

---

# Small Acreage Landholder Outreach Program 2004 Annual Report

Submitted to Clark County Clean Water Program

Submitted by WSU Clark County Extension

Douglas M. Stienbarger, Project Director



Clark County  
Clean Water Program



Clark Conservation District

---

## Table of Contents

<b>BEST MANAGEMENT PRACTICES (BMPS) GUIDELINES .....</b>	<b>2</b>
TASK 1 A – REFERENCE MATERIALS .....	2
TASK 1 B – FACT-SHEETS.....	2
<b>PUBLIC EDUCATION &amp; OUTREACH.....</b>	<b>3</b>
TASK 2A – LIVING ON THE LAND: STEWARDSHIP FOR SMALL ACREAGES .....	3
<i>LOL Class Evaluations.....</i>	8
<i>Promotion.....</i>	10
TASK 3A – PUBLIC OUTREACH FOR SEPTIC AND WELLHEAD PROTECTION .....	11
TASK 3B – WORKSHOPS ON BEST MANAGEMENT PRACTICES (BMPS).....	13
<b>MODEL FARMS .....</b>	<b>13</b>
TASK 4 A – IDENTIFY SUITABLE PROPERTIES AND ORGANIZE TOURS .....	13
TASK 4 B - BMP SIGNAGE RECOGNITION PROGRAM .....	15
<b>OUTREACH DATABASE.....</b>	<b>16</b>
TASK 5 – WORKING MAILING LIST.....	16
<b>IMPACT EVALUATION AND PROJECT REPORTING .....</b>	<b>16</b>
TASK 6 A – WORKSHOP EVALUATION.....	16
<i>Impact Evaluation .....</i>	16
Information Diffusion .....	18
Knowledge Gained .....	19
BMP Implementation.....	20
TASK 6 B – PROGRESS REPORT.....	22
<b>APPENDICES.....</b>	<b>22</b>

## Executive Summary

The *Small Acreage Landholder Outreach Program* completed two *Living on the Land: Stewardship for Small Acreages* class series and graduated 83 people in 2004.

The program completed five septic and wellhead protection workshops, conducted four model farm tours, provided a hands-on workshop on proper fence construction and managing weeds, and evaluated twelve properties under consideration for the signage and model farm components of the project.

The program completed four fact sheets, *Current Use Taxation*, *Frequently Asked Questions*, *Constructing Ponds and Water Features: What Does it Take?*, and *Common Best Management Practices*.

The program booth at the Clark County Fair reached over 2,000 people and won one of ten Best Educational Exhibit awards.

## Best Management Practices (BMPs) Guidelines

### Task 1 a – Reference Materials

Clark County Water Resources agreed to post information in the appropriate section of their web site until the WSU Extension web site is redesigned. Information posted includes a description of the Small Acreage Program, links to fact sheets, and notices of classes and events.

#### *Deliverables*

After establishing the initial BMP guideline materials file (Appendix A), additional materials were incorporated as appropriate.

#### *Issues and Recommendations*

The Clark County Water Resources Program posts program information on their web site until the WSU Extension web site redesign is completed in spring 2005.

### Task 1 b – Fact-sheets

Although all four factsheets have been completed, the fourth factsheet still needs to be posted to the web. The program produced an additional two factsheets that did not meet the criteria of the deliverables that they address gaps in local information. They have nonetheless been added as resources for program participants.

The first five currently available (Appendix A) can be downloaded from the Clark County Web site at <http://www.co.clark.wa.us/water-resources/education/acreage.html>. These include:

*Current Use Taxation* explains the basic concepts of current use taxation, categories landowners may qualify under, the criteria for each category, how to apply and what it costs to apply.

*Frequently Asked Questions For Small Acreage Landowners* answers common landowner questions concerning the permitting process for common small acreage activities and includes contact information for the various permitting agencies.

*Constructing Ponds and Water Features: What Does it Take?* outlines the regulatory environment and potential impacts to water quality surrounding pond construction, along with permits required and the agencies involved. The factsheet lists some references to the technical aspects involved in pond building as well. and surrounding pond construction.

*Simple Steps to Protect Your Surface and Well Water* outlines how landowners can protect wells and maintain septic systems, keep rain water clean, install grassed waterways, use low input gardening and integrated pest management, and cover manure piles, all to prevent water contamination.

*Keeping Clean Water Clean & Reducing Mud - Managing Roof Runoff* explains why using gutters and downspouts comprises one of the most effective ways to minimize contaminating runoff.

*Keeping Water Clean – Management Practices for Small Acreages*, briefly covers the most common BMPs and why landowners can benefit from implementing these practices.

### *Deliverables*

All but one factsheet can be downloaded by the public. The last factsheet will be formatted and posted once the county reviews the document and should be available in January.

### *Issues and Recommendations*

There are none at this time.

## **Public Education & Outreach**

### **Task 2a – Living on the Land: Stewardship for Small Acreages**

The program completed two *Living on the Land: Stewardship for Small Acreages* (LOL) classes in 2004. The spring series ran from January through the end of March and graduated 45 people owning 34 parcels (57 people owning 40 parcels started the class). When asked why they signed up for the class, people cite stewardship, storm water management, stream health, a desire to explore options for their property, and interest in starting a small commercial farming enterprise.

The Fall *Living on the Land: Stewardship for Small Acreages* (LOL) class series ran from September through November. The syllabus (Table 1) changed little from the spring session with the exception of 1.5 hours of instruction on the feasibility of small farm enterprises (based on participant input in the spring). Fifty six people registered to attend the fall session, however 18 people either did not show up for class or withdrew due to scheduling conflicts. Four of these 38 remaining participants only attended five classes, while the other 34 attended at least six classes required to “graduate”, complete with a certificate of completion (Appendix D). Participants stated they attended the fall LOL class to learn about better land management, pastures and weed control, small farm enterprise development, livestock, and water related issues.

When looking at attendance levels for all three LOL courses, 75% of the participants attended at least three quarters of each session’s classes. Almost a quarter attended all classes. This indicates a strong commitment by participants and also partially explain knowledge gains found in the impact evaluation described near the end of this report.

**Table 1: Living on the Land Syllabus – Fall 2004**

<b>Week</b>	<b>Topic</b>	<b>Instructor</b>
Tuesday 9/14/04	<b>Inventorizing Resources I</b> – introduction, physical resources, and layout of properties	<i>Douglas Stienbarger</i> , Director WSU Extension <i>Rich Bachert</i> , NRCS Resource Conservationist
Tuesday 9/21/04	<b>Inventorizing Resources II</b> - financial, human, social resources and constraints	<i>Douglas Stienbarger</i> ; <i>Sheila Pendleton-Orme</i> , Clark Co. Community Development
Tuesday 9/28/04	<b>Water Quality: Making the Connection between You and the Water</b>	<i>Toni Neslen</i> , Hydrologist, Columbia County Watershed Councils
	<b>The Business of Horticulture</b> – Exploring the possibilities	<i>Charles Brun</i> , WSU Extension
Tuesday 10/5/04	<b>Getting Down and Dirty With Soil</b> - Your Living Soil ( <i>Demo Soil Sampling</i> )	<i>Steve Keirn</i> , Clark Conservation District Board Member
Saturday 10/9/04	<b>Field Trip</b> - <i>Soil Sampling</i>	Local small acreage properties
Tuesday 10/12/04	<b>What to Do About Weeds</b>	<i>Ron Hendrickson</i> , Clark County Weed Management
	<b>Small Business Planning</b>	Billi Harpole, SCORE, Small Business Development Center
Tuesday 10/19/04	<b>How Grass Grows, Pasture Renovation &amp; Establishment</b> ( <i>Forage Testing</i> )	<i>Marty Chaney</i> , NRCS Pasture Specialist
Tuesday 10/26/04	<b>Managing Soil to Keep It Productive</b> - Your Living Soil	<i>Craig Cogger</i> , WSU Soil Scientist
Saturday 10/30/04	<b>Field Trip</b> - Weeds, pastures & forage	Local small acreage properties
Tuesday 11/2/04	<b>Animals and Your Land</b>	<i>Penny Ramey</i> , Small Acreage Program
	<b>Attracting Wildlife Using Native Plants</b>	<i>Dean Longrie</i> , Clark Conservation District Board Member
Tuesday 11/9/04	<b>Protecting Household Drinking Water</b> ( <i>Water Testing</i> ) <b>and Septic Systems</b>	<i>Reuel Emery &amp; Joe Ellingson</i> County Health Dept.
Saturday 11/13/04	<b>Field Trip</b> - <i>Water Testing</i>	Local small acreage properties
Tuesday 11/16/04	<b>Managing Animals to Avoid Negative Impacts</b> – Animals care & manure mgmt.	<i>Andy Bary</i> , WSU Soil Scientist
Tuesday 11/23/04	<b>Grazing Management</b>	<i>Gary Fredricks</i> , WSU Extension
Tuesday 11/30/04	<b>My Place on a Stream</b> - All Life Depends on Water	<i>Gary Bock</i> , Watershed Stewards Program
	<b>Workshop review &amp; Graduation</b>	<i>Penny Ramey</i> , Small Acreage Program

**Table 2: LOL Participant Attendance Levels**

Classes Attended	LOL Class (# Participants)			Total	As % of Participants
	Fall 03	Spring 04	Fall 04		
12	4	15	6	25	23.6%
11	7	13	7	27	25.5%
10	2	3	9	14	13.2%
9	4	4	4	12	11.3%
8	4	5	2	11	10.4%
7	1	2	4	7	6.6%
6	1	1	2	4	3.8%
5	0	2	4	6	5.7%
Total	23	45	38	106	

**Profile of LOL Participants.** The following tables list the attributes of participants from the three *Living On The Land* classes in several areas. Graduates manage at least 937 acres of land, 65 wells and 72 septic systems which represents the immediate potential impact of implementing best management practices.

Classes were held at the Center for Agriculture Science and Environmental Education (CASEE) in Brush Prairie, a reasonably central location to small acreage owners throughout Clark County. The program reached its target audience (the urban fringe/rural areas of the county) as is indicated in Table 3 which shows the majority of class participants coming from central and north Clark County. The most notable exception to this is the low participation from the Washougal area in the east county. This may result from the lack of direct routes from the Washougal area to the training site.

Fall 2004 participants have lived on their land an average of 7.4 years, ranging from less than a year to 38 years, although 14 have lived on their land for 2 years or less. This is somewhat longer

**Table 3: Geographic Distribution of Participants**

		Fall 2003	Spring 2004	Fall 2004	City Totals	Area Totals
North	Amboy		3	4	7	42
	La Center	6	9	5	20	
	Ridgefield		5	3	7	
	Yacolt		6	0	6	
	Woodland (Clark County)			3	2	
Central	Battle Ground	8	13	12	30	41
	Brush Prairie	2	4	5	11	
South	Camas	1		0	1	16
	Vancouver	4	4	2	10	
	Washougal	2	1	2	4	
Out of County				2	8	8
Totals		23	45	38	106	

than previous classes: fall 2003 ranged from a few weeks to 16 years with an average of 5.8 years, while the spring 2004 class ranged from a few months to 28 years with an average of 6.2 years. Interestingly, this indicates that the LOL class does not primarily serve newer landowners, an initial expectation of who would take the class.

Table 4 shows graduates from the first session in fall 2003 owned smaller average acreages than those from either class in 2004. This likely reflects the higher numbers of people in the 2004 classes that come from north Clark County, which has generally larger parcels. The Fall class participants owned more acreage than the two previous classes despite having fewer graduates than the spring 2004 class. The total acreage of 937 acres for all graduates represents the potential acreages impacted if BMPs are implemented.

**Table 4: Acreage Distribution of Participants**

	Fall 2003	Spring 2004	Fall 2004	Totals
# Graduates	23	45	38	106
# Properties	16	34	30	80
Total Acreage	132.1	371.4	433.6	937.1
Average Ac. / Property	8.3	11.3	14.5	11.9
Range	2.5 ac – 35 ac	2.5 ac - 82 ac	2.3 – 80.25	2.3 - 82
<= 5 ac	7	14*	12	33
>5 ac - 10 ac	7	11*	4	22
>10 ac - 20 ac	1	5*	4	10
> 20 ac	1	3*	9	13

\* Understates total since not all participants listed acreage.

When looking at parcel size, 68% of the parcels in all three classes are 10 acres or less, although 17% of the parcels are over 20 acres.

Table 5 shows how participants utilize their land for a variety of purposes, such as pasture, forest, food production, and to encourage wildlife. Clearly, most participants have multiple goals for their properties.

**Table 5: Land Use On Participant Properties**

	Number of LOL Participants ( <i>acres</i> )				Totals	
	Fall 2003	Spring 2004	Fall 2004			
Pasture	11	20	14	46	43%	
<i>acres</i> *	23	46	71	140		
Hay	1	6	8	15	14%	
<i>acres</i> *	2	37	18	57		
Forest	9	19	24	52	49%	
<i>acres</i> *	26	30	32	88		
Vegetable Production	12	24	31	67	63%	
Orchard Production	7	21	21	51	48%	
Landscape	12	20	22	54	51%	
Wildlife	9	19	25	53	50%	
Lawn	16	25	32	73	69%	

\* Understates total since not all participants listed acreage.

Table 6 indicates participants who own animals stock have a variety of needs in managing their lands. Of the 106 total participants, 61 own livestock (57%), inclusive of spouses.

**Table 6: Numbers of Livestock Owned**

	Fall 2003 *	Spring 2004 +	Fall 2004 ^	Totals
Alpaca	3	7	90	100
Equine	24	26	25	75
Llama	12		2	14
Cattle	5	23	23	51
Goats/Sheep	6	47	147	200
Poultry	84	124	790	998
Rabbits	20	2	0	22
Ostrich / Emus		6	0	6
Hogs			14	14

\* 11 respondents; +28 respondents; ^ 22 respondents

Over 76% of participants' properties in all three classes have septic systems while 68% have wells for potable water (Table 7).

**Table 7: Properties with Wells and Septic Systems**

	Fall 2003	Spring 2004	Fall 2004	Totals	
Septic Systems	15	30	27	72	76%
Wells	12	26	27	65	68%
(# properties)	20	37	38	95	



**Field Trips.** The 2004 *Living On The Land* class sessions included three Saturday field trips, hosted by class members on their properties, to provide a firsthand experience related to the week's curriculum topic. These field trips facilitate peer-to-peer learning where participants observe how other small acreage owners deal with similar stewardship issues. Participants learn to apply classroom lessons to problem areas on their own properties.

*Soils Field Trip.* Class members dug test holes to observe how soil compaction affects soil structure, water infiltration, and grass growth. They also took soil samples and learned how to read and understand soil test results on these samples in a subsequent class.



*Water Field Trip.* Participants took water samples from a household well. They also learned firsthand about water rights from a class member who irrigates his commercial wholesale flower nursery with water from the North Fork Lewis River. He explained how his water rights work as well as his efforts to return the water to the river in good condition.

*Grasses Field Trip.* This field trip covered weeds and grasses. Participants learned how to identify overgrazed fields and how to decrease erosion and increase water infiltration. They also collected weed and grass samples to later identify and discuss in class.



## LOL Class Evaluations

**Fall 2004.** Fall 2004 class participants evaluated each class session and the program as a whole. On a scale of one to five (five being the best), participants did not rank any class lower than 3.6 and most sessions ranked between 4 and 4.5 (Table 8). When asked if their questions were answered and if they will use the information they learned, the average responses across all classes was 4.3. Individual class rankings can be found in Appendix C. These results mirrored the evaluations for the spring 2004 class as evidenced in Table 8.

When evaluating the LOL series as whole, participants thought that the 12 week length of the series was the about the right amount of time and that most of their questions were answered. They also thought that that they would be using what they learned in managing their properties, which seems borne out by anecdotal comments that many had already started implementing changes on their properties. This included better rain water management, pasture rotation and grass management, well water testing, septic system inspection, riparian planting, weed control, manure management, and composting.

**Table 8: LOL Evaluation Summary**

Lesson - Fall 2004	Inventory 1	Inventory 2	Soils 1	Soils 2	Water 1	Water 2	Water 3	Grass 1	Grass 2	Animal 1	Animal 2	Animal 3	Average
Current?	4.3	4.5	4.8	4.9	4.8	4.5	4.7	4.8	4.8	4.6	4.8	4.9	4.7
Understandable?	4.4	4.4	3.9	4.6	4.7	4.2	4.7	4.7	4.7	4.6	4.6	4.9	4.5
Presented well?	4.3	4.4	4.2	4.8	4.8	4.1	4.6	4.4	4.7	4.4	4.7	4.8	4.5
Answered questions you had?	3.9	3.9	4.0	4.6	4.3	4.3	4.4	4.3	4.1	4.1	4.7	4.7	4.3
Increased your knowledge?	3.6	3.7	4.0	4.9	3.8	4.3	4.1	4.5	4.2	3.9	4.7	4.7	4.2
Use information learned?	4.1	4.1	4.1	4.8	4.0	4.4	4.2	4.6	4.3	3.9	4.6	4.7	4.3
Worth your time?	4.3	4.2	4.3	4.8	4.7	4.5	4.4	4.6	4.5	4.2	4.7	4.8	4.5
<b>Average</b>	4.1	4.2	4.2	4.8	4.4	4.3	4.4	4.6	4.5	4.2	4.7	4.8	

Lesson - Spring 2004	Inventory	Inventory	Soils	Soils 2	Water	Water	Water	Grass	Grass	Animal	Animal	Animal	Average
Current?	4.5	4.7	3.9	4.5	4.8	4.8	4.7	4.9	4.8	4.8	4.9	4.9	4.7
Understandable?	4.2	4.6	3.3	4.3	4.8	4.8	4.7	4.9	4.6	4.9	4.9	4.9	4.6
Presented well?	4.4	4.4	3.9	4.3	4.8	4.7	4.8	4.7	4.2	4.9	5.0	4.9	4.6
Answered questions you had?	4.0	4.5	3.7	4.1	4.4	4.4	4.8	4.8	4.5	4.6	4.8	4.8	4.5
Increased your knowledge?	3.7	4.4	3.5	4.2	4.5	4.4	3.9	4.8	4.6	4.5	4.9	4.8	4.4
Use information learned?	4.4	4.7	3.8	4.2	4.6	4.6	3.6	4.9	4.5	4.2	5.0	4.3	4.4
Worth your time?	4.5	4.8	3.7	4.4	4.7	4.8	4.1	4.9	4.4	4.6	5.0	4.8	4.6
<b>Average</b>	4.2	4.6	3.7	4.3	4.7	4.6	4.3	4.9	4.5	4.6	5	4.8	

In general, fall 2004 class participants appreciated the information they learned as indicated in their comments below:

“We have lived in Clark County only three years and this program has helped us learn about the people and activities here and how to be better citizens of Clark County.”

“You saved me from making a lot of mistakes.”

“This class is a must for all who live in rural Clark County.”

“[This class was] very useful, practical, and applicable information throughout.”

“It was fabulous how much time and energy was put into a program that will teach people how to use what they have!”

“This class will help me in making better use of my farm.”

Spring 2004 class participants echoed these sentiments::

“I pay more attention to the details, like where the run-off really goes!”

“These classes have provided so much information to us new landowners. We are very grateful and appreciate the time and all the effort in putting together this wonderful program.”

“[This] program made me actually think about goals and what I want. It opened my eyes to my property.”

“[This class was] non-threatening, no government penalties, I learned what and why policies [are] in place.”

“[I] especially appreciate the local resources, its one thing to read an article written on the east coast, but meeting and questioning a local has value beyond compare.”

## **Promotion**

The Small Acreage Program purchased a full page advertisement in the *Equine Services Directory*, an annual publication of the Clark County Executive Horse Council distributed to feed and tack stores, boarding facilities, and horse clubs throughout the county (Appendix B). While the advertisement only generated ten calls seeking information on the LOL series, it does make the program more visible.

The Small Acreage Program helped staff a program display at the Clark County Fair (Appendix B) in a booth shared with the Clark Conservation District, the WSU Extension Livestock Advisor Program, and the Clark County Cattle Producers in the beef barn. The booth received one of ten *Best Educational Exhibit* awards presented during the fair. While approximately 2,055 people walked through the display, 58 people actually asked in-depth questions, usually related to pasture management, wildlife habitat weed management, fencing, and controlling mud. Given these low figures, the program will consider a static, unstaffed display for the 2005 Fair.

**Publicity & Promotion.** Following interviews with program and county staff, both the *The Columbian* (April) and *The Oregonian* (May) published favorable articles about the Living on the Land series (Appendix B). These articles resulted in 20 calls to be added to the LOL waiting list, while press releases to The Capital Press and The Reflector garnered an additional 10 registrations.

The Underwood Conservation District is applying for a DOE grant to implement a program based on the LOL curriculum. In addition, Clackamas Soil & Water Conservation District also requested the curriculum on CD. In addition, WSU Cowlitz County Extension plans to stage a LOL training in spring 2005.

## *Deliverables*

The three promised *Living on the Land: Stewardship for Small Acreages* class series “graduated” 106 people. The syllabus remains much the same as the original LOL session. The profiles of participants suggest that the program is reaching its intended audience.

## *Issues and Recommendations*

The program notified the entire waiting list of 87 people about the fall LOL class series and 37 people signed up while another 10 wanted to be contacted for the next class. In order to establish

another mailing list, the program will direct mail a notice in January 2005 to landowners in the unincorporated areas of Clark County.

## Salmon Creek Watershed

### Task 3a – Public Outreach for Septic and Wellhead Protection

Five 2004 *Maintenance of Wells and Septic Systems* workshops attracted 128 people. Staff from the Clark County Health Department incorporated the LOL PowerPoint presentation on septic systems into the class curriculum (Table 9), which focused on properly functioning septic systems and the necessity of maintenance. Maintenance prevents pollution and saves the landowner money by prolonging the systems' service life. Attendees receive both LOL and Clark County Health Department handouts.

**Table 9: Well Head Protection and Septic System Maintenance Classes**

Time	Topic	Speaker
15 Min	<i>Introduction</i>	<i>Penny Ramey, WSU Extension Becky Meats, Clark CD</i>
50 Min	<i>Maintenance Of Wells</i> Origin Of Drinking Water / What Is A Well & How It Works / Protecting Water Supplies / How To Tell If Water Is Safe / Sampling	<i>Joe Ellingson, Clark County Health Department</i>
60 Min	<i>Septic Maintenance &amp; Inspection</i> Water Pollution / Septic System Failure / System Components / Maintenance Steps & Typical Repairs / Alternate Systems / Safety	<i>Reuel Emery, Clark County Health Department</i>
15 Min	<i>Discussion &amp; Evaluations</i>	

The Health Department promotes these classes through inserts with maintenance notices mailed to septic systems owners. The Program advertises in *The Reflector* (Appendix E). However, as indicated in Table 10, participants learn of these classes primarily through advertising and press releases.

**Table 10: Where Attendees Heard of Septic Workshop** (87 out of 128)

Columbian	Reflector	HD Letter	e-mail	Other
28	18	22	3	16

**Evaluation.** When asked to rate these classes, participants ranked the workshops from 4.5 to 4.8 (scale of 1 to 5, where 5 is the highest satisfaction ranking) in all areas (Table 11).

Participant comments suggest the class increased their understanding of the management of their wells and septic systems:

“[I liked learning about] septic protection and ways to protect yourself from major problems.”

**Table 11: Septic & Wells Workshop Evaluations**

<b>Was this lesson:</b> (scale 1-5 with 5 being most useful)	<b>Average</b>
Content as announced?	4.6
Understandable?	4.7
Presented in an interesting way?	4.6
Did the program answer any questions you had?	4.5
Learn new things?	4.5
Will you use the information learned?	4.7
Was this program worth your time?	4.8
Overall average	4.6
Participants	128
Evaluations Completed	87
% completed evaluations	68%

“The program explained the needs, operation, problems and solutions of a septic system.”

“Very informative and a good resource for contacts.”

“Good demos and slides to explain the terminology.”

“I liked that the County employees who deal with this information directly did the class.”

“[I] did not know anything about our system, now I know how it works.”

“[I liked the] explanation that the ordinary person/homeowner can understand.”

“I will install risers on my tank.”

### *Deliverables*

The program completed the five septic workshops proposed in the 2004 scope of work. In order to maintain a good working relationship with the Health Department, the Extension office assisted with an additional four workshops in 2004 and promotes those as a collaboration between the Health Department, Extension, Clark CD, and the Clean Water Program.

### *Issues and Recommendations*

There are none at this time.

### Task 3b – Workshops on Best Management Practices (BMPs)



Sixteen people attended the June 26<sup>th</sup> class on fence building and weed control. Fencing provides an effective way to protect water resources by controlling animal access to riparian zones and wetlands as well as maintaining ground cover during winter rains, thus keeping surface water clean. Preventing weeds keeps a pasture healthy and also maintains effective ground cover.

This hands-on workshop allowed participants the opportunity to build a portion of the fence with individual instruction and explains the perfect ranking (5) accorded the workshop from the nine participants who completed evaluations (Appendix E). One participant commented, “This was one of the most useful things I’ve done all week.”

#### *Deliverables*

Both the promised workshops and the speakers’ list are completed.

#### *Issues and Recommendations*

Some future workshops could be organized as in-depth follow-up for LOL graduates.

### Model Farms

#### Task 4 a – Identify Suitable Properties And Organize Tours

Four tours demonstrated to participants different elements of what constitute sound management practices that minimize pollution of surface waters from sources such as sediment and nutrients. This peer-to-peer learning has proved a valuable teaching tool to raise awareness of problems and their potential solutions. Press releases can be found in [Appendix F](#).

**April Tour.** While not suitable as a model farm, the Svendsen property in Hazel Dell attracted 20 tour participants who saw some good examples of BMPs (Best Management Practices) as well as real-life issues landowners must address when trying to reduce mud on a property with a lot of water. In this case, the owners replanted a hillside susceptible to slumping with native vegetation, restricted animal access, and armored heavy use areas to prevent potential sediment transport.



*Replanted hillside*

**May Tour.** Quarry Ridge stables, located in the Day Break area, hosted the second tour. Twenty-three tour participants visited this model farm that operates a stable. Attendees viewed a stream planting area with fences installed to protect the stream from horses, armored pathways that prevent mud, and the manure collection system consisting of a covered shed with a small dump truck used to transport the manure to an another property for

composting. The owners received assistance to replant and fence their stream as part of a Clark Public Utilities riparian restoration project. A recent biological survey found native cutthroat trout, lamprey, salmon and steelhead in the stream.

Participants rated the visit 4.5 on average (Table 12). One participant stated, “[I] learned about native plant species and stream protection.”



*Manure collected under cover and then trucked off-site*

**September Tour.** Nineteen participants toured the Z & M Ranch, a five-acre horse breeding and training facility in Battle



*Cross fencing improves pastures.*

Ground, where the owners keep stormwater clean using several types of BMPs. For example, paths and sacrifice areas are armored to prevent mud and erosion, while grassy areas filter out sediments from runoff. Rubber stall mats protect animal entry areas and gutters and downspouts collect roof runoff into French drains that direct water away from animal areas and permit water to infiltrate into the ground. The landowners explained the evolution of their management practices, starting with their initial surprise at the volume of storm water runoff generated in a typical winter here.

Participants rated the farm tour an average of 4.8 on a scale of one to five (Table 12) and commented that “[This tour] showed how to handle drainage issues.”

**October Tour.** At the request of the landowner, this tour occurred on a Sunday at a llama farm. Probably due to being held on Sunday, only five people attended the tour. The owner showed participants grazing rotation, armored heavy use areas, guttered buildings and water diversion, and proper manure handling.

**November Tour.** Nineteen participants toured Z & M Ranch, the same host farm as the September tour. Participants listened to the owners talk about their management strategies. Tour participants ranked the tour an average of 4.8 on a scale of one to five (Table 12).



*Participants observe sacrifice areas.*

Participants commented: “[It] was great to explain what she’d tried and didn’t work”; and “I just bought two acres & will be bringing my horses home soon.”

**Table 12: Tour Evaluations**

Was this Tour: (scale 1-5 with 5 being most useful)	Average		
	May	Sept	Nov
Presented in an interesting way?	4.5	4.8	4.9
Did the tour answer any questions you had?	4.4	4.9	4.8
Learn new things or do others better than before?	4.4	4.7	4.7
Will you use the information learned?	4.7	4.9	4.7
Was this program worth your time?	4.6	4.9	4.9
Total Participants	23	19	19
Evaluations completed	19	16	18
% completed evaluations	82.61%	84.21%	94.74%

*Deliverables*

All model farms have been identified and the four model farm tours completed.

*Issues and Recommendations*

There are no issues at this time.

**Task 4 b - BMP Signage Recognition Program**

The recognition component of the Small Acreage Program evaluates the use of BMPs on potential signage properties as well as landowner willingness to post the sign and the visibility to the public. Nine properties were identified to be signed, but sign installation was delayed due complications with the sign vendor.

*Deliverables*

The program identified nine of the 10 properties to be signed.

*Issues and Recommendations*

An initial delay occurred when the program attempted to use the Clark County Public Information Office to design recognition signs. Due to PIO workloads, the program went to a private designer contracted by Clark County Public Works. Unfortunately, actual sign production was again delayed due to an initial quality problem with the prototype that had to be corrected. Signs should be produced by late January and installed by late May 2005.



## Outreach Database

### Task 5 – Working Mailing List

#### *Deliverables*

The Small Acreage Program completed the mailing list database in 2003.

## Impact Evaluation and Project Reporting

### Task 6 a – Workshop Evaluation

#### *Deliverables*

Class participants complete evaluation forms for all classes and workshops. Sample evaluation forms can be found in Appendix G.

### Impact Evaluation

**Overview.** In the fall of 2004, the Project Director designed a survey for former participants in the *Living on the Land* series to determine what, if any, impacts occurred based on the knowledge participants gained while taking the course.

**Methodology.** Based on the course content, the Director designed a close ended survey with questions designed to measure self-reported changes from *Living on the Land* from participants. The survey (Appendix G) attempts to measure both changes in knowledge and changes in how participants manage their properties. The survey was mailed to all 68 graduates of the first two class series in fall 2003 (23) and winter 2004 (45). The timing allowed these two groups enough time over one summer to potentially implement suggested Best Management Practices (BMPs).

After the initial mailing, the Director followed-up with non-responders by email and/or telephone. This resulted in a response rate of 72% (49 respondents). All responses were entered into an Excel spreadsheet, the data checked, and then read into the statistical program, SPSS (Statistical Package for the Social Science). All data manipulation was handled in SPSS.

**Results.** This report will cover the highlights of the survey results, primarily in descriptive statistics. Potential relationships between the data variables will be covered in a more detailed report in the spring of 2005 (using crosstabs between two variables, such as age and whether that was significantly related to the number of BMPs implemented). These highlights clearly show considerable changes in knowledge and the implementation of BMPs. In addition, the data also show that graduates of the *Living on the Land* course helped diffuse what they learned among others in their circle of contacts, whether it be friends, neighbors, or co-workers.

## Respondent Demographics

Respondents' gender was fairly balanced, but men comprised a slight majority at 55% percent of the graduates. Not surprisingly given the cost of land, the respondents tended to be older, with 25% over 60 and 60% between 41 and 60 years of age (Table 13).

A surprising number of respondents had college education. Forty-three percent had college degrees (a quarter with graduate degrees), while another 45% had some college level education.

While the program expected more neophyte land owners, Table 14 clearly shows that the majority of respondents have been on acreage for a number of years. Over half lived on acreage for over five years.

**Table 14: Years Lived on Acreage (n=49)**

	No.	%
1 Year or Less	8	16.3%
Over 1 Year, Less Than 5 Years	15	30.6%
5 Years to 10 Years	11	22.4%
Over 10 Years	14	28.6%
Did Not Respond	1	2.0%

**Table 13: Respondents' Age (n=49)**

	No.	%
40 Years Old or Less	3	6.1%
41 - 50 Years Old	17	34.7%
51 - 60 Years Old	13	26.5%
Over 60 Years Old	14	28.6%
Did Not Respond	2	4.1%

## Course Evaluation

The survey asked five questions related to how respondents rated the *Living on the Land* course. As evidenced in Table 15, when asked if the LOL course provided the level of information they required, over 90% of the respondents agreed, with 61% strongly agreeing. While the course content does not meet everyone's needs, it clearly strikes an acceptable balance for most respondents. Almost 90% of the respondents also indicated that they would recommend this course to others

When asked if they manage their property differently based on what they learned in the course, 80% agreed and over a quarter strongly agreed. This indicates that the majority of respondents changed their behaviors based on the knowledge gained in the LOL course. This data is bolstered by the BMPs respondents implemented, data presented later in this report. Similarly, 75% of the respondents thought that these changes in management improved their property.

A surprising 86% thought that the LOL course represented a good investment of Clean Water Fee monies.

**Table 15: How Respondents Rate LOL Course (n=49)**

		No.	%
<b>Provided Information Needed</b>	Strongly Disagree	1	2.0%
	Somewhat Disagree	2	4.1%
	Neither Agree or Disagree	2	4.1%
	Somewhat Agree	14	28.6%
	Strongly Agree	30	61.2%
<b>Would LOL Recommend to Others</b>	Strongly Disagree	1	2.0%
	Somewhat Disagree		
	Neither Agree or Disagree	2	4.1%
	Somewhat Agree	2	4.1%
	Strongly Agree	44	89.8%
<b>Based on Class, Changed Management</b>	Strongly Disagree	1	2.0%
	Somewhat Disagree	2	4.1%
	Neither Agree or Disagree	6	12.2%
	Somewhat Agree	25	51.0%
	Strongly Agree	14	28.6%
	Did Not Respond	1	2.0%
<b>Class is Good Use of Clean Water Fee</b>	Strongly Disagree	3	6.1%
	Somewhat Disagree	1	2.0%
	Neither Agree or Disagree	3	6.1%
	Somewhat Agree	10	20.4%
	Strongly Agree	32	65.3%
	Did Not Respond		
<b>Changes Made Improved Property</b>	Strongly Disagree	1	2.0%
	Somewhat Disagree	1	2.0%
	Neither Agree or Disagree	7	14.3%
	Somewhat Agree	19	38.8%
	Strongly Agree	18	36.7%
	Unsure/Don't Know	2	4.1%
	Did Not Respond	1	2.0%

### Information Diffusion

Another measure of positive impact involves the respondent's willingness or enthusiasm to impart what they learned to others around them. Eighty-four percent (41) of the respondents stated they shared parts of what they learned with others. Over a third of the respondents (Table 16) shared with six people or more, while 43% shared with up to five people. Only 16% did not share information.

When asked who they shared the course information with, most (65%) indicated that they shared with family and friends (Table 17). When asked about how many people they had an opportunity to share information, they listed a total of at least 376 people.

**Table 16: No. of People Shared Info With (n=49)**

	No.	%
1 - 5 People	21	42.9%
6 - 10 People	12	24.5%
Over 10 People	6	12.2%
Did Not Share	8	16.3%
Did Not Respond	2	4.1%

**Table 17: Who Shared Class Info With (n=49)**

	No.	%
Family	2	4.1%
Friends	13	26.5%
Family & Friends	17	34.7%
Family With Friends or Neighbors or Co-workers	8	16.3%
Did Not Share	8	16.3%
Did Not Respond	1	2.0%

### Knowledge Gained

A series of eight questions on the survey asked respondents to judge their level of knowledge on different topics taught in the LOL course before they took the course and after they graduated. The topics included: managing weeds, keeping pastures healthy, managing runoff, managing soil, managing animal manure, controlling mud, and how management practices impact clean water.

Respondents were asked to rate their knowledge as poor, fair, good, or excellent, but were also given the choices to mark that they were unsure or felt that this one did not apply (such as manure management for someone who owned no livestock). In order to look at relative gains in knowledge, the data was coded to compute the number of levels (Table 18) the respondents knowledge moved based on what they learned. A level equals a move from one adjacent category

**Table 18: Knowledge Change (n=49)**

	Weeds		Pastures		Runoff Mgmt.		Soil Mgmt.		Goals		Manure Mgmt.		Mud Mgmt.		Mgmt Impacts	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
One Level Change	22	45%	12	24%	15	31%	19	39%	20	41%	10	20%	9	18%	25	51%
Two Level Change	14	29%	15	31%	5	10%	14	29%	11	22%	9	18%	16	33%	8	16%
Three Level Change	1	2%	6	12%	3	6%	4	8%	2	4%	3	6%	1	2%	3	6%
No Change	10	20%	5	10%	21	43%	10	20%	13	27%	9	18%	11	22%	13	27%
Did Not Respond	1	2%	1	2%	3	6%	1	2%	1	2%	1	2%	1	2%		
Does Not Apply	1	2%	10	20%	2	4%	1	2%	2	4%	17	35%	11	22%		

to another (e.g., fair to good), while two levels equals a two category move (e.g., from poor to good or fair to excellent) and three levels equals the move from poor to excellent.

On all topics, a majority listed at least one level change in their knowledge due to the LOL course. The least change occurred in respondents' knowledge about runoff management where 43% noted no change, while the most change happened in soil management and weed management where over 75% noted changes in their knowledge levels.

Looking at the averages across all topics in Table 19, a third of respondents noted one level change in knowledge while a quarter gained two levels and a quarter saw no change.

The data clearly show a marked increase in knowledge levels for over two thirds of LOL graduates. This can only help in the program's goals to provide education that landowners can use to manage their lands to minimize impacts to water quality.

**Table 19: Average Totals**  
(n=49)

	No.	%
One Level Change	16.5	33.7%
Two Level Change	11.5	23.5%
Three Level Change	2.9	5.9%
No Change	11.5	23.5%
Did Not Respond	1.1	2.3%
Does Not Apply	5.5	11.2%

### BMP Implementation

An impressive numbers of respondents indicated that they implemented various management practices based on what they learned from the LOL course. Almost two-thirds noted they tested their soils. As a result of the class, close to 50% of those respondents with wells and septic systems stated they had tested their well water or inspected their septic system (Table 20).

**Table 20: Tests Performed After Taking Class**  
(n=49)

	Tested Soil	Inspected Septic System	Tested Well
Yes	31	21	18
As % of Total Grads	63.3%	42.9%	36.7%
Do Not Have Well/Septic		6	11
Yes as % of Grads with Well/Septic		48.8%	47.4%

Respondents report installing 113 BMPs as outlined in Table 21. Forty-three percent of the respondents implemented better weed management, 33% implemented pasture management BMPs, and 27% installed manure composting BMPs.

**Table 21: Number of BMPs Installed**

	No.	% Grads
Weed Management	21	43%
Pasture Management	16	33%
Manure Composting	13	27%
Gutters	9	18%
Sacrifice Area	9	18%
Rotational Grazing	7	14%
Soil Mgmt	6	12%
Goals / Planning	6	12%
Animal Management	5	10%
Rainwater Management	5	10%
Septic System / Well Maintenance	5	10%
Composting	4	8%
Riparian Area Management	4	8%
Fencing	1	2%
Erosion Control	1	2%
Wildlife	1	2%
Total	113	

Fifty-one percent of the respondents installed one to three BMPs, compared to a quarter who installed four BMPs or more (highest was 7) and a quarter who did not install any BMPs (Table 22). This implementation rate after only one summer season demonstrates the effectiveness of the LOL course. The respondents who implemented BMPs collectively manage at least 330 acres (there is no acreage data for 13 of the respondents, so presumably the actual number of acres is larger). In addition, at least 21 of the respondents installing BMPs have some type of waterbody on or adjacent to their property, and 18 raise livestock. This indicates that there is a potentially positive effect on reducing direct negative impacts to water quality on these properties.

**Table 22: BMPs Installed Based on Class (n=49)**

	No.	%
1 - 3 BMPs	25	51.0%
4 BMPs or More	12	24.5%
None	12	24.5%

*Deliverables.* The evaluation demonstrates considerable positive impact on participant knowledge levels and behaviors over one summer “construction” season. Further data manipulation will be undertaken to ascertain if there are relationships between behavior variables and other variables, such as participant demographics.

*Issues and Recommendations*

Based on the very positive responses, the program recommends on-going impact evaluation of LOL participants after they have had a sufficient amount of time to potentially implement practices.

**Task 6 b – Progress report**

*Deliverables*

The Director submitted the 2004 annual progress report.

**Table 11: Summary Table for 2004**

Program Elements		Audience	Two Year Goal	Done in 2003	% 2003 Goals	2004 Goals	QTR 4	Done in 2004	% 2004 Goals	
<b>Best Management Practices</b>	Task 1 a	Reference Materials								
		Compile reference materials	Public	1	1	100%				
		Post links to web site	Public	1	0	0%	1	0	0%	
	Task 1 b	Fact sheets	Public	4	0	0%	4	1	4	100%
<b>Public Education and Outreach</b>	Task 2 a	Living on the Land Class Series #	Public	3	1	100%	2	0	2	100%
		Attendance	Public	90	23	77%	67	38	83	124%
		Program Promotion / Events	Public	5	3	100%	2	1	2	100%
	Task 2 b	Livestock Advisor BMP education +	Volunteers	+	+	+				
	Task 2 c	BMP sessions in Horse Symposium *	Public	4	4	100%				
	Attendance	Public	80	118	148%					
<b>Salmon Creek Watershed</b>	Task 3a	Septic / wellhead protection workshops *	Public	11	9	225%	5	0	5	100%
		Workshop Attendance	Public	220	185	103%	100	0	128	128%
	Task 3b	Best management practices workshops ++	Public	4	3	100%	1	0	1	100%
		Workshop Attendance	Public	80	63	105%	20	0	16	80%
	Speakers list	Admin	1	0	0%	1	0	1	100%	
<b>Model Farms &amp; Signage</b>	Task 4a	Identify suitable farms/properties		2	0	0%	2	0	2	100%
		Conduct organized tours	Public	4	0	0%	4	1	4	100%
		Manure compost demo site	Public	+	+					
	Task 4b	Farm BMP signage recognition program								
	Farms Identified	Farms	10	0	0%	10	0	9	90%	
	Signage Installed	Farms	10	0	0%	10	0	0	0%	
<b>Outreach Database</b>	Task 5	Mailing list	Admin	1	1	100%				
<b>Evaluation and Project Reporting</b>	Task 6a	Evaluations	Admin							
		Workshops		22	16	100%	6	0	6	100%
		Living on Land classes & course eval		39	13	100%	26	10	26	100%
		Requests for assistance	Public	n-demar	591	100%	On-demand	45	387	
		Track website hits	Public	Quarterly	0	0%	all	0	0	0%
		Impact Evaluation **	Admin	1	0	n/a	1	1	1	100%
	Task 6b	Quarterly reports	Admin	6	3	100%	3	0	3	100%
	Annual report	Admin	2	1	100%	1	1	1	100%	

# Added an additional class series for 2004 + deliverable eliminated; \* Deliverable Added \*\* Deliverable deferred to 2004  
 ++ Goal for 2003 & 2004

## **Appendix A: Educational Resources**

### RESOURCE LIST

DO YOU QUALIFY FOR REDUCED PROPERTY TAXES?  
CURRENT USE TAXATION

WHAT CAN YOU DO ON YOUR LAND?  
FREQUENTLY ASKED QUESTIONS FOR SMALL ACREAGE LANDOWNERS

Constructing Ponds and Water Features: What Does it Take?

SIMPLE STEPS TO PROTECT YOUR SURFACE AND WELL WATER

KEEPING CLEAN WATER CLEAN & REDUCING MUD – MANAGING ROOF RUNOFF



## **Appendix B: Program Promotion**

EQUINE SERVICE DIRECTORY ADVERTISEMENT

APRIL 12, 2004 COLUMBIAN ARTICLE

MAY 13, 2004 OREGONIAN ARTICLE

PUBLISHED PRESS RELEASES

THE REFLECTOR SEPTEMBER 1, 2004 – CALENDAR ITEM & HAPPENINGS PRESS RELEASE  
CAPITAL PRESS SEPTEMBER 3, 2004

SEPTEMBER 17, 2004 WSU TODAY ARTICLE

DIRECT MAILING - FALL 2004

DIRECT MAILING - WINTER 2004

SMALL ACREAGE PROGRAM DISPLAY

## **Appendix C: Living on the Land Evaluation Summaries**

LOL CLASS EVALUATION SUMMARY  
WINTER 2004

LOL PROGRAM EVALUATION SUMMARY  
WINTER 2004

LOL CLASS EVALUATION SUMMARY  
FALL 2004

LOL PROGRAM EVALUATION SUMMARY  
FALL 2004

## **Appendix D: Living on the Land Certificate of Completion**

## **Appendix E: BMP Workshops**

WELLS & SEPTIC SYSTEMS 2004 SCHEDULE

WELLS & SEPTIC SYSTEMS WORKSHOP AGENDA

WELLS & SEPTIC SYSTEMS WORKSHOP PAID ADVERTISEMENT

THE REFLECTOR MAY 5, 2004

WELLS & SEPTIC SYSTEMS WORKSHOP EVALUATIONS

WEEDS & FENCING WORKSHOP EVALUATIONS

WEEDS & FENCING WORKSHOP PUBLISHED PRESS RELEASES

CAPITAL PRESS, JUNE 18, 2004

THE COLUMBIAN, JUNE 23, 2004

THE REFLECTOR, JUNE 23, 2004

## **Appendix F: Farm Tours**

### **SVENDSEN FARM – PUBLISHED PRESS RELEASES FOR APRIL 3, 2004 TOUR**

THE OREGONIAN, MARCH 19, 2004  
THE REFLECTOR, MARCH 24, 2004 – CALENDAR ITEM & PRESS RELEASE  
CAPITAL PRESS, MARCH 26, 2004

### **QUARRY RIDGE STABLE - PUBLISHED PRESS RELEASES FOR MAY 1, 2004 TOUR**

THE COLUMBIAN, APRIL 21, 2004  
THE REFLECTOR, April 28, 2004

### **Z & M RANCH - PUBLISHED PRESS RELEASES FOR SEPTEMBER 18, 2004 TOUR**

CAPITAL PRESS, SEPTEMBER 3, 2004  
THE COLUMBIAN, SEPTEMBER 13, 2004  
THE REFLECTOR, SEPTEMBER 1, 2004  
CLARK COUNTY EXECUTIVE HORSE COUNCIL NEWSLETTER ARTICLE, OCTOBER ISSUE

### **Z & M RANCH - PUBLISHED PRESS RELEASES FOR NOVEMBER 20, 2004 TOUR**

THE OREGONIAN, NOVEMBER 18, 2004  
THE REFLECTOR, NOVEMBER 17, 2004

## **2004 MODEL FARM TOURS EVALUATION SUMMARY**

## **Appendix G: Evaluation Form**

LIVING ON THE LAND CLASS EVALUATION FORM

LIVING ON THE LAND PROGRAM EVALUATION FORM

LIVING ON THE LAND SURVEY FORM

LIVING ON THE LAND POST PROGRAM IMPACT EVALUATION FORM

WELLS & SEPTIC WORKSHOP EVALUATION FORM

WEED & FENCING WORKSHOP EVALUATION FORM

MODEL FARM TOUR EVALUATION FORM