

# Vernonia Community Indicators of Vitality

## 2013 Baseline Assessment Report

**A Product of the Vital Vernonia Indicator Project**

A collaboration of:

Vernonia Prevention Coalition, City of Vernonia, Vernonia School District,  
The Ford Family Foundation, Rural Development Initiatives, Vernonia residents, and  
Oregon State University Extension Service & Rural Studies Program



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Jack Harvey  
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Bill Langmaid  
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## Project Overview

### What is community vitality?

Vital communities are those in which residents work together to achieve a balance of positive social, economic, and environmental outcomes. Community vitality increases the likelihood that a community can be resilient to economic downturns, natural disasters, social problems, and other stressors. As rural communities face various economic, ecological, and demographic changes it is important that they pay close attention to their vitality.

### What are community indicators?

Community vitality is hard to measure. Different people will have different visions of what a thriving community looks like, and it is not always easy to see progress. Community indicators are quantifiable measures that reflect a community's well-being. They can be used to get a sense of progress toward community goals. Specifically, community indicators of vitality are chosen to reflect the state of the local economy, environment, and society. By tracking community indicators over time, a community can gain insight into progress being made towards community goals, and can identify areas for targeted community action or investment.

Many community indicator projects have been implemented across the U.S. and other countries, at scales ranging from the municipality, county, or state. Community indicator projects are typically implemented by a government entity or non-profit organization, often in conjunction with a university. Indicators draw on data obtained from reliable outside sources (such as the U.S. Census and other regional data collection efforts) as well as primary data collection in the form of community surveys.

### The Vital Vernonia Indicator Project

In 2010, as part of the Vernonia Schools/Oregon Solutions process, faculty from Oregon State University met with Vernonia city, school district and community leaders to discuss ways that OSU could be engaged in Vernonia over the long term, and contribute to the school district's vision of university/community partnerships in research and education. One suggestion that gained support was the notion of a community indicators project in Vernonia. OSU's Rural Studies Program already had a model for working with other communities on indicator projects. The idea was that developing and tracking community indicators in Vernonia would be very useful in evaluating the long-term impacts of flood recovery, public and private investment in the new school campus, and other community initiatives. Such a project would also contribute to a better understanding of rural community vitality across Oregon, build local leadership capacity and knowledge, and further develop a framework for university-community partnerships centered on community indicators. Thus, OSU and local stakeholders agreed to move forward with the Vital Vernonia Indicator Project (VVIP).

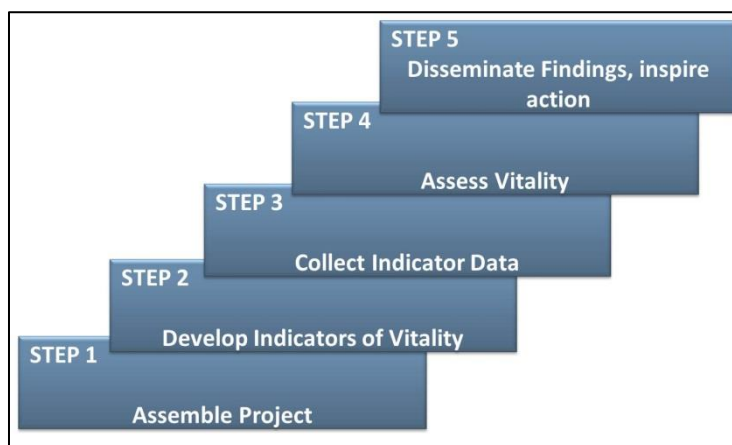
The VVIP is unique in several important ways. Although hundreds of community indicator projects have been done, most are at a regional, metropolitan, or county scale<sup>1</sup>. None could be documented at the scale of a rural city as small as Vernonia (population ~2,200). This has implications for the types of data that are appropriate for Vernonia's community indicator set. Many economic and social data sets are compiled at the county scale, while environmental data is often at a scale much greater than that. These data may not accurately reflect conditions in Vernonia, so the VVIP makes greater use of primary data sources in its indicator set than many other projects.

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<sup>1</sup> The Community Indicators Consortium maintains a database of community indicator projects: <http://www.communityindicators.net/projects>

### Project Methods

The VVIP followed the methodology that was established by OSU's Rural Studies Program with previous indicator projects.<sup>2</sup> The figure below shows a basic flow diagram describing this methodology.



Initial efforts to assemble the project began in 2011, but did not gain momentum until a year later. At that time a local Advisory Committee was formed, comprised of a small group of leaders involved in various aspects of community life in Vernonia. The committee agreed to meet monthly with the lead OSU faculty, who had primary responsibility for overseeing the project.

The first step in developing a set of community indicators is to establish the community's vision and goals to be used as a framework to guide the selection of indicators. To accomplish this, OSU contracted with Rural Development Initiatives (RDI). Shawn Morford of RDI compiled and reviewed previous visioning documents and strategic plans that had been developed in Vernonia. These included:

- Nehalem Conservation Action Plan (2012)
- Vernonia School District Natural Resources Program Mission and Vision (2011)
- Vernonia Rural Sustainability Program Plan/Logic Model (2010)
- Vernonia 2020 Vision developed by Portland State University (2008)
- Household Survey – Portland State University (2006)
- Chamber of Commerce Consumer Survey (2006)
- Visitor Readiness Report (2005)
- Downtown Resource Team Report (2005)
- City Survey – Oregon Survey Research Lab (2003)
- Marketing and Business Analysis (2001)
- Community Response Team Strategic Plan for Economic Development (1997)

A list of community goals that were either explicit or implicit in these documents was drafted, along with a list of possible indicators and data sources that would correspond to those goals. A group of graduate students from OSU then refined the list and presented them to the VVIP Advisory Committee. The committee then took this first-draft set of goals and indicators through various iterations and revisions until it was finalized in early 2013.

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<sup>2</sup> Two previous projects are the Vital Tillamook Indicator Project and Vital Willowa Indicator Project (2009). Both can be accessed at <http://oregonexplorer.info/rural/CommunityVitality>.

Indicator data collection was carried out during the summer of 2013. OSU assembled most of the secondary data. For primary data collection, the VVIP hired an intern to carry out a household survey, a business survey, and a student survey. Full details on the survey methodology are found in the Appendix of this report. VVIP advisory committee members volunteered to collect some of the other primary or secondary data, based on their expertise and interest.

After compiling all data, indicator targets were set with the input of the VVIP Advisory Committee, OSU faculty, experts in particular fields, and any standards set by local or regional agencies or organizations. Targets were articulated in various ways. For many indicators, the target is simply to maintain, increase, or decrease from the 2013 level. This is particularly appropriate for indicators that were first measured in 2013, as this serves as a baseline study. For other indicators, the target is to meet or exceed performance at a larger geographic scale such as rural Oregon or the entire state. These targets set the basis for the assessment of each indicator. Though the target values may change with further community conversation, they provide a preliminary lens through which to view the vitality of Vernonia.

The remainder of this report describes how each indicator was measured, the target associated with each indicator, and a baseline assessment of the attainment of that target. Each indicator is associated with a community goal, and the goals are further associated with five dimensions of community vitality, as defined by the VVIP Advisory Committee: 1) Livability and Community Engagement, 2) Youth and Education, 3) Economy, 4) Health and Well-Being, and 5) Environment and Natural Resources.

## Summary table of goals, indicators, and performance

### Key to symbols:



... Indicator target is being met.



... Indicator target is not being met.



... Baseline assessment; status cannot be determined until indicator is re-measured.

Livability and Community Engagement		
Goal	Indicator	Performance
Vernonia is a family-friendly community.	1. Youth participation	?
	2. Percentage of families with children under 18	✓
Vernonia schools are supported with a robust enrollment.	3. School enrollment	✗
Vernonia has sufficient and well-maintained parks and greenspaces.	4. Parks acreage and budget	✓
Vernonia is a desirable place to live.	5. Population	✗
	6. Migration	?
	7. Real estate market	✓
Residents participate in community life.	8. Adult volunteerism	✗
	9. Civic participation	?

Youth and Education		
Goal	Indicator	Performance
Opportunities for pro-social involvement exist for youth.	10. Youth volunteerism	✓
Youth exhibit traits of positive social development.	11. Positive youth development	✓ / ✗
	12. Bullying	✓ / ✗
	13. Teen substance abuse	✗
Youth exhibit bonding and attachment to their school and community.	14. Youth perception of their community	✓
Students in Vernonia are academically successful.	15. High school graduation	?
	16. Youth aspirations	✗
	17. College scholarships	✓

Economy		
Goal	Indicator	Performance
Vernonia has a viable commercial downtown center.	18. Downtown core	?
Tourism and recreation contribute to Vernonia's economy.	19. Overnight lodging	?
	20. Seasonal recreation	?



Economy (cont.)		
Agriculture and natural resources contribute to Vernonia's economy.	21. Natural resources economic sector	✓
	22. Restoration economy	?
	23. Agriculture economic sector	?
Vernonia has the capacity for commercial activity and it is utilized.	24. Commercial capacity	?
Local employment is available.	25. Local employment	✗
	26. Youth employment	?
Vernonia's residents are economically secure.	27. Poverty	✓
	28. Employment	✓

Health and Well Being		
Goal	Indicator	Performance
Residents have access to the health care services they need.	29. Health care availability	✗
	30. Health care access	?
Food security is not a concern in Vernonia.	31. Food security	?
Residents have healthful and active lifestyles.	32. Healthy lifestyle (adult)	✓
	33. Healthy lifestyle (youth)	?
Elderly residents have access to the services they need.	34. Elderly services	✗
Environment and Natural Resources		
Goal	Indicator	Performance
Vernonia is a flood-resilient community.	35. Resilience of structures within the floodplain	✗
	36. Green infrastructure	?
The Vernonia Natural Resources Education Program is successfully contributing to positive environmental and educational outcomes.	37. Natural Resources Education Program capacity	✓
	38. Youth interest in natural resources	✓
Youth have an environmental awareness and connection to the natural environment.	39. Youth outdoor recreation	?
The Upper Nehalem watershed supports a healthy salmon population.	40. Stream restoration	?
	41. Stream temperature	?
	42. Salmon abundance	?
Private forestlands in the Upper Nehalem watershed are healthy and productive.	43. Forest certification	?
	44. Land conversion	✓

### Introduction

Civic engagement has long been a focus for community development efforts in Vernonia. For example, over 100 of Vernonia's residents (~6% of the adult population) have participated in the Ford Family Foundation's Leadership Program. Graduates of this program have gone on to become leaders in local government and civic volunteers. Vernonia's residents often cite the strong sense of community as one of the greatest things about living there. This shared community spirit was made evident in the immediate aftermath of the 2007 flood; but is also apparent in the many community events and celebrations; support of local sports teams; and in the numerous volunteer organizations that exist in Vernonia. Civic engagement contributes to community capacity and is therefore a key element to a vital community.

### Goal: Vernonia is a family-friendly community.

Families are a vital and important demographic for a small rural community. Youth activities are a prime source of local entertainment and provide structure and skill development for youth. School age children create a healthy and vibrant education system that provides for local employment. A robust school district receives adequate funding which in turn creates a positive learning environment for youth and prepares them for success after graduation. A community that encourages youth participation and volunteerism is a healthier, friendlier and more active community. A community that has citizens of all ages will continue to be vibrant and active.



Photo: Scott Laird

### Indicator 1: Youth participation

Measure	Data	Year	Source
Youth registration in Boosters sports clubs	375	2013	Vernonia Boosters
Tickets sold for children's events at Salmon Festival (pumpkins, scarecrows, trout derby)	213	2013	Vernonia Salmon Festival

#### Rationale

Attendance at out-of-school activities is an indication that the community is active and inclusive of youth and families. Available programs and attendance also indicates a focus on youth and families and creates an environment where families feel comfortable participating. Although there are many other community programs for youth in Vernonia, two particular programs (Boosters and Salmon Festival) were selected for this measure because the numbers of youth participating in them are easily tracked. The number of youth registered for Booster sports clubs and the number of tickets sold for children's events are expressed as counts, as opposed to rates, because any one child may register for multiple clubs and any one family may purchase tickets for multiple events.

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### Indicator Target

The goal for this indicator is for youth participation in community activities (as exemplified by Boosters and Salmon Festival) to increase.

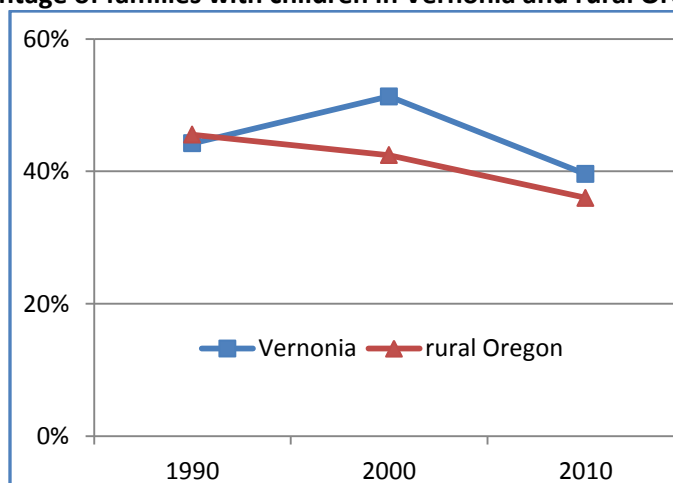
### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for youth participation is being met at this time. Future assessments of this target will measure in comparison to 2013 youth participation.

### *Indicator 2: Percentage of families with children under 18*

Measure	Data	Year	Source
Percentage of families in Vernonia's census tract with children under 18	40%	2010	U.S. Census

**Trend in percentage of families with children in Vernonia and rural Oregon, 1990-2010**



### Rationale

If a community is successful in providing a family-friendly atmosphere with activities and services desired by families, evidence of this success will be in a population of young families. The U.S. Census Bureau tracks the percentage of families with children under 18, making this an easy, inexpensive, and reliable measure for this indicator.

### Indicator Target

The target for this indicator is for Vernonia's census tract<sup>3</sup> to be at or above the level of all rural census tracts in Oregon, with respect to the percentage of families with children under 18.

<sup>3</sup> Census tracts are subdivisions of counties that generally have stable boundaries following visible features. Census tracts are delineated by local committees of census data users who work with the US Census Bureau on this task. Census tracts are designed to be units with similar population characteristics, economic status, and living conditions, and average about 4,000 inhabitants. (U.S. Census Bureau (2005). Census tracts and block numbering areas. Geographic Areas Reference Manual (10-2 – 10-3). [Retrieved] 1/10/2011 [from] <http://www.census.gov/geo/www/garm.html>)

## A. LIVABILITY AND COMMUNITY ENGAGEMENT

### Assessment

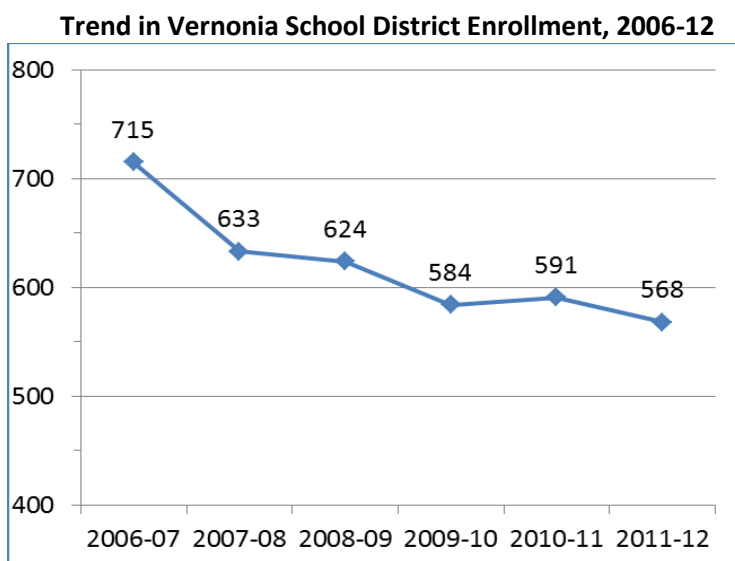
In 2010, the percentage of families with children under 18 across all of rural Oregon was 36%, whereas in Vernonia's census tract it was 40%. Therefore, Vernonia is meeting its target for this indicator. However, it should be noted that the percentage of families with children has been steadily declining across rural Oregon; whereas in Vernonia there was an increase in the 1990's followed by a decrease in the 2000's. It would be useful to explore the underlying reasons for this local pattern. What factors led to an increase in the percentage of families in the 1990's (a deviation from the state trend)? What has then led to the subsequent decrease?

### **Goal: Vernonia schools are supported with a robust enrollment.**

A robust school system depends on a population of children and their families to serve. Maintaining and increasing school enrollment is important for several reasons: the schools and their activities are a central feature of community life in Vernonia; the school district is the city's largest local employer and teacher and staff jobs depend on the number of students in the building; and the new school campus was intentionally constructed to house a much larger student population than currently exists. School enrollment dropped following the 2007 flood, as many displaced families had to move elsewhere.

### *Indicator 3: School enrollment*

Measure	Data	Year	Source
Number of students enrolled in Vernonia School District	568	2011-12	Vernonia School District



### Rationale

The measure chosen (total enrollment in the district) is a direct reflection of the indicator (school enrollment) and is data that is easily obtainable and updated annually.

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### Indicator Target

The Vernonia School District has set a goal of increasing enrollment by 2% per year, or a five-year target of 615 students.

### Assessment

Vernonia is not meeting its target for school enrollment; in contrast, enrollment has been declining since 2007. The underlying reasons for this downward trend need to be explored. It may be possible that Vernonia is still experiencing long-term ramifications of population displacement since the 2007 flood. However, the data from this indicator mirror the longer-term downward trend in families with children living in Vernonia between 2000 and 2010 (Indicator #2) which may be independent of flood displacement.

### **Goal: Vernonia has sufficient and well-maintained parks and greenspaces.**

Parks are major contributors to the quality of life of a community. They provide spaces for social gathering and physical activity, and contribute to neighborhood aesthetics.

### *Indicator 4: Parks acreage and budget*

Measure	Data	Year	Source
Parks acreage per 1,000 residents in Vernonia	77.9	2010	City of Vernonia, U.S. Census Bureau
City of Vernonia expenditures on parks operations on a per capita, annual basis	\$40	2008-09 through 2012-13 (average)	City of Vernonia

### Rationale

Along with parks acreage, funding for parks maintenance is one measure of a community's commitment to an adequate parks system. These measures are used by several other indicator projects in the Northwest, allowing for comparisons.<sup>4</sup> These measures were calculated by averaging the total parks acreage, and expenses per fiscal year, and dividing by the population of the city of Vernonia (from the most recent decennial census).

### Indicator Target

The target selected for parks acreage per 1,000 residents is be within range (or above) the levels of other similarly-sized cities. Likewise, the parks expenditures target is to be within range of other small cities.



<sup>4</sup> For example, see: Community Indicators Initiative of Spokane, <http://www.communityindicators.ewu.edu/index.cfm>; and Chelan-Douglas Trends, <http://www.chelandouglastrends.ewu.edu/index.cfm>.

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### Assessment

Data were obtained for several other cities of comparable size: Cashmere, WA (pop. 3,100), Chelan, WA (pop. 3,900), Leavenworth, WA (pop. 2,000), and Estacada, OR (pop. 2,800). Vernonia's total parks acreage (168) is far higher than any of these other cities (Estacada is the next highest, with 60 acres). Therefore parks acreage per 1,000 residents in Vernonia is much higher than the comparison cities, which ranged from 7 to 22 acres/1,000 residents). Parks expenditures per capita in the comparison cities ranged from \$31 (Estacada) to \$561 (Chelan), with Vernonia falling within the range.<sup>5,6</sup> Therefore, Vernonia is meeting its target for this indicator.

### Goal: Vernonia is a desirable place to live.

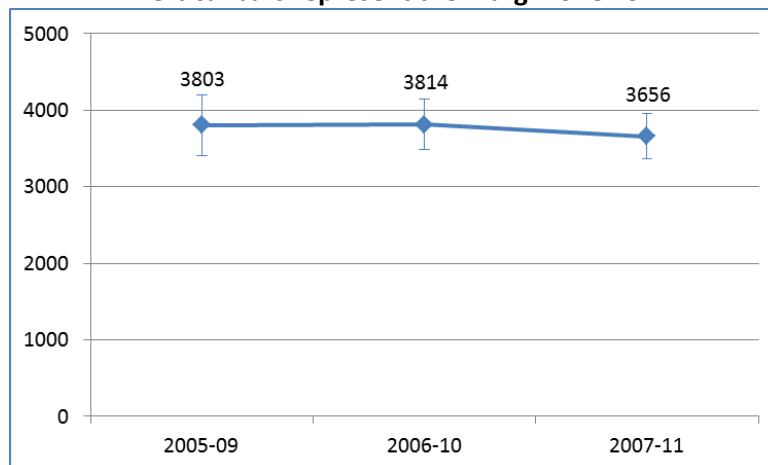
The idea that a community is seen as a desirable place to live could indicate many things: low cost of living, low crime rates, rich cultural life, quality educational opportunities, access to nature, employment opportunities, programs for youth and more. Places with a desired quality of life attract new residents. A steady or increasing population brings economic benefits because cities receive more revenue to pay for services and local businesses are supported. While a rapidly growing population can become a concern, many rural areas (including Vernonia) have faced an opposite trend.

### Indicator 5: Population and annual growth rate

Measure	Data	Year	Source
Population estimate of Vernonia's census tract (average over 5-year span)	3,656	2007-11	U.S. Census Bureau, American Community Survey (via Rural Communities Explorer)

#### Vernonia's census tract population estimate (5-year average), 2005-2011.

Vertical bars represent the margin of error.



<sup>5</sup> Chelan Douglas Trends, <http://www.chelandouglastrends.ewu.edu/cityGraph2.cfm?id=127>

<sup>6</sup> City of Estacada, [http://www.cityofestacada.org/budget\\_committee.html](http://www.cityofestacada.org/budget_committee.html)

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### Rationale

The American Community Survey is implemented annually with a subset population of each census tract, and a population estimate (with an associated margin of error) is produced each year for a five-year time span. While these population figures are less precise than the decennial census, we chose to use them because they are updated annually.

### Indicator Target

Vernonia would like to see its population grow slowly (or at least, no longer lose population). A 1% population growth rate per year has been suggested as a reasonable target. As a whole, Oregon's population is growing at about 1% per year; rural Oregon's population estimate rose slightly between 2006-10 and 2007-11, though it had been on a decline previously.<sup>7</sup>

### Assessment

The population estimate for Vernonia's census tract fell by about 4% between the periods 2006-10 and 2007-11, though it had stayed about the same in the previous period. Vernonia is not meeting its target for population and annual growth rate according to these figures. Due to the margin of error associated with the American Communities Survey, examining a trend over a longer period of time would be preferable.

### *Indicator 6: Migration*

Measure	Data	Year	Source
Percentage of adult residents that grew up in Vernonia, left, and then returned by choice to live there as an adult	19%	2013	VVIP Household Survey

### Rationale

Vernonia's geographic isolation combined with its small employment sector present challenges in terms of livability. Vernonia natives who have moved elsewhere, but then returned intentionally, likely do so in part because of strong social or cultural ties to the community. Their choice to live in Vernonia directly speaks to the area as a desirable place to live. If this measure increases over time, it could be attributed to an improved quality of life for youth in Vernonia (such that they choose to return later in life).

### Indicator Target

This measure was suggested by Oregon State University graduate students who participated in the initial exploration of community indicators for Vernonia. It is an interesting measure but not one that (to our knowledge) has been tracked elsewhere; providing little basis for comparison. It is suggested that the target would be to maintain or increase the number of people who return to live in Vernonia by choice.



Photo: Scott Laird

<sup>7</sup> American Community Survey, via the Communities Reporter Tool on the Rural Communities Explorer ([www.oregonexplorer.info/rural](http://www.oregonexplorer.info/rural)).



## A. LIVABILITY AND COMMUNITY ENGAGEMENT

### Assessment

The data for this indicator represent a baseline for comparison in the future. Therefore, it cannot be determined at this time whether Vernonia is meeting its target for migration.

### *Indicator 7: Real estate market*

Measure	Data	Year	Source
Average number of days that a residential property in Vernonia was listed on the market before sale	104	2012	RMLS Multiple Listing Service

### Rationale

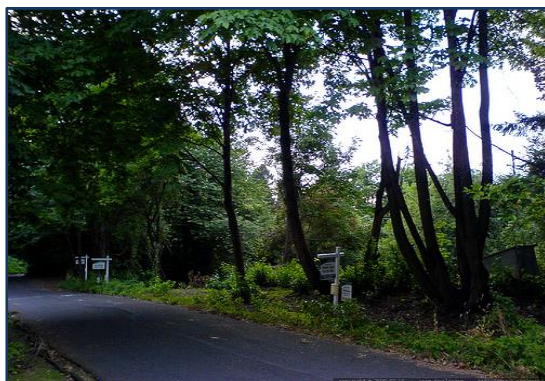
Time-on-market is viewed as an indicator of the housing market's health. Vernonia's available housing stock is limited. The purchase of a home in Vernonia indicates a buyer's intention to live there (or confidence that the home purchased can be rented). The drawback of this indicator is that it is highly influenced by broader (state or national) housing market trends; thus any change detected may not be specific to changes in conditions in Vernonia.

### Indicator Target

The target for this indicator is to be equal or below the average number of days on market across Columbia County. Benchmarking Vernonia to an average across a larger area takes into account macroeconomic trends that affect the housing market from year to year.

### Assessment

In 2012, the average time on market for residential properties sold in Columbia County was 150 days (to calculate this number, the time on market for each month in 2012 was averaged). Therefore, Vernonia is meeting the target for this indicator.



## **Goal: Residents participate in community life.**

Civic participation is a key aspect of community engagement. There are many forms of civic participation, including volunteering for an organization, serving as an elected official, attending public meetings, helping to raise money for a local cause, or attending a community celebration. Community engagement increases the social capital that is necessary for a community to thrive when other forms of capital (i.e. financial) may be scarce.

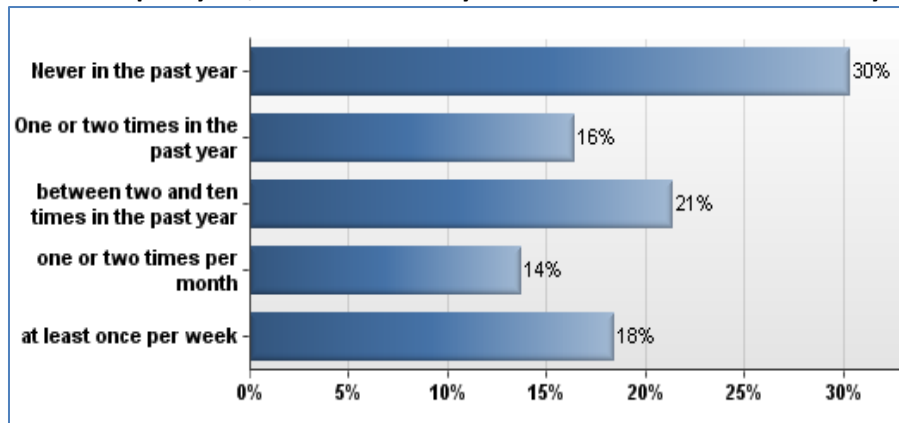
### *Indicator 8: Adult volunteerism*

Measure	Data	Year	Source
Frequency of adult volunteerism in formal and non-formal activities	51% of adults volunteered at least once in the past year, but less than once per week.	2013	VVIP Household Survey (n=405)



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**“Over the past year, how often have you volunteered in the community?”**



### Rationale

Community leaders note that in Vernonia, as in many communities, a small pool of dedicated people representing a fraction of the population comprise the bulk of the volunteerism. Having a broader segment of people involved as volunteers fosters new leaders, spreads the load, and contributes to the resilience of the community. While there are an abundance of opportunities to volunteer with organizations or groups in the community, the steering committee felt that non-formal volunteerism (i.e. helping a neighbor) was equally important and needed to be accounted for. For these reasons we chose to measure not only the current volunteer capacity (as reported by organizations) but also the frequency of volunteerism (formal and non-formal) among the overall population.

### Indicator Target

The goal for this indicator is for at least 75% of adults to volunteer between 1 or 2x/year and 1 or 2x/month. In other words, the steering committee feels that it is important that nearly all adults volunteer; and that the bulk of the volunteering is not carried out by relatively few individuals who volunteer very often.

### Assessment

According to 2013 data, Vernonia is not meeting its target for adult volunteerism. Specifically, a large fraction (30%) of adults report never volunteering within the past year. Creating avenues for these non-volunteers to easily contribute their talents and time to the greater good would be a worthwhile community goal.

### *Indicator 9: Civic participation*

Measure	Data	Year	Source
Percentage of residents who report having attended a community meeting, town hall, or city- or school district-sponsored meeting in the past year	44%	2013	VVIP Household Survey (n=400)

### Rationale

Civic participation is a commonly-used indicator in community indicator projects. Some forms of civic participation include attending community events, participating in meetings, voting in local

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elections, and serving as an elected or appointed official. There are limited opportunities to serve as an elected or appointed official in Vernonia; so that would be a poor measure of civic participation. At the other end of the spectrum, the steering committee felt that attending a community celebration was too low a threshold to gauge civic participation. Attending a public meeting where one's presence is voluntary demonstrates a higher level of community engagement; thus this measure was selected.

### Indicator Target

The goal for this indicator is for civic participation to increase over time.

### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for civic participation is being met at this time. Future assessments of this target will measure in comparison to 2013 civic participation rates.

### Introduction

A positive social and educational climate for youth is clearly a priority for Vernonia. Evidence of this lies in the dedication to rebuild Vernonia's schools; in the community pride associated with school sports; and in the many organizations that provide support and activities to youth. Many of the community's older residents grew up in Vernonia and there is a desire for today's youth to have a strong attachment to their hometown; but also to have access to opportunities that will prepare them for successful careers and lives elsewhere. The goals and indicators in this section reflect desires for youth to be educationally successful, positively engaged in their community, and develop safe and healthy life habits.



Photo: Scott Laird

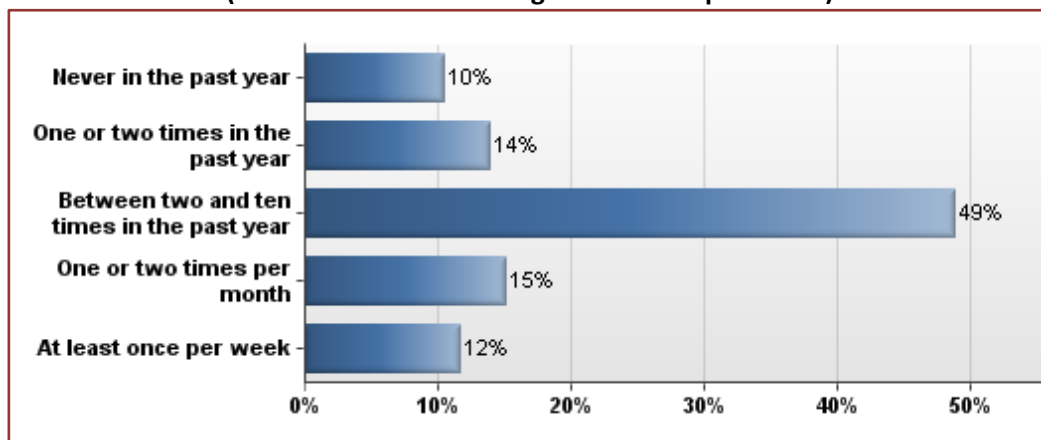
### Goal: Opportunities for pro-social involvement exist for youth.

The theory behind this goal is that if youth have the opportunity to contribute to their community in positive ways, then they will develop a stronger sense of place, show more caring and compassion for others, and be less prone to self-destructive behavior.

#### Indicator 10: Youth volunteerism

Measure	Data	Year	Source
Frequency of volunteerism among Vernonia High School students (other than graduation or class requirement)	78% of students volunteered at least once in the past year, but less than once per week.	2012-13	VHS Student Survey (n=86)

**"Over the past year, how often have you volunteered in the community?"  
(other than for a class or graduation requirement)**



#### Rationale

One of the most common methods to develop an awareness of community, compassion for others, and social responsibility among youth is through volunteerism. Engaging youth in volunteerism is

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thought to promote a lifelong commitment to civic engagement<sup>8</sup>. It is also a relatively easy indicator to measure, through a survey instrument administered to high school students. The question asked was identical to the question asked of adults on our household survey (with the exception that youth were asked to exclude “required” volunteerism, i.e. due to a class or graduation requirement).



Photo: Scott Laird

### Indicator Target

The goal for this indicator is for at least 75% of students to volunteer between 1 or 2x/year and 1 or 2x/month. In other words, the steering committee feels that it is important that nearly all students volunteer; and that the bulk of the volunteering is not carried out by relatively few individuals who volunteer very often.

### Assessment

According to 2013 data, Vernonia is meeting the target for youth volunteerism.

## **Goal: Youth exhibit traits of positive social development.**

High levels of positive social development among youth are strongly associated with healthy behaviors and student success. The Vernonia School District (VSD) has made positive social development a priority. Their participation in the PBIS (*Positive Behavioral Interventions and Supports*) system provides tactile feedback to students who exhibit both positive and negative social signs. The Vernonia Prevention Coalition has worked closely with VSD to address risks and harmful behaviors (to self and others). The indicators related to the goal of positive social development have to do with self-perception and self-esteem as well as the incidence of behaviors that are inconsistent with positive social development.

### ***Indicator 11: Positive youth development***

Measure	Data	Year	Source
Percentage of Vernonia teens meeting the Positive Youth Development benchmark	69% (8 <sup>th</sup> grade) 63% (11 <sup>th</sup> grade)	2012	Oregon Student Wellness Survey

### Rationale

Positive youth development is a difficult and intangible thing to quantify. Fortunately, the Oregon Student Wellness Survey, administered statewide, provides a consistent framework for evaluating positive youth development through a series of questions on their survey that together contribute to a Positive Youth Development (PYD) Benchmark. The benchmark looks at six components: emotional and mental health, physical health, feelings of competence, self-confidence, support of a

<sup>8</sup> Hart, D. et al. 2007. High school community service as a predictor of adult voting and volunteering. *American Educational Research Journal* 44(1):197-219.

## B. YOUTH AND EDUCATION

caring adult in school, and service to the community. Students meet the PYD benchmark if they answer five of these six questions affirmatively. We chose to use the PYD Benchmark data from the Student Wellness Survey as it is regularly repeated, readily available at the local level, and comparable at a statewide level. The data reported here are for students in the Vernonia School District.

### Indicator Target

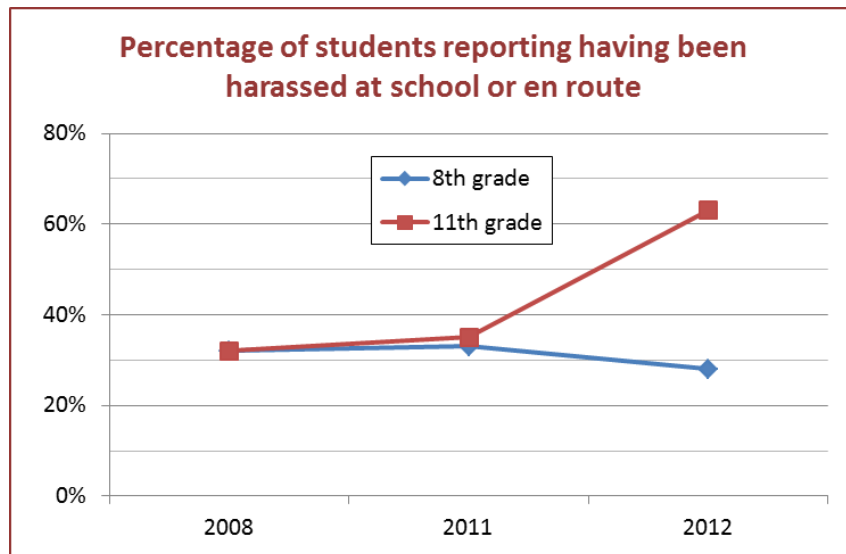
The goal for this indicator is for pro-social behavior among Vernonia's teens (as measured by the Positive Youth Development Benchmark) to be equal or above the statewide average.

### Assessment

In 2012 Vernonia 8<sup>th</sup> graders exceeded the statewide level of 8<sup>th</sup> graders meeting the Positive Youth Development benchmark (60%), while Vernonia's 11<sup>th</sup> graders fell short of the statewide average (66%). Therefore, Vernonia is only partially meeting its target for this indicator.

### *Indicator 12: Bullying*

Measure	Data	Year	Source
Percentage of students reporting having been harassed at school or on their way to/ from school	28% (8 <sup>th</sup> grade) 63% (11 <sup>th</sup> grade)	2012	Oregon Healthy Teens Survey



### Rationale

The Oregon Healthy Teens Survey is administered every other year and contains a section related to harassment. We chose this survey as the source for this indicator because the data are readily available (statewide data is online and local data can be obtained from the school district). The specific survey response selected for this indicator was "harassment for any reason" in response to the question "During the past 30 days, have you ever been harassed at school (or on the way to or from school)?"

## B. YOUTH AND EDUCATION

Alternative methods of tracking bullying were considered and rejected for various reasons. For example, the Vernonia School Counselor tracks the number of instances of bullying reported annually. However, that data may be subject to various biases, such as the fact that bullying is often not reported.

### Indicator Target

The goal for this indicator is for reported harassment/bullying in Vernonia to be equal or below the statewide average.

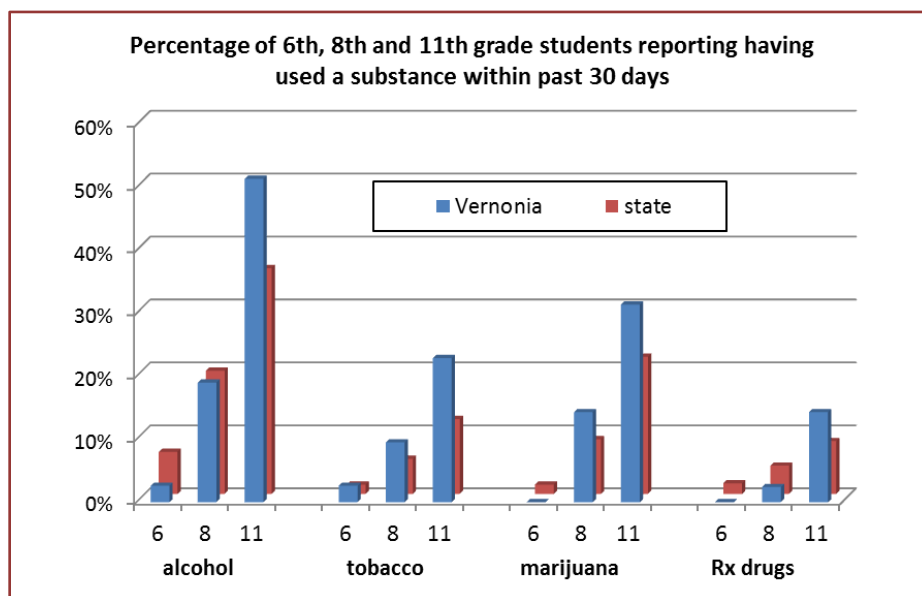
### Assessment

Statewide, 51% of 8<sup>th</sup> graders and 40% of 11<sup>th</sup> graders reported having been harassed for any reason at school or en route in 2012. Therefore Vernonia is meeting its goal for this indicator for 8<sup>th</sup> graders, but not for 11<sup>th</sup> graders.

The above graphic shows a fairly steady rate of reported harassment from 2008 to 2012 for 8<sup>th</sup> graders. On the other hand, the reported bullying rate for 11<sup>th</sup> graders sharply increased between 2011 and 2012. The Vernonia Prevention Coalition implemented an intensive program of Bullying Prevention and Intervention trainings during that time frame and suggests that the jump may be related to an increase in awareness of what constitutes bullying, rather than an actual increase in bullying activity.

### *Indicator 13: Teen substance abuse*

Measure		Data			Year	Source
		6 <sup>th</sup>	8 <sup>th</sup>	11 <sup>th</sup>		
Percentage of Vernonia students reporting alcohol, tobacco, or drug use in the past 30 days	<b>Alcohol</b>	3%	19%	51%	2012	Oregon Student Wellness Survey
	<b>Tobacco</b>	3%	10%	23%		
	<b>Marijuana</b>	0%	14%	31%		
	<b>Rx drugs</b>	0%	2%	14%		



## B. YOUTH AND EDUCATION

### Rationale

Substance abuse among teens is an issue that has been identified as a particular concern in Vernonia. The school district along with the Vernonia Prevention Coalition have sponsored various awareness and prevention programs over recent years to address what is perceived as a relatively high rate of substance abuse among students. In order to measure this indicator, we chose to use data from the Oregon Student Wellness Survey, which is conducted annually by the Oregon Health Authority within participating schools across the state (Vernonia is one of the participating schools). While there are many questions related to substance use and abuse on the Student Wellness Survey, for simplicity, we chose the ones related to the percentage of students that use various substances.

### Indicator Target

The target for this indicator is for substance use rates among Vernonia's teens to be below the statewide averages.

### Assessment

The graphic on the previous page shows a couple of noteworthy patterns in substance use among youth in Vernonia as compared to in Oregon overall. First of all, it is clear that substance use rates rise with age (both in Vernonia and statewide). Tobacco use is higher in Vernonia than it is statewide in all grade levels (with more than a 10-percentage-point difference in 11<sup>th</sup> grade). A higher percentage of 11<sup>th</sup> graders in Vernonia use all four substances compared to 11<sup>th</sup> graders across the state. On the other hand, 6<sup>th</sup> graders in Vernonia use alcohol, marijuana and prescription drugs less frequently than 6<sup>th</sup> graders across the state, while for 8<sup>th</sup> graders, the comparisons are mixed. These data indicate that Vernonia is not meeting its target with respect to substance abuse among youth. It further reveals that the sharpest differences between Vernonia's and Oregon's teen substance use rates is in the older teen (11<sup>th</sup> grade) population; therefore future prevention efforts might be best specifically targeted to this age group.

## **Goal: Youth exhibit bonding and attachment to their school and community.**

There are several reasons why having youth exhibit an attachment to their community and school is an important goal. For one, it is expected that community involvement (through volunteerism, participation in community activities, and other mechanisms) will ultimately result in a stronger attachment to one's community. Therefore, this goal can be thought of as a long-term outcome of some of the other indicators that are included in this report, such as youth volunteerism (#1) and youth participation (#10). Secondly, attachment to place is one factor that influences individuals' decisions on whether to remain in a rural community (or return after a period of time; see indicator #5) or leave permanently. In tandem with creating desirable conditions for an educated workforce to live and work in Vernonia, creating strong community attachments at an early age is seen as important to retaining Vernonia's youthful population.

### ***Indicator 14: Youth perception of their community***

Measure	Data	Year	Source
Percentage of Vernonia High School students who say they take pride in their school and community	74%	2013	VVIP Student Survey

## B. YOUTH AND EDUCATION

### Rationale

We decided to directly ask students about their attachment to their school and community through the survey implemented at the high school. The question was simple: “Do you agree with the following statement: ‘I am proud of my school and community.’?” We felt that being proud of one’s community and school was a suitable proxy for bonding and attachment, and was a concept more readily understood by youth.

### Indicator Target

The VVIP steering committee felt that the survey results showing that 74% of students take pride in their school and community met or exceeded expectations. Therefore, the target for this indicator in the future is for the level to maintain (within 2%) or increase.

### Assessment

The data show that Vernonia is meeting its goal for youth bonding and attachment to their school and community.

## **Goal: Students in Vernonia are academically successful.**

Having a large proportion of youth who succeed academically is considered to be central to Vernonia’s identity as a vital community. Students who succeed academically are better prepared to enter the workforce, whether they choose to remain in Vernonia or move elsewhere.

### ***Indicator 15: High school graduation***

Measure	Data	Year	Source
Graduation rate of 4-year cohort	70%	2012	Vernonia School District

### Rationale

With the broad spectrum of standardized testing data available, there are many metrics for academic success. We chose graduation rate as our measure of academic success for several reasons: it is easy to understand; it represents the culmination of a student’s K-12 experience; and it is a statewide priority, as exemplified by the Oregon governor’s 40-40-20 initiative, the goal of which is for 100% of all Oregon students to graduate high school. The 4-year cohort-graduation rate is different from the “regular” graduation rate: the 4-year cohort rate follows students who are first-time high school students in a particular year and follows those students through four years. It does not include students who take more than four years to graduate; though it is adjusted for transfers in and out of the district. The 4-year cohort rate is being used by the Oregon Department of Education. Importantly for Vernonia, it accounts and adjusts for foreign exchange students (that make up an unusually high percentage of the VHS senior class annually).

### Indicator Target

The data for 2012 represent a baseline for future years to be measured against. The goal is to increase the 4-year cohort graduation rate compared to the 2012 rate of 70%.



## B. YOUTH AND EDUCATION

### Assessment

Because 2012 is the baseline year for this indicator, it is not possible to state whether Vernonia is meeting its goal for high school graduation. In future years, success will be determined if the graduation rate rises above 70%. For comparison, the 2011-12 4-year cohort graduation rate for all of Oregon was 68%.

### *Indicator 16: Youth aspirations*

Measure	Data	Year	Source
Percentage of VHS students who say they intend to pursue higher education (including trade or vocational programs)	86%	2012-13	VVIP Student Survey (n = 85)

### Rationale

This measure was intended to be specific to high school seniors, and was intended to ask their intent to pursue higher education within one year of graduation. However, the VVIP Student Survey was administered very late in the school year, after seniors were excused from classes, so seniors did not take the survey. The data are therefore for 9<sup>th</sup> – 11<sup>th</sup> graders. Future iterations of the survey should be done at a time when all high school students are available.

### Indicator Target

The goal for youth aspirations is for Vernonia to meet or exceed the national average in terms of students' intentions to pursue higher education.

### Assessment

Nationwide, as in Vernonia, a high percentage of high school students report an intention to pursue higher education. In 2011 (the last date that data were available), a total of 90% of seniors in a nationwide survey reported that they “definitely would” attend a technical or vocational school (6.9%), graduate from a two-year college (21.8%), or graduate from a four-year college (60.7%).<sup>9</sup> Based on the target to meet national rates of higher education ambitions, Vernonia is falling slightly below its goal for this indicator. It should be noted, however, that there is a fairly small sample size in Vernonia; so one or two students responding differently to the question would have a large effect on the percentage.

### *Indicator 17: College scholarships*

Measure	Data	Year	Source
Dollar amount in college scholarships awarded to VHS graduating seniors from within-community sources	\$48,000	2013	Vernonia School District

<sup>9</sup> Johnston, L. D., Bachman, J. G., & O'Malley, P. M. (2013). Monitoring the Future: Questionnaire responses from the nation's high school seniors, 2011. Ann Arbor, MI: Institute for Social Research, 394 pp. Available at: [www.monitoringthefuture.org](http://www.monitoringthefuture.org).

## B. YOUTH AND EDUCATION

### Rationale

This measure quantifies the financial support of community organizations and individuals (defined as within Columbia and Clatsop Counties) in the form of scholarships to Vernonia's college-bound seniors. The intention in including this measure is the assumption that it serves as an indicator of several things: students' educational success; community support of that educational success and academic growth; and community affluence (as exemplified by the ability to donate scholarship monies). The data for this indicator is retained by the high school secretary.

### Indicator Target

With fewer than 70 students in the graduating class, the total amount of scholarships awarded amounts to over \$700 per student. The VVIP steering committee felt that the level of scholarship funding attained by Vernonia High School graduates met or exceeded expectations. Therefore, the target for this indicator in the future is for the level to maintain or increase.

### Assessment

In 2013, Vernonia was on target for scholarship funding awarded to high school graduates.

## Introduction

Vernonia's economy has clearly transformed over the last century, from one dependent on resource extraction to a more diversified one that includes tourism, small businesses, and, most notably, a large proportion of commuters. Economic development is identified as a priority for Vernonia in various strategic planning and visioning efforts over the past decade or so. The Vernonia 2020 Vision report (2008) identified the development of "an economic development strategy to increase the number of local jobs" as the #1 long-term community priority. The Vernonia School District's Natural Resources program also includes an economic development element in its mission statement, specifically around sustainable natural resources-based industries. The goals and indicators in this section relate to economic health both at the community and household level.

### Goal: Vernonia has a viable commercial downtown center.

Due to its geographic isolation and its near proximity to unincorporated and/or smaller communities in the Upper Nehalem Valley, downtown Vernonia services many more people than those who live within its city limits. Therefore, a viable, vibrant commercial downtown center might provide a small "city living room" to the Upper Nehalem Valley.

#### *Indicator 18: Downtown core*

Measure	Data	Year	Source
Percentage of downtown storefronts that are occupied*	81%	2013	VVIP Advisory Committee

\*In Downtown Core only. Does not include churches or public buildings.

#### Rationale

A downtown core with few vacant storefronts is inviting and promotes commerce. The fact that businesses are open directly indicates the health of the business and retail sector.

#### Indicator Target

The committee would like to see the occupancy rate increase, but not to 100%, because this would indicate that there is no room for growth (i.e. it would detract potential new businesses from opening).



Photo: Scott Laird

#### Assessment

The data for 2013 represent a baseline for future years to be measured against. Therefore, it is neither possible nor appropriate to state whether Vernonia is meeting its goal for the vitality of the downtown core at this time.

## C. ECONOMY

### Goal: Tourism and recreation contribute to Vernonia's economy.

Vernonia's economy for the past few decades has depended on the economies of other areas due to the fact that few jobs are located within the greater Vernonia area. However, some tourists have begun to find Vernonia as a tourist destination (due in part to the Banks-Vernonia Linear Trail, Vernonia's historic downtown and parks system). This goal provides the opportunity to measure the contribution of tourism and recreation to Vernonia's economy, and develop strategies to accommodate future growth.

#### *Indicator 19: Overnight lodging*

Measure	Data	Year	Source
Number of rooms of overnight lodging available in Vernonia	9	2012	VVIP Business Survey
Average vacancy rate for overnight lodging	33% (July) 53% (November)		

#### Rationale

Outdoor tourism has increased around Vernonia in recent years and is projected to continue as new bicycle routes and loops are developed. Other than at state or local parks, overnight accommodations are limited. Lodging capacity and vacancy rates need to be considered together, because a low vacancy rate could indicate too little capacity, while an increase in capacity coupled with a decrease in vacancy rate could indicate that the sector is over-built. The limitation of this measure is in the quality of the data. It is dependent on the number of businesses that respond to the business survey. Only 100 of the ~260 businesses to whom the survey was sent responded to the survey (38% response rate); of these, only three respondents indicated that they provided overnight lodging. Vacancy rate was requested for July and November, to account for seasonality.

#### Indicator Target

It is difficult to come up with a target for these indicators. Without industry expertise, it is hard to judge how much lodging capacity is appropriate for a community of Vernonia's size and visitor activity. The VVIP steering committee felt that low reported vacancy rates would indicate a need for more capacity; however we did not have the expertise to judge what level of occupancy is considered "healthy" for the industry. By comparison, hotel vacancy rates across the Portland metro area were 17% and 39% for July and November 2012, respectively; whereas in the Coast region the rates were 29% and 62% in the same months.<sup>10</sup>

#### Assessment

The consensus among the VVIP steering committee is that the data we collected should be considered a baseline against which to measure future trends. If bicycle traffic continues to rise, more lodging capacity will certainly be needed. Vacancy rates for Vernonia should compare favorably to the greater Portland metro/coastal region, which it seems to do at this time given our limited sample size.

<sup>10</sup> Oregon Restaurant and Lodging Association. Oregon Lodging Statistics. Available at [http://www.deanrunyan.com/doc\\_library/OR\\_STR.pdf](http://www.deanrunyan.com/doc_library/OR_STR.pdf). Last accessed December 2, 2013.

## C. ECONOMY

### *Indicator 20: Seasonal recreation*

Measure	Data	Year	Source
Average vacancy rate of city parks in July and August	33%	2012	City of Vernonia
Number of bicyclists using the Banks-Vernonia trail per year	No data		
Amount in day use fees collected by City of Vernonia parks per year	\$11,300	2010-12	City of Vernonia

#### Rationale

People come to Vernonia for various forms of recreation, including cycling, fishing, and camping. Our measures for this indicator are intended to capture these various groups of individuals. Camping is permitted at two city parks (Anderson and Airport); vacancy rates for each park were obtained for each summer month (July and August) to capture visitor use during the peak recreation season. Anderson Park reported much lower vacancy rates (<5%) than Airport Park (60-70%), indicating that while Anderson Park is fully utilized in the summer, Airport Park could be better developed to encourage more use.

Data on bike trail usage could not be obtained to date, but is desirable for future reports.



Photo: Scott Laird

Vernonia residents do not pay day-use fees at city parks. Therefore any day-use fees would reflect visitor (i.e. tourist) use. Visitors paying day-use fees at Vernonia parks are likely to be a different population than bike tourists. Over a three year period, annual day-use fees averaged \$11,300; at \$5/vehicle, this represents over 2,200 visitor vehicles per year. Anecdotally, 90% of the day-use fees collected in 2010-12 were at Vernonia Lake, likely representing fishing use.

#### Indicator Targets

The target for parks vacancy rate is to reduce the vacancy rate, down to 15%. A vacancy rate below 15% would indicate that Vernonia parks do not have adequate capacity to serve camping demand. The target for day use fees is to increase the annual amount of fees collected, averaged over a three-year period.

#### Assessment

The data for this indicator represent a baseline against which future years will be compared. Therefore it is not appropriate to assess whether Vernonia is meeting its targets for seasonal recreation at this time.

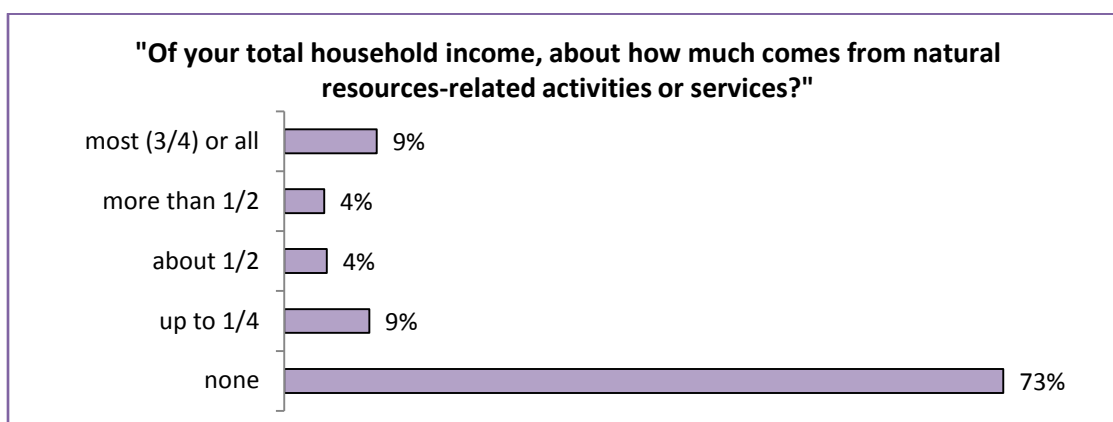
## C. ECONOMY

### Goal: Agriculture and natural resources contribute to Vernonia's economy.

Vernonia was founded as a timber town, however that has changed over the last half-century as it has become more of a bedroom community for the tech and service sectors in Washington County. Nevertheless, Vernonia is surrounded by vast natural resources, largely privately-owned timber; and the timber industry is central to Vernonia's cultural heritage. A sustainable community has a diversified economic base which includes but is not limited to natural resources. The agriculture land base in Vernonia is small by comparison, but has the potential to contribute to community food security.

#### *Indicator 21: Natural resources economic sector*

Measure	Data	Year	Source
Number of businesses that produce value-added forest products	12	2013	VVIP Business Survey
Percentage of households where some of the total household income comes from natural resources related activity or services	27%	2013	VVIP Household Survey (n = 405)



#### Rationale

The majority of the timberland surrounding Vernonia is owned by non-local industry companies or investment corporations, and the timber is largely sold as a commodity product to mills outside the area. Secondary processing of wood products (i.e. into dried or custom cut lumber, furniture, craft materials, bundled firewood, etc.) is a means of expanding jobs and income close to the source of the raw material. The Vernonia 2020 Vision report prepared in 2008 identified adding value to current exports as a potential economic development strategy. It is difficult to quantify the added economic impact of these diverse value-added products, but a count of the number of businesses engaged in value-added production provides some measure of activity in this sector. For this measure, we included a question on the business survey asking whether the business produced any sort of value-added forest products. The accuracy of the data for this measure is therefore dependent on the response rate to the business survey. We had a 38% response rate to the survey in 2012; therefore it is quite possible that the absolute number of businesses producing value-added forest products may be higher.



## C. ECONOMY

The second measure, the number of households that are reliant on natural resources for income, is a broader measure of the natural resources economic sector. In 2013, over ¼ of Vernonia households reported some income from the natural resources sector. This includes direct employment (i.e. in logging or fishing); indirect employment (i.e. providing business services for a logging company); or sale of products such as timber from family-owned property. It is noteworthy to compare this figure to the U.S. Census Bureau's estimate that 4% of Vernonia's population is *employed* in the natural resources sector<sup>11</sup>. This discrepancy indicates that natural resources play an important economic role in Vernonia beyond direct employment.



Photo: Peter Hayes

### Indicator Target

The target is for value-added forest product businesses to increase from the current level. For the percentage of households deriving some fraction of their income from the natural resources sector, the target is to maintain the current level (within 5%).

### Assessment

The data collected for these measures represent baselines against which future trends will be measured. Therefore, it cannot be determined whether Vernonia is currently meeting its target for value-added forest products businesses or income generation from natural resources.

### *Indicator 22: Restoration economy*

Measure	Data	Year	Source
Dollar investment in stream restoration projects in the Upper Nehalem watershed in past five years	\$2.64 million	2007-11	Oregon Water Resources Inventory (via Oregon Explorer)

### Rationale

Watershed restoration is a significant and growing economic sector. Many employment activities traditionally associated with the timber industry (road construction, tree planting, etc.) are directly transferrable to the restoration sector. It is estimated that 16.7 jobs are generated for every \$1 million spent on restoration projects in Oregon<sup>12</sup>, and \$0.80 of every dollar stays within the county in which it was spent.<sup>13</sup> The data for this measure can be easily obtained through Oregon Explorer, however it does not include restoration projects funded through USDA landowner incentive programs (those administered by the NRCS). Funding can be highly variable from year to year (in the

<sup>11</sup> Source: Rural Communities Explorer. U.S. Decennial Census, 2000. Industry employment rates: Agriculture, Forestry, Fishing and Mining. Accessed from <http://www.oregonexplorer.info/rural>.

<sup>12</sup> Nielsen-Pincus, M. and C. Moseley. 2010. Economic and Employment Impacts of Forest and Watershed Restoration in Oregon. University of Oregon: Ecosystem Workforce Program, Working Paper Number 24. Available at <http://www.habitat.noaa.gov/partners/toolkits/restorationjobs.html>

<sup>13</sup> Hibbard, M. and S. Lurie. 2006. Some Community Socio-Economic Benefits of Watershed Councils: A Case Study From Oregon. *Journal of Environmental Planning and Management* 49: 891-908.

## C. ECONOMY

period 2007-2011, annual investment in the Upper Nehalem ranged from less than \$30,000 to over \$1 million), therefore we are using a five-year average to capture a longer-term trend.

### Indicator Target

The target for this indicator is to increase the level of funding for stream restoration over a five year period.

### Assessment

The data for this five-year period represent a baseline for future years, therefore an assessment of whether the indicator target is being met is not possible at this time.

### *Indicator 23: Agriculture economic sector*

Measure	Data	Year	Source
Number of businesses that produce value-added farm products	12	2013	VVIP Business Survey

### Rationale

The Vernonia 2020 Vision report (2008) identified adding value to currently produced goods as one potential economic development strategy for Vernonia. While the agriculture sector in and around Vernonia is relatively small, these small farm operations may be particularly well suited for producing value-added goods. Such products might include jams/jellies, cider, dried herbs, soaps, etc. Farmers markets are one (but not the only) marketing channel for such products. Vernonia has a weekly farmers' market that serves both residents and tourists, and contributes to the rural character of the community.



For this indicator, we included a question on the business survey asking whether the business produced any sort of value-added farm products. The accuracy of the data is therefore dependent on the response rate to the business survey. We had a 38% response rate to the survey in 2012; therefore it is quite possible that the absolute number of businesses producing value-added farm products may be higher.

### Indicator Target

The target for value-added farm products businesses is to increase from the current level.

### Assessment

The data for this indicator represent a baseline for future years. Therefore, no assessment of this indicator's status can be made at this time.



## C. ECONOMY

### Goal: Vernonia has the capacity for commercial activity and it is utilized.

In order for Vernonia to attract new businesses, or to facilitate the expansion of existing ones, infrastructure is needed to support them. Infrastructure includes space for commercial enterprises, high speed Internet, affordable utilities, and other services. Community leaders concerned with economic development have noted a concern that some of these factors prevent barriers to attracting or retaining small businesses.

#### *Indicator 24: Commercial capacity*

Measure	Data	Year	Source
Percentage of commercially zoned acreage in Vernonia that is developed	93%	2013	City of Vernonia GIS

##### Rationale

Many economic indicators are only tracked at the county or state level. However, commercial zoning acreage is obtainable from the City of Vernonia's GIS program, making it an easy local measure to track.

##### Indicator target

The target is for the percentage of occupied commercially zoned acreage to increase, but not to reach 95%. If the commercially zoned acreage were fully occupied or nearly so, it would indicate that there is no room for commercial growth.

##### Assessment

The data for this indicator represent a baseline measurement for future years to be compared with. Therefore, it is not possible to state whether Vernonia is meeting its target for commercial capacity.

### Goal: Local employment is available.

Vernonia is about 20 miles away from any larger town in every direction and the majority of working residents commute out of town. While a long commute may be feasible for the average adult worker, it is not a viable option for everyone nor is it an environmentally sustainable option. Long commutes reduce free time available for family, socializing, or civic engagement. Indicators related to local employment measure both the impact of economic development activities as well as the ability for residents to work locally.

#### *Indicator 25: Local employment*

Measure	Data	Year	Source
Number of people employed by Vernonia businesses	267	2013	VVIP Business Survey (n=98)
Percentage of commuters in the Vernonia census tract who travel less than 30 minutes to work	30%	2007-11	U.S. Census Bureau (American Community Survey)

## C. ECONOMY

### Rationale

It is assumed that the number of people employed by local businesses who live outside the census tract (i.e. reverse commuters) is minimal, therefore we expect the data for the first measure to reasonably reflect Vernonia area residents who are employed close to home. However, this measure is limited by the business survey response rate. In 2013, the survey response rate was 38%. If the response rate goes up in future years, then data for the indicator might seem to rise artificially, and vice versa should the response rate go down. Therefore, the first measure is coupled with a measure that is derived from the U.S. Census Bureau's American Community Survey, which examines commute time. Thirty minutes was selected as the "local commute" cutoff because outside of Vernonia, the nearest employment centers (Hillsboro, Scappoose, St. Helens) are all more than 30 minutes' drive; whereas some individuals who live in the rural area of the census tract might travel less than 30 minutes to get to Vernonia.

### Indicator Target

Because the goal is to increase local employment, the target for the number of people employed by Vernonia businesses is to increase above the current level of 267. (See notation above about data limitation.) The goal for the second measure is to have a larger percentage of less-than-30-minute commuters as compared to the overall percentage for rural Oregon.

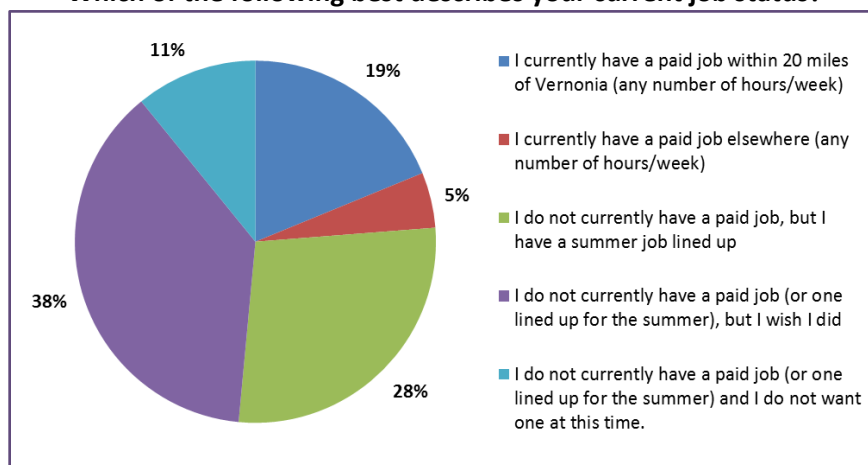
### Assessment

The data for the first measure represent a baseline for which future years can be compared, so a current assessment is not appropriate. However, the percentage of commuters in Vernonia that travel under 30 minutes to work is far higher than the overall percentage for rural census tracts (69%). Therefore, the overall assessment is that Vernonia is not meeting its target for local employment.

### *Indicator 26: Youth employment*

Measure	Data	Year	Source
Percentage of VHS teens who have a job within 20 miles of Vernonia ("local" employment-to-population ratio)	19%	2013	VVIP Student Survey (n = 86)

### **"Which of the following best describes your current job status?"**



## C. ECONOMY

### Rationale

Teen focus groups conducted in Vernonia in 2008 found that teens saw a need for more teen job opportunities in town. Because teens typically work in low-wage jobs, if they work outside of Vernonia they end up spending a disproportionate amount of their earnings on gas. We included a question on our high school student survey about job status, and the results are displayed above.



Photo: Scott Laird

Employment-to-population ratio is a statistic used to describe the status of jobs. It is calculated as the number of people currently employed divided by the total working-eligible population. We can use our survey results to calculate an overall employment-to-population ratio, as well as a “local employment-to-population ratio”, which we define as the number of respondents who report having a job within 20 miles of Vernonia divided by the total number of respondents. Of 85 survey respondents, 16 had a job in or near Vernonia (19%). For comparison, in 2013, the seasonally-adjusted employment-to-population ratio for 16- to 19-year-olds across the U.S. was 26%<sup>14</sup>. It is important to note that 12<sup>th</sup> graders (who are arguably more likely to be employed than students in lower grades) did not take the survey; and that the survey was conducted during the school year, rather than the summer when more teens are working. Adding in the 24 respondents not currently working in or near Vernonia but that had summer jobs lined up, the ratio rises to 35%.

### Indicator Target

The target for this indicator is for the “local” employment-to-population ratio for Vernonia teens to rise above the current percentage (19% school-year and 35% summer).

### Assessment

Because this is a baseline measurement, an assessment of whether Vernonia is meeting the target for youth employment is not possible at this time. These data will be used for comparison in future years.

## **Goal: Vernonia’s residents are economically secure.**

A population that is economically stable is critical to a community’s vitality. Poverty is linked to poor health, decreased educational success, stress, depression, and other problems, all of which limit an individual’s ability to engage positively in community life and create strain on community support services. A vital community is one in which residents are able to make ends meet, and one that can support those in need.

<sup>14</sup> U.S. Bureau of Labor Statistics, Labor force, employment, and unemployment statistics for youth ages 16 to 24. Accessible at <http://data.bls.gov/pdq/querytool.jsp?survey=ln>.

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### *Indicator 27: Poverty*

Measure	Data	Year	Source
Poverty rate (census tract)	7.2% ( $\pm 3.1\%$ )	2007-11	U.S. Census Bureau (American Community Survey)
Percentage of students in VSD that qualify for free or reduced lunch	44%	2011-12	Vernonia School District

#### Rationale

Two measures were chosen for this indicator; the data for each of them are easily obtainable and recalculated regularly. The income threshold for each measure is different; in 2013, the federal poverty guideline for a family of four was a gross annual income below \$23,550; whereas it was \$43,568 to qualify for free or reduced lunch. Both measures were thought to be important because one provides insight into the rate of the extremely poor, while the other captures the low-income population more broadly. It is important to note that the free or reduced lunch program is voluntary. In order to qualify for free or reduced lunch, the parents of children enrolled in school have to voluntarily complete an application for the program on which they report household income and the number of household members. If there is any reason for parents to feel uncomfortable about this reporting process, due perhaps to embarrassment about their low income or income being earned under the table, they may forgo completing the application. If, however, they feel safe reporting this information then they are more likely to do so. This means that changes in the percentage of students who qualify for free or reduced lunch could be due to actual changes in the number of students in low-income households or simply changes to the number of parents who feel comfortable reporting their low-income status.

#### Indicator Target

Family poverty can be affected by a number of factors, not all of them local. Changes in local trends over time may be due to these external factors rather than due to community changes specific to Vernonia. Therefore, the target is for Vernonia's poverty rate and free/reduced lunch rate to be below the average for rural Oregon census tracts.

#### Assessment

The overall poverty rate in Oregon's rural census tracts was 13% in the same time period, while 59% of Oregon's non-metropolitan students qualified for free or reduced lunch. Therefore, Vernonia is meeting its target with respect to family economic security.

## C. ECONOMY

### *Indicator 28: Employment*

Measure	Data	Year	Source
Unemployment rate (census tract)	8.1% ( $\pm$ 1.3%)	2007-11	U.S. Census Bureau (American Community Survey)

#### Rationale

Employment is a key to economic stability. The unemployment rate is calculated as the number of adults that are not employed, but looking for work. It therefore excludes such non-employed people as retirees, individuals who are financially secure through means other than employment, and those who cannot be employed due to illness or disability. This is another measure that is easily obtainable and re-measured annually through the American Community Survey.

#### Indicator Target

Because the unemployment rate can be affected by national and global economic trends, the target is for Vernonia's unemployment rate to fall below that of non-metropolitan Oregon as a whole.

#### Assessment

Over the period 2007-11, the average unemployment rate in Oregon's rural census tracts was 9.8%. Therefore, Vernonia is meeting the target for this indicator.

## Introduction

Individuals' physical and mental health are critical elements contributing to their overall well-being and sense of satisfaction with life. While one's health is determined by many factors beyond the control of his/her community, there are community services and amenities that can help to ensure that residents' health and well-being are maintained. The indicators in this section relate to these community services, such as health care and senior services, as well as potential individual health outcomes that would result from the provision of these services at the community level.

### Goal: Residents have access to the health care services they need.

Because of Vernonia's geographic isolation, local health care services are important. If health care services are not located in Vernonia, a substantial portion of the population who do not have the time, financial, or logistical means to travel to larger cities will, by definition, not have access to health care. Vulnerable populations in this sense include the elderly, poor, and those who are employed locally.

Health care services in Vernonia have been intermittent and inconsistent. The small population is a challenge for health care providers, and the health clinic building was damaged in the 2007 flood. Recent initiatives such as the opening of a school-based health clinic and the Rose Avenue Project (including rebuilding the clinic outside the floodplain) are intended to improve health care availability and these measures should provide some indication of the success of these efforts.

#### *Indicator 29: Health care availability*

Measure	Data	Year	Source
Number of health care providers located in Vernonia	5	2012	Oregon Secretary of State Business Licenses
Number of provider-hours/week of primary care available in Vernonia	44	2013 (as of April 1)	VVIP Advisory Committee

#### Rationale

The U.S. Department of Health and Human Services designates areas as being medically underserved based on the ratio of primary care providers to the overall population. For example, a physician-to-population ratio of 1:3,500 is used to designate an area as having a health professional shortage.<sup>15</sup> However, these data seem to be available at the county level only (Columbia County is designated as a primary care shortage area). To assess local conditions in Vernonia, we chose to inventory the total number of hours of primary care available per week. This data is easily quantifiable by summing the hours of operation of each provider.

#### Indicator Target

Five health care providers were identified as located in the 97064 zip code in 2012 according to the Oregon Secretary of State: a pharmacy, a naturopath, a dental clinic, a mental health clinic, and a family wellness clinic (the wellness clinic has since closed, and reopened with a new provider, and a school-based health clinic opened). The target is for the number of providers to increase. Physical

<sup>15</sup> U.S. Department of Health and Human Services, <http://www.hrsa.gov/shortage/>

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therapy is one specific service not currently available that is identified as desirable. Three primary care providers were operating at the time of measurement: Spencer Health & Wellness, Vernonia Health Clinic, and Natural Path Health Services; in total, providing 44 hours of service per week. The target is for the number of provider-hours of primary care to increase.

### Assessment

Vernonia was not meeting its target for health care availability at the time of measurement. However, it should be noted that one of the primary care providers (Vernonia Health Clinic) has significantly expanded its hours of operation since then.

### *Indicator 30: Health care access*

Measure	Data	Year	Source
Percentage of Vernonia adults who say they have access to the health care services they need	55%	2013	VVIP Household Survey (n = 388)

### Rationale

The ultimate goal is health care access for all; but having health care services available locally may not be sufficient to provide that access. For some, health care access may mean having the ability to travel to receive specialized care or to afford care at all. For these reasons we included a broad question about perceived health care access on the household survey.

### Indicator Target

While the ultimate goal is for all adults to have access to the health care services they need, it is understood that this goal is not entirely realistic. Therefore, the target for this indicator is simply for the percentage of people reporting that they have access to adequate health care to increase from current levels.

### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for health care access is being met at this time. Future assessments of this target will measure in comparison to 2013 rates.

## **Goal: Food security is not a concern in Vernonia.**

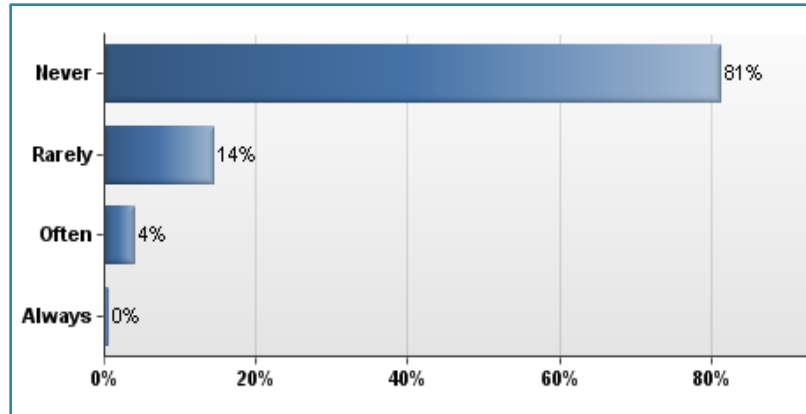
Food security is a constant concern in a community where the Food Bank serves over 200 families a month. Lack of access to proper nutrition leads to poor health which manifests in various ways. Healthy kids learn better, have better attention spans, and have a stronger attendance record than those lacking proper nutrition. Adults are affected in similar ways, but also make deeper choices based on hunger which can affect the longevity of the food insecurity cycle. People that are hungry make poor buying choices when confronted with choices in a supermarket, resulting in poor use of food dollars. Moreover, failure to meet basic needs such as food and shelter forces people into a survival mode where they don't use reason in making choices, and their choices invariably are short-term rather than long-term. Food security allows people the luxury of making well considered decisions while maintaining good health.

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### Indicator 31: Food security

Measure	Data	Year	Source
Average number of households served by the Vernonia Food Bank per month	144	2012	Vernonia Cares Food Bank
Percentage of Vernonia adults that report concerns about obtaining food “often” or “always”	4%	2013	VVIP Household Survey (n = 402)

**“In the past year, did you ever have to worry about where your next meal would come from?”**



#### Rationale

Vernonia area residents can obtain emergency food boxes (about three days' supply of food) from the Vernonia Cares Food Bank. Households may only obtain one food box per month. Therefore, looking at the number of households served by the Food Bank per month provides an accurate assessment of the number of people needing food assistance in the community. In 2012 (data were available for January – August), an average of 144 households per month utilized the Food Bank, or approximately 10% of the households in the census tract.

The survey question for the second measure was chosen to reflect a question that is included on a statewide survey conducted by the Oregon Food Bank<sup>16</sup>. 31 percent of respondents on the statewide survey reported worrying about where their next meal was coming from “often” or “always”. However, the results are not entirely comparable, as the Oregon Food Bank survey is distributed only to a subsample of its Food Bank clients, whereas our household survey was sent to a sample of Vernonia residents as a whole (regardless of whether they use the Food Bank). The 18% of residents who worry about food access at least sometimes (rarely, often, or always) is more closely aligned with the data we obtained from the Vernonia Cares Food Bank.

#### Indicator Target

The target is for each of these measures to decrease.

#### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for food security is being met at this time.

<sup>16</sup> Oregon Food Bank, 2012 Oregon Hunger Factors Assessment, available at: <http://www.oregonfoodbank.org/Understanding-Hunger/Hunger-Factors>



**Goal: Residents have healthful and active lifestyles.**

Visitors come to Vernonia for outdoor active pursuits such as cycling. Vernonia’s residents, however, may or may not share the same passion for cycling or other physical recreation. Nevertheless, it should be a goal that area residents have access to and pursue forms of active living in equal measure as tourists that flock to the area.

Although Vernonia is a beautiful area to live and play, it is a small and isolated town. Many area residents live outside of the city, well beyond walking distance to one another’s homes, grocery stores, restaurants, and the like. A large percentage of area residents make a long work commute. These factors combined predispose Vernonia residents to spending a lot of time in cars, and less in physical activity.

*Indicator 32: Healthy lifestyle (adults)*

Measure	Data	Year	Source
Percentage of Vernonia adults that say they exercise regularly (at least once per week)	81%	2013	VVIP Household Survey (n = 399)

Rationale

Regular physical activity is known to produce long term health benefits and the U.S. Department of Health and Human Services sets “physical activity guidelines” (PAG) for all Americans that describe the type and quantity of physical activity that is recommended to promote good health.<sup>17</sup> The PAG specifies 150 minutes of moderate activity per week. Although our more simply-stated survey question did not exactly mirror the PAG, it can still provide a useful comparison. By comparison, in 2009, 56% of Oregon adults met the minimum PAG recommendations.<sup>18</sup>

Indicator Target

The VVIP Advisory Committee’s consensus is that the percentage of Vernonia adults exercising regularly (according to survey results) is relatively high. Therefore, the target for this indicator is to maintain the percentage at the current level. However, it is recommended that future surveys use the specific PAG language and criteria, so that direct comparisons can be made to statewide data.

Assessment

Vernonia is currently meeting its target for healthy lifestyles among adults.

*Indicator 33: Healthy lifestyle (youth)*

Measure	Data	Year	Source
Percentage of VSD students who walk or bike to school	NO DATA		
Percentage of VSD students who are overweight or	NO DATA		

<sup>17</sup> U.S. Department of Health and Human Services, 2008 Physical Activity Guidelines for Americans, <http://www.health.gov/paguidelines/guidelines/summary.aspx>

<sup>18</sup> Oregon Health Authority, *Oregon Overweight, Obesity, Physical Activity and Nutrition Facts*, available at <http://public.health.oregon.gov/PreventionWellness/PhysicalActivity/Pages/pubs.aspx>

obese

### Rationale

Data for these two measures were not available at the time of this report. However, the VVIP Advisory Committee chose to retain the measures in the indicator set in the hopes that data will be available in the future. A potential source of data on students walking or biking to school is the Safe Routes to School Program, which currently does not operate in Vernonia. There are established protocols for determining BMI (body mass index), and subsequently overweight/obesity rates through simple height and weight measurements. The VSD nurse or school-based health clinic may be able to provide these data in an anonymous format.

### **Goal: Elderly residents have access to the services they need.**

As people age, they often become less able to travel to access their basic needs such as health care, shopping, banking, etc. Because of Vernonia's distance from other cities and lack of public transportation, livability for seniors is reduced if these basic services are not found locally. Community services such as assisted living, social gathering spaces for seniors, and public transportation can promote aging in place.

### *Indicator 34: Elderly services*

Measure	Data	Year	Source
Number of services targeted at seniors	4	2013	Jack Harvey, Vernonia Senior Center

### Rationale

This measure considered only services that are directed specifically for senior needs. The VVIP Advisory Committee developed a list of possible services that would benefit seniors, some of which currently are available in Vernonia (denoted with an \*asterisk) and others that are not. The services identified include:

- Meal assistance (such as Meals-on-Wheels)\*
- Public transportation outside Vernonia (such as Dial-a-Ride)\*
- Local (within Vernonia) transportation
- Assisted living facility
- Subsidized housing
- Home health assistance\*
- Welfare calls
- In-home personal grooming services
- Financial counseling
- Social activities\*
- Continuing education



Photo: Scott Laird

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### Indicator Target

Currently, only four of the services on the list of identified desirable services for seniors exist in Vernonia. The target for this indicator is to increase the number of available services.

### Assessment

Vernonia is not currently meeting its goal for providing services to the elderly.

## E. ENVIRONMENT AND NATURAL RESOURCES

### Introduction

Surrounded by some of the most productive forestland in the state and with the Nehalem River flowing through town, Vernonia is defined by its natural landscape. The goals and indicators in this section reflect a desire to protect and restore ecological conditions, build community engagement and awareness of environmental issues, and improve Vernonia's resilience to natural disasters.

### Goal: Vernonia is a flood-resilient community.

The Nehalem River is highly flood-prone; flood damage and recovery have defined Vernonia's recent history. Measures to reduce the likelihood of damage to human infrastructure will reduce the economic and social burden of future flood events and allow a more rapid recovery.

#### *Indicator 35: Resilience of structures within the floodplain*

Measure	Data	Year	Source
Percentage of buildings deemed out of compliance with the National Flood Insurance Program (NFIP) that have subsequently been brought into compliance	83%	2013	City of Vernonia

#### Rationale

In order for the city of Vernonia (and its residents and businesses) to qualify for National Flood Insurance, owners of structures within the floodplain must either have their structures up to FEMA standards for flood risk or tear them down. Ensuring that all structures in the floodplain are compliant with this program is critical given the high risk of flooding in Vernonia.

#### Indicator Target

The target for this indicator is 100%, because full compliance is required for NFIP.

#### Assessment

The data show that Vernonia is not meeting its goal for this indicator.



Photo: Amy Gratta

#### *Indicator 36: Green infrastructure*

Measure	Data	Year	Source
Acres of restoration projects intended to promote natural basin storage that have been completed in the Upper Nehalem basin	7 acres <sup>19</sup>	2013	Upper Nehalem Watershed Council

<sup>19</sup> Wetland projects only. Future assessments will include both wetland and instream projects in the total.

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### Rationale

Promoting natural basin storage can mediate the impacts of high rain events by capturing the water before it flows downstream. There are several types of restoration projects that promote watershed storage. Reconnecting side stream channels and wetlands to mainstem channels gives high water a place to go besides downstream. Also, replacing large woody debris in streams creates instream pools and slows the water down. This “green infrastructure” can be as important, if not more important than the “grey infrastructure” (such as sewer pipes and levees) in managing stormwater.

We chose acres as our metric for quantifying green infrastructure projects. Wetland restoration projects are typically measured in acres. Instream projects (such as large wood placement) are usually measured in stream miles. In this case, we estimate a stream mile to equate to approximately 3 acres (5,280 feet/mile x an average 25 foot active channel width = 132,000 ft<sup>2</sup>).

### Indicator Target

The target for this indicator is to add at least three acres per year of reconnected channel, off channel storage (wetlands), or instream channel with improved storage function.

### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for green infrastructure is being met at this time. Future assessments of this target will measure in comparison to 2013 rates.

### **Goal: The Vernonia Natural Resources Education Program is successfully contributing to positive environmental and educational outcomes.**

The Vernonia School District (VSD) has undergone a major curriculum initiative in tandem with the opening of the new school campus, the Natural Resources Education Program. The program’s objective is to integrate the hands-on, inquiry-based study of natural resources into all grade levels and subject areas in a coordinated way. Other goals are to foster partnerships with higher education and the community and engage the school community in the study and stewardship of the area’s natural resources. Evaluating the impact of the Natural Resources Education program was an early impetus for this indicator project.



Photo: LeeAnn Mikkelsen

### **Indicator 37: Natural Resources Education Program capacity**

Measure	Data	Year	Source
Dollar amount in grants obtained by VSD and number of partners providing in-kind support for youth natural resources education	\$133,900 9 partners	Through 9/2013	Vernonia School District
Percentage of VSD teachers that are doing service-learning or project-based learning related to natural resources	100%	2013	Vernonia School District

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### Rationale

Creating working partnerships is a key programmatic component of the Vernonia Natural Resources Education Program. Furthermore, it was suggested that an increase in grants and partnerships secured by the school would reflect an increase in social capital and community networks, both of which are essential for vital communities. While Natural Resources Education may be a district-wide programmatic goal, the program is implemented by individual teachers who have voluntarily added or altered existing curriculum to incorporate Natural Resources Education. Positive student outcomes can only be achieved if teachers are implementing the curriculum.



Photo: Scott Laird

### Indicator Target

In just a few years, VSD has secured an impressive \$133,900 in grants to support its Natural Resources Education Program. Equally important, the program has nine partners that provide in-kind support: City of Vernonia, Longview Timber, Northwest Oregon Restoration Partnership, OSU Forestry & Natural Resources Extension, Oregon Natural Resources Education Program, Portland Community College, Stimson Lumber, Stub Stewart State Park, and the Upper Nehalem Watershed Council (UNWC). Moving into the future, the target is to maintain the existing number of partnerships and to secure additional grants, raising the cumulative total grant support. Additionally, the curriculum goal is to maintain full (100%) teacher involvement in the Natural Resources Education through project-based learning or service learning.

### Assessment

Although the data for this indicator represent a baseline for the future, it is clear that VSD is meeting its target for teacher participation/implementation of the Natural Resources curriculum as well as partnerships. In future years, assessment of this indicator will be measured against 2013 data for grant funding.

### ***Indicator 38: Youth interest in natural resources***

Measure	Data	Year	Source
Percentage of VHS students who say they intend to pursue natural resources-related internships, jobs, or higher education	41%	2013	VVIP Student Survey (n=86)

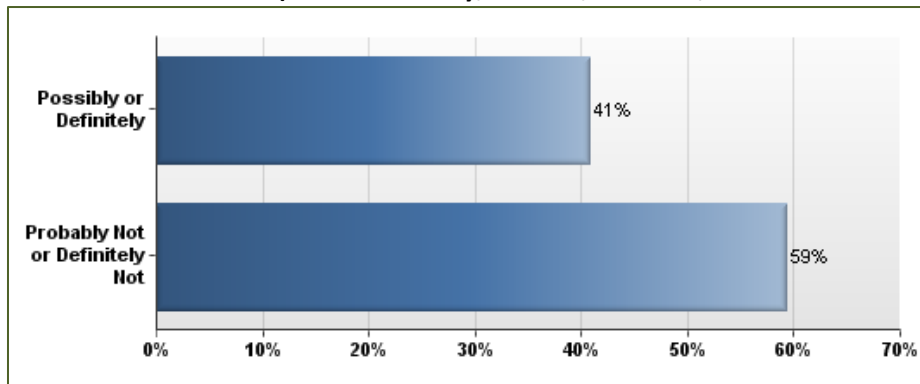
### Rationale

The Natural Resources Education program has a long-term economic and vocational development objective, in that it seeks to develop employment skills in VSD's graduates such that they may be employable in a local, 21<sup>st</sup> century natural resources economy. While not all students will be attracted to this career path, it would be useful to track changes in career interest over time as a result of exposure to the Natural Resources Education program. Research shows that education is one of several important factors that may determine an adolescent's career choice.<sup>20</sup>

<sup>20</sup> For a discussion, see Conroy, C. 2000. Reinventing career education and recruitment in agricultural education for the 21<sup>st</sup> century. *Journal of Agricultural Education* 41(4):73-84.

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**“After high school, do you think you will look for a job and/or college/vocational program that is related to natural resources (such as forestry, wildlife, fisheries, environmental science)?**



### Indicator Target

The target for this goal is to maintain or increase the number of students who express interest in natural resources careers. In 2013, Vernonia students' interest in natural resources careers does not appear to be all that different from students nationwide.<sup>21</sup> An interest in the field, coupled with local job opportunities and social factors may encourage retention of young people in Vernonia with satisfying and lucrative work in the future. On the other hand, negative experiences or impressions of natural resources careers may discourage youth from pursuing this as an interest.

Some rural scholars argue that it is unwise to encourage youth to pursue a career path (such as natural resources) if it would require them to move away from home in order to obtain the training needed to pursue it; or if there are no jobs in the sector to be had in the home community. Therefore, this indicator and target must be considered carefully and in conjunction with Indicator #21 (natural resources economy) and #37 (natural resources education program).

### Assessment

Vernonia is meeting its target for youth interest in natural resources careers.

## **Goal: Youth have an environmental awareness and connection to their natural environment.**

VSD teachers have stated that “raising youth awareness and connection to the natural world” is a primary outcome they hope to achieve through activities associated with the VSD Natural Resources Program. Increased awareness and connection to the natural environment is a short-term outcome which may, in the long-term, contribute to other outcomes such as environmental stewardship, support for restoration activities, or participation in the natural resources workforce.

<sup>21</sup> Hager, S., Straka, T., and Irwin, H. 2007. What do teenagers think of environmental issues and natural resources management careers? *Journal of Forestry* 105(2):95-98.



## E. ENVIRONMENT AND NATURAL RESOURCES

### *Indicator 39: Youth outdoor recreation*

Measure	Data	Year	Source
Number of Vernonia youth with hunting or fishing licenses	113	2012	Oregon Dept. of Fish and Wildlife

#### Rationale

Environmental awareness and connection to the natural world is an intangible trait that cannot easily be measured. Many early-life experiences are known to contribute to an individual's environmental awareness<sup>22</sup>. Of them, participation in consumptive outdoor recreation (i.e. hunting and fishing) is one that is easiest to track, because the Oregon Department of Fish and Wildlife maintains a database of all sport licenses purchased.



Photo: Scott Laird

#### Indicator Target

The target for this indicator is to maintain or increase from 2012 levels the number of youth with hunting or fishing licenses. If Vernonia's youth population were to increase substantially, the goal would be for the number of youth with hunting and fishing licenses to increase proportionally as well.

#### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for youth environmental awareness is being met at this time. Future assessments of this target will measure in comparison to 2012 data.

### **Goal: The Upper Nehalem Watershed supports a healthy salmon population.**

Salmon populations are an important indicator of ecosystem health throughout the Northwest, and many land use policies and regulations, as well as restoration efforts, are centered on protecting salmon habitat. The Upper Nehalem watershed is no exception in this regard. The watershed has significant potential as an important area for salmon, however there are major challenges for salmon survival including elevated stream temperatures (due to a lack of shade) and loss of complex instream features (due to past land use practices).

### *Indicator 40: Stream restoration*

Measure	Data	Year	Source
Number of restoration prescriptions identified for the Rock Creek basin that have been implemented and maintained (if applicable) at least three years	3	2013	Upper Nehalem Watershed Council

<sup>22</sup> Ewert, A. et al. 2005. Early-life outdoor experiences and an individual's environmental attitudes. *Leisure Sciences* 27:225-239.

## E. ENVIRONMENT AND NATURAL RESOURCES

### Rationale

A Limiting Factors Analysis was performed for the Rock Creek basin in 2011, identifying priority restoration actions that would contribute to Coho production in the basin. Sixty-six discrete restoration prescriptions were identified in the report. These prescriptions were assigned a priority on a five-point scale. Of the 66 prescriptions, 15 were ranked 1 (highest priority). Other basins in the Upper Nehalem watershed are equally important to Coho production, but Rock Creek was selected based on data availability.

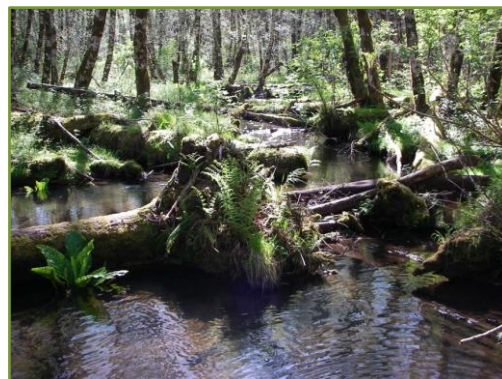


Photo: Biosurveys, LLC

### Indicator Target

The target for this indicator is to implement at least one more restoration prescription in the Rock Creek basin every three years. The UNWC actually hopes to implement one new prescription every year throughout the Upper Nehalem basin, but not all of these will be in the Rock Creek drainage.

### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for stream restoration is being met at this time. Future assessments of this target will measure in comparison to 2012 data.

### *Indicator 41: Stream temperature*

Measure	Data	Year	Source
Percentage of monitoring stations in the Upper Nehalem watershed with a reported 7-day average daily maximum temperature exceeding the temperature standard for fish health (65 F)	70%	2000	Oregon Dept. of Environmental Quality (DEQ)
Number of days/year that the 7-day average daily maximum stream temperature in the Upper Nehalem exceeds 65 F	78	2003	

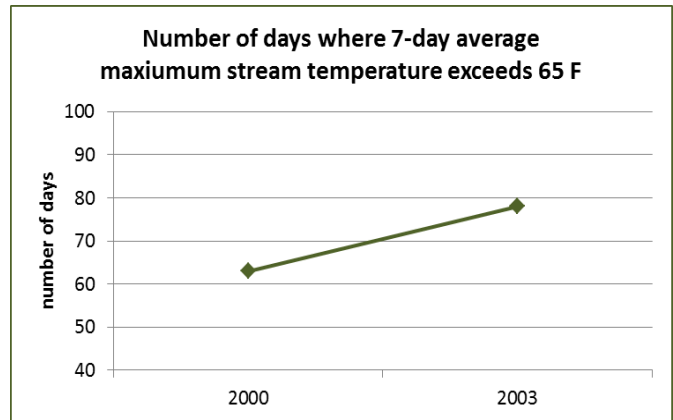
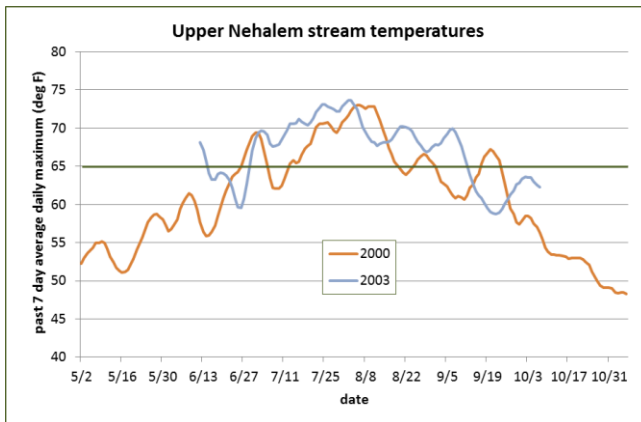
### Rationale

Water temperatures above 65 F make it difficult for salmon to survive. Stream temperature is considered to be one of the most important limiting factors contributing to salmon decline in the Upper Nehalem watershed. Restoration activities such as planting trees to shade stream channels are a priority. Stream temperatures are influenced by air temperature, so they will rise during a hotter year. Therefore for this indicator it is ideal to take an average over several years. The 7-day average daily maximum temperature is a commonly used metric for stream temperature conditions (the highest temperature recorded each day for a period of seven days is averaged).

The Oregon Department of Environmental Quality performed extensive stream monitoring in the Upper Nehalem Watershed in the early 2000's. Since then, data have become scarcer as there are fewer active monitoring stations. However, recently the Upper Nehalem Watershed Council and the

## E. ENVIRONMENT AND NATURAL RESOURCES

Vernonia School District have collaborated to install stream temperature monitors. It is expected that this effort will contribute updated data for this indicator.



### Indicator Target

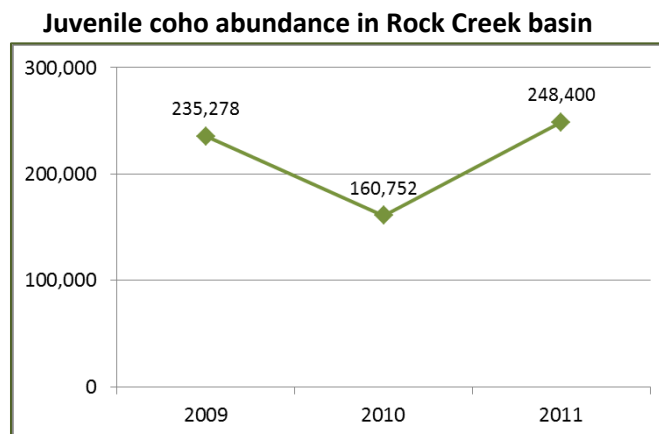
The target for this indicator is for the trend in both percentage of stations reporting high temperatures and number of days exceeding the temperature threshold to decrease. Caution should be applied when evaluating data from any single year. Multiple years of data are desirable to detect long-term trends.

### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for stream temperature is being met at this time. Future assessments of this target will use this data for comparison.

### *Indicator 42. Salmon abundance*

Measure	Data	Year	Source
Estimated number of juvenile coho in Rock Creek basin	160,000 to 248,000	2009-11	Upper Nehalem Watershed Council



## E. ENVIRONMENT AND NATURAL RESOURCES

### Rationale

The Rock Creek basin was selected for this indicator because it is one of the most productive basins for Coho in the watershed, and because it corresponds to available information on restoration activities (Indicator #40). Fish abundance is variable from year to year and is highly influenced by ocean conditions and other outside factors. A year-to-year fluctuation is not indicative of an overall trend in basin conditions. Therefore, examining a trend over time is desired.

### Indicator Target

Biologists working with the UNWC report that juvenile coho numbers in the Upper Nehalem tend to be higher than in other similar river systems in the state. However, it is still deemed that the current range of abundance is lower than what would be considered a healthy population. Therefore, the target for this indicator is for there to be an overall upward trend in juvenile coho abundance. As with the stream temperature indicator, a single yearly abundance figure should not be used to determine a long-term trend.

### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for salmon abundance is being met at this time. Future assessments of this target will use this data for comparison.

## **Goal: Private forestlands in the Upper Nehalem watershed are healthy and productive.**

Forests define the landscape around Vernonia, and the vast majority of that forestland is privately owned. Northwest Oregon's soils and climate contribute to the region having some of the most productive forestlands in the world. "Healthy" and "Productive" are subjective terms, but in this case we define a healthy forest as one that is resilient to environmental stress and a productive forest as one that is capable of providing wood fiber, habitat and environmental services to its fullest potential. Factors that reduce forestland productivity may include loss of forestland to other land uses; unsustainable management practices; natural events such as insect and disease outbreaks, fires, and storms; and invasive species.

### *Indicator 43: Forest certification*

Measure	Data	Year	Source
Number of family forest owners, and acres owned whose lands are certified (land in eastern half of watershed, Columbia & Washington Counties)	33 owners 10,534 acres	2013	Oregon Tree Farm System Northwest Natural Resources Group Trout Mountain Forestry

### Rationale

Family-owned forestlands are a significant component of the forestland acreage surrounding Vernonia, and family forest ownership is an important cultural component to the community. However, the productive capacity of these lands is wide-ranging. Participation in a forest certification program requires that owners follow a forest management plan and is correlated with an increased likelihood that the land is actively managed. Two forest certification programs are

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available to family forest owners, the American Tree Farm System (ATFS) and the Forest Stewardship Council (FSC). With about 24,000 acres of family-owned land in forest deferral in the study area<sup>23</sup>, approximately 44% are currently certified. Statewide, approximately 21% of family-owned forested acres are certified.<sup>24</sup>

### Indicator Target

Although forest certification rates in the study area appear to be well above the state average, it is desired for more private lands to become certified. The Nehalem Conservation Action Plan (which covers both the Upper and Lower Nehalem basins) has a goal of at least 10% of privately owned forestland acres to be FSC certified and at least 50% to qualify under SFI (Sustainable Forestry Initiative, an umbrella under which ATFS certification falls)<sup>25</sup>. Therefore, the target for this indicator is for the number of family forest owners and certified acres each to increase by 5% over five years.

### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for forest certification is being met at this time. Future assessments of this indicator will measure in comparison to 2013 data.

### *Indicator 44. Land conversion*

Measure	Data	Year	Source
Percentage of land in the Upper Nehalem watershed classified as "Wildland Forest" land use (land in eastern half of watershed, Columbia and Washington Counties)	95.2%	2009	Oregon Department of Forestry

### Rationale

In order for forestlands to maintain their productive capacity, they must remain in forest use. Development (parcelization) is a key factor leading to the loss of forestland productivity. The area of non-federal forestland is a statewide indicator of sustainable forestry<sup>26</sup>, and locally, the Nehalem Conservation Action Plan also calls out "no net loss of forestland" as a goal<sup>27</sup>.

The Oregon Department of Forestry (ODF) classifies land into eight land use categories, based on digital imagery.



Photo: Amy Grotta



Photo: Amy Grotta

<sup>23</sup> A. Grotta, estimated from Columbia and Washington County Assessors' Office taxlot records.

<sup>24</sup> USDA Forest Service, National Woodland Owner Survey, 2006. <http://apps.fs.fed.us/fia/nwos/tablemaker.jsp>

<sup>25</sup> Nehalem Conservation Action Plan. 2012. <http://cap.nehalem.org>

<sup>26</sup> Oregon Department of Forestry. Oregon Indicators of Sustainable Forest Management. <http://www.oregon.gov/odf/indicators/Pages/list.aspx>

<sup>27</sup> Nehalem Conservation Action Plan. 2012. <http://cap.nehalem.org/>

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Wildland Forest is the least developed of these eight classes. It is defined as being at least 80 percent forested and having fewer than five structures per 640 acres<sup>28</sup>. To calculate the percentage of land in the study area classified as Wildland Forest, the statewide Land Use GIS layer was obtained from ODF. The watershed and county layers were superimposed and then the resulting polygon area for each land use class was calculated.

### Indicator Target

Since the goal is for “no net loss” of forestland, the target for this indicator is to maintain (or increase) the percentage of land classified as Wildland Forest.

### Assessment

The data for this indicator represent a baseline assessment. Therefore, it is not possible to assess whether the target for forestland conversion is being met at this time. Future assessments of this indicator will measure in comparison to 2009 data.

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<sup>28</sup> Oregon Department of Forestry. 2011. Forests, Farms & People: Land Use Change on Non-Federal Land in Oregon, 1974-2009.

## Conclusion

This baseline assessment gathered data on many aspects of community vitality in Vernonia, as of 2013. These data points reveal many things, some of which are quite consistent with community perceptions and some of which may be surprising. Taken together, they paint a picture of Vernonia residents' well-being and the degree to which their community supports their well-being. Considered separately, they provide an impetus for community conversations and priority setting in order to make improvements in community vitality in the future.

In terms of livability and community character, several elements stand out as positive highlights. Youth are actively engaged in Vernonia and take pride in it, and have strong support from their community for positive achievements, as evidenced by scholarship recognition and community partnerships with the school district. Local amenities such as parks and open space contribute to livability and the real estate market is robust as compared to other rural communities. However, there are several challenges to livability in Vernonia. Most notably, health care services and services for the elderly fall short of what is desired; and with few local jobs many residents have very long commutes.

These aspects of livability may partially explain some of the trends we found in Vernonia's demographic indicators. Compared to other rural areas of Oregon, Vernonia's residents are economically better off, and there are more families with young children. However, like most rural parts of the state, overall population and school enrollment have been declining and are below the community's targets. It is hoped that the investment in the new school campus will help to attract (and retain) more families to Vernonia. However, the other aspects of livability (such as local jobs and services) need to be addressed in tandem with the educational infrastructure in order to maintain a stable population base.

The economic indicators that we looked at showed that while many Vernonia residents commute out of the area, the local economy remains diverse. Natural resources continue to play an important role in the economy despite the fact that few are directly employed in this sector. Tourism is important as evidenced by the high numbers of non-residents visiting and camping at Vernonia's parks. Developing economic indicators were particularly challenging for this project due to the fact that most economic data is collected at a much broader scale (i.e. the county). This project represents the first time that most of our economic indicator data were collected at the community level in Vernonia; making this a true baseline effort for which to compare future trends and outcomes.

Likewise, with the environment and natural resources indicators, finding appropriate data at a fine scale such as the watershed or a census tract presented a challenge. However, as the natural resources program within the school adds capacity to watershed monitoring efforts as part of their curriculum, it is hoped that local data will be more prevalent in the future. Vernonia's residents seem to be appreciative of and connected with their surrounding environment in terms of recreational pursuits and stewardship efforts. Outcomes in terms of improved environmental indicators (such as stream temperatures and fish populations) are expected to be long-term. One area that is in need of improvement is in flood resilience. Both structural improvements in the floodplain as well as natural restoration are warranted to ensure that Vernonia can weather future floods without the social and financial upheaval that has been experienced in the past.

Finally, it is important to keep in mind that from the outset, this project was always intended to be a baseline assessment, to document vitality at a moment in time so that forward progress (or setbacks)



may be evaluated objectively. This means that the real value of this project will be at a future point in time, when the indicators are re-measured. This will take time and effort, but the fact that many members of the community invested their time and energy into this baseline assessment will pave the way for an easier process the next time around.

## Survey methods

### Household survey

The household survey was a two-wave mailed survey consisting of eight questions. We developed as complete a list of household addresses in the census tract including Vernonia using the following procedure:

- The county's property tax roll was obtained from the Columbia County Assessor's website as an Excel file. We narrowed this list to the subject geographic area by retaining only those designated "3" (for Vernonia) in the "MA" column OR those with an owner's mailing address in Vernonia. We further narrowed the list to residential properties by retaining only those with the following property classes (per Assessor's recommendation): 010, 019, 101, 109, 401, 409, 541, 549, 551, 559, 581, 589, 641, 649, 681, 689. The resulting list was sorted by owner's name and duplicates removed. Any with a mailing address outside the target geographic area were removed and put into a separate "nonresident" list. Any listings where the owner's mailing address and the situs address did not match were removed and put into a "potential rental property" list. Whatever was left over was retained for the final mailing list.
- A voter registration list for the 97064 zip code was obtained from the Oregon Secretary of State's office. This list was sorted by mailing address. Listings where the mailing address matched one of the listings in the "potential rental property" list above were put into the mailing list. Any listings where the address was not found in the Assessor's list above were also put into the final mailing list. Finally, any listings where the address matched the "nonresident" list above were also put into the final mailing list.
- For the remaining "nonresident" list, listings in Birkenfeld were removed in the vicinity of Fishhawk Lake (presumed to be second homes). Duplicates were removed. The remaining listings were sorted by acreage. All that were over 1 acre were removed. Out-of-town addresses were removed. For everything remaining, the Owner's name was changed to "Resident" and included in the final mailing list.
- In the final mailing list, any Owner's name that included "Trust" was converted to "Family" (i.e. "John Smith Trust" became "John Smith Family". "Or current resident" was added to each listing (except those addressed to "Resident").

This process resulted in a final mailing list of 1,415 addresses.

We estimated the total adult population of the census tract to be 2,625 (based on 75% of the total census tract population). We had a goal of at least 489 responses to achieve a 4% margin of error. We used a 40% expected response rate to calculate that 1,225 surveys would need to be mailed to reach that goal. We used a random number generator to assign a decimal between 0 and 1 to each of the 1,415 addresses in our list. The list was then sorted by the random numbers and the top 1,225 were selected for inclusion on the mailing list.

Each selected address received a mailing that included a cover letter, a copy of the survey and a postage-paid return envelope. The cover letter indicated that if there were more than one adult living in the household, that the individual with the most recent birthday should be the one to complete the survey. No identifying information was asked for on the survey. To track responses, each survey was

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printed with a code number attached to each address. When surveys were returned, those code numbers were checked so that they would not be included in the second wave.

About a month after the initial mailing, all non-respondents were sent a duplicate mailing with another survey, cover letter and return envelope.

In total, we received 405 responses for a 33% response rate and an estimated 4.5% margin of error. While we did not quite reach our response rate goal, we also do not know the number of undeliverable surveys. Thus it is quite possible that our effective response rate was higher. A recommendation for the future would be to request the post office to return undeliverable mailings, though this comes with a substantial cost.

One question on the household survey asked for the respondent's age. This was done to evaluate whether the respondent population mirrored the overall adult population. The data shows that this was not the case; respondents to the survey included a much greater percentage of 65+ and much lower percentage of under-35 than the overall population (Table X).

Survey respondents		Overall census tract population*	
18-34 years	4%	20-34 years	25%
35-44 years	10%	34-44 years	18%
45-54 years	21%	45-54 years	20%
55-64 years	24%	55-64 years	20%
65+ years	41%	65+ years	18%

*\*source: U.S. Census Bureau, American Community Survey 2006-10. Percentages do not add up to 100% due to rounding.*

### Student survey

The survey consisted of five questions on a single sheet of paper. A VVIP Advisory Committee member obtained permission from VSD administration and distributed it to all Vernonia High School students in late May, 2013. Because of the timing of the survey, VHS seniors were already excused from classes and thus did not take the survey. In total, 86 surveys were returned (for a 58% response rate not including seniors; 42% response rate seniors included). This translates to a 7-8% margin of error. Future efforts should take the timing and logistics of the survey into consideration to achieve a higher response rate and thus lower margin of error.

### Business survey

A list of all business entities registered in the 97064 zip code was obtained from the Oregon Secretary of State. Additionally, a business directory was obtained from the Vernonia Chamber of Commerce. These two lists were combined and duplicate and outdated listings removed. The final list totaled 262 businesses. A survey consisting of eight questions along with a cover letter and a postage-paid return envelope was mailed to each business. Businesses that did not return the printed survey after several weeks were contacted by phone or e-mail, to the extent known, and given the opportunity to complete the survey over the phone or electronically. Of the 262 businesses, 100 completed the survey; no phone or e-mail contact was known for 113; 25 were attempted unsuccessfully to reach by phone; 22 refused; and two were deemed ineligible. This translates to an effective 41.6% response rate (refusals and ineligibles removed from potential respondents). It is not appropriate to determine the margin of error on the business survey due to the open-ended nature of the questions.

## List of Acronyms

FEMA = Federal Emergency Management Agency  
GIS = Geographic Information System  
NFIP = National Flood Insurance Program  
NRCS = Natural Resources Conservation Service  
ODF = Oregon Department of Forestry  
OSU = Oregon State University  
PAG = Physical Activity Guidelines  
PYD = Positive Youth Development  
RDI = Rural Development Initiatives  
RMLS = Regional Multiple Listing Service  
UNWC = Upper Nehalem Watershed Council  
USDA = United States Department of Agriculture  
VSD = Vernonia School District  
VHS = Vernonia High School  
VVIP = Vital Vernonia Indicator Project