SHELTON:

A SUSTAINABILITY STUDY OF HOME

By

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A THESIS

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and the Honors College of the University of Oregon
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This thesis in its most basic sense is a study of home, an assertion of my commitment to the unique environmental and cultural qualities of a place my family calls Shelton. It presents a thoughtful and comprehensive study for maintaining and restoring the cultural and environmental integrity of Shelton for the long term. In this plan for sustainability I focus on the three major themes of family, food provision and forestry. In each part I piece together a local history, provide contemporary descriptions, and make specific recommendations for working towards increased sustainability.

Through my history's despite
and ruin, I have come
to its remainder, and here
have made the beginning
of a farm intended to become
my art of being here.
By it I would instruct
my wants: they should belong
to each other and to this place.
Until my song comes here
to learn its words, my art
is but the hope of song.

-Wendell Berry
"History"

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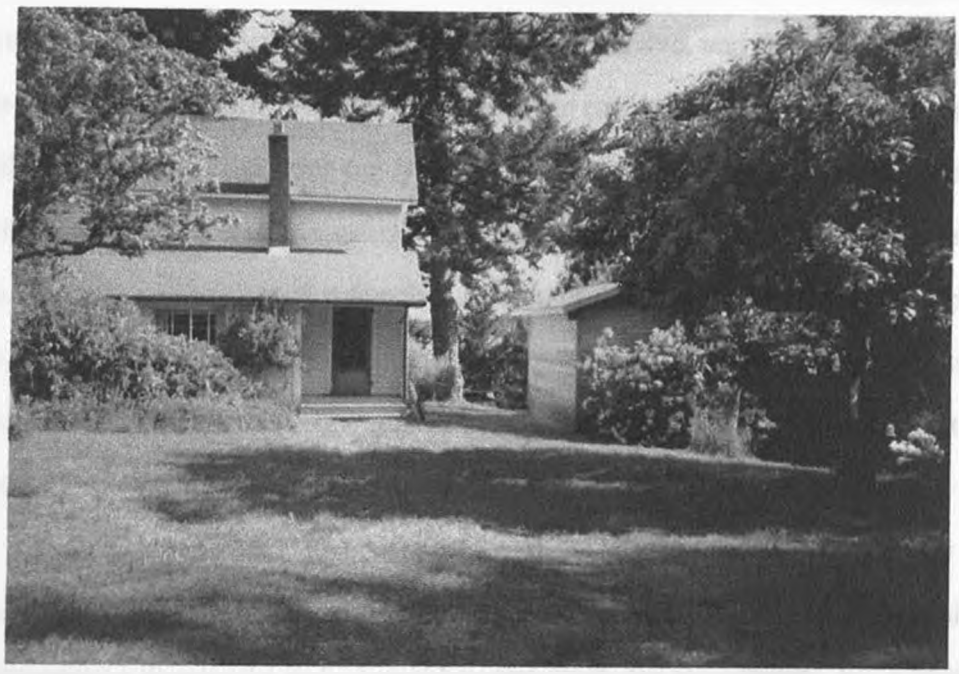
I. Introduction



(Shelton farmhouse)

There is a place on the south Puget Sound of Washington, a yellow wood house tucked between water and forest, that has been the geographical center of my family for nearly a century. While these ninety some years are short on the time scale of the Squaxin Indian tribe that have dwelled in the area for thousands of years, in the highly mobile culture of the modern United States, four generations connected to one piece of land is becoming quite an anomaly. As the land my great-grandparents settled, the farm my grandfather and his brothers worked, the country home where my Seattle-raised mother spent her vacations, the destination my family visited with all possible frequency, and now the full time home of my parents, and aunt and uncle, Shelton bestows upon me an understanding of what it means to have an extended relationship with "place." I feel a draw to the land; a perfect comfort and joy in being there. I look forward to sharing with the land and community of Shelton for the rest of my life.

To love a place, however deeply, is not enough. In order to preserve and continue the relationship, one must have a strong and intentional drive to work towards the sustained health and well being of the land and the communities that it supports. In a day when the voice of our society has grown quiet and passive, and the economy shapes people as dedicated consumers, very little is more revolutionary than asserting something has value that exceeds the price tag (i.e. clean air at any cost). It is in itself a profound and radical act to form a relationship with a place that can not be equated by real-estate values. For four generations my family has been building such a rapport with "place." In this process we have created a geographic center that gives strength and focus to our family, and we have become stewards of a beautiful marine, wetland, and forest ecosystem.

This thesis in its most basic sense is a study of home, an assertion of my commitment to the unique environmental and cultural qualities of a place we call Shelton. It also presents a thoughtful and comprehensive study for maintaining and restoring the cultural and environmental integrity of Shelton for the long term. In this plan for sustainability I focus on the three major themes of family, food provision and forestry. In each part I piece together a local history, provide contemporary descriptions, and make specific recommendations for working towards increased sustainability.

This thesis is built from the contributions of many people. Yet it still represents only my vision for Shelton. It is my hope that this project will serve as a spark for future conversations and more complete community collaboration in shaping the future of Shelton. Also, I like to envision that someday this sort of study will be commonplace in a sweeping citizen movement that actively honors and implements wise community and land stewardship. While I discuss only the specifics of Shelton, I write for the greater goal that someday every person will have a home, feel lasting connections to a place and to people, and because of these ties will choose to act in ways that promote the health and vitality of their geographical and social setting.

My original inspiration for this projected stemmed from the simple pleasure of being in this place. While nearly every long weekend and most summer days of my childhood and youth had been spent at Shelton, the spring of 1999 marked my first experience in living there. Carolyn and Dale Dietzman moved full-time into the old farmhouse of Shelton in January of 1999. They were kind and hospitable enough to welcome me and my partner, Aaron Foster, to join them in March. In the following three months Aaron and I designed and created a beautiful flower, vegetable, and herb garden, expanded the aging orchard, and began construction of a greenhouse. With every day I became more familiar with the wetness of the season, more absorbed in the rhythms of physical work, more appreciative of the beauty of forest and water, more curious about the ways people have lived here in the past. I began to see myself as just one link in a long family scene. I also realized my importance as a bridge between future generations and those of our past.

It is my most sincere hope that this project speaks to all readers in some way. For those of you already connected to Shelton, I hope that this reminds you of what it means to be deeply and daily tied into the life and cycles of this special place. To those of you who are yet unfamiliar with Shelton, I hope these pages serve as more general example of what it means to study "home." I have included a family tree (Appendix A) to aid in the negotiations of family names and relations.

II. Definition Of Sustainability

The integrated nature, system outlook, guiding principles, and language of this project find some basis and support in permaculture. In the 1970s David Holmgren and Bill Mollison, two young Australian ecologists, coined the term "permaculture". A contraction of the words "permanent agriculture" or "permanent culture," Mollison defines permaculture as a "design system for creating sustainable human environments" (Mollison 4). This synergy of ecology, energy conservation, landscape design, and community focus describes a way to live responsibly within physical and social limitations. In the winter of 1999, I traveled to New Zealand to intern on organic farms and permaculture sites. The culmination of this three-month experience was a three-week intensive permaculture certification course. I am not alone as I seek to directly apply this learning, this way of living into my own life, onto my own land, but rather I am joining a strong international community of permaculture activists.

My working definition of cultural and environmental sustainability is based on living in a healthy, invested, and responsible manner. This three-part definition applies inclusively to individuals, communities, and larger systems.

Responsibility = Consume no more than your share. Recognize and live within the balance and cycles of a local system. Treat nothing as a waste product. Produce and give back to benefit the greater community.

Health = Maintain natural and proper functions and processes. Resist stagnation through continual and responsive engagement with the process of change. Find fulfillment in daily activities.

Investment = Plan and act in regard for the long-term. Participate in dialogue and decision making processes. Expend the energy needed to understand your role (dependencies and contributions) in cycles of exchange.

Following references to sustainability shall be based upon this definition.

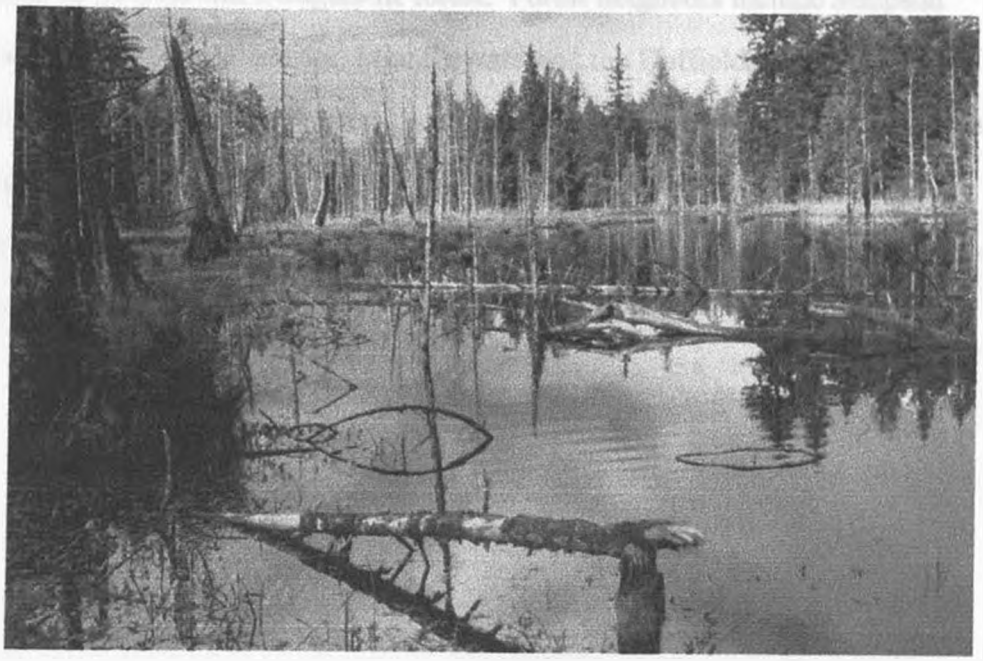
III. Geographical Context

Two potentially confusing terms in this discussion are "Shelton" and "Shelton." Shelton is the name of the largest town and capital seat of Mason County, Washington. Shelton is also how my family refers to our home, our land. It is the epitaph of our place somewhat like the name of the Jones' farm down the road, "Hungry Hollow Farm." To avoid confusion, the town of Shelton from here after will be referred to as "Shelton-proper" and our place will simply be "Shelton."

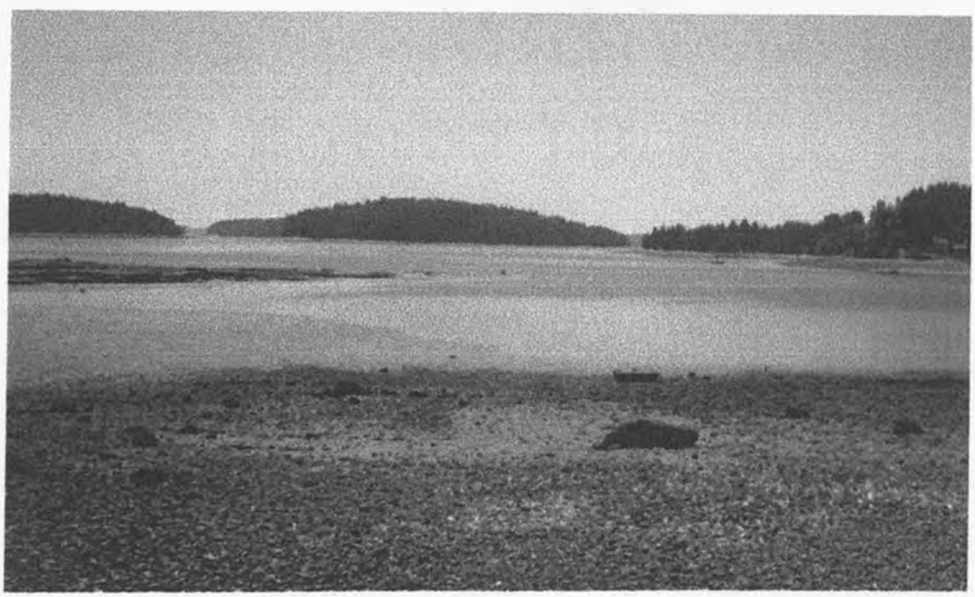
Shelton is located on the south Puget Sound of Washington, 30 miles northeast of Olympia by road, or seven miles by water; 12 miles east of Shelton-proper by road, or three miles by water; on Pickering Road, just 1/4 mile from the Harstine Island bridge (Map- Appendix B). The original piece of land that my great-grandparents bought consisted of five acres on the water side of the road and 15 acres across the road angling out towards the beaver pond.

In 1955 Isabel was forced to sell the 15 acres across the road to pay taxes. In 1965 she sold the remaining property to various buyers, including the approximately two-acre, 90 foot waterfront house lot to Burton and Leora Dietzman. Burton and Leora then sold that property back to my parents in 1978. In 1984 Leora and Burton bought eight acres across the road that had previously been owned by Isabel. Unfortunately, the family could not afford to make this purchase from a Mr. Manke while the land was still timbered, so they bought it after the 1982 cut. The forest is now regenerating nicely, and people walk the trail that leads the way to the beaver pond frequently.

In 1997 my parents, Carolyn and Dale, were able to buy back another acre and a half of the original waterfront property. They now own approximately 3.5 acres of land that slopes down towards the beach on the water side of the road. The beach is rocky and has oyster and clam beds. The waterfront vista looks out at Graham's point, Harstine Island, and Squaxin Island.



(Beaver Pond)



(Beach)

Up the hill to the southwest my uncle and aunt, Tom and Toni Droscher own 10 acres of clear-cut land upon which they have just finished the construction of a house. On a clear day their living room boasts a view of Mount Rainier, Mount Adams, the base of Mount Saint Helens, and Pickering Passage. Adjoining their land, my father and I jointly

own 6.2 acres of 30-year-old Douglas-fir forest. Forest neighbors include Simpson Timber, Lawrence Barnes, Al Jones, Mrs. Stewart, and the Duffields (Map- Appendix C).

Between the arrival of my great-grandparents and the present day, there have been many changes in land ownership. Yet the continual family ownership of the yellow farmhouse has been enough to keep this place as a geographical focus of my family for over four generations.

Part Two: Foundations In Family

IV. Tracing Our Roots

The rich heritage of experience and memory that I inherit from older generations, and present conditions from which I can interpret and build, provide a strong foundation for planning extended cultural stability. Learning the stories and recognizing the value associated with Shelton is a first step in this process. How and why did my family come to this place? What has daily life at Shelton been like over the years? What has enabled and motivated multiple generations to hold on to this land and shape it as a family center? Answers to these and other questions provide a basis for defining special characteristics of geography and interpersonal relationships related to Shelton.

It is my hope that by knowing and sharing a common history, the identity and solidarity of the Shelton community will be strengthened. In the way that, "memory validates personal identity, history perpetuates collective self-awareness." Understanding our history will help us better understand who we, both as individuals and community, are and what we might become (Lowenthal 213). It is for this reason that I have collected the many myths, facts, and interpretations on Shelton's past.

In many cases my sources are personal interviews and letters. By basing much of my research on personal recollections of the past, I have undoubtedly assimilated and passed on biases and bits from one person's recollection that do not match another's. In interpreting, synthesizing, and ordering personal memories, I have attempted to create a more comprehensive and generalized history of Shelton. I have done this out of agreement with historian and geographer David Lowenthal that "sharing and validating memories sharpens them and promotes their recall; events we alone know about are less certain, less easily evoked. In the process of knitting our own discontinuous recollections into narratives," (1996) personal recollections merge to tell a single story, a tale more enduring simply because more people have contributed to its creation and listened to its telling.

I have included many extended quotes in the text in an attempt to keep transparent the personal nature of many of the sources I have used to highlight the collective nature of the stories I am trying to record. I hope all readers will understand that I cannot help but write, filter, and arrange this history from the biases of my own past and personality. I feel only the deepest respect and gratitude towards everybody who participated in the creation of these stories and this project.

* * *

I remember an evening when I was about 12 years old. I was on a walk across the Harstine Island Bridge with my mother and a group of her friends. One woman commented on how striking the resemblance was between the channels and islands of the Puget Sound and the fjords of Norway she had recently visited. My romantic imagination caught hold of this association and has yet to release it. I knew my great-grandmother had been born in a tightly knit, Norwegian speaking community in South Dakota. I also knew she had run away from her family's home to the Northwest. Perhaps, I guessed, there was a draw to this place, a call deeply embedded in blood memory that drew her away from the plains to the Puget Sound, to a land of forest, mountains and water that closely resembled the home in Norway where her ancestors once fished and farmed. While the real story, or a least the story that practical accounts can verify, does not match my simple imaginings, it does contain enough of this thread to satisfy the whims of any good romantic.

John Ericsen Roshiem and Britha Olsdatter Hop were born in 1825 in Vik-Sogn, Norway (Family Tree), a village in western Norway on the south shore of the Sognefjorden (Cohen 43). They, like most Scandinavians who immigrated to the United States in the mid 1800s probably:

> came from a land of small cottages and large families. They were people of the soil and they came of a stock that for thousands of years had tilled the soil

> they were now leaving. Generation had followed generation, sons succeeded fathers at harrow and plow, and daughters took their mothers' place at spinning wheel and loom. Through ever-shifting fortunes the farm remained the home of the family, the giver of life's sustenance (Veirs 10).

This type of subsistence living was disrupted in the 1800s when the population of Norway sharply increased due to agricultural and medical improvements. In a country with little industrialization, this meant that traditional forms of agriculture tenure were strained as customary systems of land inheritance were overwhelmed and soil fertility decreased. Social unrest, religious oppression, and growing poverty in the lower classes may have been other factors that motivated a large scale Norwegian immigration to the United States in the mid 1800s (Veirs 12-13).

While the specific reasons for their migration are obscured by time, we do know that John and Britha made the move sometime before 1855, for in that year their daughter Olina Rosheim was born in Lanesboro, Minnesota (Family Tree). They settled down in Flandreau, South Dakota, within a mostly Norwegian community and once again began farming. Living in a tight communitiy that spoke in their native language, and working the long hours required for farmers meant there was little time and few opportunity for learning English and new customs; thus assimilation was slow (Veirs 15-16).

Ingeborg Rosheim Afdahl Droscher (she latter changed her name to Isabel), born in 1883 as the first child of Olina Rosheim and Lars Knutson Afdahl, grew up in this traditional environment. Isabel had two younger bothers, Julius and Knut, and four younger sisters, Bessie, Clara, Anna, and Lovella (Droscher, Ralph). A letter written in 1982 by her sisters Clara and Bessie describes her early life in this way:

> Ingeborg or Isabel was born July 22, 1883 in Lone Rock Township, Moody County, Dakota Territory.
>
> She was baptized in the Norwegian Lutheran Religion. She was confirmed by Rev. Blillie when she was 14 or 15 years of age. The folks

drove to Blinsmon Church about 15 miles in a spring wagon. Do not remember her dress but remember she had a black silk cape. Just a short one around her shoulders. When I was out there (WA) in 1961 she still had it. A neighbor girl stayed with the younger children. I remember some of the food we had.

She attended school at Simon's School, about 1 mile from home. Then she went to Flandreau. She and a neighbor rented a room, they prepared their meals etc.

About 1900 one day she came home from school, she brought no books. The teacher told them "the world was coming to an end." Well we are still here. She graduated in June 1903. Do not know date.

She worked at Henry's Dry Good Store for around seven years... Her wages I remember were $1.00 a day. She saved enough money, went to a business school in Grand Island, Neb. Came back to Flandreau and worked in the Farmers State Bank. For some reason didn't like it. A classmate Maggie Maghee talked her into coming out west- Maggie's father worked for the Milwalkia railroad. She left in June 1910... (Afdahl).

On this point oral family legends differs. Some relatives believe that Isabel had a local boyfriend who did not meet her father's approval. Since she could not have the family blessing necessary for her to marry and remain happily and welcomed in the community, she ran away. She took with her, as a keepsake from the thwarted boyfriend, a rattlesnake belt (Dietzman, Carolyn).

Isabel's solo journey to the West no doubt required courage and spunk, but she did not make this journey in isolation. Between 1890 and 1910 the population of Washington State quadrupled to exceed one million inhabitants. At the end of this period of mass immigration, fifty percent of the population was first or second generation foreign born, and twenty-five percent of the total population was of Scandinavian descent. The majority of the

Nordics that settled in the Pacific Northwest before 1920 came from the Midwest, not straight from Europe. Upon leaving Europe, the average immigrant had left behind a life that included small-scale subsistence farming of some grain, a vegetable garden, perhaps a small fruit orchard, a few head of livestock and sheep for wool, and sometimes an occupation such as logging, fishing, sailing, a trade or craft. In the Midwest, many were forced to change their practices and cultivate bigger land areas, with less diversified crops, and great climatic extremes (Veirs 17).

Many people successfully adapted to the new environment, but many others shared the sentiment expressed by one immigration who stated, "'Dakota is all right for those who like it, but there is just too much of Norway in me - of mountain, meadow and fjord'" (Veirs 17). The environment of the Pacific Northwest and the types of small scale home-economies that the maritime slope supported were a much better match for the people of Scandinavian. The striking geographical similarities provided both emotional comfort and familiar occupations. As on immigrate wrote, "The jagged summits of the Olympics now appeared clear and cold, sticking out of the dark, green banks of the foothills. I thought of Norway. The scene was different but just as beautiful, and the air was fine, full of the fragrance of the firs and the smell of the sea" (Veirs 8). Descriptive letters such as this one sent to relatives and friends still in the Midwest as well as other publications, and heavy recruitment by the railroads and land speculators hastened the migration from the Midwest to the West Coast (Veirs 18). So Isabel, while acting out a personal decision, probably was pushed by the tide of a larger ethnic trend.

It is thought that she went first to Ballard, a strongly Scandinavian district of Seattle, and met up with her friend from South Dakota. Maggie's father must have helped get Isabel a job with the Milwalkia line for she soon moved to Maulden, Washington where she "held a position as stenographer in a railroad office" (Wedding Announcement). It was during this short period of employment that she met Henry Droscher, also an employee of Chicago Milwalkia Rail Road (Droscher, Ralph).

(Henry and Isabel 1911?)

Henry (Hinrich David Wilhem Droscher), born in London in 1876 was of English and Irish decent (Death Certificate). He had a sister Kate and a brother named Alfred (Droscher, Ralph). Family rumor has it that Henry spent some of his youth in India where his father was a teacher (Dietzman, Carolyn). He latter served in the English army as an officer (rank unknown) in the Boar War (Droscher, Ralph). How he came to the United States is unconfirmed. Carolyn and Jane believe that he jumped ship somewhere on the eastern seaboard. Ralph contends that he "entered the U.S.A. illegally, coming in through Mexico" (Droscher, Ralph). Though he took up residence in the United States in

1906, he never became a US citizen (Death Certificate). Evidently he lived in Maulden, Washington and when he and Isabel

married they made their first home there (Wedding Announcement). In 1911 they bought 21 timbered acres near Shelton-proper (Dietzman, Carolyn). After a short period of dual residency they moved out and began life in this rural area of forest, Sound, and small farms.

While I recognize that these choices in location reflect a regional demographic trend, I also feel that personal connections to place played a part in my family's arrival to Shelton. Even though Isabel was born and raised in the plains of South Dakota, I imagine that her childhood was saturated with images of the homeland. Surely in the lore and customs of the Norwegian community forest, sea, and mountains made reoccurring appearances. The gap of a single generation could not have erased the affinity for the smell of salt water, or the appeal of a small domestic farm that many centuries had ingrained deeply into the Roshiem blood line.

V. Daily Life In a Rural Home Economy

When Isabel and Henry Droscher moved to their new land on Pickering Passage in 1911 they came with the financial security of property ownership and Henry's continuing employment with the railroad. In the city of Shelton in 1914 the cost of living for a family of five was estimated at $425 a year (Fredson 27). This figure was probably even lower for rural residents. At some point in the early 1920s Henry's health begin to fail. He stopped working and stayed at the Pickering place as a "farmer" (Death Certificate). When he died in the Shelton hospital during or shortly after an operation for stomach cancer in 1923, the family was forced to adjust their means of earning a livelihood. Isabel received a small mother's pension from the federal government. Along with assistance to Union veterans of the Civil War this program was the only form of national social welfare in the United States prior to 1930 (Herman). With this aid she and the four boys, Chuck, Paul, Don, and Ralph were able to make ends meet through hard work and neighborhood support. Farming provided basic staples. The sale of some crops as well as the occasional odd job provided a small cash income for the family.

In this period of time from 1923 until the mid 1930s when the boys started moving away to find jobs elsewhere, full family participation in the rural home economy was a necessity. To make the farm a go an almost non-divisible connection between work and daily life was forged. While the 1920s are know as a national decade of prosperity and the 1930s as a period of economic despair, the Droschers and many other neighbors probably did not experience either trend very keenly. Because of the rural, subsistence nature of their daily life, Pickering Passage residents were not affected to the same degree as the general population by either national economic prosperity or hardship.

For the families that lived on the shores of Pickering Passage in the early part of the twentieth century almost all aspects of their lives were closely tied to the land upon which they lived and farmed. As an old-time resident of Harstine Island, Esther Goetsch expressed in an interview, "We raised all our own vegetables and fruits. We never had to buy anything

but the staples such as sugar, flour and coffee (58)... Every fall Papa would take the passenger and freight boat to Olympia and bring home a winter's supply of staples such as a one hundred pound sack of sugar, six or seven forty pound sacks of flour, a ten pound bucket of lard, a case of condensed milk and plenty of coffee beans" (Goetsch 24). Such small family farms were not equipped to grow and sell a surplus sufficient to generate considerable wealth even in periods of economic boom. They were not operations of profit, but did provide families with a modest degree of plenty. The relative self-sufficiency of the agriculturally based home economy buffered rural residents from the downfalls of an unpredictable economy that urban, wage labors suffered from. While the temptation to romanticize their situation as a perfect pastoral picture is strong, the rural isolation and never-ending hard work of these pioneer type people should not be idealized.

Addressing the topic of daily rural existence in the "old days," Lawrence Barnes of the Pickering neighborhood explained in an interview how "in those days it was different. The old area has sure changed- almost nobody has livestock now. Back then everybody had a cow, chickens, and pigs. Everybody had a garden with potatoes, veggies. They all cut hay, dried it, and put it up in the barn. Everybody had berries: strawberries, raspberries, logans" (Barnes). Each family tended to produce their basic staples in large gardens and from a few animals, and then sold surplus crops, mostly berries, either for cash or for trading credit at Shelton proper's Lumberman Mercantile (Barnes).

The Droschers certainly lived this subsistence farming lifestyle. To suit the family's agricultural production the "land was cleared from the beach almost to the swamp out back. The property from the road to the beach was used for the garden, grape patch, loganberrys, strawberrys, and hay fields" (Droscher, Ralph). They grew a lot of potatoes and other vegetables and had chickens for eggs and meat (Barnes). When Isabel and Henry first moved to Shelton they built a small two room house on the Southwest side of the property about 150 feet up from the beach. After the big house was built that first home was used as the chicken house (Droscher, Don).

Don remembers that as a child:

> berries and the cows were our biggest source of income. There was a freight boat (that) used to come by twice a week to Olympia. We used to pick our berries, put em in a rowboat and load it on that launch and they'd take 'em to Olympia to the cannery. They'd bring us our checks and they'd bring us our empty crates.
>
> And our cows. We used to sell milk for nine cents a quart. And we'd used to carry it all over. There were the Johnsons and Mrs. Graham, and the Andersons. And in the summertime the Benders and the Petersons. For nine cents a quart, and that was pretty good (Droscher, Don).

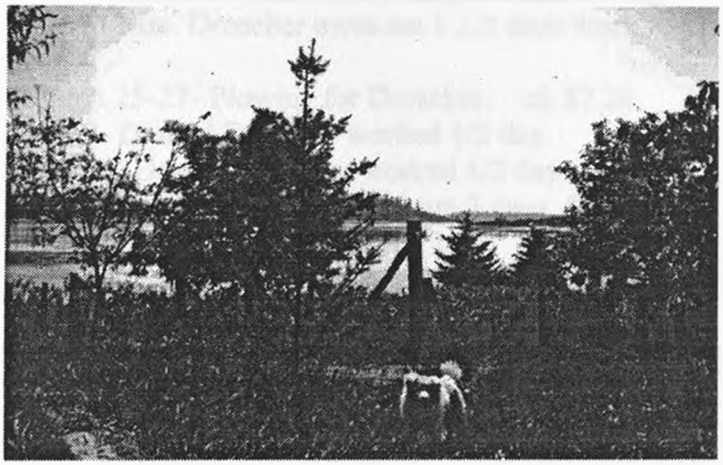
The cows lived first in the original barn, just north of the road on the western property line. Later, as Ralph remembers:

> in 1926 Uncle Charlie came out from Detroit and lived with us for about a year. He was Mom's sister Bess's husband and he built the new barn just across from the driveway. Also a chicken house was built next to the barn.
>
> We had two cows till I graduated from high school. I milked them in the AM and Don milked them at night. About the last two years I milked both AM and PM. We sold milk to the neighbors till about 1937 or 1938 (Droscher, Ralph).

Pasture for the cows extended north towards the beaver pond. Hay was grown on the property on the southern side of Pickering road on the "eastside of the house from property line to the loganberry patch. When it came to hay harvest time Don and myself would hand cut the hay with scythes. It would take us about two days to get it all cut" (Droscher, Ralph).

They also grew grapes to sell to the Werberger Winery just across the bay. In 1919 the Werberger family set out 1,000 plantings of Island Belle grapes; this small vineyard was that start of their juice business. In 1934, with the lift of Prohibition, they begin making wine as well (Journal 85). To supplement the harvests of their own vineyard and increase their

level of production, they bought additional grapes from local growers. At the peak of grape production the Droschers had plants growing both to the east and just south of the house down to the water (Droscher, Jane). Most were Island Belle, a Concord-type grape, but they also grew white and red varieties (Jones, Al). A few of these plants still remain today. With the sales of milk, berries, and grapes constituting the greatest part of the family income it is easy to imagine how slight total revenues were. To make ends meet, each member of the family had to work hard and contribute to family means.



(Fritz, vineyard and Sound 1935?)

In this period income and technology were not the institutionalized forms of security that they are today. Security was not based solely in monetary savings, but largely in land productivity and interpersonal connections. People were much more independent and reliant on only what they could grow and make for themselves. Strong neighborhood and family networks provided additional help and support. All family members, including the kids, often contributed to the livelihood of the family by helping with the farming, food preservation, cooking, sewing, and animal husbandry. Often, as did the Droscher boys, children worked the family farm, went to school, and then hired out for a little extra cash when they could.

Larger, well-managed farms such as the Jones' Hungry Hollow Farm down the road were able to both provide amply for the family and generate a little extra profit by adapting

to changing conditions in market demand. They were able to keep a hired man employed (Byrd), and hire other neighbors when needed. For example Al Jones can remember Don Droscher working on the farm from time to time, especially during apple picking season (Jones, Al). The old farm journal of Hungry Hollow has entries that illuminate the exchange between the Jones and the Droschers:

1933 June 25- 1 and 3/4 day work by Donald Droscher.
July 3- I owe Donald Droscher for 2 1/4 days work.
Donald worked 2 3/4. Ralph worked 1 day.
Mrs. Droscher owes me 1 1/2 days work.

1934 March 25-27- Plowing for Droscher. ch $2.28
July 9- Donald Droscher worked 1/2 day.
July 14- Donald Droscher worked 1/2 day.
September 25- Droscher had team 3 days. $9.00
October 1- Droscher owes me 75 ct.

1938 April 8- work by Bird (horse) for Droscher. $2.00
April 23- Horse to Droscher and Lundbergh. $5.00
May 4- Horse to Droscher. $1.00
December 2- veggies to Droscher. $3.00

1940 May 17- Ralph Droscher had the horse. $1.50 (Jones, Ed).

Some employment could be found in logging as well. Don remembers his brother, "Chuck, when he was ten years old, had for a short while a job greasing skids. Skids were every 4 or 5 feet apart. They put the skids on the logging road and the horses pulled the logs over them, and you'd have to grease them (skids) for logs to slide over them better. Chuck carrying that 5 bucket gallon of grease and a big swab. He lasted 'bout a week and then couldn't take it any more. That was different days" (Droscher, Don). The rest of the boys picked berries and cleaned up for folks when they could but there wasn't much work in those days (Barnes).

(Ralph, Don, Paul , and Chuck 1925?)

Neither Don Droscher, Lawrence Barnes, nor Al Jones expresses any resentment over the years of hard work they put into helping their families get by. Instead they exuded pride over the lessons of thrift, and cooperation, and the strong work ethic they acquired as kids. Lawrence Barnes has great admiration for Isabel Droscher and the way she raised her boys alone after her husband's early death and how "they all grew up to be good men, no bad ones among 'um" (Barnes). Fair discipline as well as general good humor probably served them all well in days that were far from easy. A good laugh is never far away when in the company of any of these men. Don especially had a saying ready for any situation. His favorite adage was "life's great if you don't weaken."

In a story telling session at the old Grant Schoolhouse Don recounted with a chuckle the time when Isabel bought a baby pig from a neighbor. He and Ralph, "had built a pen for it, built a little shelter and a pen and we thought we were all ready for it. George brought the pig down, put it in the pen, but the boards were about that far apart (6"). And that pig got

out. We chased it all over those 20 acres. That was a chase!" (Droscher, Don). The mirth with which he told this story is surly a reflection of the hearty laughter that filled his youth as well.

The network between neighbors seems almost as strong as the bonds of family. In a day when everyone was just trying to get by, "everyone was a good neighbor and helped each other" (Barnes). Such ties were forged by both by social and economic necessity. Visiting exemplifies this type of cooperation. Carolyn remembers going visiting with Grandma Droscher and recalls how calling on neighbors always revolved around trade, the exchange of some goods or services.

(Isabel and guests in Shelton kitchen 1940?)

They would go to Mrs. McGonagol's for eggs, and Mrs. Jones' for something else (Dietzman, Carolyn). Always staying to chat, catch up on the recent gossip, and enjoy some treats as well I'm sure. Visiting was obviously social in purpose but frequently justified as being a necessary errand. Al Jones recalls that his parents and Isabel visited with each other often. Often enough that Al could recount with endearing familiarity:

> Well I can sure tell you that I knew your grandmother pretty well cause I called her Izzy! I can remember sitting out here the last time they got together. I've got the picture somewhere of her and mom talking. I can tell you that your grandma used to complain after the folks had visited down there. She said she'd have to wash the curtains 'cause dad smoked a pipe. Ah, he didn't believe that 'til after he quit. He didn't smoke the last 12 years so he understood then (Jones, Al)

Following are two great examples of how the outgoing nature of neighbor relations extended into terms of friendly assistance. Lawrence Barnes tells this anecdote about his mother and Isabel Droscher with a glow of pride:

> Bergeson was the name of a woman who lived on Harstine Island. She was crippled with rheumatism. Mrs. Barnes and Mrs. Droscher would go over every fall to can for her. She couldn't with her crippled hands. They helped put away the food the family would need for the winter. Quarts and quarts of tomatoes, etc.... She traded fresh veggies to them through the summer in return. They would row over. She lived straight across the channel from Grants School on the water (Barnes).

Favors between neighbors were exchanged freely, but with great appreciation. Isabel Droscher was more than willing to help Mrs. Bergeson with her canning, and in turn she surely expressed gratitude to others who extend help in similar ways to her own family. Don Droscher recollects on some of the generosity they received:

> We had wonderful neighbors, those days. We had on our west side Harry Martin. I don't know how many of you old timers here remember Harry Martin. He was a retired sea captain, and he was a wonderful old gentleman. He had a tractor and when we needed cultivation of our berries or garden we borrowed that tractor.
>
> We ate a lot of clams in those days. Money was scarce but clams were free for digging. He had better clam digging on his beach then we had on our beach, so we'd go down and dig a bucket of clams, take em up to Mr. Martin. He'd take what he wanted; we'd take the rest. It was always that way. Everybody was helping each other in those days. Its something you don't have now. Every place now says "KEEP OFF" or "RESTRICTED". You can't... its different, altogether different (Droscher, Don).

Another example of neighborhood and family cooperation can be found in a description of deer hunts. As Ralph details:

> We did a lot of deer hunting and clam digging to supplement our food supply. The deer hunting was usually done in parties of six to ten men. Two or three men were put on stands and the rest would drive thru the trees and brush to chase the deer out to the ones on the stands to do the shooting. After the day's hunt was over, the deer were dressed out and put in equal amounts. One person turned away from the meat and another would ask him who that meat was for. After all were called each took their meat. This method was used so no one could pick the best or the worst of the meat (Droscher, Ralph).

By lending the helping hand and working together for mutual benefit in so many daily, ordinary situations the community was strong and able to cope with situations of greater stress. Interpersonal relationships, exchanges, and dependencies were in functional and reciprocal order. Even in the midst of national economic downfall, industry collapse, and high unemployment the Pickering residents got by with cooperation and the sharing of resources.

During the Depression it was not uncommon nationally for these sorts of informal security networks to fail. As one historian explains, "the depression years in the Pacific Northwest were doubly difficult. The economic realities of falling farm prices, industrial unemployment, (and) foreclosed mortgages, all (added) up to pervasive despair" (Dodds 227). Indeed in the city of Shelton one man needed work so desperately that he entered a Work Wanted add in the Mason County Journal that read: "(Work) -any kind, town or country. Can drive any make of car of truck. Spading gardens by hour or piece or work. Any kind of work, day or longer. Garden spading or anything for family man" (Fredson 78).

While this scenario might reflect the general regional outlook, nowhere is despair or loss of hope evident in the words and records of the rural residents of the Pickering Passage area. These small independent landowners were not hit quite as hard by the severe economic downturn as were wage laborers in urban areas. Esther Goetsch asserts that "even during the depression years there was always something going on here. People didn't have much money but it didn't cost anything to live. Most people were farmers who raised everything they needed for food. Many of the farmers had gone into chicken business selling eggs, raising big gardens and growing loganberries and grapes to sell to the winery. What they couldn't sell they ate. There were always big platters of homegrown fried chicken and vegetables washed down with home made wine and the company never ceased to come" (Goetsch 83).

To be sure few Pickering residents had much of value to lose beyond their land. The Droschers certainty lived quite modestly. As Don describes:

> We didn't have water, running water. We had a well outside the house. Mom used to wash her clothes in a big scrub board and washtub. And things like sheets and towels she'd usually boil in a big ole copper boiler. She'd bake her own bread. We had a big kitchen range. Lot of you know what they were, maybe some of you don't. And our heating was by wood. We'd cut it all ourselves. We'd haul it in from the woods in a wheelbarrow. Those days were different (Droscher, Don).

Jane Droscher can remember that on her first visit to the place in 1938 there was no electricity, just Aladdin lamps for light. There was an oil heater in the living room and a wood stove in the kitchen.

The toilet was out behind the barn, across the road (Droscher, Jane). What a long walk it was when you were down on the beach and had to go! (Dietzman, Carolyn). When electricity did come around Chuck wired the house. Sometime in the 1940s Paul paid for an electric pump that replaced the old hand pump and Don and Ralph plumbed the house

for water (Droscher, Ralph). Don replaced the old pantry with an indoor bathroom in 1952 just before Isabel's sisters came out from South Dakota for a visit (Dietzman, Carolyn).

Living in such a manner meant that rarely was there time not occupied by chores. In a letter from Isabel's sisters Clara and Bessie, they described Isabel as "always busy, if she had only a few minutes she'd picked up her fancywork" (Afdahl). She crocheted a lot of pot holders and edging of pillowcases and knew how to do Norwegian tatting. Nothing was ever wasted in her home. Wool clothes were saved for braided rugs and nylons were turned into crocheted rugs.

Calling on neighbors was the main social opportunity for Isabel and her adult counterparts. Children on the other hand got to go off to school to play and learn with their peers. The Droscher boys and other Pickering area children attended the small Grant Schoolhouse. Don Droscher described his elementary years in this way:

> For recreation, we'd go off to school. Part of the time someone would drive, hired by the school district, as a bus driver. I can remember Ed Jones, his dad. Just about every year when he was doing it he'd buy a brand new Model T Ford Curry to use as the school bus... We all went to school here, it was a small building like this, where that wall is now. One teacher and we had up to 30 kids. I don't know how many there were in the end, five or so. Like Al said we had to go to Agate. I don't know what was, maybe a state exam before we could get out of the Grant Grade School. We all did well. No one ever flunked, that I can remember. I started here with Mrs. Snider when I was six years old. Mrs. Blake, Mrs. Mitchell..." (Droscher, Don).

After graduation from the Grant Grade School all of the Droscher boys attended and graduated from Shelton High School. Other forms of youth entertainment included swimming in the nearby lakes in the summer and ice skating in winter. Lawrence Barnes

recalls they would all go out to Pine Lake, a small seasonal pond on the way to Phillips Lake (near the new development) to skate every winter (Barnes).

Living out in the country, transportation has always included elements of adventure. When Isabel and Henry first bought their property in 1911, no roads connected with it. They, like most farmers, established their homes close to the waterfront. The channels of the Sound served as the region's main route for transportation both of goods and people. Isabel never owned a car, but the family always had a boat (Droscher, Jane). Don described the early days in this way:

> When Dad and Mom came out here there were no roads, no electricity, there were no telephones, everything had to come in by boat and if you wanted anything you had to go by boat. Like my oldest brother had to have glasses when he was 4 or 5 years old. Dad rowed him over to Arcadia and they caught the Simpson freight boat that ran from Shelton to Tacoma. They had an appointment with an optometrist and he got fitted with glasses. That's the way it was in those days. (Droscher, Don)

There are also family stories of Isabel rowing into town for groceries. The approximately six mile round-trip journey had to be carefully planned with the tides. At some point Lumberman Mercantile started a weekly delivery ship that brought groceries, hay, grain, and the mail (Barnes). During berry season boats came more frequently to collect the produce.

(South Sound sternwheeler 1915?)

Esther Goetsch remembers picking berries all day on Sundays to be ready for the Monday freight boat that came from Olympia (Goetsch 26). Other merchants capitalized on the

water-bound market of these rural customers as well. Ships from San Francisco would come up and travel the waterways selling household items. Much of the Droscher furniture was purchased this way (Dietzman, Carolyn).

When asked about water transportation in his family, Al Jones had a tale ready to tell:

> I can tell you a story you might find interesting. Edna Jones, my 96 year old half-sister died this last summer. She had a clear mind to the very end she wrote some things about her growing years. She grew up on this farm. And (this is) one of the stories she tells... Dad had two gasoline launches. One and then the other, I don't know why. That was before the Model T. And Edna got sick, and I mean she was really sick. And then she says that (Dad) had a wagon and a team of horses; so I assumed she meant that they... must of gone in that wagon to where he had a float down in the cove down here and got her on board that boat. It had an old marine engine, probably a single cylinder bang type thing, you know, this is way back. He took her all the way down into Shelton... Then it was a mile down from that boat dock... She doesn't see how he got her up to the doctor... Anyways he got her up to Doctor Wells...Well he checked her over and said, 'she's got diphtheria. You're gonna have to take her to the hospital in Olympia.' So they went back to the boat and went all the way over into Olympia. And they had at that time an experimental new anti-toxin for diphtheria and she talks about her mother giving permission and them giving this new anti-toxin to her and saving her life. There's a boating story for you!

Al conjectures that they started taking the horses in to town when "the roads... got a little better and... they gave up going by boat. (Ed Jones) wouldn't have gone by boat by choice! He was raised in Kansas. Couldn't swim and he was scared and hated the

water." First they had a wagon and then latter a buggy. Soon after they replaced the buggy with a Model-T (Jones, Al).

It would be impossible to paint a complete picture of the daily life in this rural world of the early to mid twentieth century without mentioning logging. Harvesting the great forests of the coastal northwest was the driving force behind settlement for some 70 years. The Droscher's direct involvement in the logging industry during the early years remains vague. When they purchased their property it was timbered in what from a photograph appears to be about a 25-year-old stand of Douglas fir. Henry Droscher certainly wasn't aspiring to be a lumberjack. Don remembers that:

> Elmer Weiss logged it for Mom and Dad... I don't know how he logged it, but from what I see that's left there and from how I saw him log in other places, he probably had a one drum donkey and a mainline, and he had a horse to pull the mainline out to where he took the logs. I don't know who felled 'em or what. But there's still occasionally a ditch where the logs would be drug across and drug in. I don't know where they rafted them or shipped them or anything like that (Droscher, Don).

(Shelton logging operation 1911?)

Later on Chuck worked greasing skids for the Sawtells. To my knowledge there was no other participation in the logging industry by the boys in their youth.

Obviously the logging culture of the Shelton area was pervasive in aspects other than employment for Chuck, Paul, and Don later held logging jobs. Chuck had a job with a logging company out of Roseburg, Oregon and Paul owned Paul Droscher Equipment, an outfit that sold logging equipment, machinery, and supplies in Redding, California (Dietzman, Carolyn). In the 30s "Don got a job in Aberdeen working in a mill cause he knew the foreman, Carleson. He was known as the 'kid from Shelton,' as an outsider taking a local's job when jobs were hard to get" (Barnes). He also listed "Logging Contractor, self-employed" on his resume in 1935 (Droscher, Don-Resume). Though they didn't make money at it while they were young, the boys must have picked up or absorbed some know-how about logging during their youth.

Just as the Droscher's financial connection to the dominant industry of the region was slight in those early years, so were their connections to general national economic conditions. The bounty of their gardens and livestock made the demand for capital expenditures minimal. Due to the subsistence nature of their livelihood they never were wealthy, even during the prosperous 20s, but they also escaped the hunger and desperation that so many Americans faced during the 30s. The diversification of crops and revenue sources was key. The family produced what they needed and then had milk, strawberries, loganberries and grapes for sale. The government aid and additional income earned in the boys outside employment certainly helped as well.

Credit for the stable and wholesome, if not leisurely, youth that Chuck, Paul, Don, and Ralph experienced is also due in great part to the amazing strength and fortitude of Isabel. It was surely not common or easy for a woman to stay on the land alone as well as raise four fine boys. The strong family focus extended into striking bonds of loyalty and rapport with neighbors. In this community, tied closely together by similar occupations and lifestyles, common geography, and mostly Scandinavian heritage, a strong local

identity grew. It is in the hope that these close bonds between family, neighbors and the fertile land, water and forest of the Pickering Passage area will not ever fully disappear, that I write.

VI. Years In The Middle

During the 30s the boys started moving away. Paul and Ralph found work out of town. Don attended college at the University of Washington and then found employment in Seattle. Chuck married a neighbor girl and moved across the bay. Isabel had successfully raised them. Not one inclined to look for easy alternatives, she stayed on the land alone after they all left.

The twenty-one acres and the yellow wood house tucked between water and forest had become unquestionably her home. When reflecting on how Grandma Droscher felt towards Shelton Carolyn determined simply that, "it was her place. Her home. She never talked about it or complained. It simply was where she belonged... She seemed satisfied. She did with what she had and didn't pine for anything more or expresses regrets" (Dietzman, Carolyn). Over the years Isabel had forged an understanding, a familiarity, a dependency, a connection with her place. It was where she belonged. It was her home to tend, take pride in, reside in.

What is most amazing to me in the years that followed is how she opened up this feeling of belonging and acceptance to Shelton to so many people. Her open door and generosity set a precedent for following generations. Guests were always welcomed, and time was always made to enjoy hearty conversation over dinner, or gossip over tea and cookies. The community and camaraderie that was formed in this era is often better expressed in photos then by the words I can gather or guess.

It was to this place of belonging and engaged daily living that Isabel's extended family was welcomed. The boys visited regularly and brought their growing families.

(Jane and Don 1938)

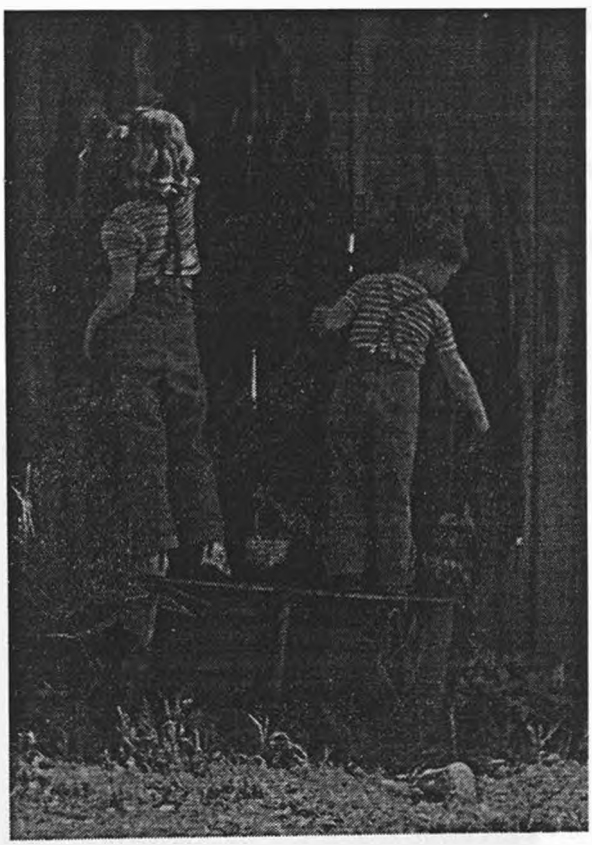
Jane and Don met in 1938, and Jane came down to Shelton for the first time in that year. She remembers "rowing in the evening, out by Hog Island and we'd line up all our nice little salmon trout, probably partly illegal, in the bottom of the boat. And we'd go by the Axe's. Mr. Axe, he was a neat old guy" (Sobremesa). Its fun to imagine the courtship of my grandparents taking place in this way.

After they married in 1941 and settled in Seattle, Don continued to come down to help Isabel with chores. Whenever it was possible, helping out his mother and staying close to his childhood home remanded top priorities for Don. And while Isabel "always had chores for Don to do like picking fruit, chopping wood, shucking oysters, it was never a burden. That was just part of the way things were (Dietzman, Carolyn).

For Carolyn,Tom, and Sue this meant weekends and summer vacations were spent at Shelton. Carolyn remembers that, "Grandma would love for us to come down. She'd feed us. We'd do chores." And while Carolyn doesn't remember a lot of conversation taking place, somehow Grandma always made her feel really special. "She, like Don had a glow, a presence, that it was just good to be around" (Dietzman, Carolyn). There was definitely a special rapport and understanding between granddaughter and grandmother.

(Isabel and Carolyn 1955?)

Tom and Carolyn's favorite memories of their childhood trips to Shelton include eating country fried chicken, making forts and tree houses in the woods, and gorging on the fruit of a particular Bing cherry tree. Every year in July when the cherries were ripe, Carolyn would take the north half of the tree, Tom the south, and they'd eat themselves sick. If either person ate a cherry from the other person's side, there was trouble! Carolyn also remembers "everybody sleeping upstairs, the whole family; the slop jars. And grandma would get up early to cook. You'd hear her rattling around downstairs and then pretty soon the smell of bacon and oatmeal would drift up. Then we'd all be up. She'd also make gingersnaps, that hard, crispy kind" (Sobremesa).



(Carolyn and Tom 1950?)

While family and friends did visit Isabel often, she was for the most part on her own at Shelton. The neighborhood relationships outlined earlier, became even more important in their elements of social support. Daily visits and holidays were shared together. During the 50s Isabel would go into town with Sevren Nelson every Saturday to do the shopping. Mrs. Nelson was homebound by arthritis, so in exchange for the ride Isabel would do their shopping.

In the 1960s the neighborhood generation that first came to the Pickering area in the early part of the century, begin to age and die. The last years at Shelton were sad ones for Isabel. Mrs. Nelson, Mrs. Barnes, Mrs. Jones, and Mrs. Troy all passed away. Without the neighborhood mechanisms of social support and exchanges of goods and services, it was hard for her to remain. In 1965, at the age of 82 Isabel left Shelton and moved into the Kenny Home, a retirement center in West Seattle (Dietzman, Carolyn).

(Isabel and friends 1960?)

VII. Vacation Destination

To make that move, Isabel needed money. She couldn't continue to live at Shelton alone, and she couldn't leave Shelton without liquidating her property assets. As my father Dale remembers, in 1965, the year that he and Carolyn married, the Droscher family:

> decided to sell all the property. Paul was the only one in the family with money and he didn't want the land... So I convinced Burton and Leora (his parents) to buy the middle, 90-foot section with the house for us. We didn't want it to leave the family. So they came down and looked at it and decided to buy it. We were gone a lot, so they came out often (from their home in Seattle), fixed up the house" (Dietzman, Dale).

In his visits to Shelton Dale had clearly seen the importance this land had for Carolyn. He also must have had an affinity for the place himself. In this way, with the marriage of the Droscher and Dietzman families, Shelton was not lost. By drawing more people into the charm of the place, devotion to keeping it increased.

For Leora and Burton, Shelton became their "country home." They spent their weekends out there. It was their place." Regularly, they'd leave Seattle to spend a weekend in the country. Burton liked to be in the woods or go fishing in the rowboat out in the bay. He kept a garden with flowers and vegetables (Dietzman, Dale

They also did their share of maintenance over the years. They worked on the house foundation, put up the wallboard in the living room, and jacked up the southwest living room corner. Leora can also remember doing plenty of canning and preserving at Shelton. The orchard continued to produce an "abundance of apples, cherries, and plums. We would can and make applesauce. (With all the fruit) there were always deer around. When we would drive in at night their eyes would shine, and they'd scamper away" (Dietzman, Leora). Recently Leora said that Burton enjoyed being at Shelton so much that he would have liked to have lived there.

(Burton 1984)

(Leora and Emily 1984)

The next seasonal residents did not arrive until 1973. In that summer, while Dale was finishing a position in Seattle, Carolyn lived at Shelton on her own with Daniel, age four, and Sara, two (Dietzman, Carolyn). It probably would have been an enjoyable time if Carolyn had not chosen to do extensive fruit canning over the wood-burning stove.

(Sara Jane, Daniel, and Dale 1973)

While Sara was too young to remember much from that summer at Shelton, she does have many other early memories:

> My first memories of Shelton are only pseudo memories; that is they are only stories that I don't in fact remember. Mom setting out to brave a summer there alone with Daniel and me. Daniel falling into a beehive. Me probably off eating berries somewhere. Or later crying when Pops caught a dogfish in the boat.
>
> ...Another early memory that I should probably allow my brother to write about is our famous night camping in the Volkswagen bus by the water. Something about feeling too sick to get up, then me vomiting everywhere. The folks were smart enough to have locked the screen door to the house. Don't know why Daniel didn't think to holler a bit. But he did invite his vomit encrusted sister to sleep down below after the pop-top was no longer fit sleeping quarters. (Dietzman, Sara)

During my years of growing up, Shelton was the destination for nearly every long weekend and good portions of summer for our nuclear family. The five of us plus the dog

would pack up and pile into the Volkswagen bus. We'd leave our busy Walla Walla schedules of athletic practices, piano lessons, school, and work and head to Shelton where there was only the family, the outdoors, and possibly unceasing rain.

(Carolyn, Dale, Emily, Sara Jane, Daniel 1980)

It would be wrong to idealize this time as always fun and leisurely. As Sara states:

> ...mostly what I remember about Shelton when I was little was being bored. Shelton meant a seven hour car trip to a secluded place where it frequently rained and where entertainment was self-made. Bringing a friend was always a good answer. Then there would be gooeyduck excursions, guided trips into the forest (then dark and full over my head). Or often, a promised trip to the big city (Seattle) held me over.
>
> It wasn't until I grew a bit older that Shelton truly became a treasured place, or at least this realization didn't come until later. (Dietzman, Sara)

It is important not to dismiss that Shelton time includes boredom, quibbles, and other tensions that are real elements of our family dynamics. This stated, it is now fair to dwell on the good times we share there.

During the 1980s family reunions came to be a part of Shelton summers. Don organized several Droscher reunions. The four brothers and their families would gather together for several days to reminisce, eat shellfish, drink beer, and play horseshoes. Daniel can remember "Fourth of July weekends, where there were Dietzman family reunions. Always sunny. Barbecue, baseball, fireworks and relatives that were rarely seen any other time during the year (Dietzman, Daniel). One year Jane hosted a Pickerell (her maiden family) reunion. During this event Jane and I did a formal count of all the guests. We reached a total of 32 adults, eight kids, and five dogs. It was at these affairs that I met my relatives and realized how many people shared connections with the place.

Shelton also became the location for an annual gathering of Carolyn's women friends, select spouses, and their kids. Every June after school was out for the summer, we'd gather for several days of vacation. This meant chocolate, book discussions, swimming, bonfire barbecues, bird watching walks, more chocolate, boat rides, and good conversation. This tradition continues into its fifteenth season. The only changes being that the women exercise more and spend considerable time sharing pictures of grandchildren.

In my store of memories, childhood time at Shelton meant hunting the sweet and tiny wild strawberries in the lawn for hours; hiding in the tall grass when it hadn't been cut for weeks or months; shell hunting; fighting with Daniel for the red couch, or at least any place but the ghost bed!; lazy mornings of pancakes with fresh blackberry sauce; learning to pump on the swing; climbing trees; looking for rock crabs under Harstine Island bridge with Dale; reading and doing puzzles on wet rainy days; time with my best friend Emily Montgomery; seeing the grandparents; games of UNO, Skipbow, and Scrabble in the evenings; Dale fiddling with the TV antenna on the roof, in the tree; mountain biking with Daniel; Mom planting rhodys; rubber boots and wet clothes hanging on lines in the kitchen; the wood stove; the musty Shelton smell that I unpacked in all my clothes and sleeping bag upon returning home; Pops not "on call" and Mom content in her favorite place.

Sara, if she had more time would expand on adventures to:

> Indian Island and boat rides in the sun. Hitchhiking. A knock on the door and a man with a bloody face needing a ride. A place to take loved ones for getaways. Family reunions and memories of family and friends that are no longer in our lives. Turning over rocks to catch crabs. Hearing the crash of a whale! Seeing it lost in our cove. Hearing the music of mandolins and cellos. The dinner bell on the old shed. Snake hunting with Tyler. Seeing a deer be mangled by the animal instinct in a sweet dog. Hearing the thump of beaver tails at the pond. Visiting an old apple orchard when I was eight and being amazed at the fact that these trees were 80, 90 years old. Filleting perch with Tom Montgomery. Eating pie. My grandfathers (Dietzman, Sara).

The curiosity and delight of kids in this gentle wilderness are still a part of the Shelton spirit. Claire and Tyler Gervais, the kids of Sue and Phil, come out every summer. They keep the kitchen window sill stocked with shells and the adults busy looking for gardener snakes and doing craft projects.

The significance of Shelton in our lives is clearly expressed in the tenor and abundance of these memories. All of these experiences have shaped us as individuals and given us common bonds that strengthen our ties as family. Shelton, as a constant place, as an unbroken thread of shared memory and activity, gives a geographically located core to my nuclear and extended family. Shelton provides a place for folks and friends to gather, to unscatter from around the world. It has also served as the setting for forging generational connection. My love of this place encourages me to ask about the lives and personalities of my great-grandparents, and it is at Shelton that I spend time with my grandparents. Something about a small house and the big outdoors provides the right fabric for people to relate well together here. An atmosphere of relaxed activity and open conversation pervades the boat rides, forest walks, work time in the garden, and feasts around the picnic table.

Through the act of identifying the special social and cultural aspects of Shelton, we can work to understand their sources and affirm their continuation.

(Carolyn, Tom, Sue, Claire, Tyler 1997)

VIII. Return to Residency

Thirty-five years after Isabel moved away, full time residents returned to Shelton. In January of 1999 Carolyn and Dale moved into the yellow farmhouse as full time residents. Aaron and I joined them for a spring and summer of gardening. On the surface this has meant that the hide-a-key is in a different place, fewer beds line the upstairs, we receive regular trash pick up service, there's a new outdoor hot tub and a washer and dryer in the shed, and the squirrels have been evicted from the attic. More attention is being paid to the upkeep of the yard and the structural condition of the house.

Tom and Toni began the construction of their new house up the hill in late winter of 1999. They moved down from Bellingham in mid summer and were living in the house in early fall. In making the move to Shelton, Dale, Carolyn, Tom, and Toni have provided company and support for each other that has helped to ease and accommodate their transitions into this rural lifestyle and new community. Meals are shared together weekly; most walking routes now pass through Tom and Toni's yard and daily chats take place here on the hill; we swap gardening advice; the dogs play together; Tom helps Carolyn and Dale with construction type chores.

In the summer of 1999 Jane moved down from Port Townsend to a retirement center in Shelton-proper. Tom and Carolyn acted as a great team in making this move possible. In such ways the loose configurations of family visiting that once took place at Shelton have been tightened and centralized as more of us come to live here.

By no means has this meant fewer visitors. In the spring through early fall of 1999, friends and family were up visiting nearly every weekend. Shelton was in a constant bustle of social activity. Carolyn's women friends were out in June, Daniel

came home for three weeks in July, Sara visited in both June and August, the Montgomery's traveled frequently down from Burien, WA, Sue, Phil and the kids came in July, and other friends showed up as well.

For visitors, lounging in the hot tub and spending time in the garden are the only remarkable changes in how time is spent. On the other hand the full-time residents have to go to work and more daily chores call for attention. With bills, house cleaning, and jobs, the endless stream of visitors can strain needs for personal space and time for quiet respite. Taking time just to relax and enjoy the place is difficult with so many projects and pressures. Learning how to successfully balance these elements will be key for the future.

IX. Cultural Sustainability

In Part Two: Foundations In Family, several general themes have been traced. They include the importance of history in forming contemporary identities, descriptions of changing daily life, the draw people feel to the land, and how an extended community has come to view Shelton as a special place for gathering. By understanding what elements of Shelton life have been important to community stability in the past and evaluating what is important now, clear directions for the future come forth.

During Isabel's 54 year tenure on the land, the major concern of domestic affairs was how to earn a livelihood from land. To make ends meet in the rural home economy required that all family members cooperated in farming and other chores. A strong network of neighborhood support was in place to provide opportunities for socializing and to assist people in times of need. Also, a sense of belonging permeated the place. Isabel was in her niche at Shelton, and she welcomed all others into her home.

Currently, Shelton plays a significant role in providing a center for gatherings of friends and family. A focus on sharing time and activities gives comfortable context to strengthening interpersonal relationships in this place. At Shelton visitors and residents enjoy aesthetic and physical connections to the land through many outdoor opportunities. Walking in the woods, going on boat rides, and working in the gardens are reasons and ways people enjoy time at Shelton.

Shelton is also the place where my family has roots. We take great pride and comfort in being of an old-timer family. Sara illustrates this pride in the following antidote:

> One day when my father, grandmother, and I were yelled at for picking blackberries on a rather unfriendly lot, and , followed home by these very people, we were accused of being new comers. This was the worst insult, and I felt pride when my father said no we weren't new--this place had been in the family almost 90 years. They were the new ones. Old neighbors knew Don and his family, and share memories of helping each other. In trouble for picking berries-how absurd! (Dietzman, Sara).

When reflecting on the potential directions for the future of Shelton Daniel's only desire "is that it remains the family place it has always been" (Dietzman, Daniel). Sara echoes his sentiment when she states:

> What I hope for this place is that family and friends will continue to be able to unite for food (soul and real), for forest, and for sea. I want to hear more music in this place. I want to learn more names of trees. I want to understand the transformations of the land better. I want this place to remain sacred to us all (Dietzman, Sara).

For Shelton to "remain sacred" I feel is it important to maintain the honored qualities and traditions of today and return a functional emphasis to the practices and philosophies of the past. From this perspective I have created a guide for cultural sustainability at Shelton:

- Make history accessible to everyone. Take pride in our old-time family status. Continue to collect and keep stories.
- Honor and build inter-generational connections.
- Maintain or build better connections with neighbors. Ask and return favors.

Learn from the social and practical exchange/barter system of visiting that

Learn from the social and practical exchange/barter system of visiting that

Isabel relied so much on.

- Build stabilizing connections with the Shelton-proper community.
- Be a part of a Pickering Road neighborhood discussion and decision making body.
- Let guests know they're always welcome. Encourage friends to feel comfortable and non-intrusive in visiting.
- Create ways for non-permanent residents to invest in the place.
- Expand infrastructure to accommodate more people (i.e. put in an outdoor, composting toilet down below, consider building guest accommodations).
- Formulate and communicate a clear and agreeable means of passing the property from generation to successive generation.
- Enjoy time spent and company shared at Shelton.

If these goals are give conscience attention, Shelton's legacy as a place for family and friends to gather in a grounding environment shall live on.

Part Three: Forestry

X. Forces Of Creation; Factors Of Condition

Since the arrival of the first loggers in 1853, trees have been the center of Euroamerican life in Mason County, Washington. It is now estimated that 90% of the 613,000 acres of "Timber County" are devoted to raising commercial timber or forest recreation (James 50). Very few of the gigantic conifers that once blanketed the area still exist. I know of no remaining, intact old growth forest ecosystem in Mason County. Forests are highly fragmented and for the most part intensively managed as plantations for timber production. The forested land now associated with my family has not been exempt in any way from the logging history and culture of the area.

In this setting where timber exploitation is the norm, outlining a future for forestry that takes more into consideration than maximizing harvest profits is vital. In Mason County, this type of awareness and action will not develop until the full costs and consequences of environmental wreckage are realized. Accountable action will ensue only after economic diversification provides people with more options for earning a livelihood. The meanwhile will probably bring shorter intervals between cuts, further reduction and degradation of wildlife habitat, and continuing erosion and loss of soil fertility. These large-scale problems require broad-based solutions. While I believe that both a stronger environmental ethic on the part of citizens and stronger state and federal polices are incipient and growing, the game of wait and see is not proactive enough for my tastes. In our forested Shelton acreage we have the opportunity to promote and protect a pocket of healthy forest. Twenty acres out of 613,000 is not incredibly significant, but even small plots contribute to large-scale restoration efforts.

To better understand sustainable forestry practices, it is helpful to grasp the influences and epochs that have shaped Northwest forest conditions over time. Climate, human patterns of habitation and extraction, and disturbance regimes all play important roles in the continual evolution of forest ecosystems. What we see today are really

"snapshots in time of a long and changing series of ecosystems shaped by many processes" (Hebda 227). There is no "climax" ecosystem, no final and most desirable forest condition. The present environmental state, just like all stages in history, is a response to changes in these many processes. Therefore to select a certain snapshot, say the one of old growth forests that Euroamerican immigrants encountered in the 1800s, as the one to retain as the preservation ideal would be a rather arbitrary and shortsighted choice.

While it is important to honor and recognize these processes of change, it is also important to realize that environmental change is presently occurring at a intensity and scope more extreme than any period since the last glaciation due to human disturbances (Hebda 250). Population increase, consumer demands, global warming, ozone depletion, species extinction, and nuclear contamination are all wreaking profound consequences on global environmental conditions. At this rate natural mechanisms for adaptation and adjustment may be overwhelmed. On the broadest level of environmental activism the goal is to slow or reverse the root forces of such widespread devastation. On a more local level, an appropriate preservation goal might be to help retain an ecosystem's "health" and ability to cope with rapid change.

Just as when considering the health of a person, defining "good health" in a forest is difficult. Highly variable and often of an intuitive and comparative rather than a quantifiable value, "health" is indeed vague terminology. In my definition health is equivalent with physical, mental, and spiritual well-being. It can not be cataloged or determined within the confines of a linear scale or exact criteria. Yet having a set of standards or considerations is helpful when trying to understand the conditions of a forest and the directions in which land stewardship should progress. My working definition of forest health is as follows:

- A healthy forest ecosystem maintains its natural functions and processes; for example it incorporates and recovers from disease and

disturbance, cycles nutrients and water, and transitions through stages of succession.

- A healthy forest ecosystem retains species composition in terms of richness, diversity, dominance, and frequency.
- A healthy forest ecosystem sustains diverse structural qualities such as flood plains, quantities of downed wood, habitat, and riparian zones.
- Forest health should be considered as a reflection of changing conditions, and contextualized within sucessional stages.

It is from this definition of health and the outline of sustainability given in the first section of this project that I base my arguments and plans for future forest management.

On the scale of geological time, today's hallmark conifer forests of the Pacific Northwest have been around for only a very short period of time. Thirty million years ago, a diverse hardwood forest occupied the lowlands of the Pacific rim. By about 10 million years ago, the Cascade mountain range had risen, forming a significant terrestrial barrier. The western slope of the range fostered a wet and cool climate unsuitable to many of the hardwood tree species. Between that point and 2.5 million years ago many of the hardwoods went extinct while conifers became much more predominate. By the "early Pleistocene age, about 1.5 million years ago, the Northwest forest had developed an overwhelming preponderance of coniferous species, and appeared more-or-less the same as today." It was at this point that the two distinctive features of the present Northwest climate, low summer rainfall and mild winter temperatures, came together for the first time to create a climate specially suited to the growing needs of conifers (Shultz 253-254).

Indeed, today the most remarkable feature of the South Puget Sound climate is the frequency with which it rains. Nestled between the Pacific Ocean and the Cascade Mountains, "the rain falls steadily and heavily... slanting down in wind-snapped sheets during the winter storms, drizzling through the spring nights, settling in heavy dew on

summer mornings" (Morgan 5). Just a couple of miles away from our place at Shelton the following data were collected:

Monthly Average Precipitation in Oakland Bay Watershed
Historical average, 54 years, 1932 through 1986

Jan	10.4 inches
Feb	8.2
Mar	6.7
Apr	4.0
May	2.2
Jun	1.7
Jul	0.91
Aug	1.2
Sep	2.6
Oct	6.0
Nov	9.7
Dec	11.4 (Oakland Bay A-9)

Total annual average precipitation = 65.01

Ninety percent of the annual precipitation falls late fall to early spring (Schultz 254-5). Summers tend to be fairly dry. The Puget Sound and Pacific Ocean act as temperature modifiers. Rarely are there hard winter freezes or many summer days over 85 degrees.

In this region of heavy winter rains and moderate yearly temperatures, temperate conifer forests flourish. Winters of high rainfall and mild temperatures allow for continuing photosynthesis, giving conifers and evergreen hardwoods the growth advantage over deciduous species (Perry 50). In fact evergreen plants accumulate 30% to 50% of their carbohydrates in the winter months (Schultz 254). The warmer temperatures and minimal rainfall during the summer months also contributes to making winter the preferable growing season for conifer plant species.

XI. Historical View

For many millennia humans have also found this environment suitable for habitation. Archeological records date the earliest indigenous settlement in the Northwest back 12,000 years old near Sequim, WA on the Olympic Peninsula (Dodds 1). It is believed that the Northwest Coast peoples had permanent villages located near areas of high seasonal harvest. Staying in the margins of saltwater, freshwater outlets, and forest they moved in semi-sedentary patterns to capture the harvest of salmon, berries, roots, and other products of the forest and sea (Suttles 259). The marine environment poured forth an abundance of food in shellfish, salmon and other fish species, and seaweed.

Similar to the later day settlement of the Euroamericans, native peoples cleared sites on the edges of the woods for villages. In lightly managed forest areas close to the settlements they harvested plants for medicinal, culinary, and crafting uses. Western red cedar was harvested for many uses: wood was used for the construction of housing, canoes, cooking containers, and artistic carvings; bark was fashioned into plates, diapers, and used as a fire starter; roots were constructed into baskets, and clothing (Del Mar).

Native peoples used fire to create and maintain clearings in which they cultivated the camas plant, a dietary staple. Fire was also employed periodically to clear travel routes out of the dense forest or to make meadow like clearings that attracted grazing game (Ervin 94). Such burning encouraged patterns of highly diverse regeneration by maintaining successional and open vegetation (Hebda 248).

When the Lewis and Clark expedition arrived at the Pacific coast in 1805 they were not so captivated with the climate or forest of the region. Clark complained in his diary on Monday, November 11th that:

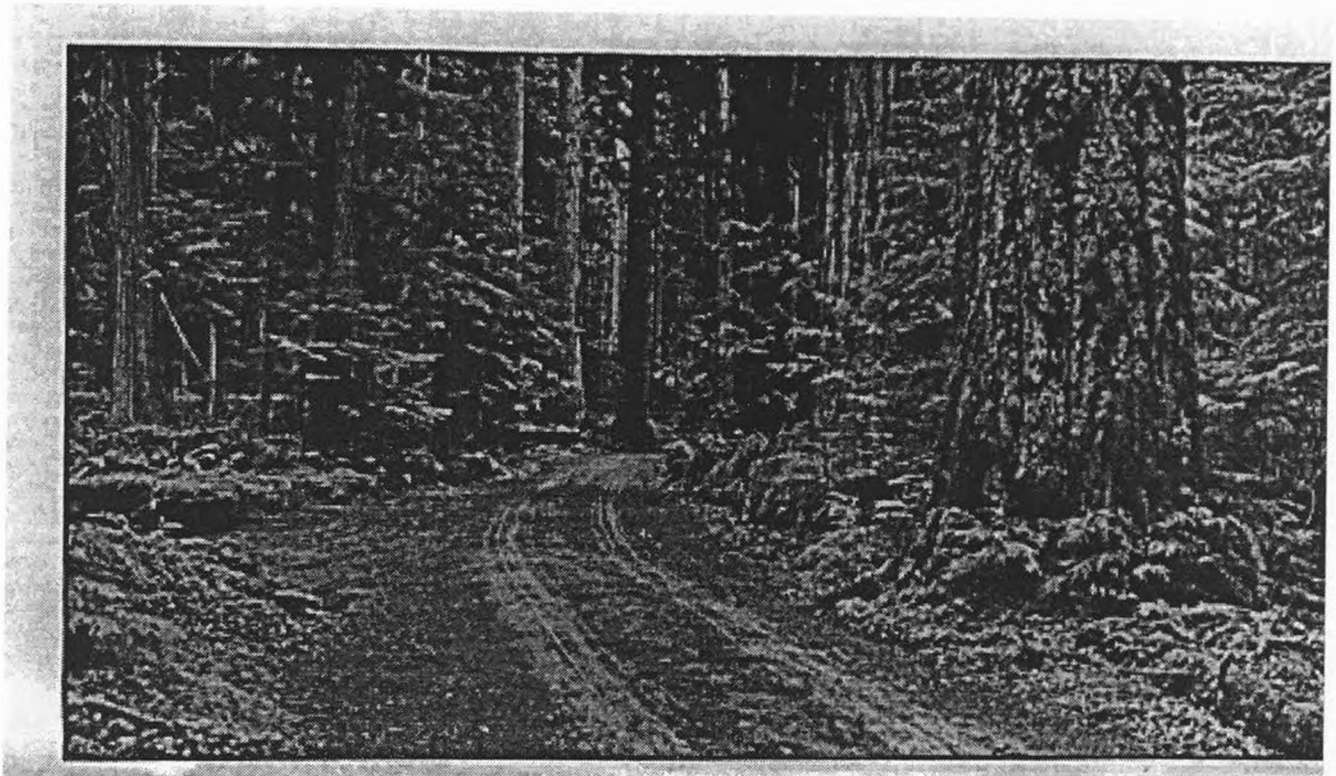
> "A hard rain all the last night we again get wet the rain continue(s) at intervals all day. Wind very high from SW and blew a storm all day... and our situation is truly a disagreeable one" (Schultz 9).

They also expressed frustration over the density and impassability of the woods (Robbins 316).

Others who followed their path across the continent did not find the Northwest so disagreeable. During the 1840s and 50s a "swelling tide of EuroAmericans... overran and pushed aside an already decimated native population for the most valuable agricultural lands." Validated by manifest destiny and a cultural belief that never questioned the essential rightness of viewing the natural world as capital, these new settlers set about exploiting the natural resources of the Pacific Northwest for the advancement of their personal economic status (Robbins 316).

Great profits could be garnered from logging the magnificent stands of timber that blanketed the Northwest, and with great rapidity the "forest primeval" fell to the axes and saws of the eager lumberjacks. Such forests as they encountered in the late 1800s are hard to imagine to a person familiar with the spindly plantations that now patch the county. Gigantic Douglas-fir with diameters exceeding 10 feet were not uncommon. Typical diameters were five to seven feet for Douglas-fir and three to four feet for mature western hemlocks. Western red cedars, Sitka spruces and pines also clad the land in dynamic pockets of diverse species composition.

Yet to the loggers, the breathtaking aesthetics of such forests could not compare with the profits garnered by harvesting the timber. These magnificent forests were cleared, spreading outward from waterways, as fast as these trees could be hauled away and milled. It was upon this harvesting of the great forests of the Puget Sound that Shelton-proper was founded. The first harvesting of timber by Euroamericans took place there in 1853. In 1861 Mike Simmons came to the Big Skookum inlet and built the first water mill in the area (Morgan 190).



View of the Forest Primeval before any timber is cut.

(Giles 4).

A promotional pamphlet produced by the State of Washington in 1911 entitled "The Logged-Off Lands of Western Washington" details the progressions in logging in the 50 years following Simmons:

> The operations of the loggers began at tide water where the giant tree trunks could readily be assembled in rafts and towed to the mills. With the growth of the industry, the interior country was penetrated, particularly along the courses of the larger streams, upon which the logs could be floated in their journey to market. Later on, the railroads came, and in addition to the service supplied by the great Trans-continental systems, numerous logging railroads have been constructed for the purpose of developing the more distant timbered areas. Left in the wake of the timberman are tens of thousands of acres of "logged-off" or cut over lands (Giles 9).

Piling Logs and Stumps with a Donkey Engine; much more rapid than the old way of burning in small piles.

(Giles 6)

By 1911 Washington's timber industry and subsidiary enterprises ranked number one in the country for value in annual output of lumber and lumber products (Giles 9). In the cutting frenzy little attention was paid to ensuring continued harvests for future years. Some considered Shelton-proper as merely a logging boom town that would not "endure after the forests were cut down" (Fredson 2). The idea of a second harvest was foreign to the time (Morgan 192). Instead of replanting tree seedlings the state government advocated the conversion of cut over lands to agriculture as the sustained economic hope for Western Washington.

Timber harvesting and lumber processing strongly influenced the developing economic and social text of the entire area. Many thousands of men were employed in logging camps. Profits held by Shelton-proper timber baron, Sol Simpson, and his successor, Mark Reed, funded developments in the municipal infrastructure. Railroad lines crossed the area as they worked to more expediently export the massive trees and lumber to markets in California and the East. It may even have been for these rail lines

that Henry Droscher worked after moving out to Shelton. When timber markets were booming, so was the economy of the Shelton-proper region, when they dragged, many Shelton-proper area residents suffered. In the economic slump of 1921 over "eighty-five thousand loggers were idled from Northwest camps. Those who worked saw their wages reduced from $4.40 to $3 a day" (Fredson 41). Obviously the role of logging and timber-centric forestry practices cannot be underestimated in the social and economic sectors of Mason County.

Logging operations varied greatly in size. Simpson Timber Company ran several different logging camps that each employed thousands of men. At the same time one-man, independent logging enterprises called gyppos worked smaller rural areas. In the Pickering Passage neighborhood a Mr. Kimball "logged wherever he could find a stick to log... and did a lot of pile driver work" as well (Jones, Al). From approximately 1921 to 1926 Charlie Kindred logged up the hill (in the area now owned by Ton Droscher, Simpson, etc...) He lived with his four or five sons in a float house equipped with bunks and cooking equipment in the Barnes' cove. There used to be an old log barn at the corner (where Pickering Road curves at Tom's driveway) that kept the horses employed in logging. Twelve to fourteen horses lived there. They dragged the logs down the skid roads, hauled them across the road and dumped the logs into the cove. A boom stick blocked the entrance of the cove until the logs where ready to ship out (Barnes). Later the Sawtells logged with horses up top, using a skid road that went up Barnes' property (Droscher, Don).

Advancements in technology have greatly altered logging methods. Motorized saws, trucks, and lumber processing units have made it possible to cut vast amounts of wood in very short time periods. Although mechanization has eliminated many traditional forestry jobs, logging is still the major industry of Mason County. Today Simpson Timber Company owns 287,000 acres of Washington timber lands, 170,000 of which are

in Mason County (Kinne). Company policy encourages clearcut harvesting on 50 year rotations (Baxtrem). To achieve efficient and high timber yields:

> increasing use is being made of large machines called feller/bunchers with which the operator grasps each tree in turn above its base, cuts through the base in less than a second.. and lays the tree gently down. These trees are sorted by species, gathered and dragged to the road's edge where the operator of a second large machine-a delimber/processor-is working.

Simpson Timber Company suggests that the use of such machines reduces soil compaction, ground vegetation loss, and the number of shattered tress. Such technological advances are a major part of their efforts to " becoming better stewards of (their) lands" (Kinne). Such machines are a far cry from the old spring boards and crosssaws that cleared the "forest primeval", but I am anything but convinced that they represent new achievements in sustainable forestry practices and management.

Human disturbance and logging has not been the only disturbance to the forests of the Puget Sound area. Natural disturbance regimes, including fire and wind, play an integral role in forest health. Accurate records on disturbance regimes are not easy to locate for the specific area and so more general figures of the area are used in the following discussion.

Wind is the most frequent disturbance that acts as a renewing and modifying agent for these coastal type forests (Bunnell 110). In my own recollection I can recall several large wind storms. The most severe of these occurred in the winter of 1996. An ice storm laced all surfaces with a good half inch of ice. A wind storm with gusts up to 70 miles per hour swept in immediately after. Huge numbers of small trees, the tops of unsheltered larger trees, and branches snapped to the ground. As a reoccurring event, wind serves as a good regulator of forest health by breaking off weaker individuals, dropping woody biomass to the forest floor to be broken down in the decomposition processes, and

opening up pockets or leveling whole stands in mature forests. Each of these effects gives younger, later sucessional trees the chance to grow up.

The natural fire cycle in coastal temperate rain forests is about 230 years along the Washington coast (Bunnell 110). Figures put out by the Washington State Department of Natural Resources (DNR) for DNR protected lands on the state's west side stated that there were 20 lightning fires that in total burned five acres in 1995. In comparison there were 58 fires sparked by recreational activities that burned over 146 acres in the same year (Washington State DNR). It is difficult to understand the natural fire regime in this area because most forest fire information dates from periods of active fire suppression policy.

During a visit to Shelton in the fall of 1999, I had the opportunity to talk with Al Jones, an old timer of the area. His family began farming just down the road from my family's land in 1888. Though he was not alive at the time he has stories of the great fire of 1910. This blaze was so big that residents thought that the world was ending; the incineration of judgment day had arrived. At mid-day kerosene lanterns were needed to see in the dark of the smoke (Jones, Al). On many of the old trees in the four acre reserve, and on some of the older trees remaining on the six acres, charred bark from this fire is still visible.

XII. Patterns of Succession

Fires such as the one described here, greatly alter the face of the land. It is rare however for such natural disturbances to "engender permanent change in community composition; rather, they initiate a changing sequence of communities that eventually leads back to the original" (Perry 100). This process of change, known as succession, occur as an ecosystem experiences and responds to disturbance and is a common and vital component of renewal for any ecosystem. Weak or diseased trees are often eliminated, making room for the establishment of young plants, and encouraging species and structural diversity. The transitional nature of succession creates a continuum of different forest stages, all points having unique and healthy attributes. The following diagram and lists illustrate the general characteristics of different stages during forest succession following fire:

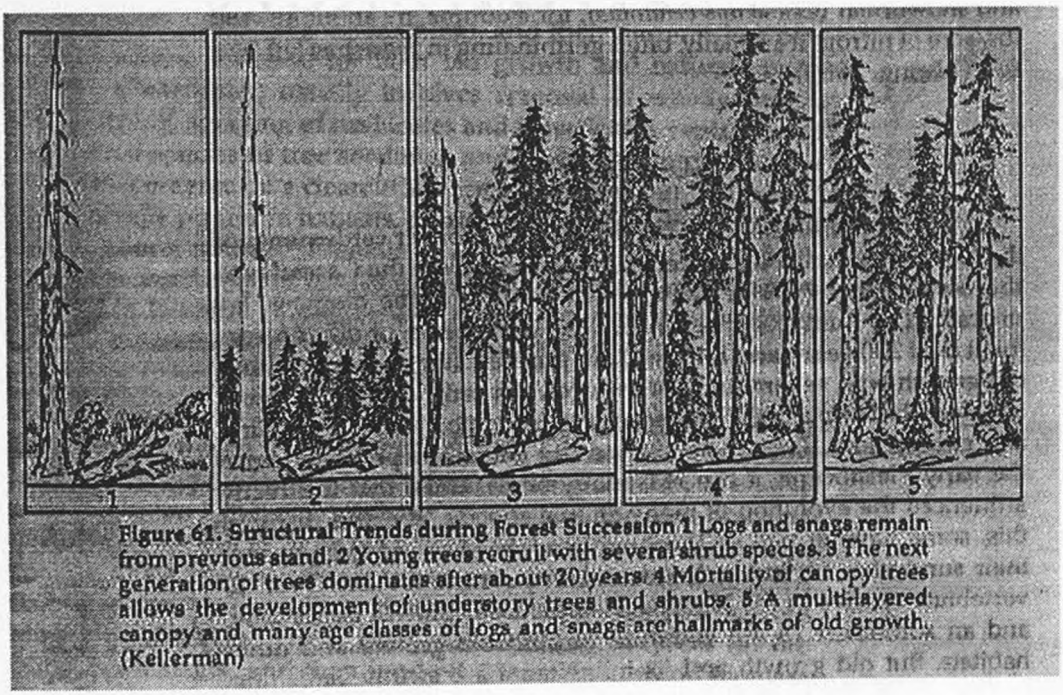


Figure 61. Structural Trends during Forest Succession 1 Logs and snags remain from previous stand. 2 Young trees recruit with several shrub species. 3 The next generation of trees dominates after about 20 years. 4 Mortality of canopy trees allows the development of understory trees and shrubs. 5 A multi-layered canopy and many age classes of logs and snags are hallmarks of old growth. (Kellerman)

(Schultz 55).

General characteristics of establishment phase:

Follows a major disturbance such as fire or windthrow.

New individuals establish from seed and resprouting.

Young plants are relatively free from competition with established plants.

High species diversity due to the mix of old and new species.

High horizontal patchiness of trees, shrubs, herbs, deadwood and bare ground.

When the canopy grows together, a loss of shade herbs and shrubs results (Spies 14).

General characteristics of thinning phase/stem exclusion:

Closing of tree canopy.

Decline in shade intolerant understory.

Decline in species diversity with the loss of above.

Mortality in canopy trees due to competition, diseases, etc... (Spies 16).

Dense stands with narrow diameter trees are more susceptible to breakage from wind and ice storms (Spies 23).

General characteristics of transition/steady-state/shifting gap stage:

Period can last 100 to 1000 years.

Original cohort breaks up and new tree establishment and understory growth increases.

Dead wood biomass reaches a low point before it begins to increase again.

New cohort reaches overstory.

Relics of the previous cohort die and it becomes true old-growth (Spies 17).

Very efficient and conservative system of nutrient recycling and energy flows (Schultz 56).

At Shelton, the natural disturbance cycles have been greatly disrupted in the last 150 years under human influences. Logging and the suppression of fire are the most significant examples of our artificial alteration of the forest environment. It is important to consider how forest succession differs following a logging operation, rather than a natural disturbance and what consequences this carries for long-term forest health and recovery.

XIII. Land Description

The forest that the Dietzman and Droscher families now own wears the legacy of the last century and a half of logging history heavily. Clearcutting, erosion, and plantation forestry practices have all taken their toll. Yet the forest still recovers, grows, and regenerates with wild determination. We now own three different land parcels. Each plot tells the story of a different logging legacy and represents a different successional stage in forest recovery from disturbance. Please see the aerial photo map (Appendix B) for clarification on geography and the relative locations of the plots.

Directly across the road from the Shelton farmhouse, Leora Dietzman owns eight acres of land that was "selectively" logged in 1982 (she purchased the land post-harvest) and replanted the following year with Douglas-fir seedlings. Because we frequently walk through this forest area to reach the beaver pond and other forest trails, I call this forest stand "Beaver Pond." Daniel remembers how, "before it was logged, the walk to the pond was a mysterious journey on a winding, mossy trail through the dark heavy wood. Rarely ventured alone. Since it has been logged, it is a only a short walk down a gravel road. The pond is the same, but the journey has lost its mystery" (Dietzman, Daniel). Some of the large second growth trees that Daniel recalls were left on the south and western shores of the beaver pond as riparian zone protection during the 1982 logging. The beavers do a pretty efficient job at capturing and containing water inside their dams. One stream drains the pond overflow from the southwest corner out to the Sound. This site is on Sinclair shotty loam soil with a 5 to 15% slope and has a site class of 3 to 4 (Appendix D).

Up the hill to the southwest, Tom and Toni Droscher own 10 acres of land that was clearcut in 1992 and replanted the next year with Douglas-fir seedlings. They purchased the land in 1997 from Lawrence Barnes, who had bought the land after the cutting. This acreage will be referred to as "Clearcut 92." Much of this site is steeply sloped. Starting from the hill's base and moving up and westward, the soils of the site are Sinclair shotty loam with a slope of 15-30%, Alderwood gravelly sandy loam with a

slope of 5 to 15%, and Everett gravelly loamy sand with a slope of 5 to 15%, having a site class of 4 to 5 (Appendix D).

Adjoining "Clearcut 92" my father and I jointly own a 6.2 acre stand that has an approximate canopy age of 35 years. This land was purchased from Lawrence Barnes in 1998. We call it simply the "6 acres." An old logging road follows the southern edge of the property line. The site is mostly flat and is on soil types of Alderwood gravelly sandy loam with a slope of 5 to 15%, and Everett gravelly loamy sand with a slope of 5 to 15%, having a site class of 4 to 5 (Appendix D).

While I feel it is necessary to first understand the forest processes that are taking place on our own land, a view confined to personal property lines is fundamentally limited. Healthy forest fragments don't translate into a healthy forest ecosystem. Ridges, drainage basins, and stream flow patterns create the definition of a naturally defined system, a watershed, much more effectively than do conventional property boundaries (Gordon 84).

Aerial photos, ground mapping, and familiarity with the land have aided in outlining the borders of the local watershed. The profound features of the landscape are of course the Puget Sound, the rise in elevation from the Sound to the top of the ridge where Tom and Toni's house is now located, the beaver pond at the bottom of this slope, and the streams that drain out of the land's contour into the Sound. This 100 acre is but a mini section of a broader watershed, but looking at this sub-basin in which our land is located is the most feasible option for the reach of this project. See Appendix E for a visual description of the watershed.

Land management practices on a single property will have consequences for all other areas of the mini-watershed. Therefore, identifying other landowners in this area and learning about their land management objectives has also been part of this project.

Included in this area is land owed by Lawrence Barnes. A 4 acre section that shares property lines with both the "6 acres" and "Clearcut 92" hosts a fine stand of old

growth and old second growth trees. This magnificent area has been off limits to cutting to safeguard the water quality of a spring that the Barnes family used as their drinking water source well into the late twentieth century. Lawrence purchased this land in the 1950s to protect the water. Lawrence also owns another 20 acres of second growth forest that was selectively logged in 1982 (Barnes). At this point in time Lawrence and Carol are concerned with forest preservation and have no plans for future harvests.

Between Lawrence's property and the Beaver Pond acreage a Mrs. Stewart of Alabama owns an eight acre forested strip. Dale wrote her a letter in November of 1999 asking if she was interested in selling this land. He received no response.

Land owned by the Duffield's parallels the other side of the Beaver Pond. Mr. Duffield is a trained botanist; he and Mrs. Duffield are avid bird watchers. The natural beauty and wildlife habitat of the forest environment are of prime importance to them and dictate their land management practices.

Simpson Timber Company owns land on the top of the ridge in 100+ and 40 acre plots. Both sections are slated to be clearcut in 2001. The 100+ acre section lies to the southwest of our properties. When it is cleared we shall lose our buffer from the weather and winds. The 40 acre section shares boundaries with the 6 acres and Lawrence's 20 acres. Simpson bought the land at a Mason County auction in 1943 and has not yet left their management mark on the land except for the construction of a road in 1977 (Baxtrem). One of our favorite walking trails and a Type 2 stream (DNR- Water and Roads) pass through the northwest corner of the section. The eastern half of the property slopes down towards the Beaver Pond. Three seasonal streams drain the area. I have attempted to communicate Simpson Timber Company about the possibilities of selling this property. To date neither my letter or phone calls have elicited a response.

XIV. Management Objectives

Outside of the politics and profits of logging, the extended community of Shelton treasures the surrounding forests. To ensure that the qualities we value in the forest environment exist in future years and generations I have formulated the following management objectives and goals:

- **Create or maintain forest recreation and educational opportunities.**

Walks or runs in the woods are a daily part of any stay at Shelton. People often enjoy quiet meditation time at the beaver pond, listening to frogs, feeling the thick gray of sky, tree trunks, and the still reflecting water. Bird watching, berry eating, salamander searching, and puzzling over animal tracks are just some of the many ways environmental education takes place in these woods and wetlands. For many of us that visit from urban lives, the opportunity to be in a wild, natural place is the greatest treat of all. Sara Dietzman reflects this sentiments when she writes:

> I have so many different memories of the woods. Getting lost, picking berries, feeling the old tall trees tower above me in a mysterious majestic way that was not only a reflection of the trees' grandeur but also of my small size. I remember a tremendous tree overturned half way to the beaver pond that put a detour in our path. And the base and roots and the resulting hole being so enormous. I remember the winding path, past the old barn and into the dark coolness of the forest.
>
> Later my memory of the same area of forest is light. It had been logged and I remember one day standing upon a huge stump, dancing slowly... The light, the sound of the trees, the birds. And I felt the life and peace and breath of the forest enter me. It was a moment of realization, of connection and of affirmation of life. (Dietzman, Sara).

Leora Dietzman also has memories of special time in this same place. She remembers how, "before it was logged I loved to go out and sit on the knoll, in the *big trees* and listen

to the birds" (Dietzman, Leora). Indeed the forests are a special place for discovery of the natural world and for new discovery of our selves. Something sacred is expressed by this evergreen landscape.

Walking in the woods usually holds some adventure of newness as well. Treks led by Grandpa Don always had the added bonus of getting the whole party incredibly lost. Dale recalls how, "we'd always used to take a hike. And (Don) would say he was never lost. So we'd come out at Phillips Lake or sometimes at Spencer Lake. And sometimes we'd never find anything. You'd always be going through slash over your head. Stuff that you'd fall through..." (Sobremesa). It was on these semi-trail-less hikes that I learned to navigate in the woods with confidence. I learned that by having a good sense of direction, familiarity of the land contours and forest types, and plenty of time to spare, I'll eventually come out somewhere I recognize.

Dale has translated the experience of so many wood's adventures into an incentive to make an intricate set of trails through the woods. He is now clearing small deer-like paths that wind and connect, forming loops to suit forest walks of any length. These trails make it easier to walk in areas of dense understory, and more people who are less familiar with the land are comfortable taking solitary treks.

- **Prioritize wildlife habitat.**

It is in the forest that it is easiest to remember that we are not the native residents to this environment. The squawk of the heron, the slap of the beaver's tail, the print of cougar and bear prints in mud, the light bounding and high tail of a deer, the aerial dives of hunting eagles and osprey, and the buzz of springtime hummingbirds all invoke heightened awareness and acknowledgment of the biological community supported by the forest.

The flora and the fauna populations are far from stable. From the fact that old growth "dominated the landscape probably since the early Pleistocene, it can reasonably be assumed that it directly influenced the evolution of many animal species, and as a result of this, some have grown so thoroughly adapted to old growth that their survival is seriously threatened in younger forest. Over 40 vertebrate species in the Northwest appear old growth dependent" (Schultz 46). Whatever we can do to help, or not impede the succession of the young forests under our stewardship to old growth-type maturity, will be advantageous to the survival of many species.

- **Create a social network for wise watershed management.**

Obviously many animals would be hard pressed to live in this area if all trees were stripped away. Maintaining forest habitat is an objective for the future management of our land. Unfortunately other neighbors in close proximity are not working towards the same ends. The neighbor directly to the east of the Duffield's is just finishing a clearcut operation of 10 acres that closely shades the eastern edge of the beaver pond. Simpson Timber Company plans on cutting 140+ acres in 2001. Logging on the 40 acre area that adjoins our land and Lawrence Barnes' property concerns me. This section includes several steeply sloped acres that are drained by three small streams that flow into the beaver pond. Clearing this area has the potential to cause high levels of erosion and water quality degradation.

In early February, 2000 I spoke with Dave Baxtrem of Simpson Timber Company about my concerns. We were able to resolve straight-forward questions revolving around line disparities. Stream and wetland classification had not yet taken place, so it was difficult to discuss specific management techniques for these sensitive areas. I did let Mr. Baxtrem know where my sites of concern are located. Though I feel it is unlikely to change the clearcut fate of this forest, I hope that by being a watchful and vocal neighbor I can ensure that Simpson will observe basic conservation standards.

In contrast to Simpson Timber Company, the 25 acres of our other close neighbor, Lawrence Barnes, is an oasis of mature, second growth, non-plantation forest. It provides valuable habitat for wildlife, and exemplifies the beauty and complexity of the unique temperate rain forests of the region. "Right now," as Lawrence and his wife Carol say, "those trees are just for looking at." It's comforting to know that there are no current plans for more cutting, but the unpredictability of the future and the high price these big trees would bring at market does not leave much assurance for the longevity of this forest. Hopefully my family will be able to step up and help in some sort of forest protection if any opportunity arises.

Creating some sort of communication network between landowners in the watershed would be conducive to establishing more unified forest practices. Obviously not all forest landowners have the same management objectives, but having an arena for discussion and sharing of information and plans could have very positive results for all. Continuing to have conversations with individual owners on a regular interval is the most effective step I can see in furthering this process.

- **Restrict residential and agricultural fragmentation of the forest.**

Logging is not the only threat to forested lands. The concrete and construction of residential development more permanently converts land out of forest than logging. To expand agriculture, even in recently cleared areas, would also eliminate land from potential forest regeneration. In a forest ecysystem, keeping land in forest should be a priority. More Shelton land will be needed for domestic and farming purposes, but attention should be paid to using land intensively before expanding to reduce the fragmentation of forest stands as much as possible.

- **Designate and monitor an area for domestic timber harvest and wildcrafting.**

An important concept of sustainability outlined in Part Four, the agriculture section, regards the use of resources from within a system. Imports often extract

resources from a distant ecosystem in an unbalanced, but hidden manner. Recognizing that I consume wood products in so many forms, and that I live in a prime wood fiber production area, I feel it is important to manage our forest lands in such a way that we can sustainably harvest wood and other forest products for domestic use. A small wood lot or an area open to selective harvesting could contribute wood for heating, crafts and more. Wildcrafting other forest products such as berries, mushrooms, plant-based medicines, floral greens, and fibers and dyes for textile work would be another way to maximize in-system resources in a sustainable manner.

Clearly recreation, connection to a wilderness space, wildlife habitat, restricted residential and agricultural growth, and the designation of a domestic harvest area are all priorities in designing a future plan for forest management on our land. Along with these guidelines, the goal of maintaining or restoring forest health should be paramount in establishing a plan.

XV. Field Study

While I am not a biologist or trained ecologist, I have been able to study the health of four forest sections in their varying stages of regeneration and succession. Looking at the Beaver Pond, 6 acres, 4 acre old reserve, and Clearcut 92 sections, I applied forest biology principles of succession, diversity, species identification, disturbance regimes, recovery, and species dominance and frequency to evaluate and compare the health of these forests within their varying sucessional stages.

In each of the four sections I randomly selected three to four 50 by 50 foot plots for examination. On data sheets I recorded the date, plot identification numbers, and a description of location. I then counted and cataloged, by species and size, the trees in the area. I calculated the total basal area (descriptive measure of trees and stands, cross-sectional area of the trunk at breast height (Baumgartner 3)) of each plot by using size averages (given on the example data sheet) and then adding all basal areas for a species total in the plot. These figures offer a decent reference to the relative dominance of individual tree species. Examples for this type of inventory system were taken from George Cox's Laboratory Manual of General Ecology.

No estimates were made of the biomass of woody understory plants, instead a simple survey of the visually dominant species in each corner of the plot was recorded.

Categories for the classification of snags and logs came from Trees and Logs Important to Wildlife in the Interior Columbia River Basin by Evelyn Bull et. al. (26 and 39). There are few snags, and it proved very difficult to calculate any figures for downed and decomposing logs. Approximations of volume are quite subjective or comparative. Diversity of species, the number of different species present, was determined on a comparative basis between plots.

For me the most interesting part of the inventory process was listing other species present in the plot and making general site observations. These, in many cases, are the spaces that capture the most telling aspects of the different sites. My awareness of what

is present in the forest skyrocketed by the plot, by the hour I spent in the woods making these types of observations (Appendix F- Forest Data Sheet).

Additional help in evaluating forest health was given to me by Don Theoe, a Stewardship Forester of the Washington State Department of Natural Resources. The Stewardship Forestry program of the DNR "provides direct one-on-one assistance to forest landowners...DNR foresters evaluate current forest conditions and suggest management practices to meet the landowner's objectives" (Washington State University 3). On October 29, 1999 Don Theoe paid an on site visit to Shelton. He brought many helpful articles and publications written for the small private landowner. He explained guidelines for the "Forest Stewardship Plan" and advocated that I do one. This could make our lands eligible for state funding of approved "stewardship" type projects. During his visit we also walked the land together. In this time he offered many valuable insights on forest health and suggestions for land management.

With the information garnered from the study, the forest consultation with Done Theoe, and the management objectives listed above I have made the following site specific evaluations and recommendations for future forest management.

XVI. Beaver Pond

Sampling and Results:

Stage in succession: Establishment Phase

Time since last logging: 18 years

Trees ranked by relative dominance as determined by basal areas: Douglas-fir, western red cedar, red alder, bigleaf maple, cascara

Dominant understory plants: Salal, red and evergreen huckleberry, hairy manzanita, ocean spray, holly, bracken fern, native vine blackberry.

Dead wood (snag and log) estimates: Stumps from the '82 cut remained with little evidence of decay; there were some downed logs with evidence of decay in one plot, and few snags in total.

Species diversity: Very high. Plots included salal, red and evergreen huckleberry, hairy manzanita, ocean spray, holly, bracken fern, native vine blackberry, hazelnut, Pacific dogwood, bigleaf maple, cascara, Douglas-fir, Pacific madrone, western hemlock, western red cedar, western white pine, thimbleberry, strawberry, sword fern, scotch broom, Oregon grape, salmonberry, red alder, grand fir, birch, wild rose, spreading rush, rattlesnake plantain, fungus, lady fern, vine maple, and blackberry.

Evidence and responses to disturbance: In the 1982 logging operation some taller Douglas-fir were left standing. Many of these trees have since been felled or topped by wind. Some small cedars were also left in the selective cut and now provide a ready seed source and some canopy. Without a thick overhead canopy the regeneration of sun tolerant species has been rapid, thick, and diverse.

Observations: These plots were very difficult to walk through due to either tall bracken fern and vine blackberry clusters, or dense stands of cascara and red alder. There were so many young trees that it took close to two hours to do an accurate survey of each of these plots.

Evaluations of health: This seems to be a healthy regenerating forest. It is capable of natural functions and processes as exemplified in the exuberant regeneration. Soil fertility and seed sources are adequate. Species composition is highly diverse in both trees and understory. Alders are present to fix nitrogen; Douglas-fir and cedar are regenerating well from natural seed sources; the planted Douglas-fir seedlings are now well established and reaching a good 20 feet in height. While not recorded on the data sheets, wildlife spottings of yellow belly sap suckers, grouse, and other small birds that appreciate the dense cover are common.

Recommendations for management: The species diversity is quite high. If we were managing for timber crops, a "pre-commercial" thinning would be necessary to reduce competition for the production trees. As our objectives are more of the recreation, preservation type, the diversity is welcome. As the Douglas-firs mature and the canopy closes, plant diversity will decrease. It is possible that in another 15-20 years the forest may benefit from a thinning. The Douglas-fir seedlings were planted at close intervals, and as the trees mature thinning to create greater spaced between trees would decrease stress and competition for moisture and nutrients. The stand could also pass more slowly through this thinning stage on its own accord (Theoe). Since another management objective for our forest is to generate some timber for domestic use, a future selective thinning of the Beaver Pond area is a logical source. I advocate looking into non-mechanized methods of harvest. The noise of machinery is highly disruptive and disturbing to wildlife and human neighbors. The weight of tractors and trucks compresses and destroys soil structure and sensitive flora. The scale of such a thinning would also be small and could be spread out over several years on an "as needed" timber basis.

XVII. Clear-cut 92

Sampling and Results:

Stage in succession: Establishment Phase

Time since last logging: 8 years

Trees ranked by relative dominance as determined by basal areas: Douglas-fir, Pacific madrone, red alder, western hemlock, western red cedar

Dominant understory plants: Salal, evergreen huckleberry, bracken fern, grasses, sword fern, native vine blackberry, wild raspberry.

Dead wood (snags and logs) estimates: Very few snags or big decomposing wood present. The ground is covered with sticks, branches, and other small wood that exhibit little evidence of decay.

Species diversity: Diversity in tree species is considerably lower then in the Beaver Pond plots. Understory diversity remains high. Plots included salal, evergreen huckleberry, bracken fern, grasses, sword fern, native vine blackberry, wild raspberry, Douglas-fir, madrone, western red cedar, blackberry, fireweed, red alder, western hemlock, fox glove, red huckleberry, wild rose, elderberry, rush, pearly everlasting, and thistle.

Response to disturbance: My own emotional reaction to the logging of this site will be a lingering effect of the operation. I remember walking up the old skid road that adjoins this property when there was no break in the cover of the large second growth trees. I can also remember the sheets of red anger that washed over me during the days that it was logged. I felt so helpless before the quickness of the mechanized process, so cut by the sounds of splintering trunks, and numbed by the whine of the chain saws. Rarely have I felt so much anger as I did then, watching the removal of a beautiful and familiar forest. Soon after the timber was hauled away, Douglas-fir seedling were routinely replanted.

In the eight years since the clearcut, the land has greened up remarkably. Red alders fill pockets down the south east facing slope; evergreen huckleberries, Douglas-fir, and a whole colony of western hemlocks have colonized the upper flat acres. After making it through the winter of 1997-98, one of the wettest seasons on record, the steep slope of the area has proved to be somewhat solid and not prone to landslides. In these rains though, more of the scant topsoil was washed away.

Some of the most notable differences on the land from before and after the cut are the changes in temperature and wind. On sunny days this exposed area is incredibly warm, in summer often unpleasantly hot, especially when compared to shady forest temperatures. On warm days the wind picks up, rising from the lower lands and the Sound. The storm winds of the southwest now also blow through this area with increased force.

Like the light seeking Douglas-fir, alders, and huckleberries, Tom and Toni have also colonized the sunny hill in the wake of disturbance. They cleared two acres for a house site, yard, orchard, and gardens.

Observations: One of the most prominent features of this site is the amount of woody material on the ground. Very little of it is substantial in size, rather the sheer volume of the branches, small logs, and debris is amazing. One plot has at least five large, 40 inch diameter stumps exhibiting few signs of decomposition. Often the walking was very difficult in the site as I'd either fall though holes in the wood matrices, or catch a foot in the entangling native vine blackberries. I was surprised to notice the uneven, patchy dispersal of different tree species. The alders, Douglas-fir, madrones, hemlocks, and cedars were each grouped in exclusive conglomerations. This may in part be due to variances in seed source, soil, moisture availability, or predation.

Evaluations of health: In clearcut operations like the one that took place here, "agencies drag the slash and stumps into piles and let them rot... (which) leaves a barren, eroding landscape" (Fritz II-38-39). Indeed, in many places the soil of this site is exposed

rocky substrate, lacking organic matter. Rather a sorry state when, "in the long run the most important resource of the forest in the soil" (Raphael II-47). In clearcutting, biomass and nutrients are transported away, exposing the soil, increasing water runoff, and worsening the extent of leaching (Raphael II-47). Due to the disturbance and loss of soil the acreage's ability to recover from clearcutting has been slowed.

Recommendations for management: When walking the land with Don Theoe, he was immediately struck by what he deemed the "poor regeneration" of some areas. For the reasons listed above I hypothesize that the patchiness of tree regeneration is due in great part to degradation of the soil structure and fertility. Since we aren't managing for fast timber, the need for immediate regrowth is not pressing. In a slow fashion, the plants that are naturally colonizing the land are all playing roles in rebuilding the quality of the site. More vegetation adds more organic matter. Shaded ground will cool the ground to temperatures more accommodating to organisms that live in the litter and soil. Alders fix nitrogen. In such ways the site is being prepared for sucessional flora stages.

XVIII. 6 Acres

Sampling and Results:

Stage in succession: Thinning Phase/Stem Exclusion

Time since last cutting: 35 to 50 years

Trees ranked by relative dominance as determined by basal areas: Douglas-fir, western hemlock, western red cedar, Pacific madrone, red alder, dogwood

Dominant woody understory plants: Evergreen huckleberry, salal

Dead wood (snag and log) estimates: I estimate that the amount of downed wood, mostly of a 6 inch diameter, is equal to twice the volume in standing trees. Most of these slim logs are suspended above the ground in the evergreen huckleberry understory. There are also some small 6-inch snags still standing to 15 feet in height. Most of this wood displacement occurred in the ice and windstorm in the winter of 1996.

Species diversity: Species diversity is quite low. Just Douglas-fir, western hemlock, western red cedar, Pacific madrone, red alder, dogwood, evergreen huckleberry, salal, sword fern, Oregon grape, and fungi were visually present in the plot surveys.

Responses to disturbance: The last major disturbance to effect this stand was the wind and ice storm of 1996. If my estimate is correct that the volume of downed wood in some places is indeed equal to twice that of standing live trees, then I am truly convinced of wind's power as a renewal agent in coastal forests. In the pockets where most trees, the majority being Douglas-fir, fell, western hemlocks are now sprouting up. As "the Douglas-fir forests of western North America are largely in the western hemlock zone" it follows common patterns of succession for late-successional western hemlocks to regenerate in the broken shade of the seral Douglas-fir. This is a clear example of how hemlocks remain in the understory until mortality in the canopy creates light gaps which they exploit (Schowalter 174).

Observations: One of the most interesting aspects of the study of this site was the identification of the "dividing line." In the photos below, the center line demarcates

two areas of adjoining forest that have characteristics and structural differences visibly discernible even in photos. Lawrence Barnes could give no clues on what if any past management practices may have lead to the differences. The right/southern side is much less homogeneous. There are fewer canopy trees, and the understory is more varied in species composition and structure. It would be a logical guess that the right/south side was thinned while the left/northern side was not. However, Lawrence cannot verify this.

Evaluations of health: Initially I was quite concerned over the health of the stand. Diversity seemed extraordinarily low and the Douglas-firs seemed to be densely packed in a plantation type formation. Many people have advised me of the imminent need for thinning. It has been stated in advocacy of thinning that tree "competition with neighbors for light, soil nutrients, and soil moisture... results in slower growth and increased susceptibility to insects, disease, and eventually premature death. We know of no other treatment that you can do to assure a more healthy productive forest." (Hanley 1)

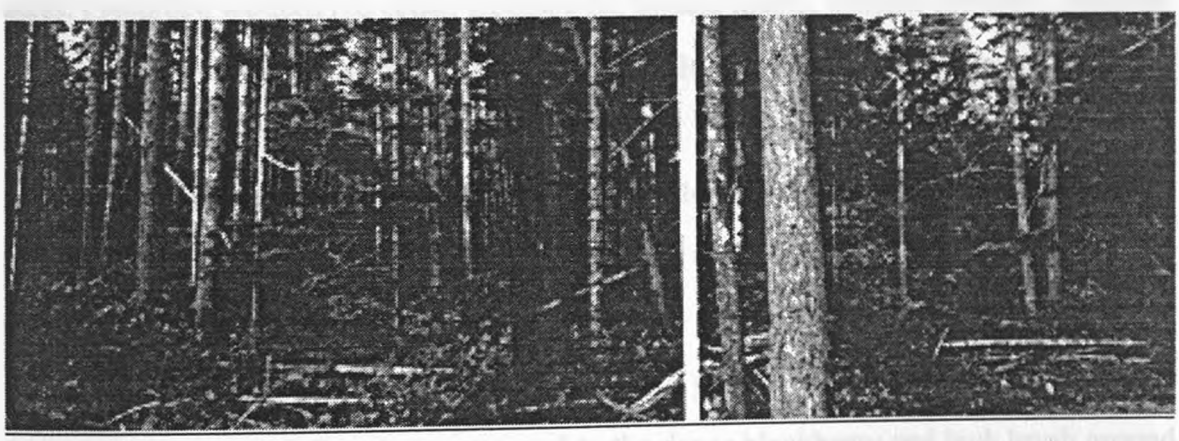
Observations in the forest, backed by readings, confirm that this area is in the midst of the thinning/stem exclusion phase. Slowly the stronger, larger Douglas-firs are crowding out weaker, smaller species. Stem density and diversity are decreasing in this natural process. I see no signs of insect damage or disease. It is unlikely however, that the forest will exhibit a "release" in growth as this natural thinning progression and period of slow growth has been so extended (Dickman).

Recommendations for management: Don Theoe advised me not to thin the 6 acres. While it is true the trees are densely packed and could perhaps benefit in terms of faster growth from a thinning, he suggests that it would not be wise to open the stand to more wind passage at this time. Just southwest of the 6 acre stand is the regenerating forest on the clearcut land of Tom and Toni and another 20 acres clearcut in 1994 owned by different neighbors. Most of the storms come from this direction. The open clearcut area provides no protection and so the 6 acres receives the brunt of harsh wind and

weather conditions. The high likelihood of Simpson Timber Company beginning a clearcut operation in 2001 on land just further to the southwest could worsen this scenario. Don Theoe did suggest that it may be safe to thin 200 yards into the forest, leaving a substantial margin to serve as a wind break (Theoe).

It seems prudent to wait until after the Simpson logging is complete, and the consequences of the clearcut can be foreseen before we make any moves to thin in the 6 acres. If conditions seem stable I would like to selectively thin trees in the interior region of the lot to promote growth and diversity. The timber would be available for firewood and building supplies at a convenient time.

As surrounding forests reach the 50 year cutting rotation maturity and are cut, this small lot may be a funny island of green on the top of the ridge line. I hope that we can protect this area, and help it mature into a more stable, diverse forest. Six acres will be awfully small in isolation. I am hopeful that someday opportunities and means to buy more land in this vicinity (i.e. the 40 acre Simpson plot) will surface.



(Line illustrating the two forest types-6 acres)

XIX. 4 Acre Old Reserve

Sampling and Results:

Stage in succession: Transition/steady-state/shifting gap phase

Time since last cutting: No logging has taken place on this site.

Trees ranked by relative dominance as determined by basal areas: Western red cedar, Douglas-fir, bigleaf maple, western hemlock, grand fir

Dominant woody understory plants: Sword fern, devil's club

Dead wood (snag and log) estimates: There was quite a bit of big wood on the ground though most of it was visibly disguised by big mounds of moss or over hanging foliage. More often than seeing logs on the ground, I would step down through the dense sword ferns and feel soft wood crumble under foot. There were a couple of extensively decayed snags that had been reduced in height over time to the equivalent of tall stumps.

Species diversity: In the dense shade of most of this area high understory diversity is discouraged by the closed canopy. Yet more species are present than in the 6 acres. I recorded western red cedar, Douglas-fir, bigleaf maple, western hemlock, grand fir, sword fern, devil's club, elderberry, bracken fern, salmonberry, lady fern, fungi, Oregon grape, wild raspberry, and mosses.

Response to disturbance: There is very little evidence of disturbance except for bark on some trees that still shows char marks from the 1910 fire. This stand seems to be the community most stable over the long-term.

Observations: The 4 acres offers such easy pedestrian passage through its sword fern understory, especially when compared to the dense blackberry and high brush ground covers of the other plots. At the end of October a thick layer of bigleaf maple leaves covered the ground. A core sample, showing 220 rings was taken from one of the large Douglas-fir. This sample did not capture the full radius of the tree, and I would guess that a complete sample would show another 150 rings. Just outside of the inventoried plots, grow some large hemlocks. They are the only mature examples I've seen of this

climax species in the region. At the depression of the valley, near the spring the ground is boggy. Fewer trees grow here, but the devil's club flourishes. I noticed many hemlock seedlings using logs and coarse wood for what are deemed "primary colonization sites" (Schowalter 176). It is a pleasure to be in this forest: so calm, strong, and beautiful.

Evaluations of health: If this isn't a healthy section of forest, frankly I don't know what is. I am concerned about how isolated this old stand is amongst the other more rapidly cycled lands of the area. I think it seems stable though, and acts as a terrific seed and organism source for neighboring sections in varying successional stages.

Recommendations for management: The area needs to be preserved in perpetuity. It would be a terrible shame if it ever became open to timber harvest. Yet I am presently in no position to influence its future management. We should maintain good communication with Lawrence and Carol Barnes.

(Big Douglas-fir 4 acre old reserve)

XX. Forest Sustainability

Out of the Puget Sound's unique climate of moderate temperatures and heavy rainfall, the temperate conifer forests have evolved. For thousands of years native peoples have lived in the edges of forest and sea. For a century and a half, the forest has been ruthlessly logged for the value of the timber, and replaced by residential development, agriculture, and tree farms. At the turn of this new millennium, the extended Shelton community has the opportunity to direct the future management of our forested lands. It is an exciting time of people expressing appreciation for the natural beauty and respite offered by the woods. Simultaneously, neighborhood logging operations such as the one just completed on the eastern shores of the Beaver Pond, and the slated operations of Simpson for 2001 continue the legacy of non-sustainable resource extraction.

It is easy to become discouraged and depressed in the face of large timber companies, profit oriented citizens, and acres of stumps. But these events and factors can also act as our catalyst for action, our summons for responsible management. What better motivation could there be for good land stewardship then witnessing the destruction of a once familiar and cherished forest?

I have made site specific observations and some recommendations for land management on the Beaver Pond, 6 acres, Clearcut 92, and the 4 acre old reserve. These are simply suggestions, and represent my first endeavors in applying concepts of forest health into practical applications for management. Continuing this learning process of research, field observations, and consultations with knowledgeable people will be imperative to our success in responsible management.

More important than specific management recipes in determining future forestry practices, however, are our land use objectives. I hope that in all future decision and actions we:

- Create or maintain forest recreation and educational opportunities.
- Prioritize wildlife habitat.

- Create watershed management network.
- Restrict residential and agricultural fragmentation of the forest.
- Designate and monitor area(s) for domestic timber harvest and wildcrafting.

with the ultimate goal of maintaining or restoring forest health.

Part Four: Hands In The Dirt

XXI. Perennial Past

(Cabbage, June 1999)

Ringed by old orchard trees, the yellow farmhouse gracefully suggests a long life surrounded by agricultural activity. The few Island Belle grape vines south of the house are another subtle way that Shelton's history in subsistence agriculture remains visually apparent. A few loganberry vines that Grandpa Don reintroduced to the place in the 1980s produce luscious fruit every June. Between such tangible records and the likes of stories recorded in Part Two on daily life there is every affirmation that diverse food production is possible on this land. Working from the premise that providing basic staples for oneself is a crucial aspect of a sustainable lifestyle, it is important to investigate what sort of growing practices best suit the land and community of Shelton. It is necessary to ask whether food production drains the ecosystem of energy and resources, or plays a durable part in the cycling of these vital elements. Answers can be found in examples from the agricultural history of the Pickering Passage area, studies of the land, and the social priorities of the people on the land- the folks whose hands are in the dirt.

One example of living within the local system and finding a balance in forestry and farming can be found in the pre-contact Native American societies of the Puget Sound and

coastal region. Living on the cusp of forest and water their food sources were highly varied. The marine environment was bountiful in shellfish and fish. Salmon especially played an important role in the Native American diet and culture. From the forest came supplements to their diet in berries and game (Squaxin Island Tribe 3), and "occasionally, they also would set fires to maintain the clearings in which they grew their second most important food, the camas plant... When white settlers arrived on Whidbey Island , the largest island in the Puget Sound, they found prairies filled with bracken and camas" (Diefenderfer 94-97).

From this one can learn that settled agriculture has been practiced successfully in the Puget Sound area for quite some time. Root crops in particular do well. It is also apparent that food provision was not entirely dependent on agriculture, but drew from marine resources, the hunting of animals, and the gathering of berries. The diversity in food sources undoubtedly provided greater food security to the coastal Indians.

It is this same pattern of diversified food systems that Euroamerican settlers like the Droschers found best suited the moderate climate and land fertility of the maritime northwest. They too enjoyed salmon and clams from the Sound, savored berries and game from the woods, and labored to clear away patches of the forest in order to grow fruits and vegetables, and to pasture animals. This conversion of logged land into productive farmland was often the most difficult of all steps. Logged-off or cut-over land, acreage that had been logged but not replanted, was often put up for cheap resale and advertised as prime agricultural land. Turning it into farmable land required intensive clearing of woody debris, brush, and stumps. Only after their removal could the ground be effectively tilled. Methods for clearing in the early years of the century included burning the area to eliminate undergrowth and tree remnants. Stumps were removed by tedious hand and shovel work, dynamite blasting, or various burning techniques. This process of conversion could take several seasons of labor before completion. Often an initial burn would be conducted, forage seed spread in the ashes, and then livestock pastured in the area during the long process of

stump removal (Harris 11-18). In this way farmers eked out pockets of pastures and fields within the broad expanse of forest.

An old farm journal kept by Al Jones' father at Hungry Hollow during the years of 1932 to 1942 provides details about truck farming, a very common version of small, diverse agriculture in the mid decades of Washington's history. Not only is the journal a great resource for fitting together the puzzle pieces that tell the story of my own family, but it also serves as a source of local growing information. The itemized lists of seed types, planting dates, harvest and sale records, expenditures, and fertilizer recipes create a very detailed picture of small-scale agriculture in the Pickering Passage neighborhood. Though far from complete in detail, the following is a calendar of general activity at Hungry Hollow Farm:

January- Sell grape plants, rabbit, eggs, spuds, parsnips, veal, chicken.

February- Sell eggs, milk.

March- Start plowing the fields. Sow field oats, clover. Begin spring vegetable planting. Sell eggs, milk.

April- Plow. Plant. Apply manure fertilizer to crop fields. Sell eggs.

May- Plow. Plant. Begin harvesting strawberries, raspberries. Sell eggs.

June- Start of loganberry harvest. Plant. Sell eggs, milk. Cut hay.

July- Harvest loganberries. Sell veal, milk, eggs. Cut hay.

August- Harvest and sell vegetables, pears, apples, eggs.

September- Harvest and peddle vegetables in McCleary, Bremerton, Olympia, Hilcrest, Shelton. Sell rabbits, eggs. Sow over-wintered oats.

October- Harvest and peddle vegetables in McCleary, Bremerton, Olympia, Hilcrest, Shelton. Harvest grapes and the last corn. Sell eggs

November- Harvest and peddle vegetables in McCleary, Bremerton, Olympia, Hilcrest, Shelton. Harvest the last tomatoes. Sell chicken, rabbit, eggs.

December- Last peddling trip early in the month.

Other farm profits came from the sales of cows, dogs, chickens, pigs, grape juice, cascara bark (a home remedy for constipation), seed corn, and the leasing out of the horse and plow to neighbors.

The farm journal also detailed interesting fertilizer recipes and pest remedies. One entry from 1937 reads, "Put 440 salmon on grapes. Put salmon on all of the old loganberries. Put 2 truck loads chicken manure on grapes. Put salmon on pear trees and some chicken manure also on big cherry tree." There being such an abundance of salmon that the fish could be used as a ready source of fertilizer speaks to a different time indeed. The manure came mostly from the farm, but on occasion it was trucked in. (Jones, Ed 1937). Another unusual source of nutrients came from starfish. These the Jones' either gathered from the Sound or purchased in large quantity. Imagine having the spring chore of prying starfish away from rocks until the buckets and rowboat were filled! (Jones, Al). The creatures were then planted out with pea seeds and potatoes (Jones, Ed 1935, 36). Other fertilizer applications included super and triple phosphate for the logans and grapes and potash with the potatoes (Jones, Ed 1937).

To combat pests, Hungry Hollow used slightly less organic solutions. Root maggots were treated in 1934 by spreading naphthalene flakes on the ground once a week. In 1937 the recipe for root maggot extermination read, "Pour 1 cupful of Kerosene over 1 bucket of dry sand. Stir well and distribute in small quantities over land." They used corrosive sublimate on the brassicas and dusted the tomatoes (Jones, Ed 1936). While there is no certainty in the assumption, it is highly probable that such methods were employed by most of the small farmers in the Pickering neighborhood, including the Droschers.

The journal also includes ten years of seed lists, planting dates, and produce sale records. I spent some time comparing and averaging planting dates from over the ten seasons to build a single calendar for spring planting dates. While not yet complete this process is showing that the Jones' planting schedule is very similar to ones recommended and employed today by regional gardening sources. It is exciting to have a reference source that was

developed through years of local experiences and under the same conditions of temperature and precipitation that I now grow in.

Unfortunately there is a void in local growing information and experience from the mid 1940s into the present. Ed Jones begin cultivation of Hungry Hollow Farm soon after his arrival in 1889. His entries in the garden log ceased only in 1941, the year of his death (the final year of entry in the log-1942 is written in a different hand). Since Ed Jones' days of truck farming at Hungry Hollow the agricultural emphasis at the place has declined. Grapes were replaced by a less intensive hay crop. More land was dedicated to the raising of beef cattle. More recently with the return of Al's children to the land, U-pick raspberries and strawberries, Christmas trees and the "piddle logging" of a couple trees a year have been the main land-based activities (Byrd).

Stories of farming at Shelton also dwindle from the mid 40s onward. Jane remembers taking the loganberry vines and posts from the eastern section of the lot in the late 30s. In the late 40s and 50s, the memory period of Carolyn and Tom's childhood visits to Shelton, Isabel no longer had a cow or chickens. There were still a few grape vines and she continued to keep a vegetable garden just southwest of the house (Sobremesa). Only the orchard persevered as a consistent producer of food. Canning marathons continue today as rituals for the late summer and fall months.

Reasons for the decline in agricultural focus at Shelton are multifaceted. In the simplest sense, when the boys moved away from Shelton there were fewer mouths to feed, fewer able hands to do the farming work, and less need for the cash brought in by some crops. Following the Depression era and the introduction of new social welfare programs, Isabel probably received additional forms of social security upon which she, as a single older women could live on. Her small garden, orchard and the cooperation of the neighborhood kept her in provisions.

In this same period, but on the national scale, small family farms disappeared or consolidated under larger firms at an alarming rate. During the 50s, in the wake of the W.W.II boom and on the eve of the Green Revolution, a dominant social philosophy of "get big or get out" translated into national policies that were of great disservice to small, diversified, family farms. Land use laws, tax breaks, increased mechanization, and the use of chemical pesticides and fertilizers pushed the agriculturally based home economy to the brink of extinction. Regulations designed to monitor large producers proved daunting, inflexible, and damaging to small growers. Markets for "minor produce: a bucket of cream, a hen, a few dozen eggs" disappeared (Berry-Unsettling 41). Even if strong intentions and adequate labor had driven the Droschers to continue to produce food for sale, social supports and viable markets were fading.

While agriculture is often promoted as the backbone of society, the occupation of farming has seemingly fallen into disrespect in the United Sates over the last 50 years. The family farm and the family farmer have been ruthlessly disposed of as inefficient and extraneous by our national agricultural policy and by a capitalistic economy that values quantitative profit over qualitative production. Since 1945, the number of farms in the U.S. has declined by two-thirds, while the area of land under cultivation has remained the same (Lehman 127). As a consequence of this type of growth, most local growers have been replaced by a strange breed of "agribusinessmen."

These large land owners manage for profit by producing monoculture crops with heavy applications of chemical pesticides, herbicides, and fertilizers. They are in large part responsible for the degradation of farmland by toxic poisoning, soil compaction, and erosion. In 1995 alone 1.2 billion pounds of pesticides were used in the United States, 4.7 billion pounds world-wide (Altieri 64). After harvest produce is shipped far away in large, fuel guzzling trucks to be processed in large industrial factories or to be sold to large supermarkets. On average, food travels 2000 miles before reaching the plates of consumers (Lehman 122). The economic, political, and physical separations between people and the

food they eat are extensive. Under the influence of the mainstream, corporatized system, the alternatives of growing food on small, organic farms under careful stewardship goes largely unnoticed.

XXII. On Our Land

From the perspective of a strong environmental ethic it is astounding to realize how conventional farming systems degrade wilderness, strip topsoil, eliminate crop diversity, and drain aquifers. From a vantage point of social concern large agribusinesses damage small rural economies by consolidating wealth in the hands of few and limiting the possibilities of land tenure for many. Yet, my purpose in this project is not to dwell on the faults of the dominant, conventional system of agriculture, but to thoughtfully outline my own participation in alternative options.

Through various farming internship opportunities I have become familiar with the advantages small scale, organic agriculture offers for positive environmental and social change. When I discovered permaculture, it all seemed to come together in a comprehensible synthesis. In this philosophy I found a compatible integration of environmental and social concern with a practical design plan for bringing change. Wow! Aaron and I promptly ventured off to New Zealand, a hotbed of permaculture activism and application. During our three months there we interned on seven different farms and then attended a three week Permaculture Certification course. Like sponges we absorbed information to the point of saturation. Upon our return to the States in early spring we needed some form of practical application to solidify this learning. Building a garden at Shelton offered us an ideal opportunity. Not only did my parents offer us a place to live and ground to cultivate, but they also tolerated our experimental attitude towards gardening and expressed sincere interest in the results.

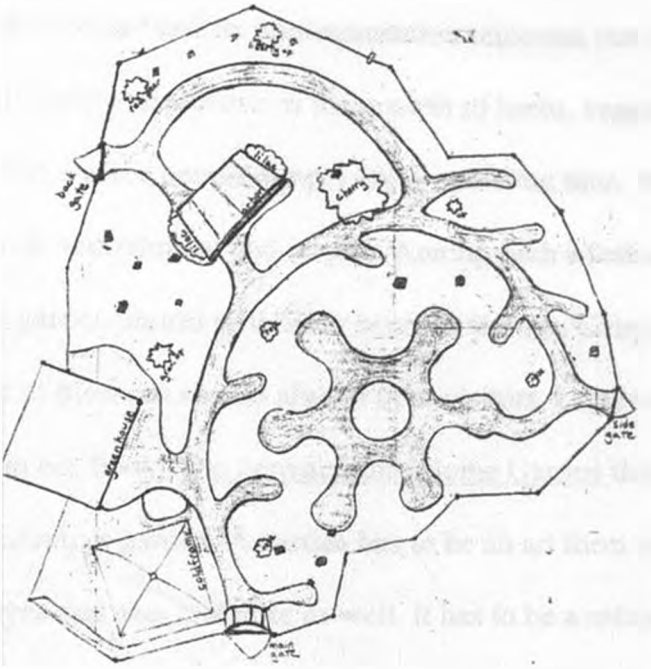
We decided to try the "no-dig" method of garden construction that we had learned in New Zealand. Instead of digging into the earth, and laboriously stripping away sod, we layered the new garden beds on top of the existing grass lawn. To build beds we laid wet newspaper on the ground and then mounded a good six to eight inches of mushroom

compost on top; to create paths we spread out cardboard and covered it with bark chips. We then planted directly into the new raised beds. Instead of laboriously stripping away the organic matter found in the sod, extra fertility and nutrients are added on top. Plants and seeds sowed directly into the upper layers of applied soil and compost grow in fertile contentment. The newspaper and cardboard act as barriers to the weeds and grass below. By the time the roots of the plants reach the newspaper barrier it has decomposed enough to allow the roots to work through and reach the pre-existing soil layers. The grass sod has also died and softened. The under layer of soil is available for plant growth without any digging on our part. The roots systems of plants and the tunneling action of earthworms encourage the mixture of endemic soil with the applied compost. Following this recipe we built our beautiful 75' by 50' "no-dig" garden.

(Garden and arbor, July 1999)

In formulating our garden design we had several considerations. One was the selection of the general location of the garden in the yard. Sun exposure, ground slope, and proximity to the house neatly collaborated in highlighting an ideal space just north of the house. A second major criteria of our design was to escape the conformity and inefficient space use of straight lines and boxes. By moving away from rectangular beds the proportion of path to garden bed space is reduced. Non linear designs also help make travel routes and work patterns more efficient. For example in a key-hole shaped path one can sit or kneel and work the semi-circle of earth that surrounds them, rather than constantly moving along a row (Woodrow 10). Energy flow was also important in our design. We looked for a way to capture, hold, spread, and focus energy in the garden both to enhance the growing environment of the plants and to heighten the enjoyment of human visitors to this space.

One of the major tenets of permaculture is to look for examples of efficiency and function in the patterns of nature. These patterns, as Bill Mollison explains in Permaculture: A Designer's Model, "are all about us: waves, sand dunes, volcanic landscapes, trees, blocks of buildings, even animal behavior." Generated by growth and flow, these patterns are "imperfectly round, never flat or square, linear only for infinitesimal distances, and stubbornly abnormal" (Mollison 71). They also exemplify efficiency in the capture and containment of resources (light, water, minerals). For our garden model we used the leaf and petal structure of a flowering plant. The main path arches around in replica of a main stem; leaf shaped keyholes branch away from the main path to access the middle of wider beds; the center and focus of the garden is in the shape of a mandala-like blossom. The beds splay out in a way that effectively captures light and water and minimizes path space in comparison to bed space.



(Garden sketch)

(Garden, gate, house, August 1999)

Energy flows through the main gate, past the cold frame and greenhouse, around the arch to the center circle. Stepping stones make an informal route from main gate to center blossom without disrupting this flow. We later added the arbor and back beds extending off of this flower, away from the main path with the intention of creating eddies of lower intensity to suit different growing practices and human activity. A strong, enclosing fence line limits the diffusion of energy and helps define the mood and space of the garden. Gateways both welcome and reflect passage

This garden design and its implementation represent our intentions to create a space that is both highly productive in the growth of herbs, vegetables, fruits, and flowers, and is also a place people simply enjoy spending time. People should come to the garden for both nourishment and respite. Among such a festival of color, sound, smells, and taste garden chores will never become tedious. Chirping robins, nibble-bite berries, and riots of blossom should always treat visitors. I agree with Linda Woodrow when she states in her book, The Permaculture Home Garden that "the best flavors come from the most seductive garden. A garden has to be an art form to be really productive. It has to feed the eyes and ears and nose as well. It has to be a refuge, a place of reflection, creation, and enchantment to produce peas that can be used to bribe children" (2).

Even with our tuned vision during the design and construction process we could not have predicted the fabulous bounty the garden poured forth. We started garden construction at the beginning of April. By mid May we were eating salads. June brought on the peas, nasturtiums, and herbs. July proffered beets, cabbage, and gorgeous flower bouquets. In August we feasted upon tomatoes, potatoes, beans, zucchini, cucumbers, broccoli and started saving the seeds of spring greens. The harvests and the seed saving activity continued into early November. Indeed the process of turning bare lawn into a blooming, bountiful garden that satisfied our produce, herb, and flower needs in just five months was a welcome surprise.

The space also succeeded in seducing people. My aunt Sue and uncle Phil enjoyed taking morning coffee under the arbor. Cousin Tyler was hard pressed not to catch and carry away all the gardener snakes that he hunted in the tangle of foliage. I found activity and engaging tasks in the daily rituals of tending the garden that hedged off loneliness

while Aaron was gone for the summer. Later when I too left Shelton for six weeks (July through mid August) the garden required so little maintenance that Mom only had to water and harvest.

(Carolyn and Orvis in the arbor, August 1999)

In August Carolyn made the following entry into the garden log:

> I really like picking bouquets for work, friends, home...
>
> Such a beautiful garden,
>
> such a profusion of color so satisfying to the senses.
>
> Love the bench with roses blooming above and kittens on my lap,
>
> reading and drinking mint tea in the late warm evening (Garden Log Week of August 9-15).

The steady flow of summer visitors to Shelton helped to eat the harvests and proffered a steady flow of praise. Most flattering and exciting were the invitations extended by

people who, captivated by our garden, asked us to come design and build gardens for them at their homes.

The garden's proximity to the road allowed the entire process from building to harvesting to be closely surveyed by all Pickering Road residents on their daily travels past. Aaron and I had many good conversations with folks whose curiosity brought them away from their walking routines or out of their cars to find out what we were doing. The no-dig method, the curving fluidity of our design, the intermixing of plant types, the hard work of fence building, and the unusual infatuation of two young twenty year olds with gardening were all topics of lively interchange.

All in all never have I experienced such satisfaction of putting all physical strength, creative energy, and learning focus into one project as I did in this garden venture. This confirmed for me that I do have the knack and desire to grow food, flowers, and herbs for myself and others in a manner healthy for the land and healthy for me. This means that in the future I would like to grow on a larger scale and provide more local food security and accessibility to my family and extended community. Yet I do not want to farm as a full-time occupation for reasons of economic stability and occupational burnout and I don't want to move away from the small, diverse, non-mechanized system. I have also come to appreciate the benefits of growing in partnership with a least one other committed person and a larger network of interested and invested people.

XXIII. Guidelines to Grow By

With these goals it becomes important to understand how food may be grown sustainably in this forest environment, and in a way that honors the patterns of daily living I hope to live. It is apparent that long lasting farming operations are equally dependent on environmental and cultural integrity and health. To give more specific direction to future planing I have created the following guide for pursuing sustainable agriculture at Shelton:

- **Foster long term connection with place.**

I can think of no other single characteristics more fundamental to good farming then intimately knowing the soil, seasons, micro-climates, and personality of the land. No book, brochure or recipe, can supplement an intimate relationship between farmer and farm. This sort of rapport takes time to build and develop. As part of the fourth generation of my family to be connected to Shelton, this sort of connection to the land is budding within me. I feel familiar and comfortable with the air, water, soil, and if given time greater on-site understanding could develop.

In this day and age, staying put goes against powerful social trends of domestic and vocational mobility. I, in the midst of my twenty-something desire to see the world, am anything but exempt from this phenomenon. But if I, or others, are serious about farming, the globe-trotter desires must be tempered. In New Zealand I had the opportunity to work on seven different farms. In this time I realized how important exposure to different lifestyles and growing techniques is to sparking interest and rekindling the desire to learn more about the art that is farming, the art that is living in a healthy, enjoyable, and responsible manner. These experiences also taught me that specific, and lasting learning takes place in the experiments and trials of one's own land. Thus, learning the subtleties of an environment through long-term residency and agricultural trials is definitely a key component to sustainability.

- **Be engaged in enjoyable patterns of work.**

It seems rather ridiculous to me how many people in this world spend their lives doing work that they don't enjoy or find satisfying just to earn enough money for food and shelter. Very often people do not have, or do not see opportunities to alter this scenario of drudgery. As usual, Wendell Berry is right on the mark when he critiques wage-labor and writes, "good work is not just the maintenance of connections-as one is now said to work 'for a living' or 'to support a family' -but the *enactment* of connections. It *is* living, and a way of living; it is not support for a family in the sense of an exterior brace or prop, but is one of the forms and acts of love" (Berry-Unsettling 139). When a person is empowered to make choices on how they spend their days, I feel any other choice but doing what one finds enjoyable and meaningful is rather ridiculous.

As I mentioned above, the experience of making the garden at Shelton confirmed a few things for me. I like growing things. I like the direct conversion of physical work and creative imaginings into food that nourishes my body, and colors and space that delight my mind. The delight that comes from preparing and eating a salad of homegrown, summer warm tomatoes and basil cannot be denied. Knowing these things, I would be quite foolish if I choose not to garden any more in the future. It also makes sense to investigate ways that I might meet more of my basic needs through farming.

The possibilities of success for a farming venture would last as long as such a positive and eager outlook was maintained. Keeping such an attitude fresh would require that the workload be manageable and dynamic. In food production there are indeed more strenuous, repetitive and labor intensive actives involved in farming than the harvest of dinner ingredients. Farming operations at Shelton decreased when the boys moved away and Isabel aged. The requirement of labor in even small food production systems is considerable. To ensure the long term viability of a farming venture, the scope of energy and labor put into food productions should not be excessive. I know how there is always

something more that can be done in a garden; a full-fledged production farm could be the nightmare of the never ending list.

One way of keeping farming efficient and manageable would be to recruit the reliable help and support of others into the process. Through the cooperation of multiple families living at Shelton, neighborhood exchange networks, and apprentice-type programs this could be done. Such collaboration would be especially helpful in the daily chores of animal husbandry. A focus on low maintenance crops such as perennial herbs, orchard fruits, and berries would be another way to keep food production manageable and enjoyable.

- **Prioritize wilderness; Contain residential and agricultural sprawl.**

Much of the land at Shelton is forested and all members of the Shelton community appreciate the forest for its recreational and wilderness value. I believe that most people would agree with Woodrow when she writes, "I also like to visit, and keep for my children to visit, the kinds of gardens that humans have nothing to do with creating. To me, it is important to use the minimum amount of land so as to leave as much as possible for (wild creatures) to find their livelihood in" (Woodrow 2). Priority should be given to preserving and restoring the forest ecosystem. Thus agricultural pursuits should be contained and focused around areas already developed as domestic centers.

Quite a bit of food can be produced from small areas when the land is farmed in an intensive manner with high levels of crop diversity. Wendell Berry advocates that sustainable, "good agriculture is virtually synonymous with small-scale agriculture (for)... smallness tends to be a prerequisite of diversity, and diversity in turn a prerequisite of thrift and care in the use of the world. In general... small farms tend to be diverse in economy, which is to say complex in structure... The more complex the system of structure, the more sound and durable it is likely to be" (Berry xi). This tenet of smallness and diversity resounds with the principles of permaculture. It is also the only

suitable model for farming at Shelton where the total size of the land area under consideration is 28 acres.

- **Incorporate non-cultivated foods into diet.**

Using non-cultivated sources of food would help reduce pressures to farm land rather than dedicate it to forest. Historically the marine environment has provided a great bounty of high protein food to residents. Fish populations, especially those of the anadromous species (salmon, sea run cut-throat, steelhead) have declined substantially in recent decades due to the loss and degradation of habitat and over harvesting. Until stronger protective measures are in place and populations stabilize and rebound, fish should not be considered as a major source of food. On the other hand, shellfish populations are thriving on our beach. Oysters and clams are abundant with little effort on our part beyond the occasional re-seeding of the beds. An all-you-can-eat protein source is a rarity and should not be ignored.

The forests also produce edible food including berries, ferns, mushrooms, greens, herbs, and roots. Wildcrafting such food can provide savory dietary staples and rare culinary treats. As in the case of the invasive Himalayan blackberry, there is no limit to the amount of fruit available for harvest, except the human capability to pick and process the berries. Every year we pick gallons of blackberries for eating fresh, making pies, freezing, and canning as sauce and jam. Wild strawberries, red and evergreen huckleberries, salmonberries and thimbleberries are also abundant for domestic harvest. On Tom and Toni's cut-over acreage the evergreen huckleberries are now one of the dominant undergrowth species. Once again, in a good season there are more berries that we could ever pick. Also, in the last couple of years I have begun foraging chanterelle mushrooms during the months of November and December and fiddle heads (young bracken ferns) in early spring.

The forest, in all stages of succession, produces good food with no investment or inputs of human energy. Gathering and eating these native crops requires very little labor. Recognizing the value (economic and nutritional) of foraged food is one more incentive to keep forests intact and protect them from development. In such wildcrafting an ethic of sustainable harvesting is vital.

Sensitive, and establishing or recently disturbed plant populations should not be harvested. No more than 5% of native plants or 25% of weedy plants should be harvested at a time. Harvests should be conducted in areas that are nearby and familiar so that effects from the harvests can be monitored (Thie 7-9). If basic principles such as these are observed a steady and continual food source is ensured without endangering the health of the forest.

- **Explore the integration of forests and agricultural .**

It is exciting to imagine the ways forest and agriculture might be blended in some areas, especially in margins that merge the two environments. Examples of this type of melding can be found in agroforestry, a land-use system "in which woody perennials are deliberately grown on the same land management unit as crops and/or animals" (Pilarski 475). Shade tolerant orchard, forage, and fodder crops can be under-planted or intermixed with the native trees and undergrowth to create a transition area of thriving diversity. This sort of transition zone could be high yielding in domestic crops, extend the land available for native wildlife foraging and habitat, and create a smooth and aesthetically pleasing transition from farm to forest.

- **Produce food for year-round harvest.**

In the maritime environment of Western Washington evergreen forests flourish. The mild seasons and abundant winter precipitation that are conducive to conifer forestation also suit food production. In the same way that the Douglas-fir and cedar stay green and grow all year, many hardy crops can be grown for year-round harvest. Rarely do temperatures drop so low that the soil freezes, and while low light levels do slow growth, many plants can survive in the ground throughout winter (Solomon 79). Hardy greens, brassicas, and root crops do especially well. Thus, winter gardening makes the provision of year-round, fresh, local, and tasty food possible.

Winter gardening has other advantageous as well. Growing special varieties of plants that are better suited to winter weather boosts the diversity of crops under cultivation. People come into better connection with the progressions of months by eating seasonal food. Steve Solomon asserts in his book Growing Vegetables West of the Cascades that it requires "much less work and takes much less time to grow a year-round garden than it does to can and freeze the summer garden" (83).

Expanding out from the traditional summer garden of tomatoes and green beans, and growing food for year-round harvest would lessen patterns of out-of-season, imported food consumption for Shelton residents. Crop diversification, eating in season, and decreasing the labor involved in food processing are all important steps in the direction of agricultural sustainability.

- **Improve soil fertility.**

Unfortunately the qualities of climate that make both forest and garden growth successful in this region do not extend to soil. In southern Mason County glacier movement during the last ice age stripped away much of the region's topsoil and deposited a glacial plain of moraine and glacial outwash (Environmental Assessment 4). Conifer forests recolonized the area and since that time soil, a product of organisms, climate, and rock interaction has continued to develop (Perry 267). The generalized soil profile of temperate forests in the Pacific Northwest is as follows:

> Thick layer of organic litter. Slow decomposition due to cool temp and highly acidic foliage.
>
> No upper layer of accumulating organic matter (Perry 269). The high acidity of foliage discourages worms. Without their mixing action organic compounds eluviate (exit).
>
> Well developed eluviation layer. The acidic conditions mobilize elements. High of amounts of rainfall leach out free elements and clay compounds to deeper layers in the soil horizon.
>
> Thick layer of accumulated organic compounds, clays. (Dickman 17).

In the forest environment of Shelton much organic matter is produced, but due to its high acidity it is slow to break down. Successive clearcuts have stripped away much of the topsoil that had developed. Now much of this soil lies as deep mud in the bay. This problem is most extreme on Tom and Toni's land up top. Successive cuts and catastrophic erosion have left their land a litter of rocks and hard pan clay.

As illustrated and described in Appendix D, the soils of Shelton are Alderwood gravelly sandy loam, Everett gravelly loamy sand, and Sinclair shotty loam. None of these soil types has a

site classification higher than 3. To amend the relatively low endemic soil fertility, large inputs of organic matter are desperately needed. Manure and seaweed are two locally available products of high fertility value. Nitrogen fixing alders also add their efforts to the cause. Planting green manure crops and sheet-composting on a large scale are other actions we can initiate now to add more organic matter and boost soil fertility for agricultural pursuits of the future.

- **Meet needs from within the local system.**

When considering such tasks as producing food, building fertility, or decreasing acidity in soil, another key to sustainability rests in using local resources. An export, import system of exchange is wasteful in transportation energy and tends to ignore the benefits and advantages of locally evolved products and information. By working within a system, deficiencies, abundancies, and limitations are much more apparent. For example, the high acidity of the soil does not suit some plants. Applications of calcium or lime to the soil modifies this problem. Two options for sourcing calcium exist. The first is to go to the store and purchase a relatively cheap, convenient, and imported product. The lime probably comes from a large ocean floor mining operation. The extraction of this product is more detrimental to the ocean ecosystem then it could ever be helpful to my local site. The second, more responsible option is to look for a local calcium source. At Shelton calcium is abundant in the shells of oysters and clams on the beach. However this form is not neatly packaged and raises challenges of how to make it more easily dispersible and soluble. Thought spent over this new puzzle is well worth a balanced, sustainable operation.

If it is a true desire for my family to ensure sustainability for our Shelton land, the only responsible choice is to live sustainably from this land. Unless we are living in balance within our own system we are contributing to the degradation of a more distant area. While I understand that no one, myself included, will be willing to excommunicate themselves from many of the conveniences and benefits of modern society, I do advocate growing food on a level that meets basic sustenance needs as a step in the sustainable direction. In adapting out diets to suit what we can grow seasonally, the appeal of imported and processed food will rapidly decrease.

- **Look for contemporary models of successful produce marketing.**

If family sustenance could be provided for and interest and energy for growing food on a larger scope still existed, the Community Supported Agriculture (CSA) model of growing fits well with the outlined priorities. In the CSA farm subscription format, customers commit to buying a full season's worth of vegetables from the farm prior to the season of harvest. The farmers in return deliver a variety box of produce every week to the customer. In this agreement the customers agree to shoulder some of the risks involved in producing food in the local setting. This gives farmers greater financial security and reduces the pressures of seasonal marketing. Best of all, by eliminating the middle-man position the CSA system puts growers and consumers in direct connection, allowing people to know and understand where, how, and by whom their food is grown. Many CSAs encourage customers to visit, volunteer, or in some way take part in the activities of the farm.

On a miniature scale, this is how our garden now functions. In cooperation with my parents, Aaron and I grew food for ourselves, my parents, aunt and uncle, and summer visitors. It does not seem far-fetched or too overwhelming to imagine expanding our growing capabilities to feed say a dozen local families if we were in full-time residency. The Olympia South Sound area has a strong organic, local food system movement. Organic growers presently serve the Olympia community at the Growers Market, via CSAs, and in sales to cooperative grocery stores. Yet the markets of Shelton and outlying rural communities of Mason County for fresh, direct, and organic produce, though small, are still untapped. If we ever sought them, opportunities for expansion beyond domestic production into larger markets would surely exist.

This philosophy of open markets for local produce has long been held by regional advocates. A 1915 pamphlet entitled "The Logged-Off Lands of Grays Harbor, Washington" went so far as to say:

> Intensive cultivation of the soil in Western Washington can never be overdone...With the ever increasing population of the cities the demand for our food products will constantly increase... There great markets at our very door should be supplied from our farms, orchard and gardens... Its accomplishment will mean so much for the

> development and enrichment of our section of the state, that it should inspire to a broad and magnanimous outlying of working plans (Harris 6-7).

The author wrote with complete assurance and a radical vision. Not only did he advocate diversified, intensive growing, but he also felt that the standard system of agriculture needed to be revolutionized. Instead of families holding large tracts of land he advocated instead that each family could be well served by no more that ten acres of cultivated land (8). Though it is now 85 years since the publication of this pamphlet, I am convinced that the argument remains strong and is even more applicable to the contemporary scenario of the sprawling Seattle-Metro area.

Working with these "guidelines to grow by," sustainable subsistence and small-scale production farming is possible at Shelton. We have the land, personal energy, community support, and historical examples to make it successful. A creative and comprehensive site plan is the missing element in the venture's preparation.

(Cabbage, August 1999)

Part Five: Dreams On Paper

Looking back to the definition of sustainability outlined in Part One, I am reminded of how important the three components, responsibility, health, and investment, are to ensuring long-term environmental and cultural integrity for a system. In Parts Two, Three, and Four, I outlined general guidelines for sustainability. They are as follows:

Family and cultural sustainability:

- Make history accessible to everyone. Take pride in our old-time family status. Continue to collect and keep stories.
- Honor and build inter-generational connections.
- Maintain or build better connections with neighbors. Ask and return favors. Learn from the social and practical exchange/barter system of visiting that Isabel relied so much on.
- Build stabilizing connections with the Shelton-proper community.
- Be a part of a Pickering Road neighborhood discussion and decision making body.
- Let guests know they're always welcome. Encourage friends to feel comfortable and non-intrusive in visiting.
- Create ways for non-permanent residents to invest in the place.
- Expand infrastructure to accommodate more people (i.e. put in an outdoor composting toilet down below, consider building guest accommodation).
- Formulate and communicate a clear and agreeable means of passing the property from generation to successive generation.
- Enjoy time spent and company shared at Shelton.

Forest sustainability:

- Create or maintain forest recreation and educational opportunities.
- Prioritize wildlife habitat.
- Create watershed management network.
- Restrict residential and agricultural fragmentation of the forest.
- Designate and monitor area(s) for domestic timber harvest and wildcrafting.

Food production sustainability:

- Foster long term connection with place.
- Be engaged in enjoyable patterns of work.
- Prioritize wilderness; Contain residential and agricultural sprawl.
- Incorporate non-cultivated foods into diet.
- Explore the integration of forest and agriculture.
- Produce food for year round harvest.
- Improve soil fertility.
- Meet needs from within the system.
- Look for contemporary models of successful produce marketing.

These goals lay an excellent foundation for a sustainable future of Shelton. Integrating and translating such ideals into tangible reality is the next challenge. It starts with putting these dreams on paper.

XXIV. Site Plan

Permaculture provides language, techniques, and principles for this type of site analysis and design. In Bill Mollison's definition, "permaculture design is a system of assembling conceptual, material, and strategic components in a pattern which functions to benefit life in all its forms. It seeks to provide a sustainable and secure place for living things on this earth" (Mollison 69). More specifically, permaculture design steps include:

- Observations (what is this place?)
- Mapping (where is everything?)
- Analysis of elements (how do these elements connect?)
- Sector planning (where should elements be placed?)
- Experience (does this work?)
- Feedback loops (more questions and evaluation) (Imes).

Up to this point this thesis presents observations and element analysis of Shelton. This section on site planning seeks to synthesis this information and visually portray concrete means of implementation. Additional attention is paid to the sector analysis of external energies (sun, wind, storms, frost, water), land slope and orientation, and zoning.

Zone analysis, the placement of elements in use and access based areas, helps to encourage good and efficient management of land. Each zone is based on importance and intensity of use. For example, the house, in which most time is spent, is the center of Zone 1. The forest wood lot, an area visited less frequently, would be placed in a zone of further distance. When well organized, a site requires less external energy to function, and wastes less space. The generalized zone layout for Shelton is as follows:

Zone 1:
house
rootcellar/pantry
bathroom facilities
recreation/lounging space (yard)
herb and vegetable kitchen garden
meeting/workspace
wood storage
tool storage

Zone 2:
greenhouse
guesthouse/studio
barn-milking stand, feed storage
water storage for domestic and agricultural use
poultry yard and hen house
intensive garden beds
compost center
orchard

Zone 3:
extensive fruit and nut orchard
foraging area for animals
hardy perennial crops
grain crops
pasture
bees

Zone 4:
wind breaks
agroforesty system
managed wood lot

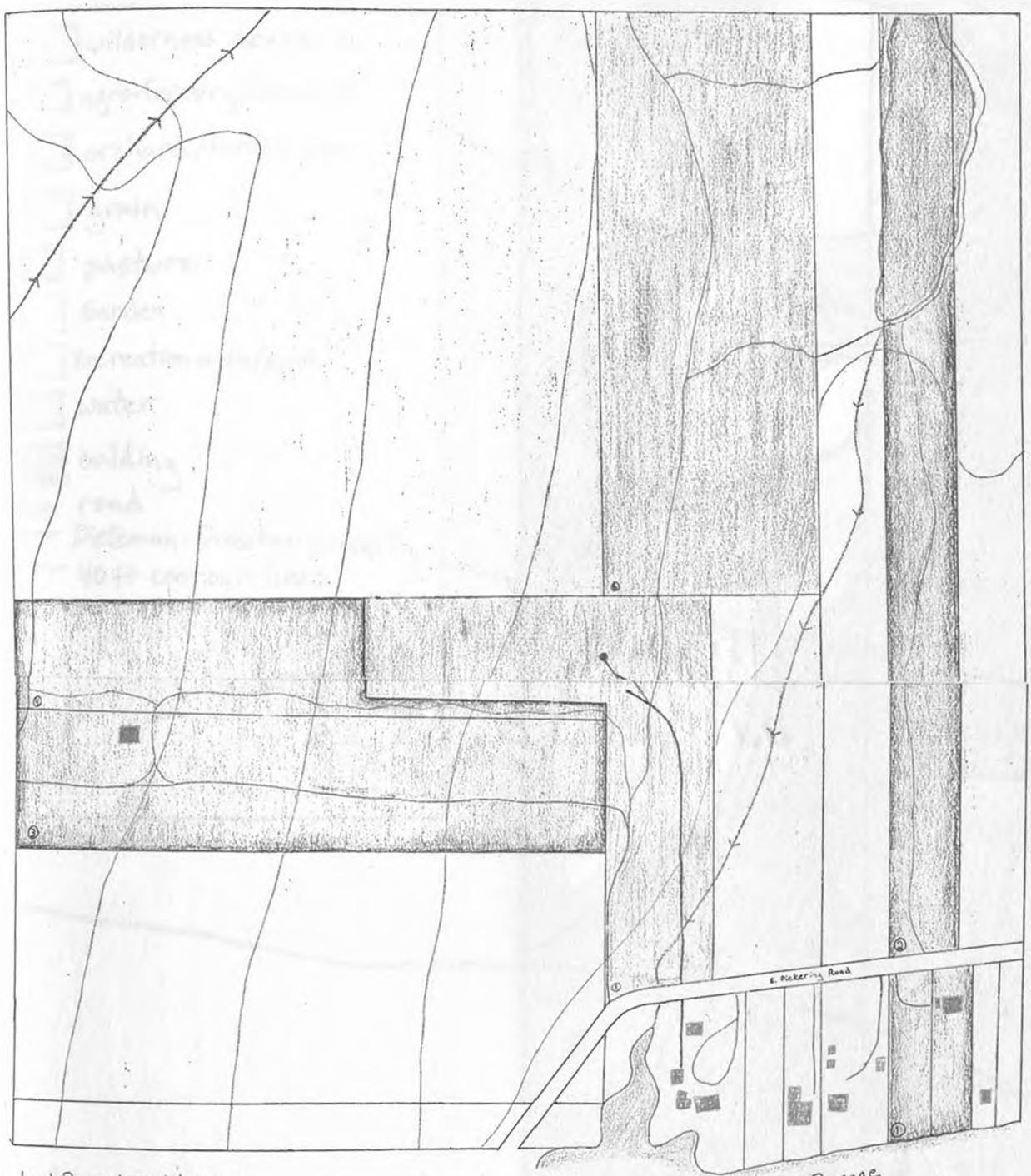
Zone 5:
native forest
wilderness preserve

An additional assumption incorporated into the site plan, not clarified elsewhere in the project, is that plans for Shelton's sustainability are based upon three residential households. I believe that our land can support six adults and two children on a full-time basis, plus guests. Currently Dale and Carolyn live in the yellow farmhouse, Tom and

Toni live up on the hill, and Aaron and I envision ourselves making a home on the 6 acres. While it is important to build from the current scenario, plans must look beyond our own generation. In this design the households interact as cooperative but independent units. Flexibility exists for the degree of autonomy or interdependency people wish to engage in. Each household has its own living area, kitchen garden, and recreation area (i.e. zone 1). One household, currently it would be that of myself and Aaron, would head the larger farming and forestry operations (zones 2-5). These ventures would take place on shared land and with shared resources; in return all produce and products would be shared.

A second assumption fundamental to the design is that our priority in food production is to first meet the basic subsistence needs of the full-time residents. Only if adequate land, energy, and time exist after this goal is met, would operations expand to small-scale market production. This "wait-and-see" philosophy is not conducive to the long-term design process. Therefore the design estimates on the side of maximum agricultural development. In accordance with the priority to minimize domestic and agricultural sprawl, no more land than what is illustrated would be used for these purposes.

Shelton Properties



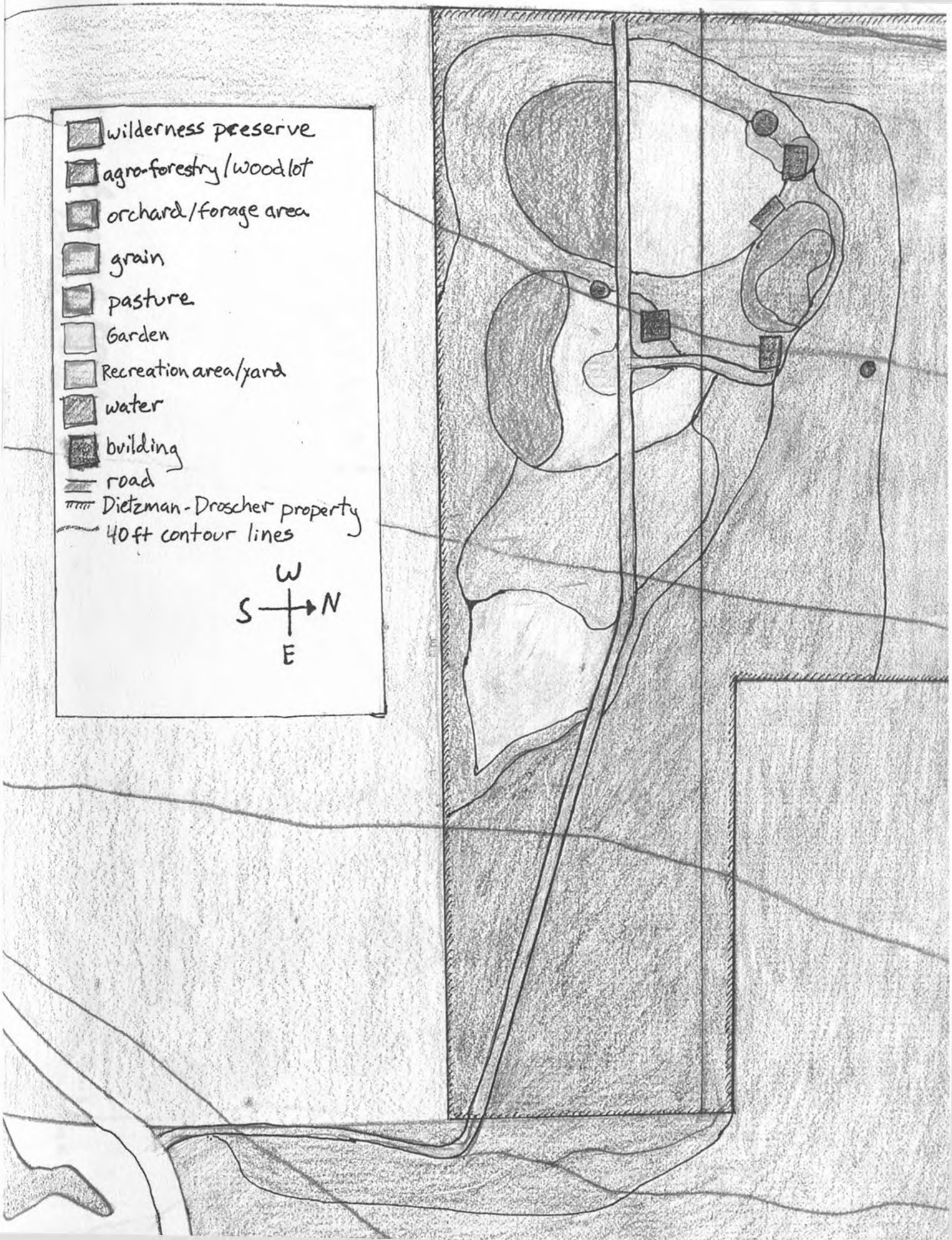
Land Ownership and Acerage:

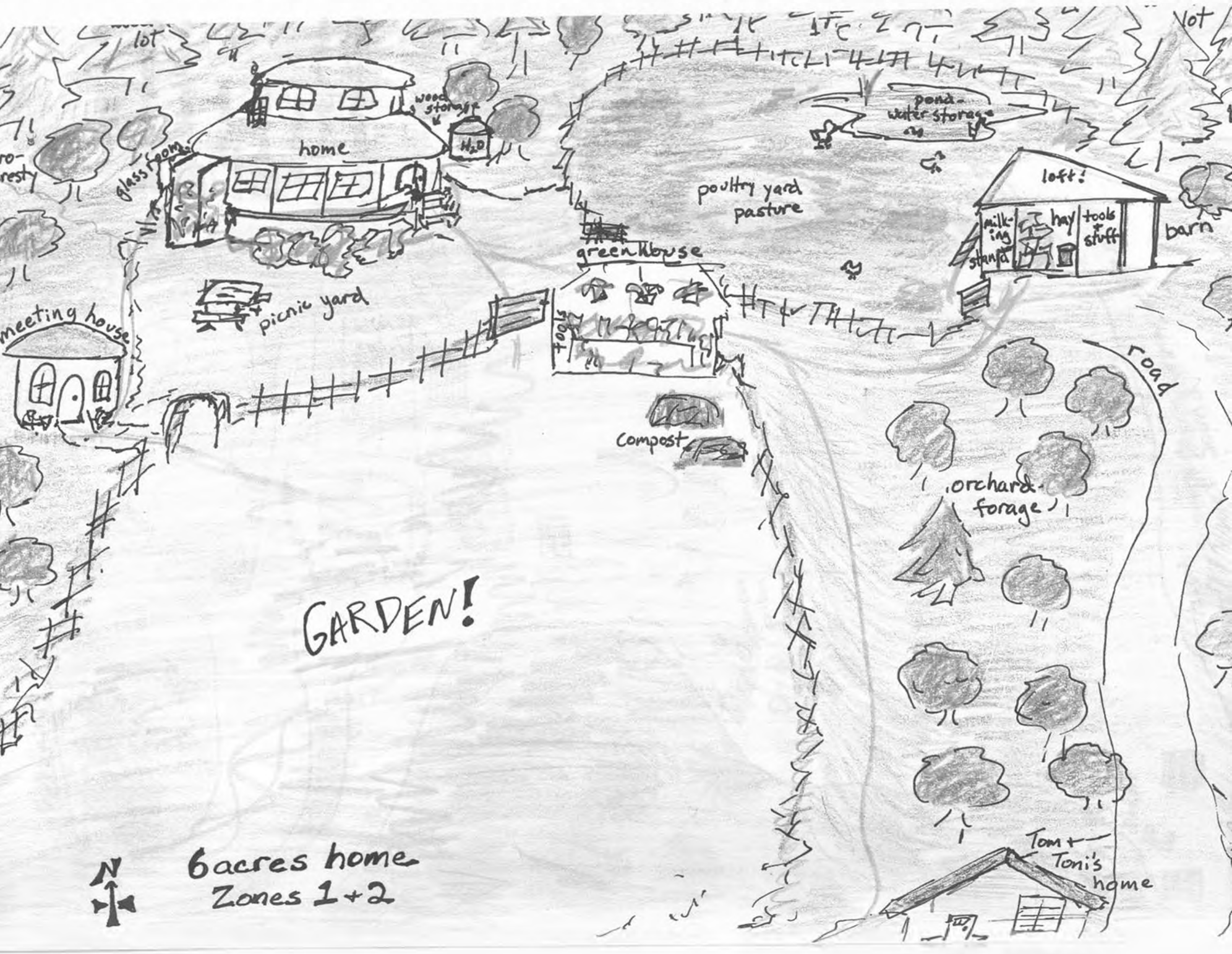
- Dieteman - Droscher 1) 2.2 2) 8 3) 10 4) 6.14
- Various owners, residential/non-forested area
- Lawrence Barnes 5) 9.5 6) 14.75
- Simpson Timber Co.
- Stewart
- Duffield

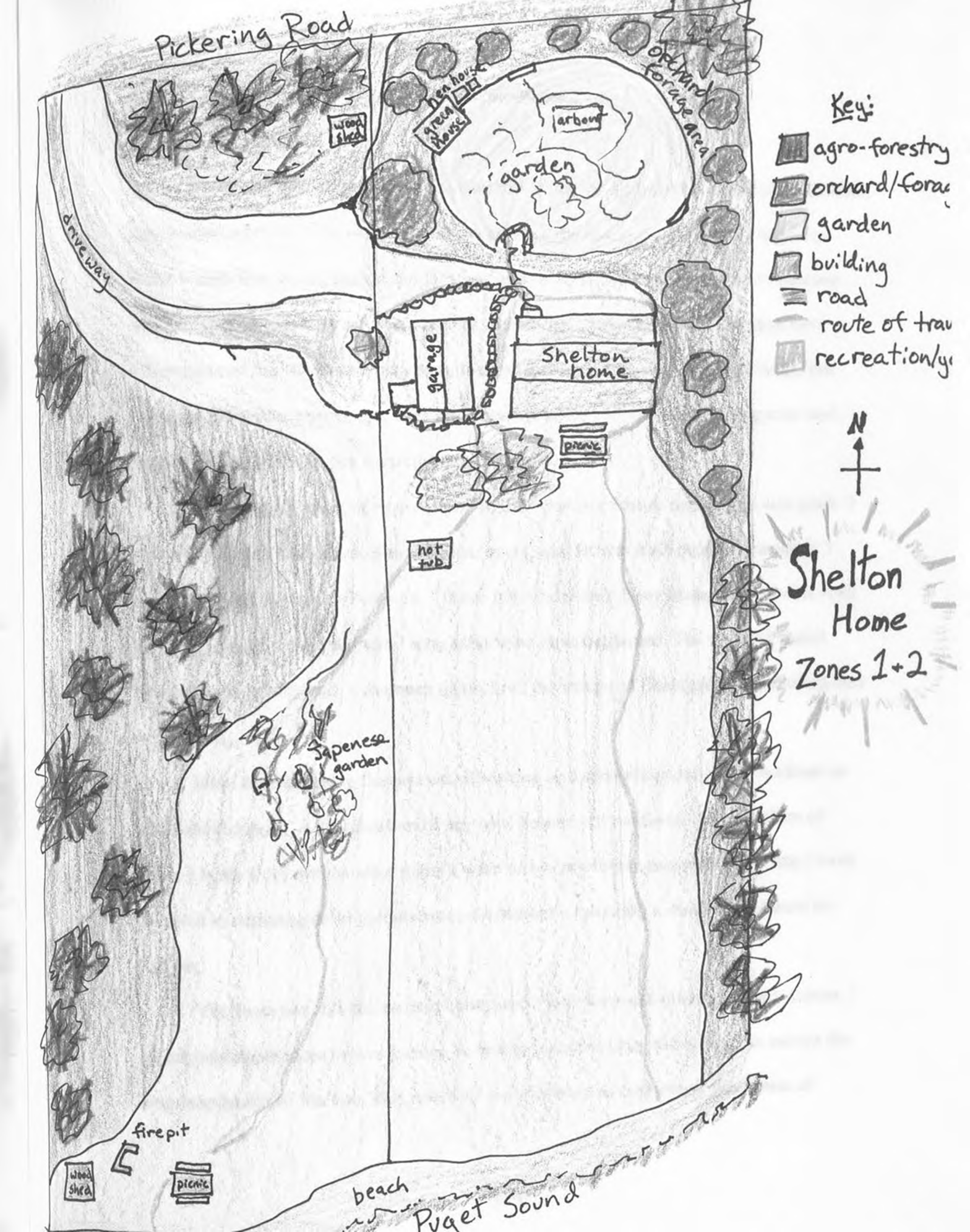
Legend:

- Contour intervals of 40 feet
- Walking paths
- Unpaved logging road, driveways
- Residential structure
- Stream with flow direction
- Beaver pond, Puget Sound

Scale 1" = 150'


wilderness preserve
agro-forestry/woodlot
orchard/forage area
grain
pasture
Garden
Recreation area/yard
water
building
road
Dietzman-Droscher property
40 ft contour lines
W
S
N
E


lot
lot
home
wood storage
H_2O
glass room
pond-water storage
poultry yard
pasture
loft!
milking stanch
hay
tools & stuff
barn
greenhouse
picnic yard
meeting house
tools
compost
road
orchard-forage
GARDEN!
Tom + Toni's home
N
6 acres home
Zones 1+2


Pickering Road
wood shed
hen house
greenhouse
arbour
garden
orchard
forage area
driveway
garage
Shelton home
picnic
hot tub
Japanese garden
fire pit
wood shed
picnic
beach
Puget Sound
Key:
agro-forestry
orchard/forag
garden
building
road
route of trav
recreation/g
N
Shelton Home
Zones 1+2

XXV. Conclusions

When I first daydreamed about what this thesis could be, what forms it could take, I envisioned a project that would somehow capture the essence of Shelton. I hoped to create a work that would reflect the familiar and relaxed, yet dignified tenor I associate with this special place. I wanted to capture the stories of my family's early days here before more of the tales were forgotten, lost, or further faded. I also wanted to lay out fundamental management objectives and social priorities to aid us in making wise and responsible decisions in our future lives at Shelton.

This weighty stack of paper is one manifestation of those imaginings and goals. I also have binders and boxes of mementos, maps, and letters that I could not include. I met new people in the Shelton area. I have new memories from taking time to visit with the older people in my life, who I may otherwise have neglected. The voice of Isabel speaks clearer to me, and I can once again hold the image of Grandpa Don's smiling face in my mind.

More than anything the process of writing and compiling this thesis has been an act of clarification. A clarification of my own values and passions, a clarification of where I come from and on what paths I want to see my future progress. I feel that I have achieved in outlining solid guidelines and actions for ensuring a sustainable future for Shelton.

Yet, I can not call this project complete. I look forward to hearing more stories. I eagerly anticipate more voices joining in dialogue, conversing about ways to ensure the long-term health of Shelton. But, mostly I look forward to converting this thesis of

thoughts and words into physical action. There are woods to watch, gardens to plant, and fences to build.

Appendix A

Simplified Droscher-Dietzman Family Tree

John Ericsen Rosheim - Britha Olsdatter Hopp
1825-1877 1825-1919
Vik-Sogn, Norway Vik-ogn, Norway

Olina Rosheim - Lars Knutson Afdahl
1855-1927
Lanesboro, Minn.

Isabel Rosheim Afdahl - Henry David William Droscher
1883-1976 1876-1923
Flandreau SD London England

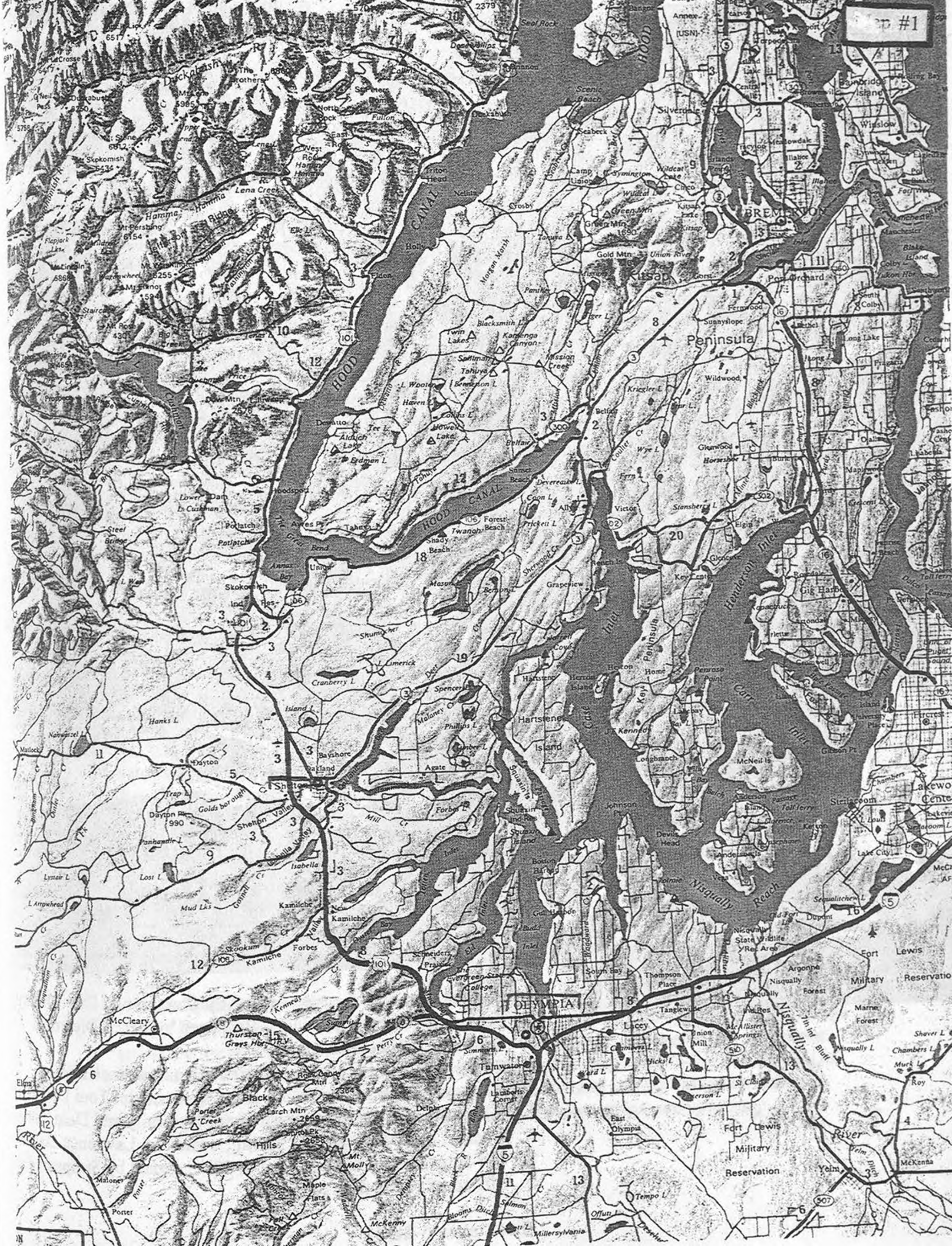
Elma C Droscher
Chuck Droscher
Paul Droscher
Ralph Droscher
Don Droscher - Jane Pickerell

Burton Dietzman - Leora Sherb

Dale Dietzman - Carolyn Droscher Tom Droscher - Toni Wyman Sue Droscher - Phil Gervais

Daniel Dietzman
Sara Jane Dietzman
Emily Dietzman Aaron Foster

Claire Gervais
Tyler Gervais


HOOD CANAL
BREMERTON
Kitsap
Peninsula
Port Orchard
Silverdale
Seabeck
Bainbridge Island
Winslow
Manchester
Belfair
Allyn
Victor
Gig Harbor
Henderson Inlet
Case Inlet
Carr Inlet
Hartstene Island
McNeil Is
Anderson Island
Nisqually Reach
Steilacoom
Lakewood Center
Dupont
Fort Lewis
Military Reservation
Shelton
Dayton
Kamilche
Skookum
Union
Hoodsport
Eldon
Lilliwaup
Brinnon
Quilcene
Duckabush
Triton Head
Lena Creek
Lower L Cushman
Potlatch
Skokomish Ind Res
Mt Skokomish
Mt Pershing
Mt Washington
Mt Ellinor
Staircase
Mt Rose
Grapeview
Cranberry L
Island L
Spencer L
Phillips L
Mason L
Isabella
Mud Lks
Lost L
Matlock
McCleary
Elma
Black Hills
Larch Mtn
Capitol Pk
Mt Molly
Maple Flats
Porter
Porter Creek
OLYMPIA
Evergreen State College
Tumwater
Lacey
Tanglewilde
East Olympia
Nisqually
Yelm
McKenna
Roy
Squaxin Island
Squaxin Ind Res
Johnson Pt
Devils Head
Longbranch
Home
Key Center
Penrose Point
Thompson Place
Boston Harbor
Gull Harbor
Olympia

Map #1

1. Shelton home; 3. 5 acres; owned by Carolyn and Dale Dietzman
2. 8 acres; selectively cut in 1982; owned by Leora Dietzman
3. Beaver pond-wetland area
4. 20 acres; 100 year old forest; owned by Lawrence Barnes
5. 10 acres; clear-cut in 1992; owned by Tom and Toni Droscher
6. 6.2 acres; 30 year old forest; owned by Emily and Dale Dietzman
7. 4 acres; reserve to protect spring; owned by Lawrence Barnes
8. 20? acres; slated to be logged in 2001; owned by Simpson Timber
9. 50? acres; owned by Al Jones

W

S → N

E

Photo taken 5-28-81

Appendix D- Soil Survey

The following map and soil descriptions comes from:

Soil Survey; Mason County, Washington. United Sates Department of Agriculture-Soil Conservation Service. Fieldwork completed in 1951. Issued September 1960.

(Sheet Number 15)

(Ab) Alderwood gravelly sandy loam, 5 to 15% slopes

This is the most extensive soil of the Alderwood series. It occupies undulating to rolling moraines.

In undisturbed areas a 1- to 2-inch mat of very dark brown, acid organic matter is on the surface. This grades to a thin, dark grayish-brown, highly organic mineral soil. The surface soil consists of a friable, brown medium acid gravelly sandy loam 8 to 13 inches deep. It has a weak granulated structure and contains numerous rounded shot. Below the surface soil, to depths ranging from 18 to 24 inches, is a pale-brown gravelly sandy loam that is very friable, is single grained, and contains small to moderate amounts of shot (20). Between this layer and the cemented till is a 3- to 10-inch layer of very pale brown gravelly sandy loam. It contains no shot and is firmer but has the same texture as the layer above. However, it is faintly to distinctly spotted and horizontally streaked with brown and yellow. The cemented till consists of light-gray, gravelly sandy loam, and it normally occurs at depths ranging from 24 to 32 inches. It is impermeable to roots and very slowly permeable to water. The first few inches is usually laminated and streaked with reddish brown and yellow. Below this, to a depth of many feet, the till is uniformly cemented, fairly uniform light gray, and medium to strongly acid. A thin mat of roots often lies over the till. The cemented substratum tends to restrict the rapid downward movement of moister.

Use and suitability

Hay, small grains, pasture, fruits, nuts, grapes, and berries are the principal crops grown on the Alderwood soils. The lack of subsoil moisture damages crops in summer. For this reason, early maturing, short-season crops are suited best to this soil. Yields of all crops are usually fairly low because of low fertility and the dry summers. Pastures produce good forage in the spring and late in fall if proper plants are used and

management is good. The deeper soils are suited best to fruits, nuts, and grapes. The uncleared and remote areas are better suited to forestry than to cultivated crops.

Alderwood soils need barnyard manure, green manure, nitrogen, or legumes to maintain a fertility for crop production... Nitrogen fertilizer is often applied with barnyard manure or when cover crops are plowed under. The fertilizer furnishes additional nitrogen need to hasten decay of the organic matter.

This soil is in capability subclass VIs and in site classes 4 and 5 for Douglas-fir. Small areas along the border, where the soil is more than 32 inches deep to compact till, are in site classes 3 and 4 for Douglas-fir (16-17).

(Ee) Everett gravelly loamy sand, 5 to 15% slopes

This soil occupies the smoother terraces or outwash plains in close association with other Everett soils... Profile characteristics vary greatly from place to place, especially on the steeper slops.

Use and suitability

All of this soil is in trees and brush, and its best use is forestry. It is in site class 5 for Douglas-fir and in capability subclass VIs (24-25).

Sinclair Series

The Sinclair series consists of moderately well drained, brown, shotty soils on uplands. They have developed from very compact Vashon gravelly glacial till in rainfall that ranges from 45 to 55 inches a year-the lowest in Mason County. The vegetation is a forest, mainly excellent Douglas-fir mixed with cedar, maple, and alder. The understory is a luxuriant growth of sword fern, Oregon-grape, vine maple, salal, and huckleberry. Compared to the vegetation on drier adjacent soils, there is very little madrone and manzanita, but there is considerable cedar.

Surface drainage is moderately well established. Internal drainage is medium, except that it is restricted by the cemented substratum.

Sinclair soils are near Puget Sound on the eastern edge of the county and on the islands of Case Inlet. They are commonly on lower slopes adjacent to the Harstine and Alderwood soils. They are grayer, more finely textured, and more shotty than either the Alderwood or the Harstine soils. In addition, the underlying till, in most places, is more cemented.

(So) Sinclair shotty loam, 5 to 15 % slopes

This gently rolling and rolling soil is the dominant soil of the Sinclair series. A thin very dark brown, acid organic mat is on the surface. The upper 3 to 4 inches of mineral soil is medium acid, granular and friable, grayish-brown shotty loam (Very dark grayish-brown when moist). This is underlain by medium acid, friable and granular, light brownish-gray shotty loam that continues to depths of 10 to 12 inches. The shot are grayish and very pronounced. This shotty loam is underlain by very pale brown gravelly loam subsoil that reaches to depths of 20 to 24 inches It is faintly stained and mottled with yellowish brown and light gray and is massive or has a weak, subangular blocky structure. The gravelly loam is hard when dry but friable when moist; it contains much less shot than the horizons above. Between the subsoil and the underlying till is a more sandy layer, 3 to 6 inches thick, that is firm and moderately mottled, contains very few

shot, and is massive. The firm till very abruptly changes to cemented till at depths of 28 to 42 inches. The upper 2 to 6 inches of cemented till is, normally, a sequence of thin plates consisting of mottled and stained, strongly cemented, grayish gravelly sandy loam. To depths of many feet, the till is granitic, light gray, strongly cemented, and strongly acid.

On the lower concave slopes, the subsoil is more highly mottled. In some place this soil is hard to distinguish from shallow deposits of Kitsap soil material overlying till

Surface drainage is well to moderately well established. Internal drainage is restricted by the cemented till. Because of finer texture, the capacity to hold available moisture is better that it is in the associated Harstine and Alderwood soils of the uplands.

Use and suitability

A higher percentage of this soil is in farms than of any of the other "hardpan" soils of the uplands. It is more favorably located and can supply moisture to plants in the dry summer months. There is a longer frost-free season for crops because the soil is on slopes adjacent to Puget Sound.

The soil is used for grapes, loganberries, raspberries, filberts, hay, grain, and pasture. Grape yields vary considerably from season to season. The Island Belle variety, a grape similar to the Concord, is the main grape, and it yields well in the cool climate of Mason County. White grapes are not so well suited, but the White Diamond variety is grown.

This soil is in capability subclass IVs and in site classes 3 and 4 for Douglas-fir.

(Sp) Sinclair shotty loam, 15 to 30% slopes

This soil occupies hilly areas and small canyons adjacent to Puget Sound in association with other Sinclair soils. It differs from Sinclair shotty loam, 5 to 15 percent slopes, in that it varies more in depth to the till and in the degree of cementation of till.

Under natural condition, the soil absorbs moisture readily and runoff is slight. Erosion would be severe if large areas were cleared.

Use and suitability

Trees grow well and respond to management.

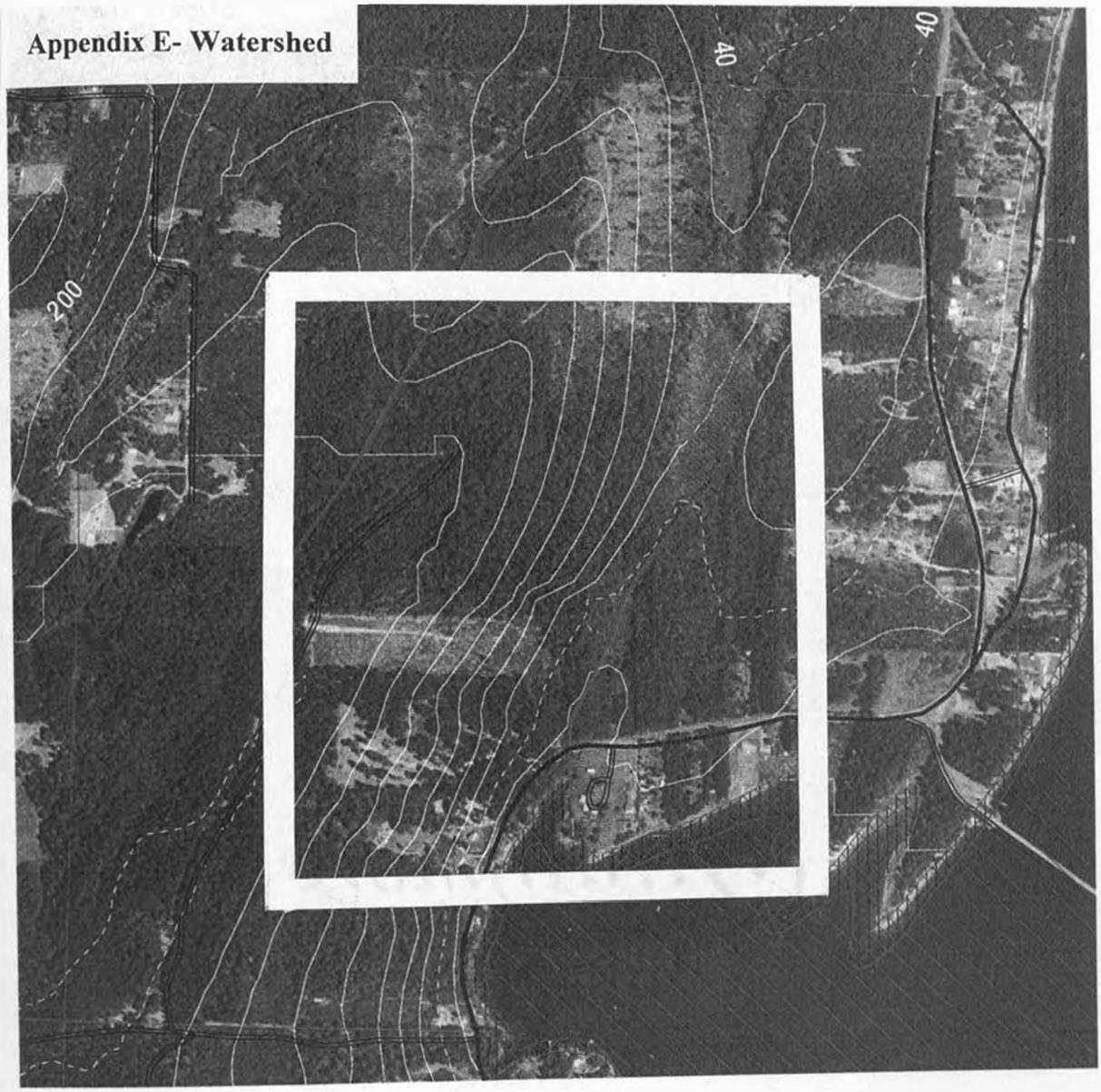
This soil is in capability subclass VIs and in site classed 3 and 4 for Douglas-fir" (41-42).

Site Classes

Site classes are a convenient measurement of a soil's wood producing ability. Under this system, the highest producing soil is designates as site class 1, and the lowest as site class 5. Soils in classes 2, 3, and 4 have intermediate wood-producing capacity. The grouping of soils into site classes is based on the average total height of the dominant and codominant trees at the age of 100 years. These are the larger trees whose crown form the general level of the forest canopy and occasionally extend above it.

Dominant and codominant trees, at an age of 100 years in well-stocked stands growing on site class 1 soils, will reach heights ranging from 190 to 210 feet; those on site class 2 soils, heights of 160 to 180 feet; on site class 3, heights of 130 and 150 feet; on site class 4, heights of 100 to 120 feet; and on site class 5, heights of 70 to 90 feet (58).

Appendix E- Watershed



Digital Orthophoto

1994 Photography

TOWNSHIP: T20R02W

SECTION: 4

1 inch = 1000 ft.

Contours 20 ft.

10/21/99

N

- Paved road
- Unpaved road
- Unknown surface
- Trails
- Railroad
- Railroad Grade
- Ferry Crossing
- Water
  text is FP water type only within section
- Water Type not classified

- Lake, Pond, Canal or Reservoir
- Intermittent Lake , Pond or Resevoir
- Marsh
- Open Water
- Flats –Mud, Tidal, Sand or Gravel

Forest Data Collection Sheet

Date_____ Plot Size_____ Plot Number _____

Forest Type_____ Location in Site_____

SPECIES	# seedlings less 12" tall	# of tress diameter less 1"	# of tress diameter 1-4"	# tress diameter over 4"	Age of selected trees (core sample)	total bas area for species
Bigleaf Maple *Acer macrophyllum*						
Cascara *Rhamnus purshiana*						
Douglas-Fir *Pseudotsuga menziesii*						
Grand Fir *Abies grandis*						
Madrone *Arbutus menziesii*						
Red Alder *Alnus rubra*						
Western Hemlock *Tsuga heterophylla*						
Western Red Cedar *Thuja plicata*						
Western White Pine *Pinus monticola*						
Other						

Dominant woody understory plants in the 4 corners of plot:

N	E	S	W

Snags (number, species, and diameter):

Died Recently	Evidence of decay	Extensive decay

Approximation of total basal area of snags in plot: _____

Logs (number, species, and diameter):

Newly downed	Evidence of decay	Extensive decay

Approximation of volume of downed wood in plot: _____

Other plant species present in plot:

Animal presence noted within plot:

Plot observations and notes:

Appendix G- Ariel Photo

5-22-99

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