

# Chapter I

## Introduction

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Since the early 1800s, agriculture has been a cornerstone of life in Snohomish County. Farms in the county have produced milk, eggs, chickens, hogs, beef, berries, row crops, hay, nursery crops, and vegetables such as corn, peas, and pumpkins.<sup>1</sup> There are over 63,000 acres of active farmland in Snohomish County.<sup>2</sup> These acres support 1,558 farms.<sup>2</sup> While 85 percent of these farms are less than 50 acres, sizes vary and some farms are as large as 2,000 acres.<sup>2</sup> Agricultural products grown on these acres sell for over \$157 million per year.<sup>2</sup> Agriculture is an important component of the Snohomish County community, both socially and economically. In recent years, demand for local and sustainable produce has increased at the same time as the population in Snohomish County has gone up by almost 13 percent from the 2010 Census, now reaching over 800,000 residents.<sup>3</sup> As the population continues to increase, the need for locally grown food will also rise. Residents of Snohomish County buy local produce at the county's seven farmers markets, through Community Supported Agriculture (CSA) subscriptions, and at grocery stores like the Sno-Isle Food Co-op. Agricultural producers in the

county also provide food to consumers around the Puget Sound region and beyond.

Despite the increasing importance and need for local farming in Snohomish County, agriculture is threatened by development and by environmental changes. The United States Department of Agriculture projected national farm sector profits to decline by \$9.8 billion from 2017 to 2018. This represents 13 percent of the profits from farming. Production expenses are forecast to increase by \$11.8 billion due to increases in costs for fuel, feed, and hired labor.<sup>4</sup> Finances are just one of the pressures facing farmers. American Farmland Trust has identified that 175 acres of farm and ranch land in the United States are lost to sprawl and development every hour, while 1.7 billion tons of topsoil are lost to erosion each year.<sup>5</sup> These trends and pressures also affect Snohomish County farms. Everett is one of the fastest growing cities in Washington State and the rising cost of land makes it difficult for farmers to stay in the county.<sup>6</sup> Between 2012 and 2017, the acres of farmland in Snohomish County dropped from 70,863 to 63,671.<sup>2</sup>

***“Agriculture is part of the social and environmental fabric of Snohomish County. It is emblematic of the enduring values of this community... [F]armers are stewards of the land and are focused on the continued productivity of the land.”***

Snohomish County. 2018. *Snohomish County Agriculture Action Plan: A Plan to Preserve and Enhance the Agricultural Economy in Snohomish County*. March 2005. <https://snohomishcountywa.gov/DocumentCenter/View/8152/Snohomish-County-Agriculture-Action-Plan?bidId=>

In addition to the existing pressures on agriculture, climate change is expected to present additional challenges into the future. In Snohomish County, sea level rise is projected to lead to saltwater intrusion and rising groundwater tables. A changing climate is expected to cause drier summers, wetter winters with more intense storms, increased river flooding, and impacts to crop viability. The *Puget Sound State of Knowledge: Climate Change in Puget Sound* report prepared by the University of Washington Climate Impacts Group describes anticipated climate impacts at a regional scale. The report includes the following projections for Snohomish County under moderate greenhouse gas emission scenarios:

- The projected streamflow during a 100-year flood event is projected to increase up to 58 percent on the Snohomish River and 76 percent on the Stillaguamish River by the 2080s<sup>8</sup>
- The area inundated by a 10-year flood in the lower Snohomish River floodplain will increase anywhere from 19 to 69 percent by the 2080s<sup>9</sup>
- Spring peak flows in the Snohomish and Stillaguamish rivers are projected to occur 29 to 49 days earlier than under current conditions by the 2080s<sup>8</sup>
- The summer minimum streamflow will decrease by 7 to 32 percent in the Stillaguamish River and by 17 to 33 percent in the Snohomish River by the 2080s<sup>8</sup>
- The length of the growing season will increase, but agriculture will also experience “shifts in crop production, increasing water supply challenges, changing risks from pests, increasing winter flood risk, and an increasing risk of saltwater intrusion.”<sup>7</sup>

This **Agriculture Resilience Plan** is intended to help prepare the agricultural community in Snohomish County for changes, whether from development, population growth, erosion, shifts in weather, or climate change. This is a plan that will help farmers in our county plan for future challenges and risk, absorb future change, and more quickly recover from stress. The plan will help build a resilient agricultural community into the future through a combination of information gathering and sharing, creation of online planning tools, project implementation, and farmland protection.

## Resilience

**Resilience** is defined as the ability of something to withstand change or difficulties. Farmers have honed this skill—constantly adapting to changes in markets, regulations, and weather over the years. Now climate change has introduced new difficulties. We have already experienced increased temperatures and higher intensity rainfall events. These and other impacts are expected to continue into the future.

The goals of the plan are to:

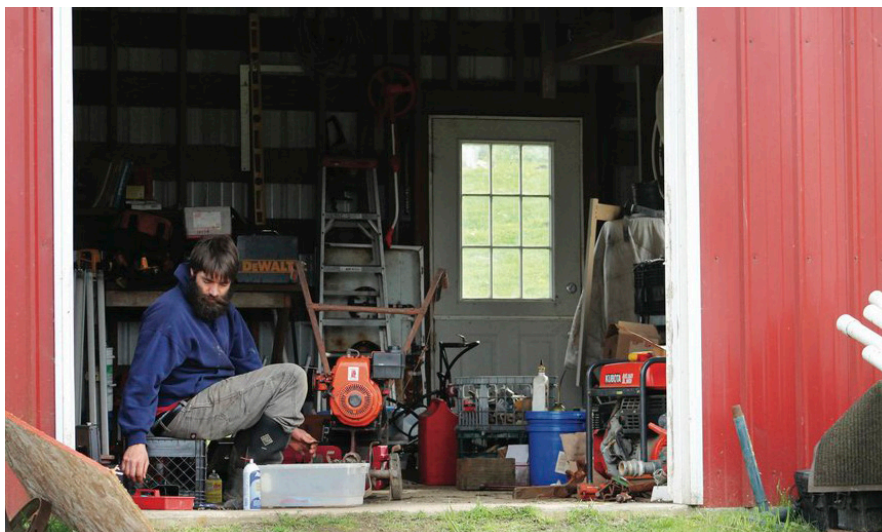
- Provide information and project funding for farmers to manage for future risk on their farms
- Develop landscape-scale projects to improve agricultural resilience
- Protect agricultural lands from subdivision or development

The Agricultural Resilience Plan is linked to the work of the Snohomish County **Sustainable Lands Strategy** (SLS). SLS, started in 2010, is a collaborative effort of partners working to improve coordination and to generate progress for fish, farm, and flood interests in the Snohomish and Stillaguamish watersheds. The SLS effort is intended to lead to “a broad set of common understandings about the importance of fish and farms and the need for collaboration to simultaneously protect and enhance both resources while also recognizing and upholding Native American tribes’ treaty rights and cultural traditions.”<sup>10</sup> SLS members are developing a series of reach-scale plans to identify coordinated sets of multiple-benefit projects to improve natural functions within each reach while generating a net gain for farm, fish, and flood interests.<sup>11</sup> Reach-scale plans for the Lower Skykomish River, Lower Snohomish River and Estuary, and Lower Stillaguamish River have been completed and a plan for the North Fork Stillaguamish River is underway.

As a participant in SLS, the Snohomish Conservation District identified a gap in the scientific understanding of agricultural needs, particularly as they relate to climate change, as well as an organized planning approach to developing priority landscape-scale agricultural viability projects. SLS participants representing fish interests are guided in their efforts by numerous plans and studies, including the *Snohomish River Basin Salmon Conservation Plan* and the *Stillaguamish Watershed Chinook Salmon Recovery Plan*. Meanwhile, the agricultural representatives are farmers that don't have the benefit of completed plans and studies identifying landscape-scale needs or future impacts. Farmers also don't have the staffing capacity to coordinate at the same level as other participants in SLS. This Agriculture Resilience Plan is intended to fill this data gap and identify priority resilience projects that will keep Snohomish County's agricultural lands viable into the future.

This plan includes eight chapters:

- **Chapter I – Introduction** discusses the importance of agriculture in Snohomish County and the purpose of the Agriculture Resilience Plan.
- **Chapter II – Outreach and Engagement** describes how the Agriculture Resilience Plan has been guided by a Steering Committee of farmers and how input has been solicited from local farmers through community meetings and the PhotoVoice project.
- **Chapter III – Farmland Conservation** describes the Snohomish County Farmland Conservation Strategy, a collaborative effort to preserve farmland and reduce conversion and subdivision of farms.
- **Chapter IV – Resilience Practices** describes practices farmers can adopt on their farm to plan for and increase resilience to droughts and floods.
- **Chapter V – Impacts Assessment** describes current and future impacts to agriculture, including climate change impacts to crops and the results of flooding, groundwater, saltwater intrusion, and land subsidence assessments.
- **Chapter VI – Priority Needs** identifies the most important actions needed to create a resilient agricultural system in Snohomish County.
- **Chapter VII – Reach Summaries** includes descriptions of 11 agricultural reaches in the Snohomish and Stillaguamish River floodplains, including information on current and future impacts to agriculture and resilience needs.
- **Chapter VIII – Next Steps** describes how the Agriculture Resilience Plan will be implemented.



## The Farmer Does It All

*“On many small farms the farmer does it all—both in the field and the office. It can be overwhelming and challenging, but also rewarding. We market to various outlets—farmers markets, CSA, and wholesale. Each requires time, energy, and paperwork. We need an outlet we can count on that would bring more farms to Snohomish County. This could be a specific vegetable or fruit processor or a USDA meat processor.”*

*Anna Caruso, Caruso Farm, Photovoice 2017*

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- 10 Snohomish County. Sustainable Lands Strategy website. <https://snohomishcountywa.gov/2194/36450/Sustainable-Lands-Strategy>
- 11 Snohomish County, 2018. Lower Skykomish River Reach-scale Plan, July 2017. <https://snohomishcountywa.gov/DocumentCenter/View/45061/Lower-Skykomish-Reach-Scale-Plan?bidId=>