



**Sowing Seeds for Local Abundance: A Tolowa Dee-ni' Nation  
Agricultural Enterprise and Farmer Training Feasibility Study**





# TABLE OF CONTENTS

Table of Contents	1
Executive Summary	2
Introduction	3
<hr/>	
<b><u>Section I - Research &amp; Analysis</u></b>	
Research and Analysis Introduction	5
The Tolowa Dee-ni' & Taa-laa-waa-dvn (Homelands)	6-9
Understanding the Local Food Context	10
Defining the Region	11
Market Assessment	
The Wild Rivers Coast Region	12-14
Tourism Focus	15-19
Regional Climate	20
Agriculture Production Overview	21-22
Wild Rivers Coast Region Agriculture Production	23-28
Agriculture Producer Market Options	29-31
Workforce Development Opportunities	32-34
Tribal Land Resources	35-38
Research and Analysis Section Review	39
<b><u>Section II - Outreach &amp; Engagement</u></b>	
Outreach and Engagement Introduction	41
Stakeholder Engagement	42-47
Community Engagement	48-49
Tolowa Dee-ni' Nation Department & Leadership Engagement	50-52
Tolowa Dee-ni' Value Identification	53
<b><u>Section III - Enterprise Identification</u></b>	
Enterprise Identification Introduction	55
Agriculture Enterprise Groupings	56-59
Enterprise Group Value Comparison	60-61
Recommended Agriculture Enterprise Group	62
<b><u>Enterprise Group Economic Modelling</u></b>	

Works Cited

## EXECUTIVE SUMMARY

*Taa-laa-waa-dvn*, the Tolowa Dee-ni' Nation homelands, is a region of natural abundance. For millennia, this land sustained the Tolowa Dee-ni' Nation people with a diverse array of elk, fish, berries, acorns, seaweeds, and many other types of native flora and fauna. Today, a large number of these native food sources have been depleted. This loss of native food sources both decreases food sovereignty and increases food insecurity. However, over the past several years the Tolowa Dee-ni' Nation has acquired many new agriculture and food resources. The Tribe now owns over 100 acres of prime agricultural land and is developing a focus on food and garden programs to benefit its members.

With these resources in place, the Tolowa Dee-ni' Nation has the ability to become an active producer in the local food system. The goal of this study is to determine which agricultural enterprise options are available to the Tribe and assess which of these options is the most culturally, economically, and environmentally viable.

This report is divided into three main sections:

**Part 1: Research and Analysis,**

**Part 2: Outreach and Engagement**

**Part 3: Enterprise Identification**

The first section, research and analysis, assesses the local and regional market of the *Taa-laa-waa-dvn* region. This information is critical in determining which types of agriculture enterprise operations are economically viable in the region. The second report section, outreach and engagement, describes information gathered by meeting with local food systems stakeholders and Tolowa Dee-ni' Nation leaders. This information is utilized to help prioritize the agricultural enterprise operations that would be most logistically and culturally viable. Finally, the third section of the report identifies a recommended suite of agricultural enterprise options and suggested next steps for bringing this agriculture enterprise suite to fruition.

Producing food locally in *Taa-laa-waa-dvn* has the potential to increase food sovereignty, lower food insecurity, and create local jobs. As the Tolowa Dee-ni' Nation continues to grow and acquire more agricultural land, our hope is that this report can be used as a tool for developing economically viable and culturally valuable agriculture enterprise operations.

## Purpose

Sowing Seeds for Local Abundance investigates the feasibility of establishing an Agricultural Enterprise & Farmer Training Program on Tolowa Dee-ni' Nation tribal land that will increase local farming and food economic opportunities. The format for this study follows the objectives of documenting current local farming operations and assessing Tolowa Dee-ni' Nation economic and cultural growth potential. The ultimate purpose of this work has been to promote economic and workforce development for the tribe, improve food security and access for the local community, and instill Tribal Food Sovereignty and Culture through agricultural practices.

This report is divided into three main sections:

- Part 1: Research and Analysis,
- Part 2: Outreach and Engagement
- Part 3: Enterprise Identification

Each section addresses the goals and objectives for the study and develops a collection of findings that supports the following sections.

This study was made possible by a grant from the USDA Local Food Promotion Program (LFPP) and was completed by a team of dedicated staff and partners. Jarlath Caldwell, Tolowa Dee-ni' Nation Agricultural Enterprise Specialist and Nathan Forster, Agriculture Business Development Consultant of Groundwork Group LLC. compiled the report findings, interacted with community and professional stakeholders and built the enterprise economic models over the course of a 12 month period.

A community of professionals supported the advancement of this work including:

- Erika Partee & Dorothy Wait of the Tolowa Dee-ni' Nation
- Brittany Rymer, Connor Caldwell of the Community Food Council for Del Norte and Tribal Lands

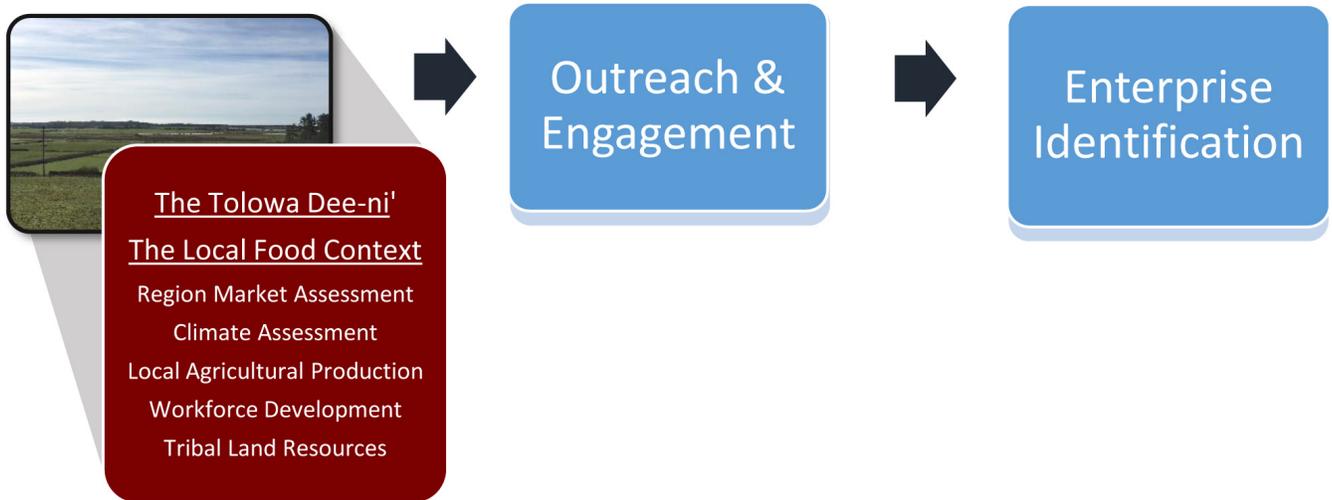
Along with the Tolowa Dee-ni' Community and Family Services, Culture, and Natural Resources Departments, Tribal Council, and the Food and Agriculture Tribal Committee. And community partner groups: Community Food Council for Del Norte and Tribal Lands via Building Healthy Communities Del Norte, and the California Center for Rural Policy.

Shu' shaa nin-la to all who contributed to this study.

This study identifies a recommended agriculture enterprise for the Tolowa Dee-ni' Nation. The additional economic modeling performed for this enterprise creates a starting point and option for the tribe to develop an economic implementation plan for the enterprise and also consider the economic potential of the food system in their *Taa-laa-waa-dvn*.



### Research and Analysis Introduction



In defining this feasibility study, identifying many regional components was necessary to frame the research and analysis. A wealth of data was collected, reviewed, and analyzed concerning the Smith River community and surrounding region. Research identified past food and farming economic development efforts, along with current and historic, economic, agricultural, and demographic data for the region. The number of farms and types of farming in the greater Smith River area was assessed with analysis of economic growth potential of the local market or other existing markets for product outlet.

Topics overviewed in this research and analysis section include: Tolowa Dee-ni' food and agriculture history, regional local agriculture market assessment, tourism opportunities, climate and current agriculture production overview, workforce availability, and Tolowa Dee-ni agriculture land resources.



### The Tolowa Dee ni' & Taa-laa-waa-dvn (Homelands)

The *Tolowa Dee-ni'* (Tolowa people) serve at the center of this project as the primary and historic stewards of the Smith River region and greater *Taa-laa-waa-dvn* (Tolowa Homeland). The *Taa-laa-waa-dvn* is defined more by natural features extending from the watersheds of Wilson Creek, CA as the southern border to the Sixes River, OR to the north. The land extended inland approximately 50 miles up the Rogue River to the Applegate River drainage in Oregon. The geographic range of Tolowa ancestral lands was approximately 7,839 square miles of southwestern Oregon and northwestern California. Tolowa Dee-ni' neighbors include the Yurok to the south, Coquille and Umpqua to the north, Takelma, Shasta and Karuk to the east.

The history and story of the people extends back beyond the presence of colonial influences on the land and is a tapestry of tradition that should be at the cornerstone of any proposed development and in keeping with the Tribe's Mission Statement.

***“To exert and protect the inherent sovereignty endowed upon the Tolowa Dee-ni' Nation to promote our tribal identity, and the wellbeing of our people, community, and environment by building a strong foundation, managing resources, and perpetuating our cultural lifeways and legacy.”***

The *Dee-ni'* (people) have a connection to food that echoes back to ancient traditions and rituals revealing a strong awareness of the natural world. Time honored stories sanctified each natural event, and environmentally protective practices necessary to sustain the resources of the earth were practiced.



The Taa-laa-waa-dvn Ancestral Lands Map

#### Dee-ni' History

The history of the *Dee-ni'* is one of sharp contrast hinged on the migration of White colonials to their *Taa-laa-waa-dvn* known as the Contact. The result of this Contact was a systematic and oppressive abuse of the *Dee-ni'*, it is important to know this past and influence it plays on the present day.

Contact with Europeans occurred as early as the 1700's with scattered trading with the coastal villages of the *Dee-ni'*. The discovery of gold in the Sacramento Valley in 1849 brought the first big wave of settlers to the *Taa-laa-waa-dvn* in present day Crescent City and Humboldt Bay, which served as supply depots for inland mining camps where they came face to face with the *Dee-ni'*. Starting in the



1850's, white homesteads and farms were established on the coastal plain and most flat areas inland. Thus began the harrowing post-Contact era, a continuous suppression of the *Dee-ni'* and other Native American populations. In 1845 the California Indian population was estimated to have been 150,000 strong; by 1900 less than 16,000 Indians had survived the colonial onslaught. The genocide of the *Dee-ni'* during 1851-1856 resulted in over 80% of the Tolowa *Dee-ni'* population being killed.

The *Dee-ni'* were put to work producing crops and ranching livestock to lessen their dependence upon the traditional life ways of foraging and hunting/fishing for food.

The *Dee-ni'* connection to their *Taa-laa-waa-dvn* underwent various degrees of abuse. These included removal to distant reservations (1855 & 1868), division of reservation land to deteriorate the tribal lifestyle (Dawes Act of 1887), reestablishment of reservation land for “homeless” Indians (1862, 1906), termination of their reservation (1960), and finally reestablishment of a constitutional and federally-recognized Smith River Rancheria (1987). The *Dee-ni'* people retained their culture, traditions, and language in spite of numerous and overt attempts forcing them to assimilate and abandon their cultural beliefs and life ways. This harrowing history articulates the perseverance by the *Dee-ni'* to establish their present day sovereign nation on a portion of their ancestral lands.<sup>1</sup>

#### **Agriculture Record from the Smith River Indian Reservation (1866-1868)**

Early settlement of the region in the 1850s included the establishment of large agricultural farms and ranches in areas particularly suitable for such activities. Given the rough topography and dense



<sup>1</sup> (Bommelyn 2006)

## RESEARCH AND ANALYSIS

forests throughout the region, agricultural land for conventional practices was very limited. Areas utilized for early agriculture in Del Norte County were concentrated in the Elk Valley and Smith River where rich alluvial soils were ideal for farming and ranching. Dairy ranching and farming of barley, wheat and oats were the earliest forms of agriculture introduced in the 1860s. In the 1870s the emphasis shifted to livestock and ranching of primarily cattle, horses, and pigs while farming efforts were focused on producing livestock feed.<sup>2</sup>

There exists a firsthand account of agriculture practices on the Smith River Indian Reservation where the Tolowa Dee-ni' were located for a time from 1866-1868. The following entries are from a diary of the Smith River Indian Reservation Ranch. The day-to-day entries into the diary depict the work and attitudes, and the general farming in the area composed by various people.<sup>3</sup>

### Tolowa Today

The Tolowa Dee-ni' Nation was established in 1908 and was the largest Rancheria in the State of California, consisting of 160 acres. Rebuilding from termination in 1960, the Tribe has grown to over 500 acres of land, a general membership of 1,609 members and led by a governed *Lhetlh-xat-ne* (Tribal Council) – comprised of seven tribal members who have been elected by the general membership.

Over 200 employees of the Tolowa Dee-ni' Nation perform and execute the functions of 17 Departments providing services to its members, the Smith River community and their *Taa-laa-waa-dvn*. A number of these departments have been identified as having shared interest in the development of this study as it relates to their missions and objectives.<sup>4</sup>

*Products of the Smith River Indian farm for the year 1867.*

	<i>Quantity</i>			<i>Article</i>
<i>June</i>	<i>20</i>	<i>Thirty</i>	<i>Head</i>	<i>Young calves</i>
<i>"</i>	<i>3</i>	<i>Three</i>	<i>"</i>	<i>" Colts</i>
<i>"</i>	<i>38</i>	<i>Thirty eight</i>	<i>"</i>	<i>" Pigs</i>
<i>Sept</i>	<i>63</i>	<i><del>Fifty</del> Sixty three</i>	<i>Tons</i>	<i>Hay</i>
	<i>46,000</i>	<i>Forty-six thousand</i>	<i>lbs</i>	<i>Oats</i>
	<i>85,000</i>	<i>Eighty five "</i>	<i>"</i>	<i>Wheat</i>
	<i>15,000</i>	<i>Fifteen thousand</i>	<i>"</i>	<i>Peas</i>
	<i>60</i>	<i>Sixty</i>	<i>tons</i>	<i>Staw</i>

*Journal Entry from the Smith River Reservation Diary, 1867*

<sup>2</sup> (Sloan 2007)

<sup>3</sup> (Smith River Reservation Journal, 1866-1868)

<sup>4</sup> (Tolowa Dee-ni' Nation, 2017)

**The *Taa-laa-waa-dvn* Bounty**

The natural world of the *Dee-ni'* is central to identity and is comprised of four interrelated ecological zones: the coast (including open water and shorelines), river corridors, redwood forest, and oak uplands that have sustained the *Dee-ni'* for countless generations. The populations of each tribal village moved freely throughout the lands harvesting from each zone as the seasons progressed. These lands still provide seasonal resources of foods, medicines, and materials that comprise the *Dee-ni'* cultural landscape. Strict spiritual protocols prescribed the use of the *Nvn-nvst-‘a~* (Mother Earth) and the preservation of her natural resources for the present and future generations.<sup>5</sup>

Coast & Rivers: spring (Chinook) salmon, silver-side, fall (Chinook) salmon, dog salmon, steelhead, smelt, perch, sturgeon, sea lions, lamprey eels, mussels, 2-3 varieties of clams, sea anemones, several small unidentified marine forms, dead whales, small game (ducks, mud hens, gull and shag eggs, seaweed

Redwoods & Oak Uplands: deer, elk, quail, rabbits, squirrel, acorns (all kinds) camas and camas-like tubers, fern roots, skunk-cabbage root, tarweed and grass seeds, many kinds of berries, green shoots, Pine nuts



5 (Calla 2011)

6 (Native Food System Resource Center)

**Modern Tribal Food Issues**

Post Contact, the Tolowa *Dee-ni'* Nation's access to traditional food sources has been reduced and the diet of TDN citizens has changed dramatically. Many traditional food sources are difficult or impossible to access in large enough quantities for subsistence. In seeking to increase access to traditional foods and improve health, many Tribes have begun food sovereignty efforts.

Tribal Food Sovereignty<sup>6</sup>

As defined by the First Nations Development Institute, food sovereignty is a choice to reconnect to the land and becoming in tune with the environment while revitalizing rich cultural traditions tied to seasonal growing and gathering practices. It speaks to nutrition and health along with economic empowerment. Many tribal nations lost control of their homelands, losing touch with ancient wisdom in subsistence living. Fatty, salty government rations replaced healthy, traditional foods. The result for indigenous peoples was some of the world's worst health outcomes.

Good food is essential to healthy, strong tribal nations. Food sovereignty involves controlling and managing all of the factors that contribute to a sustainable food system:

- Have access to healthy food;
- Have foods that are culturally appropriate;
- Grow, gather, hunt and fish in ways that are maintainable over the long term;
- Distribute foods in ways so people get what they need to stay healthy;
- Adequately compensate the people who provide the food; and
- Utilize tribal treaty rights and uphold policies that ensure continued access to traditional foods.

# RESEARCH AND ANALYSIS

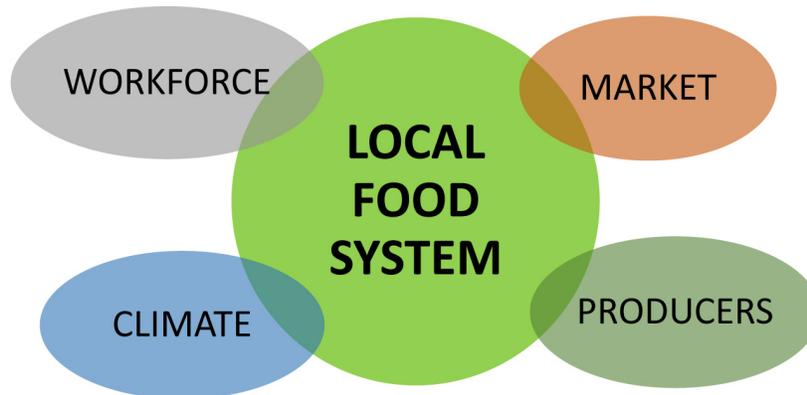
## Understanding the Local Food Context

With growing land ownership and a strong Tribal Government in place, the Tolowa Dee-ni' Nation is in a position to enhance the local food economy and increase the food sovereignty of its membership. A primary objective of this study is to document the local food system and quantify the potential for growth to sustain an economic venture on Tolowa Dee-ni' Tribal Lands. In this section, we define the various components of Smith River's local food system and access the local and regional market potential.



## Defining the Local Food System

A local food system is defined by many factors, spanning the influences of social, economic and environmental forces. The graphic below identifies the primary components of the food system discussion that we will explore in greater detail for the Smith River area.



**Market** The playing field where products are bought and sold in a defined region between producers and consumers through various market outlets

**Producers** The farmers, growers, and processors that create food-based products for sale in the market

**Climate** The environmental and natural factors and conditions of a region that influence agricultural production

**Workforce** The individuals in a region that perform the jobs and duties to drive the flow of products through the system

## Defining the Region



Regional Context Map Google Earth, 2018

Smith River, California is situated at least 6 hours from any major metropolitan area. It is in an environmentally unique and geographically distinct portion of the country. This geography is shared by surrounding small communities that dot both sides of the state line between Oregon and California. The Wild Rivers Coast is the unifying name for this stretch of coast and is used extensively in the area as an identified brand. The Wild Rivers Coast Region encompasses 5 counties (Del Norte and Humboldt in California; Coos, Curry, and Josephine in Oregon) and stretches over 200 miles of coastline from county line to county line.

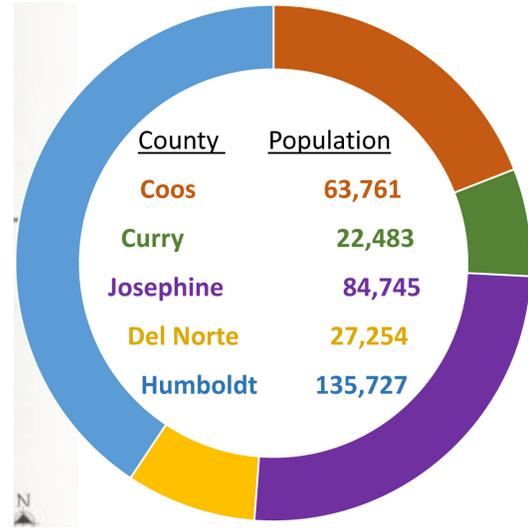
Smith River is situated nearly midway along that coastline and its main transportation corridor of Highway 101. Being within a 100 mile radius of this area’s key population centers, Smith River and the Tolowa Dee-ni’ Nation are ideally situated in the Wild Rivers Coast Region to coordinate and contribute to the local community food production and distribution in this region. The Wild Rivers Coast correlates to the ancestral lands of the Tolowa Dee-ni’ People.



The Wild River Coast Region Google Earth, 2018

## Market Assessment - The Wild Rivers Coast Region

The local market could be viewed as the base clientele for products in the Wild Rivers Coast Region. A starting point to determine this is population statistics for the region. Review of the demographic data reveals an area with a low population density and poverty rate above the state average. When compared to the state averages for California, per capita income is three-quarters the state average, median household income nearly two-thirds the state average, and population density is 7x less. The combined population of this land area is over a quarter million people (270,209 residents) with approximately half that population residing in Humboldt County.



The Wild River Coast Region Population, by County

7

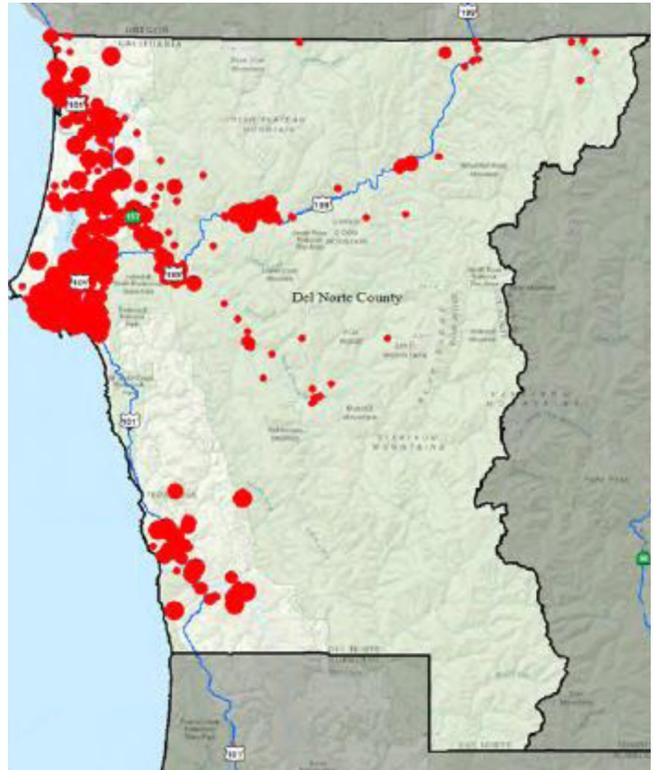
### The Wild River Coast Region Demographic Statistics

Data	Del Norte	Humboldt	Curry	Coos	Josephine
<b>Population</b>					
Population Est. 2015	27,254	135,727	22,483	63,761	84,745
Population % change over 5 years	-4.7%	0.8%	0.5%	1.1%	2.5%
Population per square mile	28.4	37.7	13.7	39.5	50.4
<b>Race</b>					
White Alone	78.7%	83.6%	92.5%	90.2	93.3%
Black, African American	3.5%	1.4%	0.5%	1.0%	0.6%
American Indian Native Alaskan	9.1%	6.2%	2.4%	2.9%	1.6%
Asian	3.6%	2.9%	1.0%	1.3%	1.0%
Hispanic Latino	19.8%	11.1%	6.8%	6.5%	7.3%
<b>Housing</b>					
Persons Per Household	2.55	2.47	2.11	2.38	2.38
Median Household Income	\$40,847	\$42,197	\$40,884	\$38,605	\$37,665
Per Capita Income	\$19,560	\$23,367	\$24,682	\$22,667	\$22,470
Persons in Poverty	23.3%	20.9%	17.2%	18.7%	21.9%

7 (US Census Bureau 2017)

Population Concentration

The largest population center in the region is Grants Pass in Josephine County, situated along the major north-south thoroughfare of Interstate 5, however the Humboldt Bay Area accounts for the largest concentration of residents at approximately 75,000 people. Population density in Del Norte County is focused along the Highway 101 corridor with the predominant population situated around Crescent City and extending north to the Oregon border. Smith River is the 36th most populated area and is the 4th most populated center in Del Norte County.



Del Norte County Population Concentration Map<sup>8</sup>

**Population Centers Table**

	City or Town	Population	County
1	Grants Pass	35,076	Josephine
2	Eureka	26,913	Humboldt
3	Arcata	17,697	Humboldt
4	Coos Bay	15,967	Coos
5	McKinleyville	15,177	Humboldt
6	Fortuna	11,788	Humboldt
7	North Bend	9,695	Coos
<b>8</b>	<b>Crescent City</b>	<b>7,188</b>	<b>Del Norte</b>
9	Brookings	6,374	Curry
10	Redwood	5,844	Josephine
11	Myrtle town	4,675	Humboldt
12	Coquille	3,866	Coos
13	Fruitdale	3,780	Josephine
14	Humboldt Hill	3,414	Humboldt
15	Rio Dell	3,361	Humboldt
16	Pine Hills	3,131	Humboldt
17	Cutten	3,108	Humboldt
18	Bandon	3,066	Coos
19	Myrtle Point	2,514	Coos
20	Bayview	2,510	Humboldt
21	<b>Bertsch-Oceanview</b>	<b>2,436</b>	<b>Del Norte</b>
22	Harbor	2,391	Curry
23	Gold Beach	2,257	Curry
24	Selma	1,934	Josephine
25	Cave Junction	1,871	Josephine
26	Willow Creek	1,710	Humboldt
27	Lakeside	1,699	Coos
28	Ferndale	1,362	Humboldt
29	Blue Lake	1,241	Humboldt
30	Hydesville	1,237	Humboldt
31	Redway	1,225	Humboldt
32	Westhaven	1,205	Humboldt
33	Port Orford	1,137	Curry
<b>34</b>	<b>Fort Dick</b>	<b>978</b>	<b>Del Norte</b>
35	Garberville	913	Humboldt
<b>36</b>	<b>Smith River</b>	<b>866</b>	<b>Del Norte</b>

Native American Population

The *Taa-laa-waa-dvn* historically shared borders with the Yurok People to the south, Karuk and Takelma Peoples to the East, and the Umpqua and Coos Peoples to the north. In the present-day boundaries of the Wild River Coast Region, there are approximately 9 federated tribes. Del Norte County has the highest Native American/Alaska Native percentage of population in the region (9.1%).

**Native American Population Table**

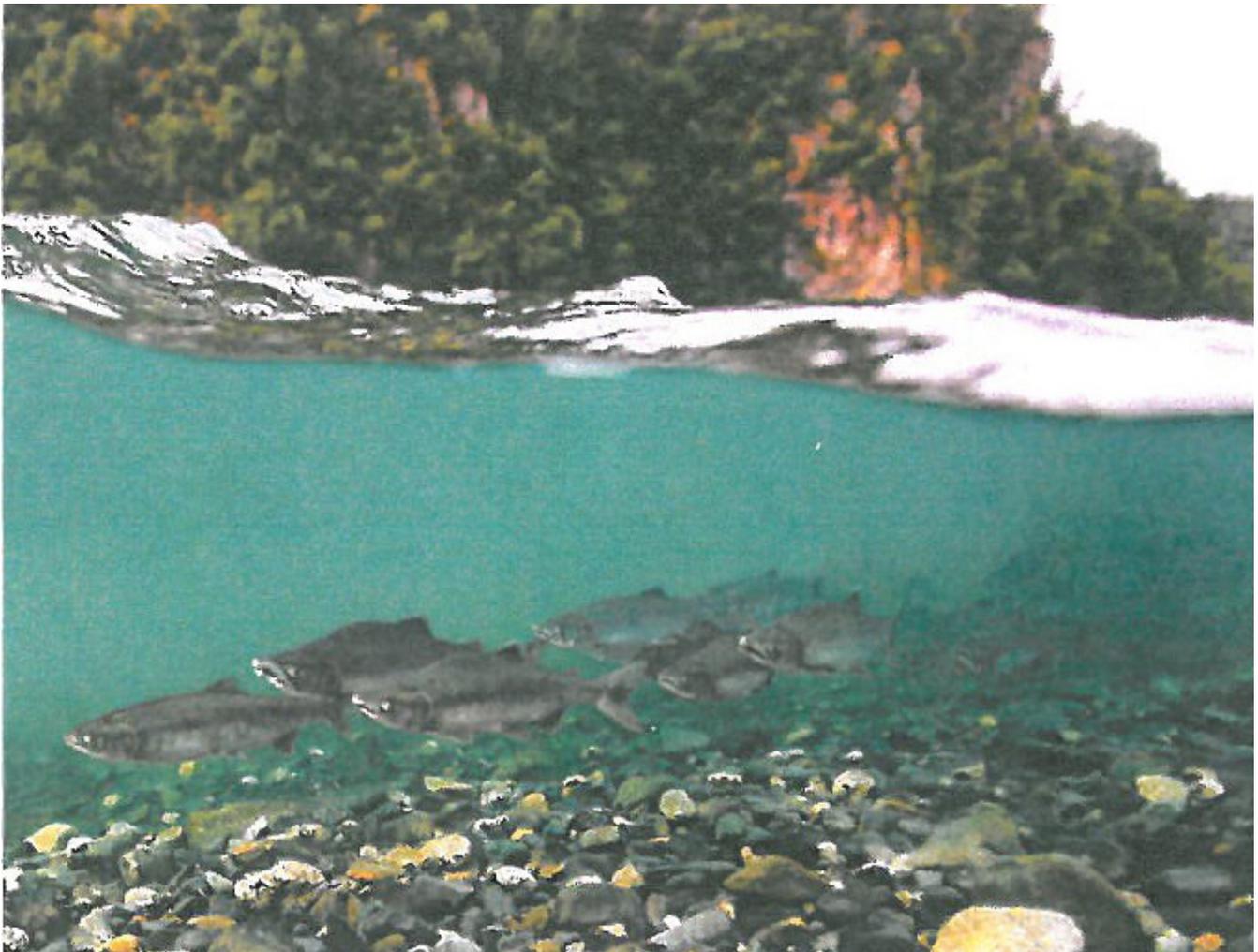
County	% of population	Population
Del Norte	9.1	2,480
Curry	2.4	540
Humboldt	6.2	8,415
Coos	2.9	1,849
Josephine	1.6	1,355
<b>Total</b>		<b>14,639</b>

<sup>8</sup> (Suplita 2017)

## RESEARCH AND ANALYSIS

### Market Recap

The Wild Rivers Coast Region is defined by a low population spread over a large area. A couple of larger population centers exist; however, the region is more so a collection of smaller towns along the main transportation routes. The region is also defined by high poverty levels and a relatively large Native American regional presence. Understanding the rural, relatively impoverished status of our region is essential information for assessing the economic potential of agriculture enterprise options.



Market Assessment - Tourism Focus

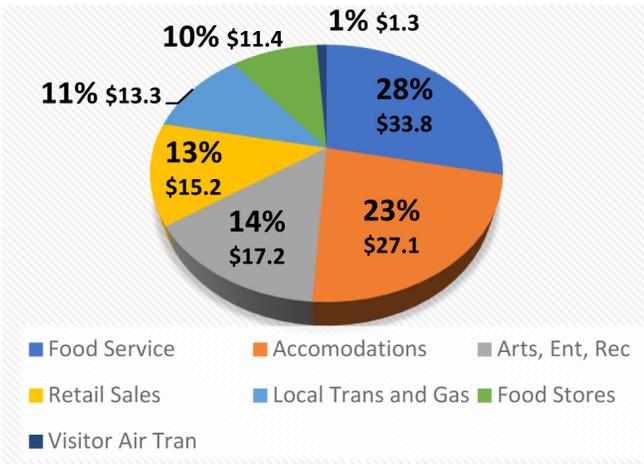
Regional statistics for the Wild Rivers Coast show that tourism has been an area of strong economic growth, based on an increasing number of jobs in this sector. This is counter to many of the other county economic trends which have shown decreasing numbers of jobs in agriculture, fishing, construction, and manufacturing over a 10-year period. A look at the Crescent City retail makeup reveals an industry sector that relies heavily on seasonal travel and tourism, which is reflected in growing tourism trends for the Wild Rivers Coast.



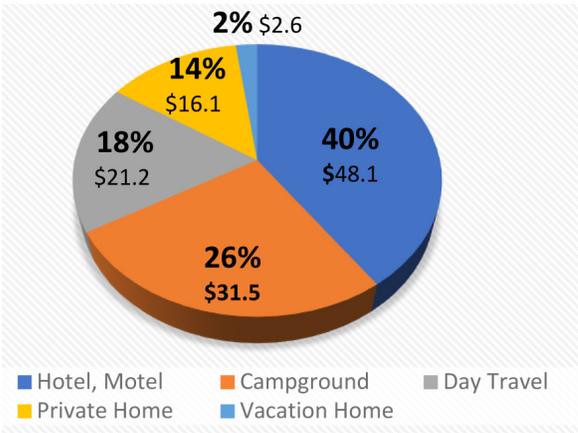
Del Norte County Tourism Review

Growth of the tourism industry in Del Norte County is well documented. In 2016, Dean Runyan Associates calculated that visitors to the area were projected to spend \$119.4 million annually directly into the local economy. This has been a trend for the past 10 years growing at a rate of 2.2% annually. This spending has directly resulted in 1,350 jobs and \$42 million in employee earnings according to the California Travel and Tourism Commission. The retail sector showed the third highest earnings, behind government and health care/ social assistance. With the statistics compiled by Dean Runyan Associates, we can take a closer look at visitor interaction with Del Norte County.<sup>9</sup>

Visitor Spending (in millions) by Commodity Purchased



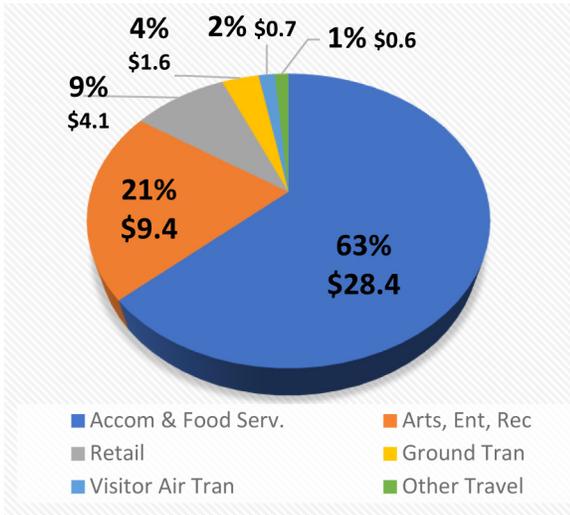
Visitor Spending (in millions) by Type of Traveler Accomodation



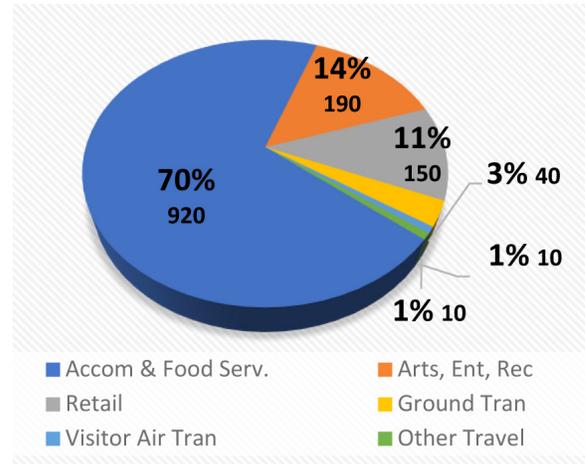
<sup>9</sup> (Dean Runyan Associates 2017)

# RESEARCH AND ANALYSIS

### Industry Earnings (in millions) Generated by Travel Spending



### Industry Employment Generated by Travel Spending



#### Visitor Spending Trends

- Food service represents the largest percentage of commodities purchased while food stores accounts for 10%.
- The campground traveler accounts for over a quarter of spending in the county.

#### Local Industry Trends

- Accommodations and Food Services dominate the earnings and employment opportunities
- Most visitors to the area mobile and able to travel independently through the region

## Interstate 101 Traffic Volumes

Ground travel is the main means of transportation through the Wild Rivers Coast region. Highway 101 serves as the main transportation corridor and Route 199 connects inland to Interstate 5. Traffic patterns are relatively equal in both directions with slightly more travelers coming from the north. There are a number of regional airports situated in each county that serve as ports of entry; however, ground transportation accounts for a larger portion as related to visitor spending.

We know visitors to our region have been increasing, which is reflected in the county statistics and traffic volumes. USDOT CALTRANS and the Department of Food and Agriculture Border Station collects traffic volume numbers at the CA/OR border north of Smith River. Traffic has increased nearly a 0.5 million over a 5 year period, a 120% increase. The below table shows a seasonal pattern to this traffic increase that implies tourism is likely accountable. Especially considering the population for our region has been decreasing, which would necessitate fewer commute-based crossings daily.

### Department of Food and Agriculture Border Station Traffic Count Table <sup>10</sup>

2015	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Total
Auto	26,497	17,588	29,629	46,570	39,280	85,595	115,405	177,496	154,716	138,644	107,181	107,569	1,046,170
Truck	1,468	1,294	1,727	2,115	1,502	2,978	3,519	5,298	4,667	5,265	2,797	2,768	35,398
Other	1,042	679	1,124	1,485	1,574	2,746	3,959	5,014	4,703	3,914	1,999	1,196	29,435
<b>Month Total</b>	<b>29,007</b>	<b>19,561</b>	<b>32,480</b>	<b>50,170</b>	<b>42,356</b>	<b>91,319</b>	<b>122,883</b>	<b>187,808</b>	<b>164,086</b>	<b>147,823</b>	<b>111,977</b>	<b>111,533</b>	<b>1,111,003</b>

2016	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Total
Auto	101,791	100,941	97,339	101,476	117,523	150,950	203,420	180,837	138,283	118,917	51,341	52,275	1,415,093
Truck	2,856	3,355	3,439	4,263	3,763	5,597	5,803	6,868	5,757	5,982	2,053	1,916	51,652
Other	1,782	1,781	1,457	1,978	2,150	2,754	4,749	3,058	2,808	1,919	1,039	849	26,324
<b>Month Total</b>	<b>106,429</b>	<b>106,077</b>	<b>102,235</b>	<b>107,717</b>	<b>123,436</b>	<b>159,301</b>	<b>213,972</b>	<b>190,763</b>	<b>146,848</b>	<b>126,818</b>	<b>54,433</b>	<b>55,040</b>	<b>1,493,069</b>

<sup>10</sup> (Valenton 2017)

## Destination: Redwoods National and State Parks



Del Norte and Humboldt Counties are home to Redwood National and State Parks, formed in 1968. These parks form a patchwork of public lands that draw visitors from around the world to the Wild Rivers Coast.

The Redwood National and State Parks are responsible for a large percentage of the tourism revenue generated in the region. A press release from the organization states tourism to Redwood National and State Parks creates \$34 million in direct spending in our local communities, which has supported 550 jobs in the local economy. That accounts for over 27% of total direct visitor spending and 40% of tourism jobs in Del Norte County.<sup>11</sup>

National Parks across the nation have been recording new all-time record visitations to their lands over the past several years. Redwood National Park had its busiest year since the turn of the century in 2016 bring in a 39% increase in visitation over a 10 year period. When factoring in visitation statistics for the neighboring State Parks, the parks drawn 1.5 million people to our region. These tourists bring over

\$90 million in visitor spending and contribute 900 local jobs to the economy annually.

Numerous tourist destinations encourage visitors to spend more time in the region. Tourists stay in our region for several days, making multiple stops along the way. This is reflected in the visitation numbers below, with the average tourism making four individual tourist stops in our region. This ties in with information presented by the American Indian Alaska Native Tourism Association (AIANTA), an organization dedicated to advancing Indian Country tourism through outreach, promotion and resource assistance.

---

<sup>11</sup> (Denny 2017)

## RESEARCH AND ANALYSIS

### AIANTA Tourism

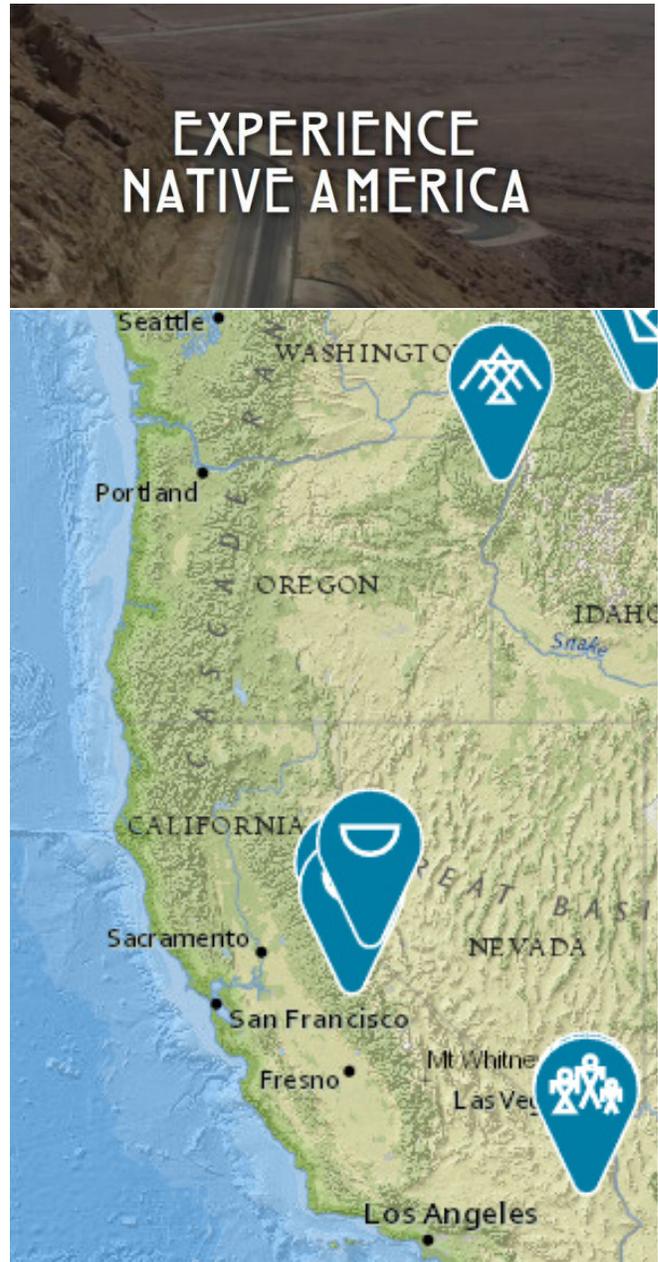
Native American tourism has been growing exponentially in recent years, with annual growth expected to continue at double digit rates. International tourism offers a particularly exciting future as overseas visitors to Indian Country tend to stay longer and spend more money than other travelers, especially when combined with established Parks tourism trends. International visitor spending in Indian Country totaled \$8.6 billion in 2015. The number of visitors travelling from overseas to Native American communities is growing nationally at a rate of 10% annually.

AIANTA's International Travel Statistics reveal that 1.6 million internationals visited Native American Communities in 2014. For 47% of these international tourists, California was their destination. San Francisco served as one of the top ports of entry with 9% of those visitors coming through its airport.

The findings from an AIANTA presentation to US Department of Commerce revealed the following facts about Native American community tourism:

- Over ¾ of people that visit Native American communities also visit national parks
- Visitors to Native American communities on average stay longer than visitors to other destinations. (30 nights vs 18 nights)
- These international tourists are visiting more distinct destinations (3.6 v 2.0)
- Overseas travelers to the US participate most in shopping, sightseeing and fine dining activities.<sup>12</sup>

These statistics show that Native American destinations with quality tourism offerings will continue to attract growing numbers of international visitors. The Tolowa Dee-ni' Nation is advantageously situated to capitalize on its location on the Wild Rivers Coast adjacent to Redwood National and State Parks.



NativeAmerica.Travel Tourism Website



**AIANTA**

American Indian Alaska Native  
Tourism Association

<sup>12</sup> (AIANTA 2017)

## Destination: Oregon Tourism Farm Trail

The Rural Tourism Studio is one example of a group working to build local and regional tourism. This group is the outreach portal for the Oregon Tourism Commission strengthening economic impacts of the state’s \$11.3 billion tourism industry. As a tourism promotion effort, the Oregon Tourism Commission created the Wild Rivers Coast Farm Trail.

The Wild Rivers Coast Farm Trail represents a 27-mile stretch of Highway 101 from Bandon to Port Orford. Ten businesses composed the farm trail in 2016, ranging from vegetable farms and berry producers to Co-op stores and restaurants. Together, these businesses create many agritourism opportunities. With the Farm Trail now established, an Action Team of representatives maintain regional coordination, collaboration, and oversight of the

shared vision. With thoughts to the future, they have been discussing the potential to extend the trail further south to include the city of Brookings. This opens the possibility of extending beyond the state border into the Smith River region.

Lastly, the Rural Tourism Studio identified Historic Places, Cultural Activities/Attractions and Exceptional Culinary Experiences as the top three visitor interest categories. These focuses are all potential opportunities the Dee-ni’ could focus on to bolster the presence of tourism to the town of Smith River.<sup>13</sup>

The Wild Rivers Coast Farm Trail Map

**WILD RIVERS COAST FARM TRAIL STOPS**

<p><b>Bandon</b></p> <p><b>Old Town Marketplace Farmers Market</b> Farmers, artisan and seafood market 250 First St. SW Bandon, OR 97450 (541) 347-3206</p> <p><b>Twin Creek Ranch Blueberries</b> U-pick blueberry farm 87432 Cranberry Creek Lane Bandon, OR 97411 (541) 347-4262</p> <p><b>Valentine Blueberries</b> U-pick blueberry farm and farm stand West of Hwy. 101 on Sydnam Lane Langlois, OR 97450 (541) 348-2363</p>	<p><b>Dragonfly Farm</b> Farm stand and nursery 49295 Hwy. 101 Langlois, OR 97450 (541) 515-8672</p> <p><b>The Spoon</b> Restaurant and specialty foods 48396 U.S. 101 Langlois, OR 97450 (541) 348-1015</p> <p><b>Valley Flora</b> U-pick produce and farm stand Floras Creek Road Langlois, OR 97450 (541) 348-2180</p> <p><b>Jensen Blueberries</b> U-pick blueberry farm 46760 Hwy. 101 Langlois, OR 97450 (541) 348-2473</p>	<p><b>Wild Woods Farm</b> Farm stand 92584 Silver Butte Road Port Orford, OR 97465</p> <p><b>Golden Harvest Herban Farm</b> Della and bakery 620 9th Street Port Orford, OR 97465 (619) 451-1370</p> <p><b>Port Orford Community Co-op/Farmers Market</b> Farmers market and grocery Hwy. 101 and 8th Street Port Orford, OR 97465 (541) 366-2067</p>
--	---	---

13 (Rural Tourism Studio 2017)

## Regional Climate

The *Taa-laa-waa-dvn* is a unique environment where the term “wild” aptly applies to all the lands. The Klamath-Siskiyou Mountain Range surrounds the developed coastline and is recognized by the World Wildlife Fund as one of the 200 most biodiverse places in the world. The Lake Earl Coastal Lagoon salt and freshwater wetland is the West Coast’s largest estuarine lagoon outside Alaska. The climate that creates this impressive native biodiversity also dictates which agriculture crops can be successfully grown in our area. In this section, we will overview the climatic conditions of our region and review existing agricultural operations.<sup>5</sup>

The Wild Rivers Coast region is dominated by the California Mediterranean climate pattern with heavy influences from the Pacific Ocean resulting in two main seasons. The 5-month warm season (June-October) is characterized by generally mild, dryer conditions with marine influenced cloud/fog cover and little precipitation. The wet season (November-May) is characterized by cooler temperatures and wetter winters punctuated by heavy precipitation events. The annual average high temperature is 65 degrees F, and annual low temperature averages 42 degrees F. Ocean-influenced winds impact the Smith River area, most often prevailing from the south or northwest.<sup>14</sup>

### Precipitation

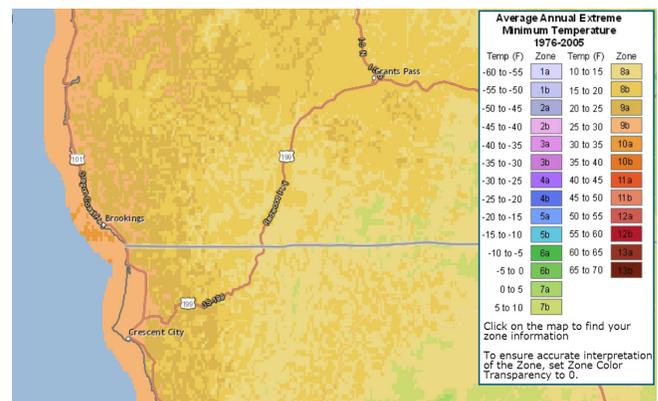
Average annual precipitation is 71.26 inches, with most rainfall occurring during the wet season. The inverse relationship to the main growing season would require irrigation needs for any farming during the warm season, however it is worth noting the period of time where rainfall is minimal is a relatively short timeframe.<sup>15</sup>

### USDA Hardiness Zone

The Plant Hardiness Zone map is a resource compiled by the USDA depicting the average annual minimum winter temperature for an area. This information serves as an important resource to identify what plant species can grow and thrive in an area based on temperature requirements. Smith River is in Zone 9b with an average minimum temperature of 25-30 degrees F. This is the result of the coastal influence from the ocean and its temperate buffering of the adjacent land mass that begins to see a temperature decrease into the coastal range.<sup>16</sup>

### Chill Hours

The USDA zone tells you the coldest temperatures in your area and how long the cold temperatures last, with temperature below 45 F qualifying as chill time. Chill hours are an important factor specifically for perennial fruiting species as the cold temperatures trigger within the plants a dormancy state that is vital in the annual cycle of species to develop fruit. In the Smith River region, there are not enough uninterrupted chill hours, making certain species of fruit plants unsuitable for the area.



Smith River USDA Plant Hardiness Zone Map

5 (Calla 2011)  
 14 (Jones & Jones 2016)  
 15 (Smith River Weather Station 2017)  
 16 (USDA 2017)

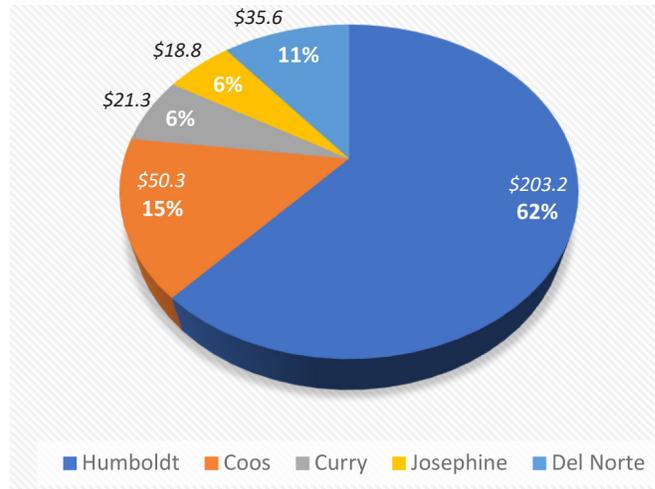
## Wild Rivers Coast Region Agriculture Production

From the early 1900s into the 1950s, the Wild Rivers Coast was known for its logging and fishing. These industries formed the backbone of the economy in the initial post-Contact era. However, the economic viability of these industries began diminishing in the 1960’s with the depleted timber and fish stock. As the timber and fishing industry began to decline, livestock and lily bulb production industries began to grow in Del Norte County.

### Agricultural Production Review

The USDA Census of Agriculture is a complete count of U.S. farms and ranches and the people who operate them. Farms or ranches with \$1,000 or more of products raised and sold annually qualify to participate in the survey. The Census of Agriculture, taken every five years, looks at land use and ownership, operator characteristics, production practices, income and expenditures. The table below contains survey data for the 5 counties that comprise the Wild Rivers Coast Region, providing us a detailed look into the regional production of agricultural goods

Market Value of Products Sold, by County (in millions)



Farms by Value of Sales



### Wild Rivers Coast Region Agricultural Production Table<sup>17</sup>

Data	Del Norte	Humboldt	Curry	Coos	Josephine	Total
<b>Farm Data</b>						
Number of Farms	121	930	197	654	617	<b>2,519</b>
Land in Farms (acres)	23,150*	593,597	63,342	157,496	28,256	<b>865,841</b>
<u>Farms by Size</u>						
1-9 ac	33	250	32	82	192	23%
10-49 ac	39	250	42	192	275	32%
50-179 ac	29	170	43	215	120	23%
180-499 ac	12	120	36	110	20	12%
500-999 ac	4	30	26	25	5	3%
1,000+ ac	4	110	18	30	5	7%

\* From the Del Norte County Crop Report 2015 due to this data not available from the 2012 Census of Agriculture

17 (Census of Agriculture 2012)

# RESEARCH AND ANALYSIS

## Farm Assessment for the Wild Rivers Coast

There are some key points to emphasize from the regional assessment of agricultural production.

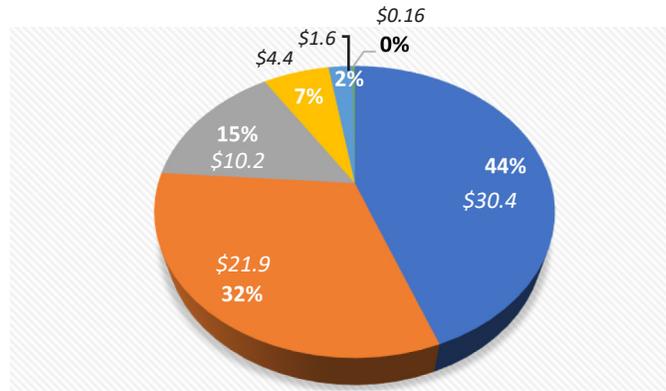
- Humboldt County is responsible for a majority of regional earning at 62%. Del Norte County is the third highest earner.
- Nearly three-quarters of farms in the region are earning less than \$25,000, meaning that there are limited operations in the region that can be considered full time farming operations.
- Majority of regional farms are on a smaller scale for land size and acreage. More than 50% of farms operate on less land that what the Tolowa Dee-ni’ Nation currently owns.

### **Smith River & Del Norte County Review**

The majority of agricultural land in Del Norte County is located in the Smith River area, situated around the river’s estuary and floodplains. The California Food and Agriculture Code requires County Departments of Agriculture to compile annual Crop Reports for each county’s agricultural production annually. These county documents provide a more current data set than the USDA Census of Agriculture, albeit limited to CA counties, along with a more comprehensive breakdown of earning and land use by industry

Agriculture in Del Norte County is dominated by livestock and nurseries. Before 2007, agricultural earnings were increasing at a slow rate, but earnings quickly decreased when the recession hit. There was a 28.3% decline in agricultural earnings in 2012. The following data represents a gross value of crops and commodities. Overall production for 2014 was valued at \$68,724,729. This represents an increase of 34.4%, largely due to increased milk and timber production.<sup>18</sup>

**Del Norte County Earning by Product (in millions)**



- Livestock & Livestock Products - cattle, calves, sheep & lambs, along with dairy products
- Timber & Forest Production - timber harvesting and firewood
- Nursery Products – Easter lily bulbs, cut ferns decoratives, flowers, seedlings and ornamentals and bedding plants.
- Field Crops – hay, irrigated and non-irrigated pasture. These crops are a direct tie to the local livestock products
- Misc. Agriculture - this category covers such things as honey, silage, hogs, goats, eggs, and other products
- Vegetables & Fruits - annual and perennial crops

18 (Riggs 2015)

## Assessment by Industry



We looked at current agricultural industries to gain further knowledge of the scale, distribution and presence of agriculture across the Wild Rivers Coast Region. We have separated the local agriculture industries into two categories: Historic Regional Agriculture and Local Agriculture Industries.

### Historic Regional Agriculture

The below industries have been a significant part of the history to the Wild Rivers Coast region's agricultural production and development since the 1850's. These industries represent major components of the economic scene, from earnings to job creation and land use. While timber is a land resource-based industry that could also be considered in this section, it has been excluded from this study aside from its presence in the agricultural earnings.

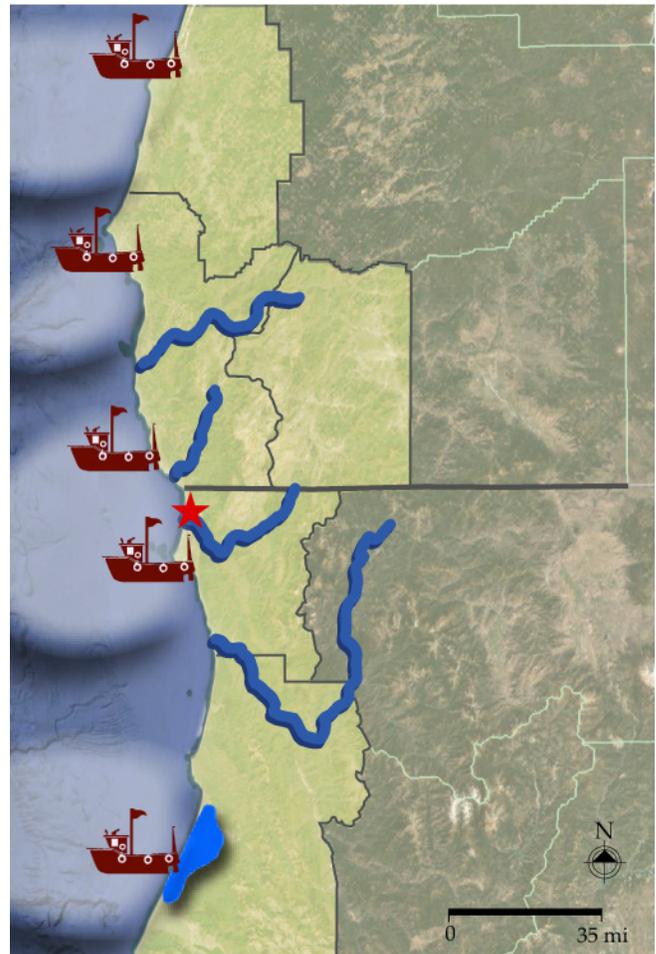
### Commercial Fishing

#### *Ocean Fishing*

Harvesting wild fish has been a difficult venture for local fishermen in recent years. In 2015 the fishing industry's commercial landings value was \$6,500,000; this is a \$16.3 million drop, or 71% decline, compared to ten years ago.<sup>8</sup> A combination of a depleting natural resource, damage to the Crescent City Harbor from a 2011 tsunami, and repeated delays and closures to the Dungeness crab season due to high levels of domoic acid toxicity have contributed to the decline of the industry.

#### *Rivers*

The waterways of Del Norte County offer some of the best sport fishing opportunities on the Wild Rivers Coast, with runs of salmon and steelhead trout still up the Smith River. This has supported a local fishing guide industry during the fall and winter months. The Rowdy Creek Fish Hatchery, located in Smith River and operated by the Tolowa Dee-ni' Nation, stocks the Smith River for sport fishing, however enhanced restrictions on hatchery-raised fish have limited the number of fish that can be released into the river. This influences the steelhead trout fishing industry, since wild caught steelhead must be released.



*Commercial Fishing Map*

<sup>8</sup> (Suplita 2017)

## RESEARCH AND ANALYSIS

### Aquaculture

Aquaculture has been identified by the California Department of Fish and Wildlife (CDFW) as an efficient and environmentally sustainable way of commercial seafood production.<sup>19</sup>

With 90% of US seafood being imported, this sector represents a growing and encouraged industry. Humboldt County has an active aquaculture scene growing oysters and clams which generated over \$7.5 million in 2013. Coos County also has an aquaculture industry, with earnings just over \$4 million. These two Wild Rivers Coast communities are leading the example for the region in the new industry approach.<sup>20</sup>



Easter lily bulb Map

8 (Suplita 2017)

19 (CDFW 2017)

20 (Dolf 2013)

21 (Warga 2012)



### Easter Lily Bulb Production

The Easter lily bulb industry is particularly unique to Smith River. Bulb production was introduced to the U.S. after World War I and expanded during WWII when trade with Japan was severed, opening the door for local growers to profit from the new market. By 1945, about 1,200 growers were cultivating the flower bulbs along the coast from Long Beach, California, to Vancouver, Canada. The ideal climatic and growing conditions of this region eventually resulted in Smith River becoming the center of production. Today, only five Easter lily bulb farms remain, producing up to 14 million bulbs each year.<sup>21</sup>

340 harvested acres in Del Norte County (and a portion of land in Curry County just over the CA/OR border) account for 95% of the worldwide lily bulb production. Lily bulbs also account for 8% of the agricultural earnings and 1.5% of harvested acreage for Del Norte County, representing the single largest commodity outside of livestock production.<sup>8</sup>

## Livestock

Livestock production (represented in this area as beef and dairy) serves as the largest single industry for the region in earnings and use of land. Its presence in Del Norte county is especially significant, with 81% of agricultural earnings and 98.6% of harvested acreage of agricultural lands dedicated to livestock.<sup>8</sup> Grassfed livestock is a special product of this area and has connections to markets beyond the Wild Rivers Coast.

The beef cattle industry involves a number of steps for various operations:<sup>22</sup>

- 1- Cow-Calf Operation – Beef production begins with ranchers who maintain a breeding herd of cows that nurture calves every year.
- 2- Stockers and Backgrounders – after calves are weaned (6-10 months of age), cattle then graze. In grassfed operations, these cattle are raised to their mature market ready weight (typically 1,200-1,400 lbs and 18-22 months of age)
- 3 - Packing Plant – cows either sold at auction by ranchers or through the ranchers themselves are then processed. Any meat intended for retail sale must be slaughtered, processed and packaged at a federally inspected facility
- 4 - Retail sale – product is distributed to the market. Beef is a strongly domestic market, with 90% of all beef raised in the US sold in the US and a market that is trending to a higher quality product.

Livestock farmers are focused mainly on operations 1 and 2 as there are a limited number of packing plants in the region (the region has two certified USDA slaughter and packing facilities located in Humboldt and Josephine Counties)



*Livestock Map*

---

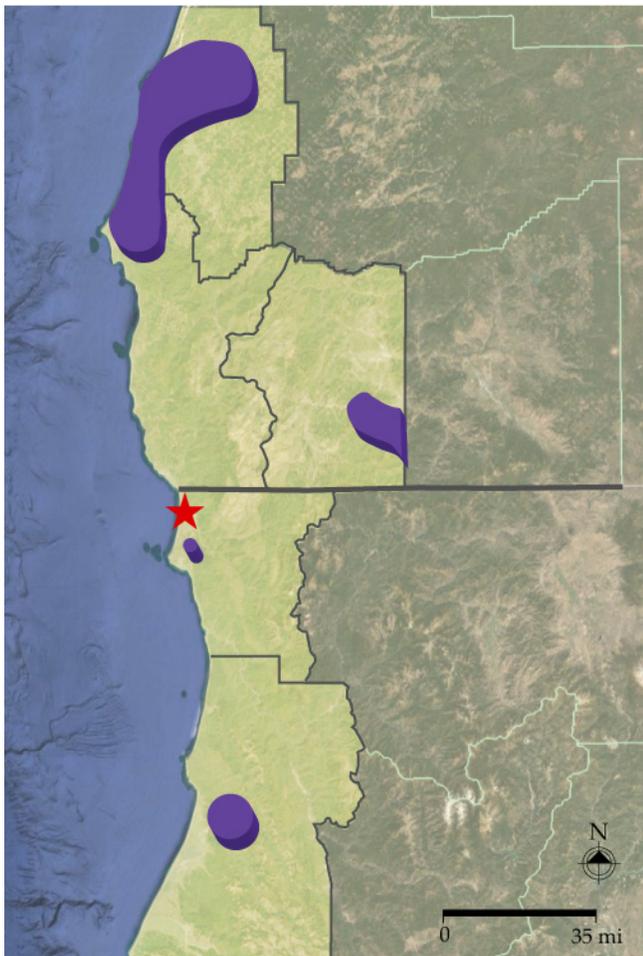
<sup>8</sup> (Suplita 2017)

<sup>22</sup> (NCBA 2017)

# RESEARCH AND ANALYSIS

## Local Market Agriculture Industries

These industries represent the agricultural enterprises present in local communities. These industries are represented at community farmers markets and through direct access to the consumer base, providing food and plants to the region. These industries exist at a different scale in the Wild Rivers Coast Region compared to the historic regional industries, which have created products that can access an expanded market to the West Coast and beyond. The products in this Local Market Agriculture category predominantly stay in our region and serve the local clientele base of the Wild Rivers Coast.



Fruits and Berries Map

## Fruits and Berries

As the *Dee-ni'* are already aware of, perennial berries are well-suited to the local region and climate. Perennial fruits include both shrub and tree-form species. Popular species include: cranberry, blueberry, grapes, apples, pears and plums. This industry is prevalent in Oregon, reflected in the earnings from the USDA Census of Agriculture. In Coos and Curry Counties, for example, 37% of farms produce fruit and berries with over 3,000 acres in production. Their collective earnings of \$15,875,000 is 135 times that of Del Norte County.<sup>17</sup> Oregon is the fourth largest producer of cranberries in the country, with nearly all of these berries coming from the Wild Rivers Coast. The Ocean Spray cooperative has 70 grower-owners in the region along with a receiving facility in Bandon, OR.<sup>23</sup>

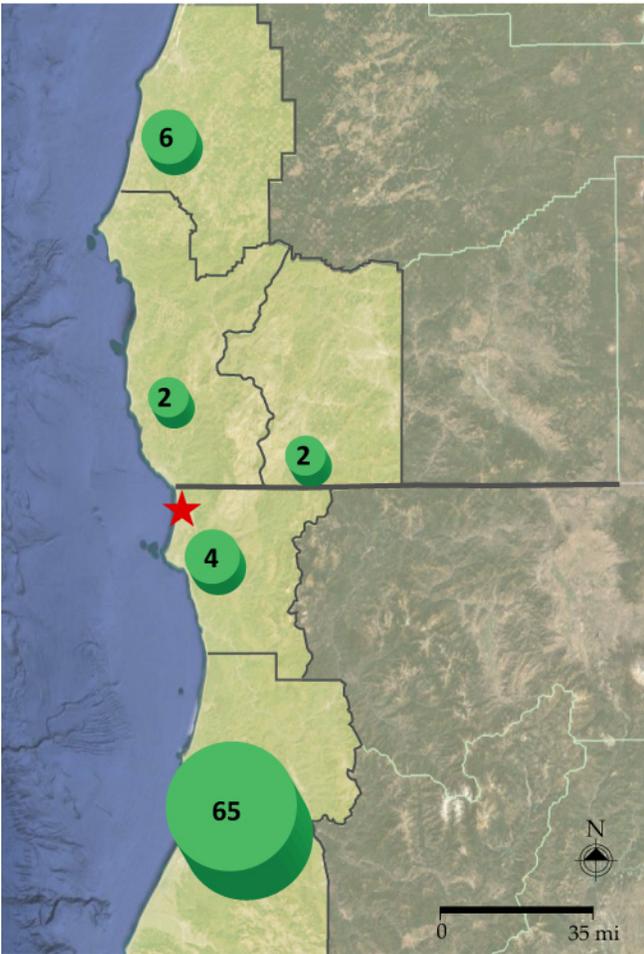
Del Norte County has only a handful of fruit and berry producers, with the lowest amount of earnings in the region. Humboldt County has a slightly larger presence, with 45 farms growing fruit and berries.

<sup>17</sup> (Census of Agriculture 2012)

<sup>23</sup> (Ocean Spray 2017)

**Vegetable Production**

Vegetable farmers include farms focused on diverse, primarily annual vegetable crops with varying species through the season. Vegetable farmers are an underrepresented group in the region. The Food Guide for Humboldt, Del Norte, and Trinity Counties identified four producers in Del Norte County, while Humboldt sustains a much larger group of farms at 65. A majority of local farms produce on a scale to sell at community farmers markets, with some potential for sale to local co-op and retail markets. Humboldt County has been able to support a large volume of farms with local sales being the major source of earnings, as learned from stakeholder discussions.<sup>24</sup>



Vegetable Production Map

24 (Local Food Guide 2017)

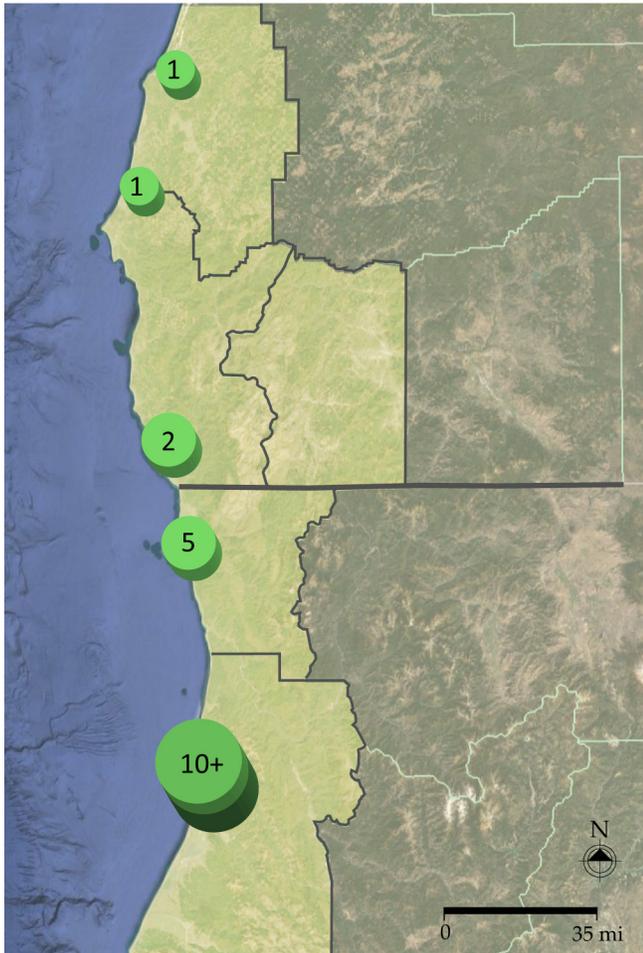
**Community Supported Agriculture (CSA)**

CSA is a way for local producers to access the direct-to-consumer sales market. Clients buy into the CSA at the beginning of a season, knowing they will receive agricultural products over regular intervals throughout the season. This provides the farmer initial revenue before the growing season, and they then can produce a known quantity of product over a planned time frame based on their number of CSA participants. This model offers a complimentary option for sales in addition to farmers market and retail sales.

CSA’s are limited in our region, with Del Norte county having no current CSA operations. Humboldt County has been able to sustain 7 operations while Curry and Coos counties likewise have limited options.



Community Supported Agriculture Map



### Nurseries

Nurseries represent an industry that is not directly food related, however does provide an agricultural product. They are represented in the Del Norte Crop Report under ornamentals and bedding plants. They generally operate as retail centers with annual and perennial plant stock, either grown on site or purchased for resale in a particular market.

This is an industry where Del Norte County is well represented, however this is significantly influenced by the designation of Lily bulbs as a nursery crop. Dahlstrom and Watt Bulb Farm located in Smith River is a good example of this industry, producing more than ¼ of the Easter lily bulbs grown in the U.S. and Canada and producing dormant hydrangea crops for other growers in the U.S and abroad.

### Agriculture Production Summary

In review, the Wild Rivers Coast has a well-represented spread of agricultural industries. These industries fall into two scales of operation:

- 1) Expanded regional and national distribution
- 2) Local market. Of the agricultural producers in the region, 74% make less than \$24,999 annually from their products.

The Smith River area has a very limited presence of the local market agriculture that has impacted other local markets' access to local and healthy food products for the community.

## Agriculture Producer Market Options

The agriculture market provides products to a customer base in a variety of different distribution models. From a local market right from where the product is grown to national distribution, products from the Wild Rivers Coast are distributed locally and internationally. The need for reliable access to food is ubiquitous for all people across all communities. Food is a unique commodity, in that it can be accessed via everything from natural foraging to ordering in restaurants, and everything in between. The ways in which agricultural producers enter the market and distribute their products is essential to understand when starting a new enterprise.

### Product Sales

There are a number of ways that agricultural products can be accessed on the market:

#### Direct Sales to Consumers

- Farmers' Markets
- Community Supported Agriculture
- Farm Stands

#### Local/ Regional Sales Outlets

- Food co-operatives
- Retail: Grocery Stores and Natural Food Stores
- Supermarkets
- Restaurants
- Institutional Food Service
- Farm to School
- Website and Mail-Order Sales

Size of the customer base is important when determining different market access points. As we have noted for our region, we have a rural population base with a limited number of larger population areas. Our rural status and smaller population gives our region a number of constraints when considering different food market options: capacity constraints for small



farms and lack of distribution systems for moving local food into mainstream markets; limited research, education, and training for marketing local food; and uncertainties related to regulations that may affect local food production, such as food safety requirements. Consumers who value high-quality foods produced with low environmental impact are willing to pay more for locally produced food. Federal, State, and local government programs increasingly support local food systems.

### Direct Sales to Consumers

Direct-to-consumer marketing includes farmers markets, farm stands, CSA's, and online sales. Agricultural producers are responsible for marketing their product. In addition to food production, they must also focus on sales, marketing, and outreach to consumers. Direct-to-consumer sales are increasing across the nation growing by 60% over the past 8 years. They accounted for 0.7% of total agriculture sales in 2012.<sup>17</sup>

---

<sup>17</sup> (Census of Agriculture 2012)

# RESEARCH AND ANALYSIS

## Farmers Market

The number of farmer's markets has reached 8,669 nationwide as of 2016. Over the past 10 years, the number has nearly doubled, according to USDA's Agricultural Marketing Service. According to the USDA Agricultural Marketing Service's 2006 National Farmers' Market Survey, the most popular product category sold at farmers' markets was fresh fruits and vegetables.

Farmers markets are present across the Wild Rivers Coast Region in each county. Crescent City and Brookings markets are the closest to Smith River. The Brookings market operates year-round while the two Crescent City markets are open June-October. Humboldt County is able to support 10 markets with its larger collection of local farmers and artisans.

## Community Supported Agriculture (CSA's)

In 1986, there were 2 CSA operations in the United States. Today, Local Harvest lists the current number of registered CSA's in their database at over 4,000. CSA's presence has already been noted in this study.

## Farm Stands

One of the most direct ways for producers to sell their product is operating a farm stand. Farm stands are located on the farm itself, reducing transportation costs and providing more opportunity for direct contact with consumers. Some possible constraints of farm stands could be remote farm location and less advertising potential.

## Retail and Institutional Markets

Accessing these sales outlets starts to introduce additional players in the local food system including distributors and retail outlets, though some of the more local-based retail outlets still deal on a farmer-to-store relationship.



## Local/Regional Sales Outlets

### Food Cooperatives

Food cooperatives, often simply called “co-ops,” are voluntary organizations owned and controlled by members to provide low cost, healthy food. Primarily they serve members of the co-op, though some also sell to the public. Individuals who belong to the co-op have a say in decision making over issues surrounding the organization. Most food from co-ops is organic, though some is “natural”—produced with minimal processing with little or no additives or preservatives.

### Grocery Stores and Natural Food Stores

Retail store buyers demand consistent quality of product, a year-round source, and prices that are competitive with other sources. Producers deciding to target retail food stores also need to consider the quantity of product and ancillary costs such as pre-packaging and delivery. These additional costs may result in market prices too high for most consumers. With a greater volume of product, producers might be able to keep their prices down; however, this is not an option for many small farmers.

### Restaurants

Restaurants can provide a local channel for food producers. The Wild Rivers Coast has a range of restaurant types that prioritize fresh and local food at reasonable prices. Because of the relatively smaller volume of product purchased, restaurants could be considered a supplemental market for producers. Producers who effectively sell to restaurants usually develop a route and deliver directly to each establishment once or twice a week.

### Institutional Food Service

Institutions such as hospitals, schools, and prisons, offer more options and volume than restaurants can. Many institutions have long-term contracts with food suppliers. These contracts can offer consistent pricing, fewer people to deal with, regular standing orders, and good volume.

One downside to these venues is that they usually have more bureaucracy and thus are more difficult to initially access (an exception being the Farm to School program noted below). Institutions also require consistent supply and quality; something that might be an issue for small producers. Many California institutions use single-source procurements to supply all institutional needs.

### Farm to School

Farm to school programs represent an important component of the institutional market for locally grown produce. These are collaborative programs that connect schools to local farmers.

The USDA conducted a Farm to School Program Census in 2015. The results showed that 42% of school districts surveyed participate in farm to school activities. This equates to more than 5,200 school districts working with more than 42,000 schools; impacting more than 23.6 million children. Participation in the program includes such activities as serving local foods in school meals, holding demonstrations using

local foods, and conducting field trips to nearby farms and orchards. School districts spent almost \$790 million on local foods during the 2013-2014 school year. On average, 11% of their total school food budget was spent on local foods during the 2013-2014 year. The most popular items were, in order: fruits/vegetables, milk, baked goods, and other dairy items

### Website and Mail-Order Sales

Internet and catalog outlets may represent a useful supplement to other outlets. One of the barriers to this kind of remote marketing is that packaging and shipping costs can as much as double the end price to the consumer. Secondly, many consumers are disinclined to purchase perishable foods via these methods.

Another use of the internet can be a business-to-business approach by tailoring a website, or at least a portion of it, to product buyers and restaurants. As well as taking online orders, a website can act as a business card and bulletin board with product updates, informational materials, and price-lists available for download.

## Workforce Development Opportunities

The workforce component of the food system is the human power behind generating a product. Without an educated and engaged labor force, quality and quantity products cannot be generated. This sector is dependent on: an available labor source willing and able to perform the duties of the job, a knowledge (either experienced or educated) in the work type, and support to progress and promote education and access for new and practicing workers in the profession to advance the workforce capability.

### Local Labor Force Assessment

Using the unemployment rate as an indicator, the Wild Rivers Coast Region is above the state averages for California and Oregon (with the exception of Humboldt County). The unemployment rate has recently been shrinking due to the the impacts of the 2008 recession, however the region has not caught up to the rest of the country, which has a rate of 4.1% as of October 2017.<sup>25</sup>

### Wild Rivers Coast Region Labor Force & Unemployment Table

Labor Force Assessment	Del Norte	Curry	Humboldt	Coos	Josephine
Labor Force	9,600	8,870	62,970	27,332	35,898
No. of Unemployed	540	550	2,140	1,448	1,795
Unemployment Rate	5.6	6.2	3.4	5.3	5.0

Farming is a very present and visible industry in Smith River. In 2015 Del Norte County supported a total of 305 farm employment jobs, representing 2.8% of all jobs by industry with most of those employment opportunities coming from small establishments (1-4 employees).<sup>8</sup>

Farming in our region has been identified as one of the top 10 fastest growing occupations, and the occupation with the most job openings. This reinforces the farming focus and potential of our region as well as the expanding employment potential for the industry.<sup>26</sup>

For the Wild Rivers Coast, there are 2,519 farms. In Del Norte County, there were only 22 farming establishments identified in the above study, however the census identified 121 agricultural earning entities. Of these 121 farms, 60% earned less than \$10,000 in sales. This indicates that these revenues have been serving as supplementary incomes, not supporting a living wage. Also worth noting is the average age of principal operators in our region. The age range for operators on the Wild Rivers Coast is between 56.0-62.5 years old, indicating an aging group of the most experienced farming and agriculture workers.

This combination of growing opportunities in the farming industry and an ageing workforce alludes to the importance of workforce development in this industry.<sup>17</sup>

<sup>8</sup> (Suplita 2017)

<sup>17</sup> (Census of Agriculture 2012)

<sup>25</sup> (FRBSL 2017)

<sup>26</sup> (Irwin 2011)

### Farming Employment in Del Norte County

Between 2006 and 2014, agriculture jobs decreased by 8.1% in Del Norte County. By 2015, there were 305 employees of county farms representing 2.8% of the labor pool. Despite the decline this is still more than double the percentage for the state, likely as a result of the rural nature of the county.<sup>17</sup>

The economic effects of the agricultural sector are widely-felt throughout Del Norte County. Shocks to agricultural markets, such as the steep rise in international competition in the fresh-cut flowers market and subsequent decline in profitability for domestic growers, are likely to affect the broader economy of the County. These effects will be especially pronounced in ag-dominant Del Norte communities such as Smith River.

### Workforce Development

Agriculture is a business like any other and is dependent on the same factors. It can be considered a low skill/high labor profession; however, it is one that is vital to the health of a region particularly with sustainable land practices. There are two main avenues to develop knowledge to either support or manage an agricultural entity: education or experience. An exciting trend of our time is a merging of the two. Within the TDN infrastructure there are programs to support both educational and experiential learning.

### Opportunity through Existing Tribal Networks

The Tolowa Dee-ni' Nation has a support network for its members seeking employment. These networks assist in connecting tribal members to the job market, providing support and protection of workers' rights.

### Tribal Employment Rights Office (TERO)

TERO is a representative for the tribal community and provides oversight of employment opportunities and contracts on tribal land, contract negotiations with local businesses, and representation of workers' rights for tribal members. TERO achieves its goal of securing and sustaining Tribal Citizen Employment with job training and job placement programs. TERO is also tasked with assisting businesses to achieve compliance with hiring Native American qualified workers. TERO establishes and maintains job training or apprenticeship programs for the purpose of assisting Indians to become qualified in the skill areas required for certain job classifications. This helps them achieve their goal of increasing the pool of Indians qualified to engage in the various employment positions available on or near the Tolowa Dee-ni' Nation.

The Tolowa Dee-ni' Nation believes that it is crucial to create employment and training opportunities for its own members and for other Native Americans, and to attempt to eliminate employment discrimination against Native American people. TERO helps support the hiring of Indians who are qualified, and supports the training of Indians to meet qualification standards for available employment opportunities.<sup>27</sup>

---

<sup>17</sup> (Census of Agriculture 2012)

<sup>27</sup> (TERO 2017)

## RESEARCH AND ANALYSIS

### Temporary Assistance for Needy Families (TANF)

TANF is a Tribal Family Assistance Program recently awarded to the Tribe via the Community and Family Services Department. It includes support services such as childcare assistance, job preparation, and work assistance for eligible tribal families. The goal of TANF is to assist applicants' work towards self-sufficiency by providing monthly assistance to needy families so that children can be cared for in their own homes, increasing the employability of needy families through job preparation, skill building and increasing employment opportunities, and encouraging the formation and maintenance of two-parent families.

TANF serves as a valuable resource to help Tribal Members develop out of unemployment, underemployment (working for very low wages), and low or very low income. TANF offers support to gain education, workforce training, and job experience. The list of approved activities through TANF includes such items as:

- subsidized tribal employment
- on the job training
- education and job skills training directly related to employment
- post secondary or vocational education training
- small business training, business start up and operational activities
- culturally relevant work activities, including those based on a specific Tribal culture

As indicated in the 2017 Del Norte County Economic and Demographic profile, Del Norte County rates of TANF usage was roughly double the state average indicating a significant need for these services to support local residents and workers. Through the work and services of TERO and TANF, the Tolowa Dee-ni' Nation is expanding its support and protection of its family members

### **Workforce Development Summary**

The potential for agricultural workforce development in Del Norte County is high, but very dependent on the myriad ways agricultural production in the county can change from year to year. As agricultural growth in our region continues and the current workforce decreases, demand for skilled agricultural workers will grow. The Tolowa Dee-ni' Nation has multiple workforce development programs that can help Tribal members gain the skills and experience necessary to fill these roles, and ultimately support agricultural production and skilled employment for Tribal members in our community.



## Tribal Land Resources

Much of the land in the Wild Rivers Coast region is publicly-owned mountainous wilderness and rivers. This leaves most of the inhabited portions and private land of the region along the coastal plain. For example, 75% of the land in Del Norte County is publicly held. Pre-Contact, most of this region was the *Taa-laa-waa-dvn* under the stewardship of the Dee-ni'. Over the centuries, the Tolowa Dee-ni' Nation has been re-establishing its presence in its native land. This has included establishing a functional government, providing services to its members, and acquiring land, primarily in the Smith River Area.

### Tolowa Dee-ni' Agricultural Lands

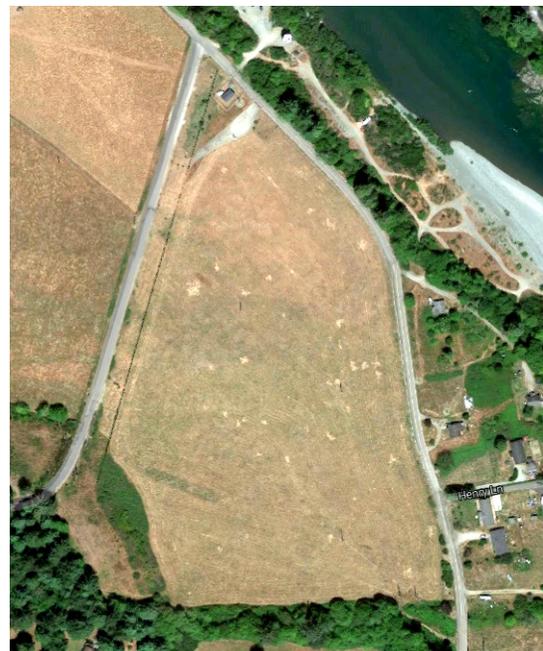
One of the key aspects for this project has been the agricultural land already owned by the Tribe. Land is one of the major roadblocks for beginning farmers. The Tribe holds two significant agricultural parcels totaling just over 100 acres. These parcels have historically been used for conventional farming. Tribal Council approved these lands to be considered as potential agricultural operations for this project.

### Agricultural Land Locations

*Sri'-Srwlh* (also known as the Gilbert Creek Property) is the northernmost owned parcel by the Tribe and one of the largest.



The South Bank Property is the southernmost parcel situated in the floodplain of the Smith River in close proximity to the *Nii~ -lii~ -chvn-dvn* historic village.



# RESEARCH AND ANALYSIS

## Sri' Srvvlh Property Analysis

After 1945, the land was dedicated to lily bulb cultivation by the Itzen Family. The Itzen Bulb Farm, Inc. operated the land and developed it into what can be seen today. The farm was finally sold to the Tolowa Dee-ni' Nation in 2007, thereby ending bulb farming on the parcel. Since then, the land played an important role in the implementation of Smith River's Water Treatment Facility with a 10-acre leach field located on the south-eastern portion of the parcel. The land houses the Maintenance and Housing Departments for the Tribe, located in the original barns. Additionally, grass hay is harvested from the fields annually. The parcel received organic certification from 2012-2014 during which time the County Department of Agriculture certified that pesticides had not been used on the parcel since the tribe took ownership

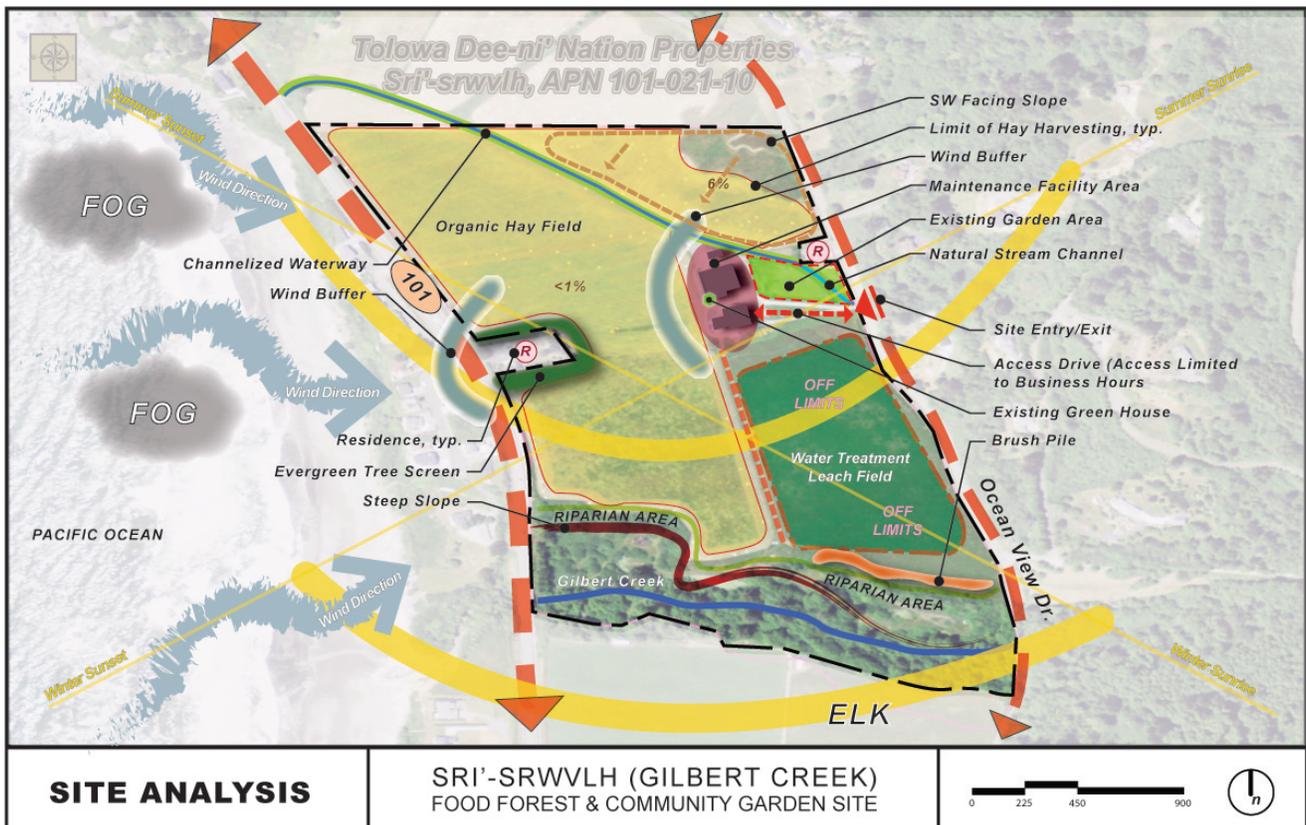
As part of the *Srtaa~ Shvm (hii) Mvlh Ghee-saa-ghit-na* Project, a site analysis of the property was conducted.

### Opportunities

- + High visibility to Hwy 101 corridor and travels along the route, which is the highest traffic roadway in the region
- + Water rights to Gilbert Creek
- + Large, contiguous farmland parcel
- + Organic registration in the past

### Constraints

- Close proximity to Pacific Ocean and marine influences on the parcel
- High wind influence with limited wind barriers present on the parcel
- Situated in the Coastal Zone receiving additional oversight by the County
- A number of TDN operations currently occurring on the parcel



**South Bank Property Analysis**

The Historic Tolowa Village of *Nii~lii~chvn-dvn* is located within a quarter mile of this property. The village was a very important tribal site and fishing area along the Smith River. Since the post-Contact era, the land has been extensively cultivated for agricultural use. The parcel was acquired by the Tribe in 2006.

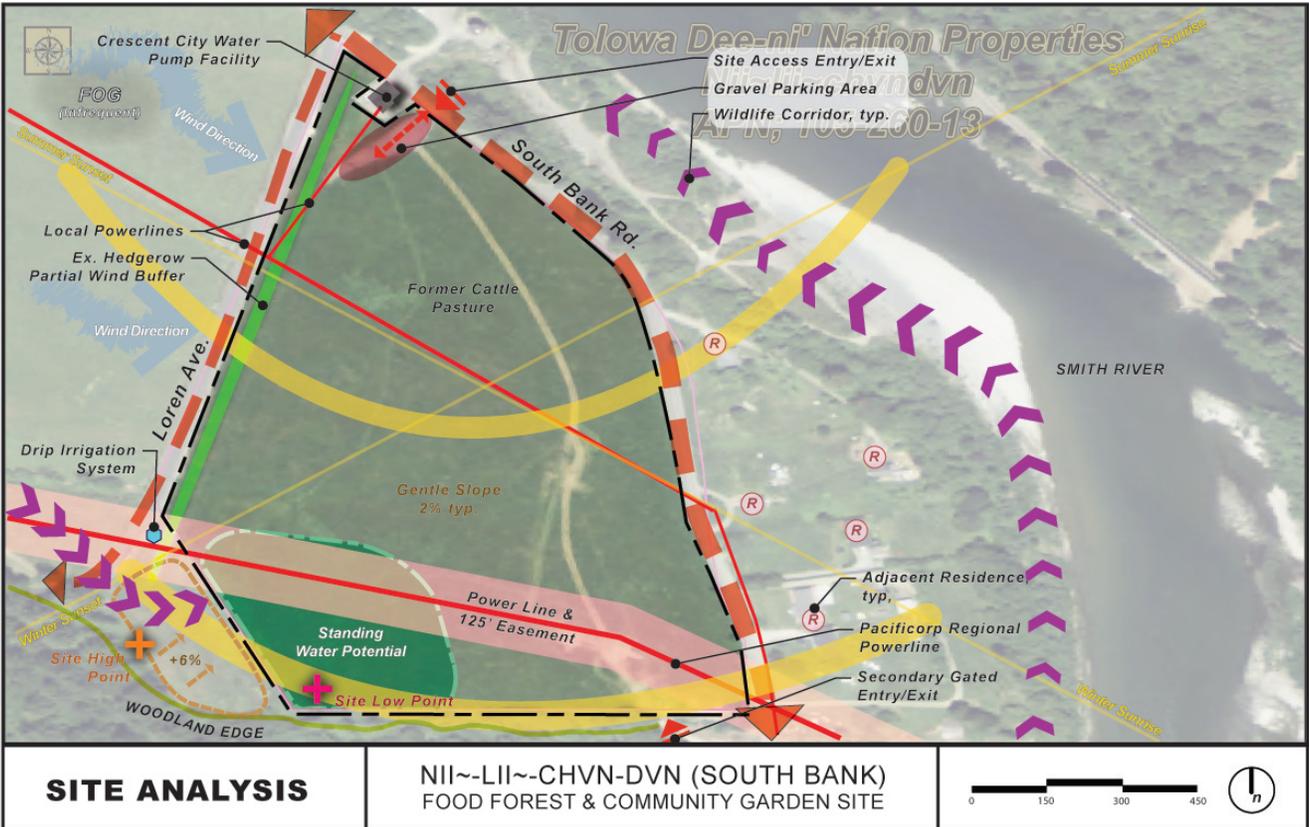
As part of the *Srtaa~Shvm (hii) Mvlh Ghee-saa-ghit-na'* Project, a site analysis of the property was conducted.

Opportunities

- + Excellent agriculture land
- + Best farmland TDN owns
- + Less marine influence when compared to other parcel

**Constraints**

- No existing water source
- Located off main 101 corridor, in a more remote and less visible location
- Long term plans for parcel have been mentioned for the parcel beyond agricultural use
- Situated away from TDN tribal lands and core presence of the Tribe



## RESEARCH AND ANALYSIS

### Recommendations

#### Sri'-srwvlh Property

The *Sri'-srwvlh* property represents a welcoming introduction to the heart of the Tolowa Dee-ni' Nation. It is the visual gateway to the coastal lands for travelers coming from the north, offering breathtaking panoramic views of the Tolowa coast. This site has the potential to create a wonderful first experience for travelers coming to the Tolowa Dee-ni' Nation. A tribally-operated agricultural enterprise will encourage people to stop and admire the area, and appreciate all the bounty that it offers. Tourists will be reminded that they are in a special stretch of coast and will be encouraged to explore more of the tribal lands.

#### South Bank Property

This property is suited for agriculture production and should either deliver a lease payment to the Tribe from a local producer, or support the agriculture enterprise interests of the Tribe with production of various products to be sold in a retail setting.

### Recommendations

These parcels are both exceptional farmland and have the potential to support emerging agricultural enterprises for the Tolowa Dee-ni' Nation. It is strongly recommended that the Tribe consider these spaces for agricultural production, as well as a retail outlet for locally produced food. The prime farmland, access to Highway 101, and historical significance of these sites presents a unique opportunity for a successful agricultural enterprise.



## Research and Analysis Section Review

Understanding the background and influences on the Smith River region is an important objective for this feasibility study. Documenting the food and farming economic development of the region and the historic, economic, agricultural and demographic data has allowed us to form assumptions and limitations for the following stages of Outreach and Engagement, and Enterprise Identification. And through all of this, the role and presence of the Tolowa Dee-ni Nation to address food security and food sovereignty for the region.

### Summary of Findings: The Case for an expanded Tolowa Dee-ni' Presence in the Wild Rivers Coast Food System

Analyzing the components of the Local Food System offered insights into identifying an appropriate course of action for the Tolowa Dee-ni' Nation:

**Market** – The Wild Rivers Coast market is constituted by two key forces, the local population and tourism/outside visitors. The region has a low population spread over a large area with a number of larger population centers, but consisting mostly of smaller towns distributed along the main transportation routes. The region has experienced a consistent economic decline reflected in the above average poverty rate and lower per capita income and median household income below the California state average. The Tolowa Dee-ni' Nation is ideally suited and situated to capitalize on tourism to the area.

**Producers** The Wild Rivers Coast is home to a diverse array of agricultural professionals. The major population centers can support a majority of these businesses while the larger land areas are dominated by

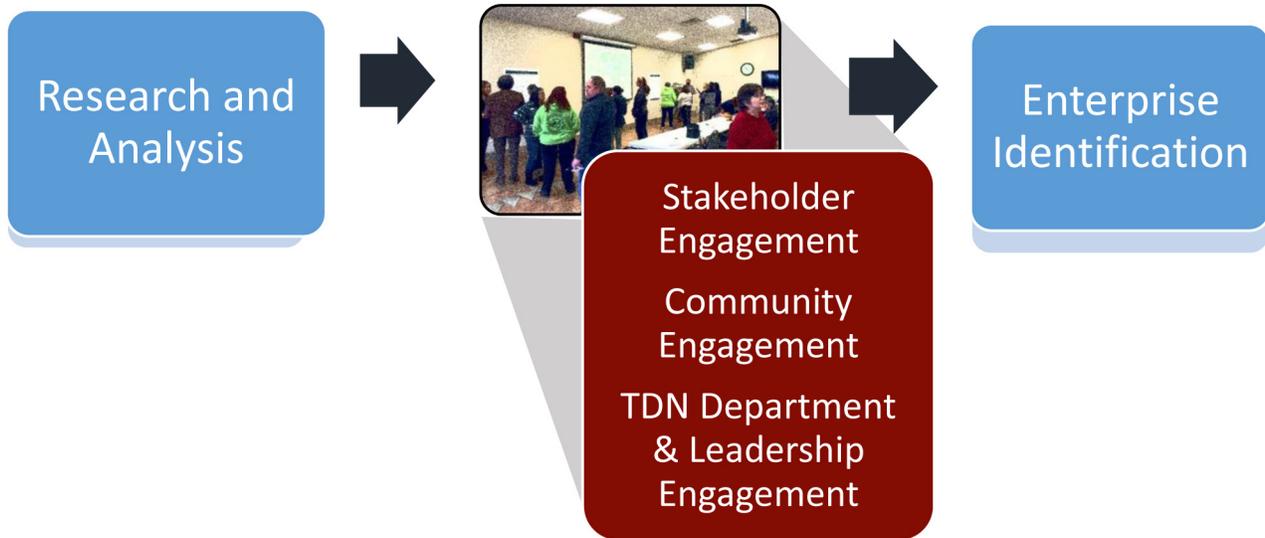
regional and national scaled industries of livestock and lily bulb cultivation, which for Del Norte county account for the vast majority of land use and earnings. The Smith River area specifically reflects this discrepancy of agricultural scale where select industries (livestock and lily bulbs) are the majority, if not only, practices on the land. The lack of food production and agricultural offerings from this area presently are a limitation for residents to access nutritious foods, but represents a significant opportunity with the available agricultural lands to enter the immediate local market.

**Workforce** – The Wild Rivers Coast has a higher degree of unemployment and while there are a number of factors that contribute to this, the increased opportunity for jobs in the region would be a benefit. Particularly when working with Tolowa Dee-ni' employment assistance programs, the potential to expand tribal employment opportunities for its members is a quality of life benefit to the region coupled with supported workforce training and development networks.

**Tribal Land Resources** – This region is suited for near-year round production with a temperate climate and weather patterns. The Tolowa Dee-ni' Nation has a sizeable holding in agricultural lands, which should be considered a valuable asset to be capitalized on.



## Outreach and Engagement Introduction



The findings of the Research and Analysis Section identified the Wild Rivers Coast Local Food System. The result of this data, highlighted in previous section, informed the next step of the project process: Outreach and Engagement. We were able to identify focused opportunities to engage with specific groups in the region to further develop our knowledge and assessment.

*Stakeholder Engagement* – identified vested interest groups in the region who could share valuable insights into their operations, expectations, limitations and support through collaborative discussions. Stakeholders were composed of private industry and public entity representatives. This included one-on-one meetings, focus groups, site visits and tours of existing operations.

*Community Engagement* – focused discussions and engagement with local community members helped to gain a regional perspective on the approach to the local food market, interest in supporting new ventures and purchasing habits. This included a broad outreach to the Tolowa Dee-ni’ community to understand the connection of the people to their land and food source.

*TDN Department & Leadership Engagement* – Coordination with TDN Departments enhanced our outreach in connecting and serving the tribal members, and *Taa-laa-waa-dvn*. Working with the departments, we investigated how this study can best support an expansion of tribal food culture and a means by which this knowledge can be transferred through generations.

In the development of this project, continual review by the Tolowa Dee-ni’ Tribal Council maintained the trajectory of this study to align with a vision towards implementation of a socially, environmentally, and economically impactful result that could be adopted as a strategic vision for the Tribe moving forward.

# OUTREACH AND ENGAGEMENT

## Stakeholder Engagement

Stakeholders are considered a person, group, or organization that has direct or indirect stake in an organization because it can affect or be affected by the organization's actions, objectives, and policies. Key stakeholders in the agriculture and food system include existing and potential future farmers, food entrepreneurs, land managers within the Tolowa Dee-ni' Nation & surrounding area, customers, employees, government, shareholders, suppliers, and the community supporters. Different stakeholders are entitled to different considerations.

To gain insight into the local market, outreach to local stakeholders was a vital effort of this study. With help from CFC DNATL and their existing relationships with the community, we were successful in covering a sizeable section of the Wild Rivers Coast Local Food System. The following stakeholder groups were engaged in the process:

**Local Agricultural Producers** – Professionals utilizing local resources (land, water, natural products) to support their enterprise. Stakeholders were approached for each of the agricultural industries for our region to understand and interpret the opportunities and constraints available to the Tolowa Dee-ni' Nation.

**Retail Outlets** – Points of sale for consumers to access food products. Local producers are likewise involved in this stage with their own farm stands and direct to consumer sales in addition to local markets, co-ops, grocery and convenient stores. This is the stage at which most consumers engage with their food.

**Institutions** – local entities utilizing larger scale food consumption through their own programs or services, which for our region constitutes school districts and meal service programs. Institutions rely on food distribution services like Food Services of America (FSA) for the majority of their needs (as do most of the retail outlets).

**Restaurant** – Food service focused entities creating refined food products for an eating experience for the customer. Restaurants in this region have a similar reliance on the prime tourism season to attract customers with distinct and attractive qualities to serve in this competitive market.

**Civic Entities** – city, county and Native American governments along with extension services and public entities. Extension services and public entities offer a wealth of data and information for the region and agricultural production that is being done here. Local governments and their departments provide helpful insight into the region's operations and trends along with overarching programs like tourism that influence the local citizens and businesses.



Stakeholders were engaged over the course of this project to discuss detailed and specific influences on our local market and how they, as professionals, have reacted over time. The findings from each group were instrumental in advancing the course of this study and identifying the feasibility of tribal agriculture enterprise. Key findings are highlighted below from each of the stakeholder groups.



Wild Rivers Coast Region Stakeholder List



## Findings from Local Producer Discussions

### Historic Regional Agriculture Producers

The historic presence of lily bulbs, seafood, and livestock still rings true to the overall image for our region and Smith River in particular. The lily bulb industry for the region has consolidated now to just a handful of growers. These growers have been actively pursuing other opportunities for their lands reacting to the decline in the lily bulb market with some working towards increased livestock production or specialty crops like quinoa. Rowdy Creek Fish Hatchery is the only hatchery on the Smith River and has likewise been seeing a decrease in its allotted stocked fish numbers by the state of California resulting in fewer salmon and steelhead trout available to recreational and commercial fishers. Livestock has been the reliant industry for this region.

- The historic natural resources of this region that agricultural industries have been built (timber, fish, etc.) are in decline and access to these markets face major hurdles today and in the future
- There is a growing market for specialty beef products (ie. organic, grassfed, etc.), which are product focuses for beef in our region by the local producers.
- A majority of agricultural land is dedicated to livestock in the region for dairy and beef operations to comply with the grass-fed label (compared to conventional beef operations that finish cattle on harvested grain typically)
- Due to the lack of a slaughter and processing facility, local operators are less inclined to finish their own cattle and opt to sell the animals at auction to larger entities for finishing. Because of this factor, our region, and Smith River in particular, are not capitalizing on the full livestock market and potential earnings.

### Livestock Highlight

Outreach to local stakeholders revealed that there is a significant level of production of beef cattle along with the dairy operations. A Meat Processing Feasibility Study for Del Norte County was conducted in 2011 to determine the viability of a meat processing center in the county, which highlighted the significant startup costs for a range of facility types. Stakeholders who have beef cattle operations were very interested in the opportunity for a local slaughter and processing facility citing existing hurdles of transporting live cattle to slaughter centers outside the county and the resulting logistics and pricing impacts.

### Determining the yield of TDN lands and grass-fed beef

Determining the maximum number of animals that can graze on pasture can be calculated. Good grazing management is based on total acreage, length of grazing season (grass growth), pasture yield, and daily livestock forage needs of your livestock. Blake Alexandre of Alexandre Eco-dairy was kind enough to provide a preliminary assessment for the *Sri'-Srwlh* Property to determine how many head of cattle it could theoretically support. A well managed 60 acres of the property could generate 420,000 pounds of feed/grass per year (based on yield numbers Alexandres has calculated over their decades of experience). With each head of cattle requiring on average 25 lb/day of feed, that equates to a total of 46 head of cattle annually. Grassfed cattle in this region take on average 2 years to finish from birth to harvest.



Alexandre Ecodairy

### Local Market Agriculture Producers

This collection of producers represent the smaller scale of agriculture production for our region, but very present industries in the community. The stakeholders we met are reliant on the local economy to sustain their businesses. Perennial berry and fruit producers in Coos and Humboldt county expressed the virtues of this region when it comes to production, and insight into accessing markets beyond the traditional farmers market. Local vegetable producers have become the staple food suppliers at the region's farmers markets with a scale of operation that allows for some seasonal hiring.

CSA's have only really succeeded in Humboldt county with the Humboldt Bay area, however Valley Flora of Langlois,OR is a particular success story for the region having established a popular and successful CSA season that serves as their largest earner. Finally nurseries are in a range of offerings from box store selections(Home Depot) to the non-profit Lost Coast Foods Native Nursery in Eureka focused on the native plant palette for the region.

- Berry and fruit production have begun to target the tourism market through U-pick operations along the 101 with upwards of 200 pickers a day during blueberry season at Twin Creek Ranch.

- These industries have catastrophe potential with loss of crop due to pest or weather, meaning crop insurance is a needed investment
- Local is the important market to capture with these businesses and has been the key focus building a reliable and continuous customer base. A number of these entities serve as community hubs for public gathering as a marketing approach
- Extension services from both CA and OR have been valuable resources for these businesses to gain valuable knowledge and support
- These producers emphasized the high labor intensity needed for crop and plant production and the level of commitment needed to sustain a business in this region with limited market outlets. Direct to consumer sales has constituted the vast earnings for these industries.

### **Stakeholder insights into the local climate**

Local stakeholders provided relevant insights into the relationship between the local environment and agricultural production. Knowledge for some of the stakeholders has gone back generations of farming this coastal plain and addressing the temperate climate influences on the land.

**Potential for year round production** – with the temperate conditions, there is little concern of extended freezes. The winter months could experience some frost events, however the temperatures can support growth of certain cold-hardy plant varieties year round. Utilization of greenhouses or hoop houses were recommended as an essential component for any vegetable/annual plant production. Not only for the winter to offer frost and temperature protection, but during the summer months to produce certain species that would not thrive as well in the outdoors.

**Precipitation and Humidity Management** – The wet season rains present issues for local producers. First, the persistent rainfall leaves fields in a steady state of saturation, that, if livestock or other intensive uses were on it, would deteriorate and reduce the lands to a mud field. Well-draining soils are a major help in this area, along with proper site drainage will improve the land's wet season resiliency. The second aspect with high amounts of rainfall is nutrient depletion from the soil. A number of vital nutrients can be leached out of the soil during the winter requiring reapplication before and during planting season to ensure the appropriate soil health is there to support plant growth. Finally, the high humidity throughout the year can encourage and spread plant disease more readily. Local growers keep a close eye on what they have planted, the proximity of plant species to one another and air flow, especially in green houses to keep disease down and plant health up.

## OUTREACH AND ENGAGEMENT

### Findings from Retail Markets Discussions

The retail market stakeholders were selected based on their local focus serving as one of the only outlets for local producers outside of direct to consumer marketing. Wild Rivers Market is the only local produce seller in Crescent City and is an extension of the Humboldt-based Eureka Natural Foods Store. The Port Orford Co-op is a recently created independent community cooperative while Otterbee's Market is a CSA-based food service entity that has recently transitioned to an online sales presence.

All 3 markets serve a local clientele and represent a scale different than the national chain stores that dominate the food sales for the Wild Rivers Coast Region. They have each established a loyal following and have developed some creative ways to access the local retail market.

- Consistent growth in revenue over the years and access (especially in Port Orford with a new storefront)
- Retailers benefit from the presence of farmers markets providing a seasonal bump of customers in the summer
- Rely on a number of food distributors (more than 3 for fresh produce alone) to fully stock their stores with consistent product to meet customer needs. A limited local vegetable and fruit production particularly in Del Norte and Curry Counties exacerbates the supply issue.
- With an overall larger production capacity, Humboldt-based stores can provide more locally made supplies to their customers
- Retailers are very interested in offering locally produced goods. Their main marketing labels are in order of priority: 1. Local 2. Organic 3. Conventional. When price competitive, retailers prefer to offer local goods.

- The client base typically is within a 30 miles radius. This leaves some significant voids in servicing the local, but dispersed, population with the current retailers in little conflict with each other for clients. The primary competition are large national chains present in the larger population centers (Crescent City, Brookings, Gold Beach, etc.)



*Port Orford Co-op Store*

### Findings from the Restaurant Discussions

Restaurants rely heavily on their marketing to attract customers, some of whom have identified the value of "local" in this pursuit. West Coast Farm to Table relied exclusively on this message while Seaquake has capitalized on local quality products of beef and cheese to boost their advertising capabilities. The House of Howonquet Restaurant is associated with the Tolowa Dee-ni' Lucky 7 Casino and has a different prioritization in catering to their target market of gamers with affordable meals.

- Purchasing local is more strictly tied to price point than some of the other groups. It is an increasing opportunity for local restaurants, however it has been difficult for local producers to compete with pricing from other conventional commercial entities.

- Relying strictly on local is a difficult practice as identified by West Coast Farm to Table, which during the course of this study closed. There were a number of factors in this, but one of note was difficulty in maintaining quality product. Most of local producers are at a small scale to sustain supply for farmers markets while not having enough for additional opportunities.
- Valley Flora farm has been the most progressive in outreach to restaurants through their Farm Fresh-sheet, which is a listing of available products and pricing, however this is typically their last option for their produce sales. They have been successful in outreach to Coos and Curry County restaurants.



### Findings from Local Institution Discussions

Institutions represent a new and largely untapped market potential for our region. Currently there is little farm-to-institution purchasing due to a lack of aggregation and distribution services leaving local entities reliant on the larger national food services. The Del Norte Unified School District (DNUSD) is a major food entity with over 38 employees preparing approximately 700,000 meals annually. Deb Kravitz, the Nutrition Services Director, has been instrumental in advancing nutritious and local food offerings as part of the meals programs with a goal to have 10% of foods locally procured by DNUSD (currently that number is anywhere between 0-6%).

The United Indians Health Services (UIHS) Elder Nutrition Program prepares 110 meals a day for Tolowa Dee-ni' and the neighboring Resighini Tribal Elders with funding from both of the tribes. This important service is a core component of the health and well being of the community providing nutritious meals, which currently relies solely on donations of local produce and meat to engage with the local producer scene. This program is however actively seeking and interested in local producers at a competitive pricing.

- Institutions have vested interest in supplying local produce, however there have been a number of roadblocks to overcome. Institutions have been approaching producers about availability presenting difficulty on both ends. Coordinating with local producers has been noted as the number 1 limitation followed by price and reliability of product.
- A contract agreement is needed between institution and producer introducing a new level of complexity to most small-scale producers in our area.
- Reliability of product was identified with local producers primarily focused on direct to consumer sales and not focusing on contracted opportunities available with local institutions.



# OUTREACH AND ENGAGEMENT

## Community Engagement

Engagement with local community members helped to gain a regional perspective on the local food market, interest in supporting new ventures, and current purchasing habits. Engagement included a broad outreach survey to the Tolowa Dee-ni' tribal membership, individual conversations with tribal and other community members, and participation in local community group events. Community engagement efforts were helpful in identifying the potential for local enterprise support, and also highlighted food insecurity issues present in Del Norte County, and more specifically our tribal population.

### Community Partner Support

The Community Food Council for Del Norte And Tribal Lands (CFC DNATL) is the main project partner assisting with this feasibility study. CFC DNATL was instrumental in community engagement efforts to identify how an increase in the access to and consumption of locally produced foods can be achieved. The organization holds monthly meetings for the Del Norte And Tribal Lands community to come together in an effort to develop a more accessible and healthy local food system. The LFPP project team has presented regularly at these monthly meetings and uses them as a forum to seek community input on the direction of the project.

CFC DNATL also organizes a Program Design Team around Del Norte's food and agriculture issues. This group is a team of systems leaders who come together to create a healthier food system in Del Norte. The LFPP has presented to this team and sought the team's input on project development.

## Del Norte And Tribal Lands Food and Garden Survey

In the summer of 2017, a widespread community survey was conducted in partnership with CFC DNATL and the California Center for Rural Policy for Tolowa Dee-ni' tribal members in the Wild Rivers Coast Region. The survey addressed a number of factors around the local food system, assessed household levels of food security, and included questions on access to community gardens and other sources of local food.

### Local Food Consumption

Respondents to this study were overwhelmingly self-reported as American Indian/Alaska Native (96%), with 92% of respondents specifying the Tolowa Dee-ni' Nation as their tribe. Survey results show that a majority of participants do eat locally produced food regularly, with 72% of respondents eating locally grown or produced food either daily, weekly, or monthly. Though we do not know where these local foods were specifically obtained, the top four places where households reported acquiring their food were the grocery store, hunting/fishing, farmers' markets, or household gardens, respectively. Vegetables were the most commonly purchased local food product, followed by fruit, berries, eggs, and honey.

Survey results also showed a desire among the tribal membership for more local food options, with 70% of respondents indicating they are interested in eating more locally-produced foods. Reasons for not eating locally produced foods currently included that they were too expensive, not readily available, and local stores had a poor selection.

### Food Insecurity

According to the Journal of the American Medical Association, food insecurity is an important

public health issue that can lead to harmful health outcomes and negatively impact overall health and well-being. Many households in the United States experience some level of food insecurity, meaning they do not consistently have access to enough nutritionally adequate food to maintain an active, healthy life.

USDA findings indicate that food insecurity is more prevalent among rural, isolated communities. Food insecurity in rural areas affects approximately 15% of the population, compared to 12.3% nationally. Startlingly, the DNATL Food and Garden Survey revealed that 37% of survey respondents experience food insecurity, with an additional 10% experiencing a marginal level of food insecurity. This indicates a tribal population struggling with food access, largely due to economic reasons. This survey has highlighted the need for more data collection exploring the intricacies of food access to the Tolowa Dee-ni' tribal membership.<sup>27</sup>

### Summary

Community members were engaged in a number of ways to gather information for this study, including monthly CFC meetings, Program Design Team meetings, individual interviews, and a widely-distributed Food and Garden Survey. The most illuminating and quantitative data resulted from the survey, which indicated a large portion of the TDN tribal membership is interested in increasing their local purchasing habits. This survey also highlighted the extremely high levels of food insecurity that Tolowa Dee-ni' tribal members experience, especially compared to national averages. These findings speak to the importance of increasing affordable, local, healthy food access in our community for the health of our tribal family.

---

<sup>27</sup> (Smith 2017)



## OUTREACH AND ENGAGEMENT

### Tolowa Dee-ni' Nation Department and Leadership Engagement

The Tolowa Dee-ni' Nation provides numerous services to its tribal members through a multitude of Departments and Programs. Working with these entities through the course of this study has helped align our goals and objectives with the broader mission and efforts of the Tribe. Connecting to ongoing economic, environmental, social, and cultural activities has benefited the purpose for agricultural enterprises on tribal lands. The following departments were engaged during the progress this study

#### **Community and Family Services Department (CFS)**

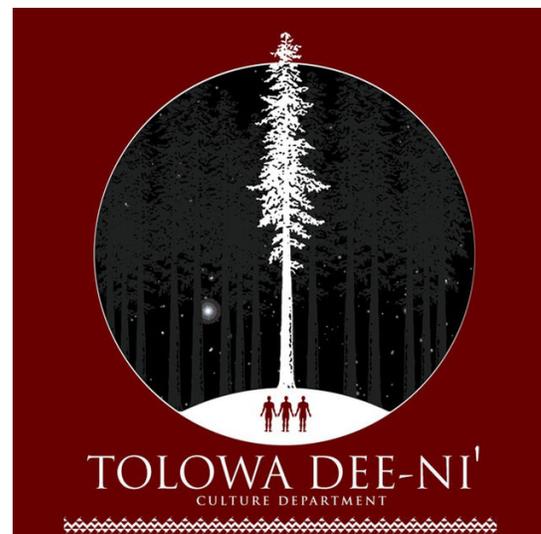
The CFS Department has been supporting a healthy tribal community through its family based services. One program of relevance to this study is the *Srtaa~ Shvm (hii) Mvlh Ghee-saa-ghit-na* (Good Food Makes Us All Healthy) Project (USDA Community Food Project grant), which works to increase healthy food access for the through community food forests and community gardens. An increased knowledge of local foods and the ability for community members to grow and propagate their own food sources have resulted from this ongoing project. And as a result, the Tolowa Dee-ni' Nation has been establishing itself as a community resource for knowledge on these topics

The Tolowa Dee-ni' Nation has also created a Standing Food & Agriculture Committee. The Food and Agriculture Committee was formed in the summer of 2017 and began meeting on a monthly basis in August. The two USDA funded projects have presented for the Tribe a new area of focus addressing the local food system from both community knowledge and accessibility, and local food production and market directions. The creation of a citizen body to represent the Tribe in these projects has been a progressive step in the development of these projects.

Also managed through CFS is the TANF program, which is relatively new addition to the list of tribal services. TANF represents a significant development in the Tribe's ability to assist needy families access the job market and progress towards self-sufficiency. Discussions with the program manager generated shared benefits considering the potential for workforce and training support for future tribal agricultural enterprise positions identified in this study.

#### **Waa-tr'vslh-'a~ (Culture) Department**

The *Waa-tr'vslh-'a~* Department provides a unified voice for the shared tribal value and cultural significance. Through their efforts, the language and traditions are being reintroduced to the members and offered in the local schools language classes. The *Waa-tr'vslh-'a~* Department, as stated in its mission statement, commits to empowering, protecting, honoring and perpetuating the Tolowa Dee-ni' heritage and spirituality as a means to remaining a strong, living indigenous people.



They effectively nourish their tribal wisdom with a deepened connection to embrace their original values. They guided our learning of the background to the *Dee-ni'* and explained the importance of food as part of the culture. Their insights addressed the importance of the seasons and migration, ancestral diets, and communal access to the earth's bounty. The use of native plants expanded beyond that of just food and served as medicine, industrial, dress and regalia and spiritual uses. Through the course of this study, the *Waa-tr'vsh-a~* Department reviewed the relevance of identified enterprises to the native culture and collaborated on the opportunities available to the *Dee-ni'* through agriculture as it relates to food traditions incorporating a transfer of tribal food culture through generations.

### **Natural Resources Department**

The Natural Resources Department evaluates and recommends to the Tribal Council on conservation and stewardship projects and policies pertaining to the multitude of resources that constitute the tribal lands. They provide the oversight to monitor environmental health of the lands and waterways of the *Taa-laa-waa-dvn*. The use of tribal agricultural lands introduces mutual considerations of land use and development where sustainable and protective practices are important considerations.

The agricultural tribal lands were reviewed with the department. Joint discussions with the Natural Resources Conservation Service (NRCS) revealed funding opportunities for agricultural site development and resource management for land, water, growing practices, and infrastructure.

### **TDN Strategic Development**

The Tolowa Dee-ni' Nation has been making considerable strides in advancing the growth and development of its tribal lands, and the greater Smith River Community as a result. A Planning Department was recently services formed by the Tribe, emphasizing the maturation towards development and utilization of land resources. The past year especially has seen significant advances in planning proposals with five unique projects underway (including this LFPP Planning Study).

#### Tolowa Dee-ni'-Dvn Preliminary Architectural Study

A study into a Cultural Center (Dee-ni' Dvn) and Visitor Center for the Tolowa Dee-ni Nation in Smith River to serve as a resource for Tribal Members and visitors, helping to rebuild the community through culturally appropriate opportunities, education and information.

#### Tolowa Dat-naa-svt Planning

Development of a new Dee-ni' residential village that responds to the culture and traditions of the Dee-ni'. The new design includes environmental and culturally responsive planning strategies while incorporating community spaces and considering commercial frontage on the 101. An outdoor covered market and business incubator are being considered.

#### Land Use Study & Master Planning for Tribal Properties

The tribe is currently undergoing an extensive tribal lands master plan to determine the best uses for the current land holdings. Economic development and optimizing commercial activities, particularly on the recently acquired Xaa-wan'-k'wvt Village & Resort (XVR) property which was the Nation's historic center of government and culture. The land use study will establish a framework for cohesive and unified development of various parcels over an extended period of time.

# OUTREACH AND ENGAGEMENT

## Economic Development

The Tribe is likewise underway on establishing an Economic Development Corporation opening new opportunities for economic advancement in the region.

This is looking to be an advantageous point in time to be conducting this agricultural study as it has shared interest in a number of the other studies being conducted by the Tribe. We see the results of this study aligning with a number of the ongoing strategic developments of the tribe, notably:

1. Tribal agricultural lands are a valuable resource and should be maintained as such for agricultural enterprise development, local food production, and advancement of tribal food sovereignty
2. Identification of Agricultural Enterprises for the Tribe represent an economic development opportunity to be considered with the formation of the Economic Development Corporation
3. Serve and promote tribal culture and workforce development for tribal members.

## **TDN Leadership**

The Tolowa Dee-ni' Tribal Council has maintained the trajectory of this study to align with a vision towards implementation of a socially, environmentally, and economically impactful result that could be adopted as a strategic vision for the Tribe moving forward.



## Tolowa Dee-ni' Value Identification

Agriculture Enterprise Development has the potential to be more than a one-dimensional pursuit for the Tribe. Through the course of this study and its outreach and engagement with the community, the potential to add value to other sectors of the *Taa-laa-waa-dvn* are a significant component for the determination of this study and its ultimate recommended outcome.



### *Economic & Workforce Development*

The opportunity to create a viable and sustaining enterprise that will generate a skilled and diverse workforce.

### *Food Security & Access*

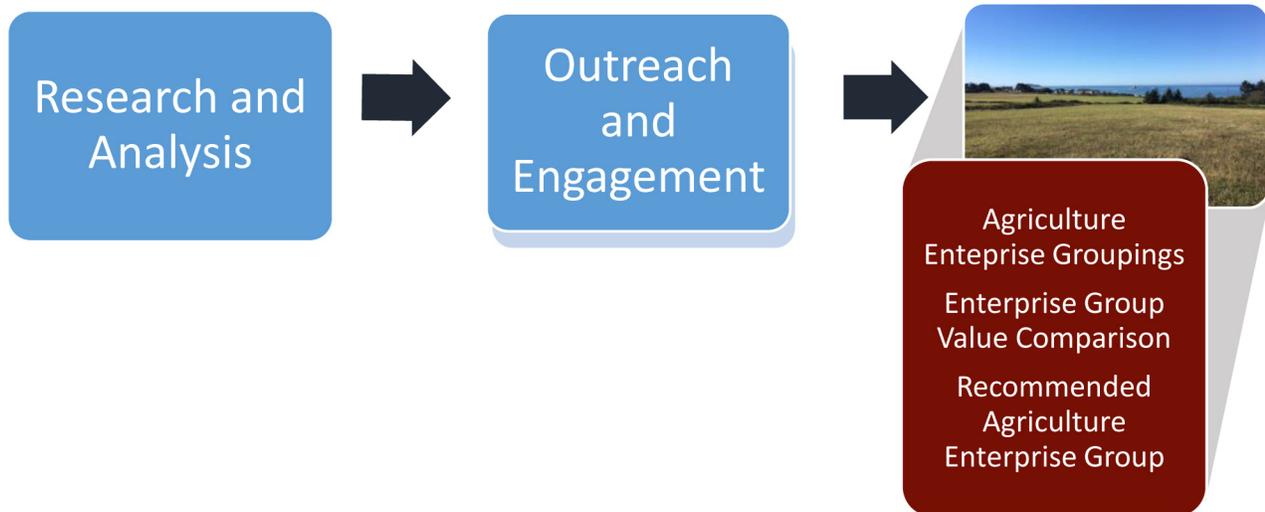
Local food production has the potential to address social communal considerations for the community, which currently has above average food insecurity of Tolowa Dee-ni' Membership. Working towards a food secure region relies on addressing food access in the Smith River Community.

### *Tribal Food Sovereignty & Culture*

Developing a platform from which the Tolowa Dee-ni' Nation can exercise their right for control and connection of one's own food source and resources in the pursuit of Tribal Food Sovereignty. In conjunction with revitalizing cultural expression and relationship between the Dee-ni', their food source, and the environment.



## Enterprise Identification Introduction



With the information collected from the previous two sections, we were able to formulate an approach to assess feasibility. Data on the Local Food System coupled with engagement with local stakeholders helped to identify agricultural enterprises that aligned with the goals and objectives of this study. An important aspect of this study has been the synchronization of agricultural enterprise with the mission, vision, and values of the Tolowa Dee-ni' Nation. This has presented a complex rationalization from the historic negative perception of agriculture as a domestication tool to the present day empowerment through food production as Tribal Food Sovereignty; and the use of enterprise as economic development and/or service for tribal membership. The result of this dialogue was the three-prong Tolowa Dee-ni' Value Identification. Agricultural enterprises considered in this study were assessed through the lense of these values and are highlighted in this chapter.

As a result of our findings, the decision was made to consider agricultural enterprises as the most feasible means for a food-based opportunity for the Tolowa Dee-ni' Nation. The research and engagement conducted in the two previous sections have allowed us to narrow the field of potential agriculture enterprises suitable to the Tolowa Dee-ni' Tribal lands. This extensive review process identified three key groupings of enterprise offering a range and diversity of opportunities for the Tribe.

### Agriculture Enterprise Groupings

Through the research and analysis portion of the study, the limitations and difficulties of creating agricultural business was made apparent. Discussions with stakeholders reinforced these findings for the Wild Rivers Coast Region. Just as the establishment of a single food hub in the community was deemed not applicable, development of a sole enterprise for the Tribe presented a difficult path to viability. With the identified opportunities available through the Tribe and its resources, the potential of numerous agriculture enterprises in concert became the preferred path for consideration. Diversifying the Tribe's presence in the local food system across producer, distribution and retail sectors allows for a more complete economic modelling opportunity to tap into the local Wild Rivers Coast Market.

#### Market Trends:

There are several emerging market trends locally and nationally that will shape the future economic development of Tribal enterprises.

Here are some of the most common trends we found:

- Customer experience is king
- Rural enterprises must be able to draw customers and provide multiple services
- Brand knowledge and recognition is essential
- Grouping of small scale enterprises alleviates revenue pressures and creates efficiencies
- Consumers want source identified, quality and unique products



## Retail Enterprise Group



The Retail Enterprise Group capitalizes on the tourism traffic while incorporating significant tribal culture and education programming. The grouping consists of four highly complementary micro-enterprises each with a relative flexibility for phased or results-based growth. The collective enterprise presents a high visibility/high impact customer-based retail offering. Land needs for these enterprises is less than the other groupings as the agriculture products are focused on the type and quality of the product versus a high quantity need to be viable.

### Independent Enterprises



**Nursery** - specializing in culturally significant traditional plants. Intended to sell to the public, the Tribe, Tribal members, and to propagate plants for other ag enterprises in this group, particularly the u-pick and farm.



**U-Pick Perennial Berries-** providing a mix of traditional u-pick fruits and berries with traditional tribal foods such as huckleberries. A unique opportunity to inform and educate the public and tribal members on the traditional foods of the Tolowa people as well as their harvest, storage, and preparation. Visual centerpiece of the enterprise group, near the road and the buildings.



**Diversified Vegetable Farm** - supplies the farm stand and takes a small step into production agriculture. This is a small, seasonal operation that is meant to tie into programming, education, and community health while supporting the other enterprises of the group.



**Seasonal Retail Farm Stand** – develops brand identity and customer experience. Becomes a place known to travelers and locals alike. The farm stand serves as the point of sale for the above products as well as a destination focus for regional visitors

## Livestock & Slaughter



The Livestock and Slaughter group capitalizes on one of the predominant agricultural industries of the Wild Rivers Coast Region. Raising cattle is an identified opportunity for the Tolowa Dee-ni' Nation with an ideal environment for grass forage and a wealth of experienced professionals in the region. A locally-grown protein source would supplement the traditional Dee-ni' diet, which relied on wild game for a large percentage of their diet. With the depletion of these wild game reserves of fish and elk, a controlled beef production would present a good option. A meat processing facility was an identified need by the stakeholder outreach for the community and would be a significant contribution to the local livestock industry.

This is the only group that presents significant infrastructure development needs requiring multi-year planning and implementation. Significant infrastructure requirements drive high project costs. This grouping offers scalable business phasing and strong double-digit employment opportunity with potential for a core tribal food product.

### Independent Enterprises



**Red Meat Slaughter Facility** – A facility for animal slaughter, processing and packaging capabilities (includes other animals and wild game processing capabilities). The Feasibility Study conducted in 2011 has detailed a range of facility options, all of which require a sizeable investment and planning especially with health and safety measure and USDA facility compliance.



**Beef and Livestock Finishing Program** – utilization of the available agricultural lands as pasture for cattle with an initial focus on the finishing of cattle to their mature market-ready weight. There is the option to phase into a complete cattle industry (with a breeding herd and cow-calf operation).

## Agriculture Production Group



The agriculture production group is based on small to medium scale niche ag-businesses dependent on a less stable, less visible market with the potential to drive community engagement and programming on health and nutrition. Enterprise success is dependent on the ability of the Tribe to provide a viable customer based and consumer demand while pursuing regional contracts for the larger scale crop production. These enterprises present a slightly longer timeline with no retail storefront activities.

### Independent Enterprises



**Diversified Vegetable CSA Farm** - generates a select and scheduled annual vegetable supply for CSA memberships for a predetermined time frame. This is a small, seasonal operation that is highly dependent on outreach to the local customer base, which would rely on programming and community health and nutrition missions.



**Agricultural Crop Production** – medium scale niche crop production (quinoa, hemp, etc.) utilizing most, if not all, available agricultural land to capitalize on scale production. Crop identification is an important consideration to determine a stable product market for sale. An initial step for this enterprise would be to lease or contract tribal lands for agricultural production to an independent farmer.



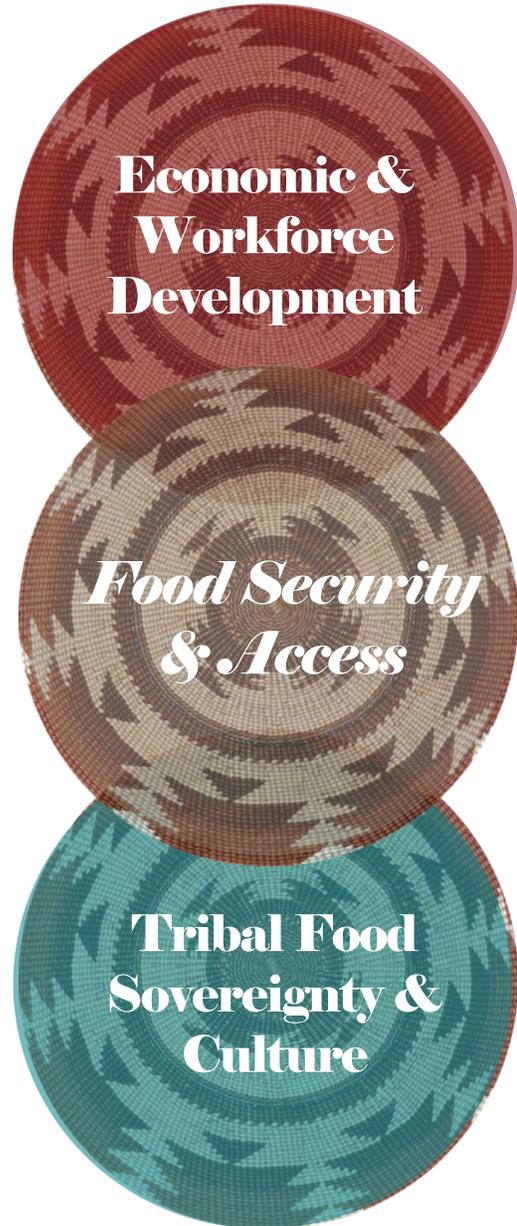
**Local Food Distribution Hub** – this presents some shared concepts of a food hub model relying more on a model of online sales or other dedicated outreach to connect customers to the products. The stakeholder Otterbees represents an existing entity with high potential opportunities to collaborate and develop a larger scale outreach and sourcing of Wild Rivers Coast Products.

### OPPORTUNITY Otterbees online retail

**Otterbees Online Retail and Distribution**  
The stakeholder Otterbee’s presented a distinct opportunity for the Tribe. Kathleen Dickson, owner and founder, has operated a CSA for southern Curry and northern Del Norte counties representing one of the only entities to do so. She has been working with roughly 9 local farms to the Wild Rivers Coast Region to source the products for the CSA along with other local goods including, sauces, coffee, breads, etc. Otterbee’s shifted to an online farmers market food vendor with home delivery in June 2017. The transition from CSA to online market has carried a good portion of her base clientele with 90 people signed up on the weekly newsletter. Orders have ranged from week to week falling between 40-50 orders on average. Kathleen identified her biggest limitations at the moment is distribution (using personal vehicle to collect products from producers and delivery) and storage availability for stockpiling product. Her vision is to attract 25% of the local area as a customer base drastically increasing her distribution and storage needs. She expressed great interest in potential partnerships for her venture.

## Enterprise Group Value Comparison

Recommended enterprises are a result of the previous two sections of findings. We identified market opportunities for new businesses for the region and product outlet options. Key stakeholders have been engaged along with the community and tribal entities. Selecting a recommended enterprise grouping from this list required additional outreach to the Tolowa Dee-ni' Nation and confirmation of the study path. A comparison matrix was created for the three enterprise groupings referenced to the Identified Tolowa Dee-ni' Values.



# Ag Enterprise Group Scoring Matrix

<b>Scoring Guide</b> 0 - Not Applicable 1 - Low/Bad 2 - Moderate 3 - High/Good	<b>Retail Farm &amp; Garden</b>	<b>Livestock &amp; Slaughter</b>	<b>Agriculture Production</b>
<b>Tribal Impact Areas</b>			
1 Cultural Food & Education	2	2	0
2 Community Health, Nutrition, and Food Security	1	2	3
3 Workforce Development	2	3	1
<b>Total Tribal Impact Areas Score</b>	<b>5</b>	<b>7</b>	<b>4</b>
<b>Market Indicators</b>			
4 Stakeholders - Tourists/Regional Visitors	3	0	0
5 Stakeholders - Tribal Members and Locals	2	2	2
6 Stakeholders - Regional Producers	1	3	2
7 Existing Market Opportunity	3	2	1
8 Affordable Market Development (Customer Acquisition) Cost	3	1	1
9 Ease of Market Entry (Few Barriers)	3	1	1
<b>Total Market Indicators Score</b>	<b>15</b>	<b>9</b>	<b>7</b>
<b>Land-Use and Infrastructure</b>			
10 Gilbert Creek - Fields	3	3	3
11 Gilbert Creek - Infrastructure	2	3	2
12 South Bank Rd - Fields	1	3	3
13 Existing Infrastructure Use	2	1	3
14 Affordability of Existing Infrastructure Renovation	2	1	2
15 Affordability of New Infrastructure Development	2	1	3
<b>Total Land-Use and Infrastructure Score</b>	<b>12</b>	<b>12</b>	<b>16</b>
<b>Enterprise Economics</b>			
16 Ability to Phase Included Micro-Enterprises	3	1	2
17 Estimated Project Affordability	2	1	3
18 Estimated Job Creation	2	3	1
19 Revenue Potential	2	2	1
20 Enterprise Fit w/Future Tribal Enterprises	2	2	1
<b>Total Enterprise Economics Score</b>	<b>11</b>	<b>9</b>	<b>8</b>
<b>Enterprise Group Score</b>			
<b>Total Score</b>	<b>43</b>	<b>37</b>	<b>35</b>
<b>Average Score</b>	<b>2.15</b>	<b>1.85</b>	<b>1.75</b>

# ENTERPRISE IDENTIFICATION

## Recommended Enterprise Group

The end result of this study is the recommendation for the Retail Agriculture Group for the Tolowa Dee-ni Nation to implement on their tribal lands

This group represents a collection of interdependent ag enterprises and that help the Tribe to meet the following goals:

- Create structures allowing economic development to flourish.
- The creation of multiple jobs will employment and lifelong learning opportunities that promote individual self determination.
- Engage with the larger community to build relationships and create a strong tribal community.
- Promote through programming and sales of traditional food and plant products to help ensure a healthy and balanced environment that sustains Dee-ni' lifeways and the earth.
- Agriculture enterprises are cultural and community spaces of Dee-ni' to be a vehicle for the imbedding of tribal language into daily life.
- Sustainably grown and harvest foods including traditional tribal foods will support overall tribal wellness.



## WORKS CITED

1. Bommelyn, Loren. Taa-laa-waa Dee-ni' Wee-ya'. 2006
2. Sloan, Kathleen. Cultural Resources and Historic Properties Inventory Study. Prepared for Smith River Rancheria, December 2007
3. Smith River Reservation Diary Entries. 1866-1868
4. Tolowa Dee-ni Nation. <http://www.tolowa-nsn.gov/>
5. Calla, Susan. Passing the Moon Through 13 Baskets A Guide to the Natural Year & Native American Celebrations on the Wild Redwood Coast. Bug Press Arcata CA, 2011
6. About Food Sovereignty. Native Food Systems Resource Center First Nations Development Institute <http://www.nativefoodsystems.org/about/sovereignty>
7. United States Census Bureau Quick Facts County Statistics. 2017
8. Supleita, Michael. Del Norte County Economic & Demographic Profile. 2017
9. California State, Regional, County and District Travel Impacts. Dean Runyan Associates. [http://www.deanrunyan.com/index.php?fuseaction=Main.Travelstats Detail&page=California](http://www.deanrunyan.com/index.php?fuseaction=Main.Travelstats%20Detail&page=California)
10. Valenton, Lucy. Department of Food and Agriculture Smith River Border Station Annual Traffic Count 2014-2016. November 2017
11. Denny, Jeff. Tourism to Redwood National and State Parks creates \$34 million in direct spending in local communities. April 20, 2017
12. About AIANTA. American Indian Alaska Native Tourism Association. <https://www.aianta.org/one-pagers.aspx>
13. Rural Tourism Studio Southern Oregon Coast Tourism Workshops. 2017
14. Jones & Jones Dee-ni' Dvn Preliminary Architectural Study
15. KCASMITH4 Weather Station. [https://www.wunderground.com/weather/us/ca/smith-river/KCASMITH4?cm\\_ven=pwsdash\\_cityforecast](https://www.wunderground.com/weather/us/ca/smith-river/KCASMITH4?cm_ven=pwsdash_cityforecast)
16. USDA Plant Hardiness Zone Map. 2017 <http://planthardiness.ars.usda.gov/PHZMWeb/>
17. Census of Agriculture County Profile 2012. [www.agcensus.usda.gov](http://www.agcensus.usda.gov)
18. Riggs, Justin. Del Norte County Crop Report. County of Del Norte Department of Agriculture. 2015
19. Aquaculture. California Department of Fish and Wildlife. 2017 <https://www.wildlife.ca.gov/aquaculture>
20. Dolf, Jeff. Humboldt County Crop & Livestock Report. County of Humboldt Department of Agriculture. 2013
21. Warga, Steve. "Easter Lily Capital of the World". American Profile. March 17, 2012
22. Exploring the Beef Lifecycle. National Cattleman's Beef Association. 2018 <https://www.beefitswhatsfordinner.com/raising-beef/production-story>
23. Oregon Growers Ocean Spray Cranberry Inc . 2017 <http://www.oceanspray.coop/Our-Cooperative/Locations/Grower-Regions-and-Stations/Cranberries/Oregon.aspx>
24. The Local Food Guide Del Norte, Humboldt and Trinity Counties. 2017
25. Labor Force and Unemployment. Federal Reserve Bank of St. Louis. 2017 <https://fred.stlouisfed.org/>
26. Irwin, John. Del Norte Meat Processing and Retail Facility Feasibility Assessment. 2011
27. Smith, Jessica. Del Norte & Adjacent Tribal Lands Food and Garden Survey Summary Findings. California Center for Rural Policy. December 2017

