#)

Horse Property Tour

Gain valuable ideas, share tips with other landowners, and see stewardship practices in action



APR 28 Sat 10 AM · Battle Ground, WA
You like WSU Extension Small Acreage Program [★ Interested](#)

343 people reached [View Promotion](#)

[Like](#) [Comment](#)

Kimberly Beltran, Jimmy Santana and 5 others

Write a comment...

WSU Extension Small Acreage Program Published by Eric Smallacreage [?] · May 14

Manure Composting & Management class is just 3 days away! Come out Thursday, May 17 from 6-8pm to learn how to turn your mountain of manure into a resource!



EXTENSION.WSU.EDU
Small Acreage Program | Clark County | Washington State University
The Small Acreage program provides educational workshops... [Learn More](#)

WSU Extension Small Acreage Program shared an event. Published by Eric Smallacreage [?] · May 8

Horses and other large livestock produce 50-60lbs of manure every day. Come out next Thursday, May 17, and learn how to turn your mountain of manure into a resource you can use.

Manure Composting & Management

Learn how to turn your mountain of manure into a resource you can use



THU, MAY 17
Manure Composting & Management
Ridgefield [★ Interested](#)

You like WSU Extension Small Acreage Program

Facebook Advertisements

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You targeted **men and women, ages 18 - 65+** who live in **1 location**, and have **10 interests**.
[Show full summary](#)

This promotion ran for **10 days**.

Your total budget for this promotion was **\$50.00 USD**.

2,654 **210** **\$41.77**
People Reached (?) Engagements Total Spend (?)

Actions | People | Countries

Event Responses 59

Link Clicks 72

Page Likes 7

Comments 6

Shares 31

Increase budget and duration

Add \$8.00 USD and 1 more day
Estimated reach is unavailable

Select custom budget and duration

DESKTOP NEWS FEED
MOBILE NEWS FEED

WSU Extension Small Acreage Program shared their event.

Sponsored ·

Come out and celebrate the 13th Annual Small Acreage Expo! This information- and fun-filled event will offer workshops on topics that small acreage landowners care about. From sustainable pasture management, to composting, addressing landscape drainage and improving equine health, there will be classes to cover broad areas of interest

Pre-registration is \$15 in advance, \$25 for walk-ins the day of the event. If you register by Tuesday, April 10 your registration will include a free boxed lunch!

For more information and on online event program, visit:
[http://extension.wsu.edu/.../naturalres.../smallacreageprogram/...](http://extension.wsu.edu/.../naturalres.../smallacreageprogram/)

13th Annual Small Acreage Expo
Clark County

Workshops on sustainable grazing, composting, weed control, equine health, raising goats and more!

By clicking Add Budget, you agree to Facebook's [Terms & Conditions](#) | [Help Center](#)
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View Results
✕

OVERVIEW
EDIT PROMOTION

Are you satisfied with this promotion?

You targeted **men and women, ages 23 - 65+** who live in **1 location**, and have **3 interests**.
[Show full summary](#)

This promotion ran for **5 days**.

Your total budget for this promotion was **\$30.00 USD**.

2,848 **62** **\$29.98**
People Reached (?) Link Clicks Total Spend (?)

Actions | People | Countries

Link Clicks 62

Page Likes 5

Post Likes 15

Comments 5

DESKTOP NEWS FEED
MOBILE NEWS FEED

WSU Extension Small Acreage Program shared an event.

Sponsored ·

Like Page

The Well and Septic workshop teaches valuable tips about maintaining your gravity-fed septic system and protecting your water supply. Septic inspection training and well safety tips will be presented by officials from Clark County Public Health, who help homeowners meet regulations protecting surface and ground water by ensuring septic systems and wells operate properly. By participating in the workshop and taking a short exam, homeowners can perform their next septic inspect... [See More](#)

Well & Septic Inspection Certification

Learn how to properly inspect, maintain and protect your septic system and well.

WED, MAY 9
Get Tickets

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Postcard Mailers

Small Acreage Program

Your Source of Information for Living on the Land

“WSU allowed us to avoid costly and messy trial and error mistakes and put into action best practices on our first try.” - *Participant*

Look on the flip side to see how we can help YOU!

WASHINGTON STATE UNIVERSITY EXTENSION
Small Acreage Program

CLARK COUNTY WASHINGTON
Clean Water Program

Got Acreage?

.....

Do You Want to.....

- Make your property look better?
- Reduce chore time?
- Improve your animals' well-being?
- Enhance your soils and pasture?
- Protect your drinking water and streams?
- Reduce mud?
- Improve storage & composting of manure?

Small Acreage Program

Your Source of Information for Living on the Land

Upcoming Events

- Living on the Land Class Series Aug 29 - Nov 14
- Harvest Celebration..... Sept 15
- Pasture Establishment & Renovation.... Sept 20
- Well & Septic Workshop..... Oct 3
- Riparian Restoration..... Oct 13

MORE INFO: <http://go.wsu.edu/smallacreage>

Sponsored by: WSU Clark County Extension
Clark County Clean Water Program