

Snohomish County Transfer of Development Rights Economic Analysis

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Prepared for:



Prepared by:





Community Attributes tells data-rich stories
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EXECUTIVE SUMMARY

Introduction

Snohomish County initiated a multi-phase Transfer of Development Rights (TDR) program to support the County's growth management and conservation goals. Snohomish County is now exploring changes to its TDR program and seeks to understand the implications of current market conditions on TDR program design. This report presents the findings of an economic analysis of the TDR program and provides recommendations to inform future TDR policy and program updates.

TDR in Snohomish County

Snohomish County launched a TDR pilot program in 2004. The pilot program established a 3,300 acre sending area in the Stillaguamish Valley and a 340 acre receiving area in the Arlington Urban Growth Area (UGA). The Arlington receiving area was annexed by the City of Arlington in 2007, and a TDR program was established through an interlocal agreement between Snohomish County and the City of Arlington. The Snohomish County TDR Code (30.35A) was created to establish guidelines for the Stillaguamish sending area, while City of Arlington Code (20.37) established TDR requirements for the Arlington receiving area.

Snohomish County recently expanded the TDR program on a countywide basis. Snohomish County adopted TDR code (30.35B) to expand sending areas to agricultural, forest and resource conservation areas, subject to site application and County Council approval. In 2009, Snohomish County established

Urban Centers as eligible receiving areas (30.34A), and established TDR bonus density incentives.

This analysis focuses on the current TDR program under Snohomish County Code sections 30.35B, and explores opportunities to expand the TDR program in new receiving areas. Potential TDR program expansions include TDR purchases as a condition to upzoning approvals in UGA expansions, rural and resource lands, and rural cluster subdivisions. This analysis examines Snohomish County 30.35A based on the understanding that this policy was created to link sending and receiving areas created through the Arlington-Stillaguamish pilot program only.

TDR Program Overview

An understanding of how market conditions affect TDR program success requires a clear definition of buyer and seller roles and incentives and how the program affects each of them. The effects of program policies can then be understood in the context of economic incentives and market conditions.

Economic Incentives

The first incentive to understand is that of a developer in the receiving areas. Snohomish County's TDR program allows a developer to purchase the opportunity to develop in a receiving area at higher density than would be allowed under existing policies.

In addition, a property owner in the sending areas can sell the right to build a house on their property. This allows the owner to keep the property for other, preferred uses. The transaction forever prevents the previously allowed housing unit to be developed on that parcel. With this transaction, the seller in the sending area is compensated for the opportunity cost of not developing a house on their property.

Developers in the receiving areas buy the opportunity to develop at greater densities, and sellers in the sending area cash-out and forego the opportunity to develop. The rights to develop are thereby transferred from areas important to protect to areas where more concentrated development is desired.

Transaction Logistics

Buyers and sellers can buy and sell TDR through the County, where the County serves as a TDR “bank”. Alternatively, buyers and sellers can find each other through private channels and seek County approval.

TDR Policies

Snohomish County TDR policy influences the potential success of this program in two ways:

- First, County Code establishes the amount of bonus development a developer can build in the Urban Center receiving areas for buying a development right. Current policy allows developers to build an additional 2,000 square feet above the maximum allowed zoning in receiving areas for each development right purchased, or “TDR credit.”

Bonus densities are also commonly expressed as “exchange rates,” or the number of additional housing units allowed per TDR credit purchased. This bonus structure is analyzed in potential TDR receiving areas.

- Second, County Code establishes the number of development rights that may be sold from a sending area property. This is called the “allocation ratio” County Code establishes two disparate allocation ratios.

Section 30.35B establishes a one to one allocation ratio. The allocation ratio provides one sending area TDR per one allowed housing unit based on underlying zoning. This allocation ratio applies to all sending site applications subject to County Council approval.

Code Section 30.35A establishes an allocation ratio of four transferable development rights per one allowed housing unit or development right in the sending area. This allocation ratio applies to the Stillaguamish sending area only.

Currently, neither section of the County’s TDR Code, identifies specific receiving areas to which sending area development rights can be transferred. The two different allocation ratios created under Section 30.35 A and B create a value differential for TDR credits in receiving areas depending on where the TDR credits are transferred from, whether it is a County Council approved sending site or the Stillaguamish sending area.

Economic Analysis Findings

The exhibit below summarizes key outcomes of the TDR economic analysis. The exhibit presents sending area TDR prices estimates for agricultural and forest land sending areas; defines receiving areas; and market-based exchange rates for each sending and receiving area scenario.

Sending Area Willingness to Sell

A variety of factors determine a sending area landowner’s willingness to sell. Analysis shows that agricultural TDR prices of \$51,000 and forest TDR prices of \$31,000 are reasonable TDR sale price estimates to inform Snohomish County policy decisions.

Agricultural TDR prices are based on the difference between “market” and “current use” land values for farm properties participating in the RCW 84.34 property tax program, based on Snohomish County assessor records. Market value represents the development value of land, while current use represents the agricultural production value. The difference between market and current use value is assumed to be the development right value.

Market and current use assessments are limited for forest properties, therefore forest TDR prices are based on past forest land TDR transactions. Forest TDR prices for five transactions in King and Snohomish County ranged between \$22,000 and \$60,000 per TDR.

Summary of TDR Exchange Rates

Sending Area	Receiving Area	Density Increase	Exchange Commodity	Exchange Rate
Agricultural lands @ \$51,000 TDR	Urban Centers	Max FAR to bonus FAR	Floor area	1 TDR Credit = 9500 SF
	UGA expansions	F, AG-10, RRT-10 and R-5 to UGA densities	Housing units	1 TDR Credit = 3 units
	Rural and resource land upzones	F to R-5	Housing units	1 TDR Credit = 4 units
		AG-10 to R-5		1 TDR Credit = 10 units
		RRT-10 to R-5		1 TDR Credit = 5 units
Rural cluster subdivisions	35% bonus density	Housing units	1 TDR Credit = 1 units	
Forest lands @ \$31,000 TDR	Urban Centers	Max FAR to bonus FAR	Floor area	1 TDR Credit = 5800 SF
	UGA expansions	F, AG-10, RRT-10 and R-5 to UGA densities	Housing units	1 TDR Credit = 2 units
	Rural and resource land upzones	F to R-5	Housing units	1 TDR Credit = 3 units
		AG-10 to R-5		1 TDR Credit = 6 units
		RRT-10 to R-5		1 TDR Credit = 4 units
Rural cluster subdivisions	35% bonus density	Housing units	1 TDR Credit = 1 units	

Receiving Area Willingness to Pay

Market conditions and pro forma income statements for new development in Urban Center receiving areas are used to measure a developer's willingness to pay for the current TDR bonus densities.

Analysis shows that developers are willing to pay \$10,000 per TDR based on the current bonus density of 2,000 SF per TDR credit. Under current policies, a receiving area investor would not get enough return on investment by receiving 2,000 SF of bonus density to merit TDR credit expenses.

Potential returns for new multifamily and mixed-use development results in a willingness to pay that ranges between \$9,100 and \$11,700 for density bonuses. This price reflects additional development costs and additional revenue potential generated from density bonuses granted, which will be discussed further below.

Market-based Bonus Density

Findings suggest that the TDR program should consider changing the bonus density from 2,000 SF per TDR credit to approximately 9,500 SF to merit a \$51,000 agricultural TDR credit purchase and to 5,800 SF to merit a \$31,000 forest TDR purchase.

Market conditions in the various Urban Centers receiving areas demonstrate that these bonus densities could help generate additional revenues to support TDR purchases in five of six Urban Centers, and all Urban Centers if market conditions improve in the future.

Market-Based Exchange Rates

This analysis also defines TDR exchange rates for additional receiving areas. The analysis explores economic opportunities to require TDR as a condition for UGA expansion or rural and resource land upzones. The analysis quantifies market-based exchange rates based on the increase in return a developer receives for building at higher densities under various upzone scenarios. In other words, the additional profit generated from building at higher densities could be used to support TDR purchases.

Market-based exchange rates are expressed as the number of additional housing units allowed in the receiving area for one TDR credit purchased in the sending areas. TDR prices are \$51,000 per agricultural TDR and \$31,000 per forest TDR. Upzone scenarios and market-based exchange rates are summarized as follows:

- **UGA expansions** include upzones from rural and resource zoning districts including forestry (F), agriculture - ten acre (AG-10), rural resource transition - ten acre (RRT-10) and rural five acre (R-5) to urban residential zones including R-9,600, R-8,400 and R-7,200 zones. Analysis results in exchange rates of 3:1 for agricultural TDR and 2:1 for forest land TDR.
- **Rural and resource lands upzones** include F, A-10 and RRT-10 zoning districts upzoned to the R-5 zoning district. F to R-5 upzones support exchange rates of 4:1 for agricultural

TDR and 3:1 for forest TDR. A-10 to R-5 upzones support exchange rates of 10:1 for agricultural TDR and 6:1 for forest TDR credits. RRT-10 to R-5 upzones support exchange rates of 5:1 for agricultural TDR and 4:1 for forest TDR credits.

- **Rural cluster subdivisions** generate additional revenue through density bonuses awarded for on-site open space preservation, which could be available to support TDRs purchases. Cluster subdivisions receive a housing unit bonus up to 35% for preserving 65% to 85% of open space.

Rural cluster subdivisions support exchange rates of 1:1 for forest and agricultural TDR credits in all zoning districts. In all zoning districts, rural cluster subdivisions generate sufficient revenue to support more than one agricultural or forest land TDR purchase per additional housing unit, which creates fractional exchange rates (such as 1 TDR per 0.5 housing units). All exchange rates are rounded up, and expressed as whole numbers.

Economic Analysis Conclusions

The wide range of potential TDR costs in sending areas coupled with variation in market conditions across the County demonstrates an array of potential market-supported bonus densities and exchange rates. The sensitivity of TDR calculations suggests that setting density bonuses and exchange rates will require a combination of policy judgment and economic analysis.

Analysis demonstrates that market conditions vary by building type and by Urban Center location. This results in different market-supported exchange rates for different building types in different areas. Policy judgment is required to determine if a single exchange rate or different exchange rates, based on location and building type, is desired. This analysis provides data to support policy discussions to identify an approach that meets multiple stakeholder objectives.

Analysis finds that residential growth constraints and market conditions in some UGAs could support new TDR receiving areas in UGA expansion areas where higher density is desired. Rural cluster subdivisions and rural or resource land upzones also demonstrate potential for new TDR receiving sites. Building at higher densities generates additional profit for developers that could be used to support TDR purchases. Project scale could be a limiting factor for rural and resource land upzones where small gains in bonus density may or may not generate sufficient revenues to purchases TDR based on supportable exchange rates.

Program Risks and Challenges

Analysis of past development trends in Urban Centers receiving areas does not demonstrate a demand for incentives that encourage higher density development. New construction in the County's Urban Centers over the past ten years was built at an average density of 0.3 FAR, well below the maximum of 1.0 FAR allowed.

A major challenge stems from parking impacts. Density bonuses, especially those for "super bonus" densities,

result in the need for structured parking, which increases construction costs and restricts development feasibility. Pro forma analysis indicates that market rents through unincorporated Snohomish County receiving areas do not generate sufficient revenues to cover the cost of construction at super bonus density levels for condo, office or mixed-use product types.

The Snohomish County Urban Centers zoning code establishes several density bonus incentive options that compete with TDR. For example, density bonuses are available for inclusion of affordable housing, structured parking and other site amenities. TDR is a feasible incentive for increasing density only if it is a *more* economically valuable option than other density bonus incentives.

Program Opportunities and Recommendations

The economic analysis results in the following recommendations to improve Snohomish County TDR program effectiveness. The recommendations may require further study to consider policy implications not addressed in this report.

- Eventually, the County should clarify the applicable sending and receiving areas for each code section 30.35A and 30.35B. The codes

should establish consistent regulatory guidelines for sending area designation and allocation ratios, or clearly define varying exchange rates, TDR prices and density bonuses.

- Amend TDR-based development incentives in receiving areas to better align with market-based expectations and differentiate TDR-based incentives from other density bonuses. For example, TDR incentives may be more effective if tied to parking reduction and aligned with transit goals. Parking requirements could be reduced or eliminated at bonus densities achieved through TDR.
- Expand receiving areas to incorporated areas where market conditions support strong demand for higher density development. Cities in Southwest Snohomish County may offer better market support for higher density development tied to TDR implementation.

Rural areas also demonstrate demand for higher density growth through rural cluster subdivision density bonuses and potential upzones. Analysis shows that upzones increase profit through higher density development which could support TDR purchases.

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INTRODUCTION

Background and Purpose

Snohomish County initiated a multi-phase Transfer of Development Rights (TDR) program in 2004 to support the County's growth management and agricultural and forest conservation goals. This report presents the findings of an economic analysis of the TDR program and provides recommendations to inform TDR policy and program updates.

The Snohomish County TDR program establishes market-oriented incentives and tools to protect the County's identified conservation priorities and focus growth to appropriate areas. The TDR program allows developers to purchase the development rights in designated agricultural and forest land conservation areas (sending areas) and transfer those development rights to County's Urban Centers (receiving areas). Developers receive a floor area bonus in exchange for purchasing the development rights, which allows developers to build at densities above what is normally allowed under code. Land owners receive compensation for selling their development rights and retain possession of their property. A conservation easement is placed on the land owner's property which protects the land from development and allows for continued farming, forestry or open space conservation indefinitely.

Snohomish County is exploring updates to its TDR program and seeks to understand the implications of current market conditions on TDR decision making.

This report evaluates the market economics that influence participation and success in the TDR program. The economic analysis presented in this report focuses determining TDR prices and exchange rates based on three fundamental topics:

- The property owner's willingness to sell development rights in sending areas, and the opportunity cost of development foregone.
- Developers' willingness to pay for development rights to build higher densities in receiving areas.
- Recommendations to improve TDR bonus density and exchange rate policies based on requirements for TDR buyers and sellers, market barriers and opportunities for program expansion. .

Methods

The analysis evaluates existing Snohomish County TDR allocation and bonus density provisions and the market conditions and requirements that impact program participation. This analysis also explores opportunities to expand the TDR program. Data reported and the sources of information are as follows:

- Snohomish County zoning and TDR codes to evaluate current policies including sending and receiving areas, TDR allocation ratios, exchange rates and density bonuses, development guidelines and other related policies.
- Recent land sales records from the Snohomish County Assessor to determine potential development right sales prices in sending areas.
- Snohomish County GIS parcel attribute files to analyze recent development trends in receiving areas including building densities and product type.
- Pro forma real estate feasibility to determine a developer's willingness to pay for TDR and required incentives for using TDR. Pro forma analysis is informed by market data from CB Richard Ellis and construction cost data from Rider Levett Bucknall.

Study Limitations

This analysis is not an appraisal and the authors are not licensed appraisers. Formal appraisals of development right values, conducted by certified appraisers, are commonly used to determine transfer ratios and exchange rates based on the market value of development rights in sending areas. Appraisers may also value development rights for potential TDR purchases made by local governments.

This study is an economic analysis of the County's current TDR program and future TDR considerations. The economic analysis applies evaluation methodologies, data and key policy metrics to measure TDR feasibility and inform constructive discussions about TDR program design. The outcomes of the analysis are meant to identify program opportunities, barriers and to illustrate market-based expectations for the sale and application of transferable development rights.

Organization of Report

The report is organized as follows:

- **TDR Program Review.** Identification of current sending and receiving areas, transfer density ratios, exchange rates and incentives for TDR. This section includes a policy overview and summary of Snohomish County TDR program activity to date.
- **Sending Areas and Development Right Values.** Sending area characteristics, sales trends and assessment of potential development right sales prices.
- **Receiving Area Market Conditions.** Land capacity and development trends in receiving areas along with recent market demand for product types, densities and land uses.
- **Receiving Area TDR feasibility.** Outcomes of pro forma analysis and willingness to pay for TDR and density incentives.
- **TDR Program Considerations.** Assessment of program risks, barriers and opportunities along with program recommendations.

TDR PROGRAM OVERVIEW

Program History

Snohomish County launched a TDR pilot program in 2004. The County established a sending area encompassing 3,300 acres of prime farmland in the Stillaguamish Valley and a receiving area in the City of Arlington UGA.¹ The 337 acre receiving area, established as a TDR overlay zone, has since been annexed by the City of Arlington. The City of Arlington TDR ordinance requires that new development in the city's receiving area utilize TDR credits. The TDR ordinance specifies that 25% of residential subdivision lots and 50% of multifamily units must utilize TDR certificates. Non-residential development must use one TDR credit per 10,000 square feet of floor area.²

Activity to date

There have been two TDR transactions in the Snohomish County program. The County purchased 49 development rights at a certified price of \$42,857 per TDR credit. The County's development right purchase protected 74 acres of farmland in the Stillaguamish Valley as part of the TDR pilot program. The total

¹ Snohomish County Planning & Development Services (2007) Transfer of Development Rights for Farmland Conservation: Model Policy and Regulatory Strategy for Snohomish County. Page 14

² Snohomish County Planning & Development Services (2007) Transfer of Development Rights for Farmland Conservation: Model Policy and Regulatory Strategy for Snohomish County. Page 15

transaction cost was nearly \$2.1 million. The County is attempting to sell the credits at the cost of purchase. Fifteen credits were auctioned in 2007 at a minimum bid of \$50,000 with no offers.³

Cascade Land Conservancy bought 17 development rights from a 62 acre property for \$500,000 or \$29,400 per TDR credit, in the summer of 2009⁴. To date, this property is the only applicant for site specific sending site in the Snohomish County TDR program.

Program Expansion

Snohomish County is considering expanding the TDR program on a countywide basis. Potential areas considered for sending area designation include all commercial farmland identified in the County Comprehensive Plan, farm and ranch lands outside designated agricultural use areas as well as private timber and forest lands.

The County recently passed a code amendment in 2010 establishing all Urban Centers zoning districts as receiving areas. Incorporated areas may also be eligible for receiving area designation through interlocal agreements with the county. (30.35A.125, 30.35B.125).

³ Snohomish County Planning & Development Services (2007) Transfer of Development Rights for Farmland Conservation: Model Policy and Regulatory Strategy for Snohomish County. Page 15

⁴Cascade Land Conservancy (2009). <http://cascadeagenda.com/tdr/tdr-in-the-news/deal-preserves-hidden-valley-camp-land>

A study completed in 2007 recommended that receiving areas be expanded to Urban Village and Transit Pedestrian Village (TPV) zoning districts. Other areas under consideration include UGA expansion areas, rural and resource land upzones, and rural cluster developments.

Sending and Receiving Areas

This analysis considers the current sending and receiving areas established by code or interlocal agreement, as well as areas within un-incorporated Snohomish County that may be eligible for future sending or receiving area designation (**Exhibit 1**).

Sending Areas

The Snohomish County General Plan establishes the following guiding criteria for sending area eligibility⁵:

- Located in TDR sending area as identified on the Future Land Use Map and zoning map and designated by interlocal or development agreement.
- Agricultural and forest lands as defined in RCW 36.70A.170 shall be eligible for designation as TDR sending areas based on 1) the extent to which the area has been historically used for commercial agricultural or forest production; 2) the extent to which future residential or commercial development is likely to occur in or near the area, as evidenced by overall market trends; and 3) the

⁵Snohomish County General Policy Plan. LU-84

extent to which conservation of the area would further the natural resource goals of the General Policy Plan.

The Snohomish County code (30.35B.030) allows individual property owners outside the current sending area to apply for sending site designation on a case-by-case and be approved by County Council. The Snohomish County code (30.35B.030) states that “The County Council may by motion designate certain sites as sending areas when it is in the public interest to transfer development rights to protect land with significant watershed, habitat, open space, and natural resource values.” Any individual property owner of land that meets these criteria could apply for sending site designation.

The Snohomish County code (30.35A.030) also establishes sending area designation criteria. The ordinance was originally developed to designate the current Stillaguamish Valley sending area under the pilot program. However, 30.35A does not identify this sending area designation. The existing code language could be interpreted to apply to any potential sending area designated through a comprehensive plan and zoning map amendment located within the A-10 zoning district. The Snohomish County TDR application packet identifies the following criteria for TDR eligibility.⁶

⁶Transfer of Development Rights (TDR) Application Packet. http://www.co.snohomish.wa.us/documents/Departments/PDS/Forms/TDR_Application_Dec07.pdf

- Privately owned
- Within a designated TDR sending area
- Zoned Agricultural-10 (A-10)
- Designated commercial farmland in the county Comprehensive Plan.

This application aligns most closely with requirements for sending site certification in the *current* sending area designed for the pilot program, and does not encompass all the requirements for sending site certification in *potential* sending areas. For example, the application does not include forest or resource lands in zoning districts F (Forestry), R-5 (Rural-5 Acre) or RC (Rural Conservation).

Receiving Areas

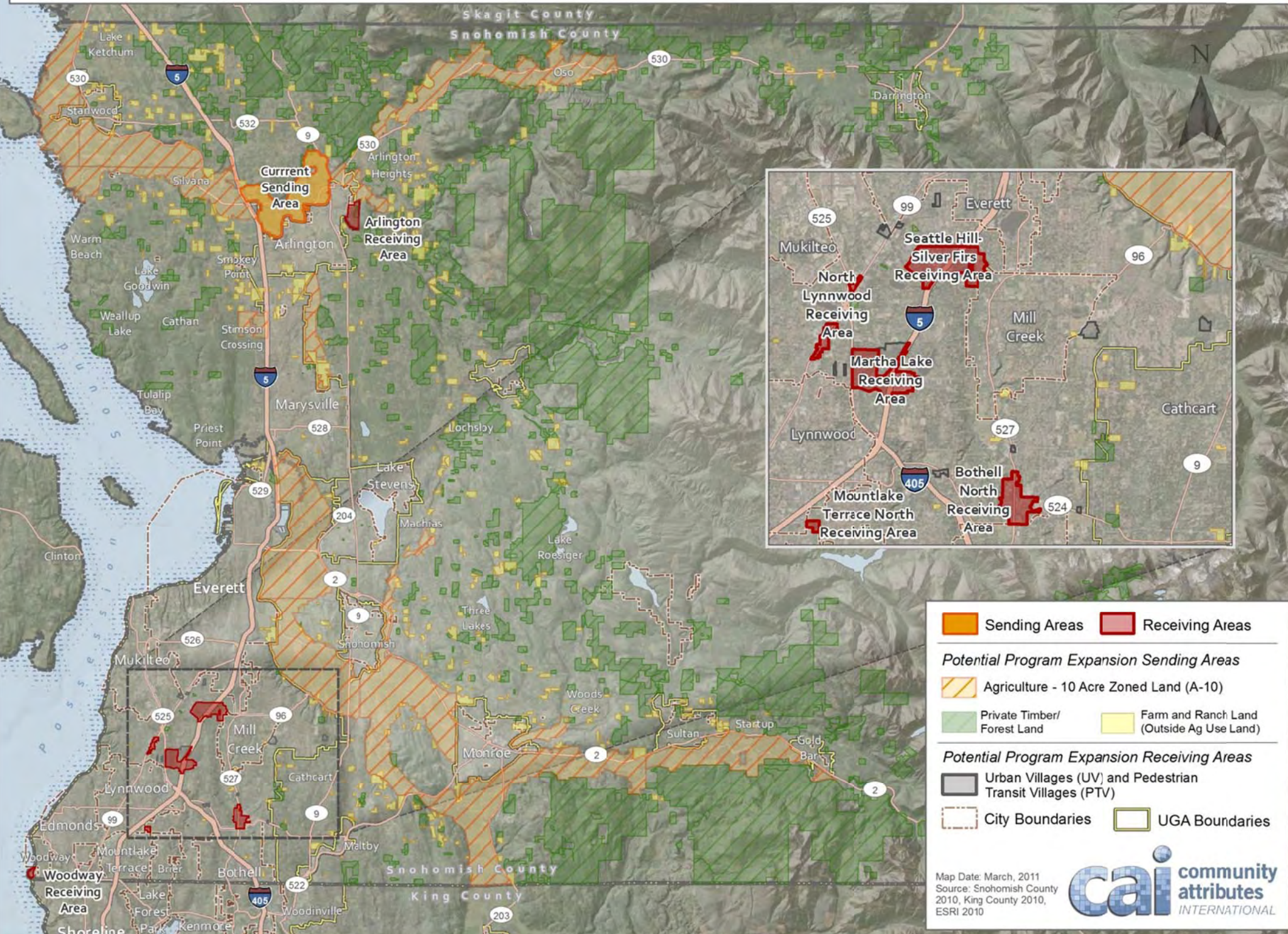
Currently, designated receiving areas include all Urban Center (UC) zones in the southwest Snohomish County UGA as well as the City of Arlington TDR receiving area overlay, established through interlocal agreement. The Snohomish County General Plan states that, “the TDR Receiving Area Overlay may only be applied to areas located within the Rural Urban Transition Area concurrent with the addition of such areas to an adjacent urban growth area (UGA) or to other areas agreed to by interlocal agreement, development agreement, or code amendment.”


Potential receiving areas include⁷:

- City centers subject to interlocal agreements with incorporated areas
- Urban Village (UV) and Pedestrian Transit Village (PTV) zones.
- UGA expansion areas
- Urban residential zones (likely in UGAs)
- Rural cluster development
- Rural and resource land upzones

⁷ Snohomish County Planning & Development Services (2007) Transfer of Development Rights for Farmland Conservation: Model Policy and Regulatory Strategy for Snohomish County. Page 27

Exhibit 1: Snohomish County Transfer of Development Rights (TDR) - Sending and Receiving Areas



	Sending Areas		Receiving Areas
<i>Potential Program Expansion Sending Areas</i>			
	Agriculture - 10 Acre Zoned Land (A-10)		Private Timber/ Forest Land
			Farm and Ranch Land (Outside Ag Use Land)
<i>Potential Program Expansion Receiving Areas</i>			
	Urban Villages (UV) and Pedestrian Transit Villages (PTV)		City Boundaries
			UGA Boundaries

Map Date: March, 2011
 Source: Snohomish County 2010, King County 2010, ESRI 2010



Current TDR Policy

Current Allocation Ratio

Allocation ratios, also referred to as “transfer density ratios” in the Snohomish County code, are used to determine the number of eligible rights that may be sold from a sending area property.

The Snohomish County Code Transfer of Development Rights Ordinance section (30.35B.040) establishes TDR allocation ratios as follows: “The number of certified development rights that a sending site is eligible to transfer shall be determined by calculating the number of residences that could be allowed on the sending site area under the zoning and development code regulations that apply to the sending site.”

Interpretation of the codes suggests that this allocation ratio applies to any sending site application approved by the County Council subject.

The Snohomish County Code Transfer of Development Rights Ordinance section (30.35A.040) establishes TDR allocation ratios as follows:

“A transfer density of 0.4 shall apply to sending sites located within the A-10 zone, computed as the base density of .1 dwelling unit per acre for the underlying zone multiplied by a transfer ratio of four.”

TDR credits are also available for legal, but substandard lots. Section 30.35A.050 states, “The sending site shall, at the request of the applicant, be credited one certified development right, multiplied by

the transfer density provided under subsection 4 of this section, for every legal lot with an area of 12,500 square feet or more that existed on or before March 15, 2005, as recognized through the department administrative lot status process.”

Origin of the code 30.35A suggests that these allocation ratios apply to the current sending area (3,300 acre sending site in the Stillaguamish Valley) established under the pilot program. However, 30.35A does not identify this sending area designation and therefore could be interpreted to apply to any potential sending area designated through a comprehensive plan and zoning map amendment located within the A-10 zoning district.

TDR Bonus Densities

Developers receive a density bonus of 2,000 square feet in floor area per TDR credit in the Urban Center receiving areas. Code amendments could establish different density bonuses in other receiving areas.

The “exchange rate” is how many receiving area development rights are assigned to a buyer per sending area housing unit development right. In Snohomish County, receiving area development rights are expressed as bonus densities in 2,000 SF increments.

A developer receives a total of 2,000 square feet of bonus floor area in receiving areas for each development right purchased in a sending site approved by County Council on a site-by-site basis.

Developers may use TDR to increase densities from 1.0 floor-to-area ratio (FAR) for single use projects to a maximum of 2.5 FAR. Developers may increase densities for a mixed use project from 2.0 FAR to a maximum of 5.0 FAR.

Additional options beyond TDR are available to increase densities and include affordable housing, structured parking, street level commercial, public art or green building elements.

Current TDR Purchase Options

TDR sales prices are set based on the negotiated price between TDR buyers and sellers. As a result, each TDR transaction can result in different sales prices.

The Snohomish County Code provides a buy-out option for developers in lieu of purchasing a TDR to receive a density bonus. The TDR exchange rate is \$42,000 for one TDR credit, or \$21 per square foot of floor area for a 2,000 square foot floor area bonus⁸.

This current TDR credit price closely aligns with the value of TDR credits held by the County. The County purchased and held 49 development rights at a certified price of \$42,857, for the conservation of 74 acres of farmland in the Stillaguamish Valley as part of the TDR pilot program⁹.

⁸Snohomish County Code Section 30.34A.030(2)

⁹ Snohomish County Planning & Development Services (2007) Transfer of Development Rights for Farmland Conservation: Model Policy and Regulatory Strategy for Snohomish County

Interpretation of existing code structure and implications

Code sections 30.35B and 30.35A do not identify specific sending areas, nor does the code identify receiving areas that are eligible to apply TDR credits obtained from a specific sending area. The codes establish two separate allocation ratios and a single bonus density. This rewards TDR buyers two different bonus densities for development right purchases associated with one developable housing unit in sending areas.

Code amendments may be desirable to clarify:

- Sending areas applicable to each code section.
- Receiving areas eligible to receive TDR from identified sending areas specified in each code section.

SENDING AREAS AND DEVELOPMENT RIGHT VALUES

Sending Area Overview

The current designated sending area totals approximately 3,300 acres of land. Potential sending areas include agricultural lands in A-10 zoning districts, farm and ranch lands outside of A-10 zoning districts and private timber lands.

A-10 zoning districts encompass approximately 59,200 acres of agricultural land. Farm and ranch lands outside of A-10 zoning districts total nearly 16,000 acres. Private timber lands total nearly 137,000 acres. In total, current and potential sending areas encompass approximately 215,400 acres of land.

Sending Area Sales Activity

Sending area vacant land sales provide an indication of market activity and areas where conservation land could be targeted for the TDR program.

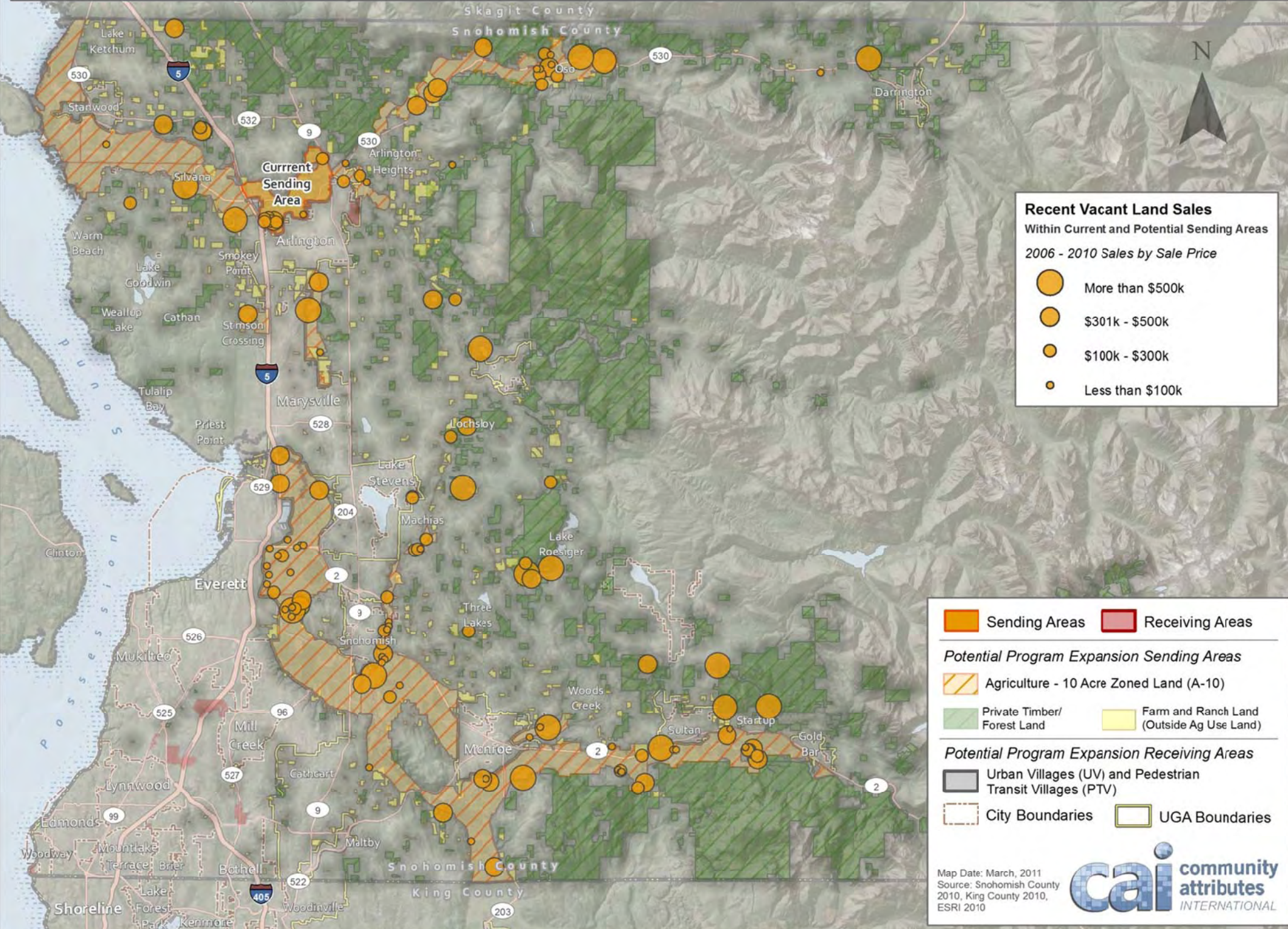
Snohomish County Assessor records indicate that from 2006 to November 2010 there were 110 vacant land sales on eligible agricultural and forest land sending sites, totaling 1,306 acres of land (**Exhibit 2**). The average sales value during this five year time period was approximately \$200,000 per acre (adjusted to 2010 dollars), ranging from an average high of \$275,000 in 2007 to a low of \$114,000 in 2010. Sales were concentrated along I-5, near the US-2 and SR 530 interchanges and near Snohomish. Large sales were concentrated along the US 2 corridor from Monroe to Startup and along the SR 530 corridor, particularly near Oso (**Exhibit 3**).

Exhibit 2
Sending Area Vacant Land Sales, 2006 – 2010

	2006	2007	2008	2009	2010	Total
Sales	41	33	24	46	7	151
Land Area (acres)	234	253	156	218	205	1,066
Sale Value (Millions, 2010\$)	\$8.5	\$11.9	\$7.5	\$8.1	\$1.7	\$37.7
Avg Sale Value per acre	\$ 156,000	\$ 275,000	\$ 159,000	\$ 223,000	\$ 114,000	\$ 201,000

Source: Community Attributes, Snohomish County Assessor (2010)

Exhibit 3: Snohomish County Transfer of Development Rights (TDR) - Recent Vacant land Sales



Recent Vacant Land Sales
 Within Current and Potential Sending Areas
 2006 - 2010 Sales by Sale Price

- More than \$500k
- \$301k - \$500k
- \$100k - \$300k
- Less than \$100k

Legend

- Sending Areas
- Receiving Areas

Potential Program Expansion Sending Areas

- Agriculture - 10 Acre Zoned Land (A-10)
- Private Timber/ Forest Land
- Farm and Ranch Land (Outside Ag Use Land)

Potential Program Expansion Receiving Areas

- Urban Villages (UV) and Pedestrian Transit Villages (PTV)
- City Boundaries
- UGA Boundaries

Map Date: March, 2011
 Source: Snohomish County 2010, King County 2010, ESRI 2010

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Sending Area Development Right Sales Prices

Potential sending area development right sales prices illustrate a property owner's economic requirements for TDR program participation. This analysis is not an appraisal and does not constitute a valuation for TDR prices in sending areas. Rather, the analysis illustrates potential development right values to inform policy decisions regarding exchange rates. TDR buyers and sellers will set TDR prices on a case by case basis.

Agricultural Sending Areas

Agricultural TDR prices are estimated based the difference between "market" and "current use" land values for farm properties participating in the RCW 84.34 property tax program, based on Snohomish County assessor records. Market value represents the development value of land, while current use represents the agricultural production value. The difference between market and current use value is assumed to be the development right value.

Development right price estimates use Snohomish County assessor records for 585 vacant land parcels of at least 10 acres in the A-10 zone district, with property code "830 Open Space Agriculture RCW 84.34." The difference between market and current land value is quantified for each parcel, and divided by the number of allowable housing units to estimate potential TDR prices.

Development right prices range from a low of \$3,800 to a high of over \$225,000 (**Exhibit 5**). The average TDR price is \$57,700 and the median TDR price is \$50,900.

Exhibit 4 Agricultural TDR Prices based on Market vs. Current Use Value

Land Area (acres)	18,000
Parcels	585
Potential Development Right Values	
Average	\$ 57,700
Median	\$ 50,900
Low	\$ 3,800
High	\$ 225,100

Source: CAI, Snohomish County Assessor (2010)

Timber and Forest Sending Areas

Market value and current use assessments are not available for large scale industrial timber properties; therefore a different method is required to illustrate potential forest TDR prices.

After exploring multiple methods with Cascade Land Conservancy, the approach that emerged takes into consideration potential forest TDR prices for 1) large scale industrial timber properties and 2) smaller scale forest and timber properties. A weighted average is then applied to arrive at a single illustrative forest TDR price.

Industrial Timber Properties. Four King County TDR transactions for large scale industrial timber properties are used as a proxy to estimate potential Snohomish County industrial timber TDR prices. The median TDR price was \$29,750 based on the following TDR transactions:

- Ames Lake \$34,000/TDR
- Snoqualmie Tree Farm \$22,000/TDR
- Sugarloaf \$60,000/TDR
- Raging River \$29,400/TDR.

Small Scale Forest and Timber. Market and current use land values are available for small timber properties participating in RCW 84.34. Following the same method as applied to agricultural TDR price estimates, small scale forest and timber properties could have a median TDR price around \$51,900.

**Exhibit 5
Forest TDR Prices**

	Large Scale Industrial Timber 84.33	Small Scale Forest and Timber 84.34	TOTAL
TDR price method	King Co Forest TDR Transactions	Market Value vs. Current Use Value	
Undeveloped Lots	4,031	313	4,344
% of Parcels	93%	7%	7%
Median TDR Price	\$ 29,750	\$ 51,850	
Weighted Price			\$ 31,000

Source: Community Attributes, King County TDR Program, Cascade Land Conservancy, Snohomish County Assessor (2011)

The two TDR price estimates are blended into a single forest TDR price estimate using a weighted average shown in **Exhibit 5**. Weighted averages are based on property participation in RCW 84.33 and RCW 84.34.

According to analysis completed by CLC, there were 4,344 potential lots where TDR could be pursued on forest parcels enrolled in 84.33 or 84.34. Industrial timber properties (84.33) represent 93% of undeveloped lots, while small scale forest and timber properties (84.34) represent 7%.

The outcome of these blended methods results in an estimated forest TDR price of \$31,000.

Sending Area Analysis Conclusions

This analysis uses the median agricultural TDR price of \$51,000 and forest TDR price of \$31,000 as policy inputs to determine market-based exchange rates. TDR prices will vary for each situation based on land owner economic objectives, location, and property development potential.

Analysis of potential TDR sending area prices presented above represents potential values for which property owners may be willing to sell TDR certificates to potential buyers. However, this represents only half of the TDR value equation.

Developers must be willing to pay the cost of purchasing a TDR unit and receive a market-rate return on the TDR investment for the TDR program to be economically feasible as a development incentive. TDR must also be the lowest cost or lowest risk alternative for improving investment returns on construction projects, otherwise developer will choose other options for boosting returns. Policies that align a property owner's willingness to sell with a buyer's willingness to pay will support program participation.

RECEIVING AREA MARKET CONDITIONS

This section of the report analyzes current and potential receiving area market conditions. Current receiving area analysis focuses on Urban Center receiving areas. Urban Centers are the currently only eligible receiving areas in unincorporated Snohomish County to receive and apply TDR credits to new development. Potential receiving areas include areas and scenarios where TDR could potential be applied as recommended by Cascade Land Conservancy.

Current Receiving Areas

Land Area and Existing Development

Current receiving areas encompass nearly 1,740 acres, including Snohomish County Urban Center zones and

the Arlington Receiving Area. Net land area excluding roads and other right of ways totals approximately 1,620 acres (**Exhibit 6**). All land area calculations are based on land area data from Snohomish County assessor records.

Existing development in receiving areas totals 9.5 million square feet of development which encompasses 984 acres of land. Development is built at an average FAR of 0.22 across all receiving areas. Densities range from a low of 0.01 in the Arlington receiving area to a high of 0.34 FAR in the Bothell North receiving area.

Exhibit 6
Receiving Area Land and Development Characteristics, 2010

Receiving Areas	Total Net Land Area (ac.)	Occupied Land Area			Vacant (ac.)
		Existing Building SF	Land Area (ac.)	FAR	
Arlington TDR Receiving Area	329	21,400	82	0.01	247
Seattle Hill-Silver Firs	493	4,637,300	407	0.26	86
North Lynnwood	156	927,100	89	0.24	67
Martha Lake	301	1,435,200	202	0.16	99
Bothell North	226	2,375,100	161	0.34	65
Mountlake Terrace North	26	12,200	16	0.02	10
Woodway	87	91,800	26	0.08	61
Total	1,619	9,500,100	984	0.22	635

Source: Community Attributes, Snohomish County Assessor (2010)

Vacant and Redevelopable Land Capacity

Developable and redevelopable land in receiving areas is estimated to total 940 acres, or 58% of total land area in Snohomish County receiving areas. There are approximately 635 acres of vacant land and 304 acres of redevelopable land based on improvement to land value ratios of less than 1.0 (**Exhibit 7**).

Zoning in Urban Center districts establishes a minimum FAR of 0.25 for ground retail, 0.5 FAR for non-residential and residential buildings and 1.0 FAR for mixed use buildings. The maximum FAR is 1.0 for residential and non-residential buildings and 2.0 for mixed use and retail. Developers may exceed maximum

FARs by pursuing density bonuses, which include TDR among other options. The maximum building height is 90 feet.

Receiving areas policies could hypothetically accommodate up to 40 million square feet of new development based on the current maximum FAR standards of 1.0 FAR for residential and non-residential buildings, not including possible FAR bonuses. Receiving areas could accommodate more development if developers pursue density bonuses.

**Exhibit 7
Receiving Area Land Capacity, 2010**

Receiving Areas	Land Area (ac.)	Development Capacity			% of Total Area
		Vacant (ac.)	Redevelop- able	Total	
Arlington TDR Receiving Area	329	247	20	267	81%
Seattle Hill-Silver Firs	493	86	135	221	45%
North Lynnwood	156	67	35	102	65%
Martha Lake	301	99	71	170	56%
Bothell North	226	65	32	97	43%
Mountlake Terrace North	26	10	11	21	80%
Woodway	87	61	-	61	70%
Total	1,619	635	304	939	58%

Source: Community Attributes, Snohomish County Assessor (2010)

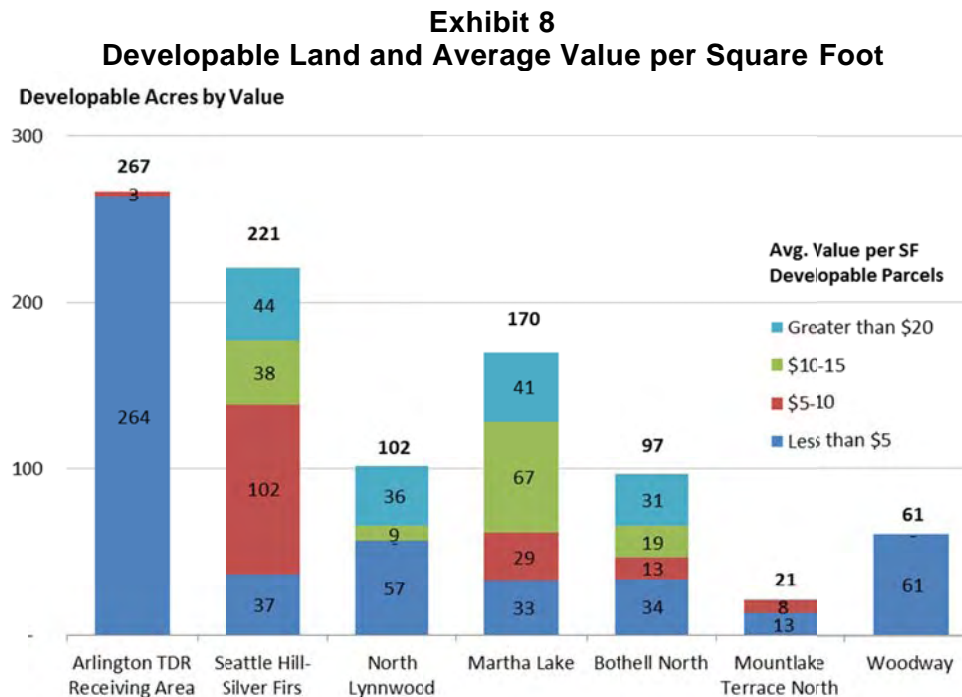
Land Values

Variability in vacant and redevelopable site values influences development feasibility in each receiving area. **Exhibit 8** shows developable land acres by site value ranges. Site values are based on the total assessed value (land & buildings) of vacant and redevelopable parcels.

Nearly 500 acres and 50% of land area in the receiving areas averages less than \$5.00 per square foot of land. Over half of this land area is concentrated in the Arlington receiving area.

Land area valued at less than \$10 per square foot accounts for over 70% of total land area across all receiving areas and 50% of land area in 6 of 7 receiving areas.

Receiving areas with the highest land values include Seattle Hill-Silver Firs, North Lynnwood, Martha Lake and Bothell North. Average developable land values range from \$17.60 to \$19.40 per square foot.



Source: Community Attributes, Snohomish County Assessor (2010)

Development and Density Trends

A total of 137 acres of land and 1.8 million square feet of new construction were developed over the past ten years in receiving areas (**Exhibit 9**). New construction was concentrated in Martha Lake, Seattle Hill-Silver Firs and Bothell North urban centers (99% of all new construction).

Commercial uses accounted for 48% of building square footage, residential uses accounted for 42% and industrial uses accounted for 7%. For sale residential product, including attached and detached condominiums accounted for nearly 60% of all residential construction based on building square footage. Apartments accounted for 25% of residential

construction. Other residential products such as nursing homes accounted for the remaining 15%.

New construction was built at an average density of 0.3 FAR. The highest densities were achieved in Seattle Hill-Silver Firs and Bothell North at 0.4 FAR. Recent densities are less than current maximum FAR standards of 1.0 FAR, not including possible FAR bonuses. On average, new construction was built at 30% of zoned residential and non-residential maximum FAR, ranging from a low of 8% to a high of 43%.

Exhibit 9
Receiving Area Development Trends and Densities, 2000 – 2010¹⁰

Receiving Areas	New Construction		Development Density (FAR)		
	Bldg SF	Land Area	Achieved	Zoned	
				Max FAR	% of Zoned
Arlington TDR Receiving Area	9,000	2.5	0.1	1.0	8%
Seattle Hill-Silver Firs	524,000	32.5	0.4	1.0	37%
North Lynnwood	7,000	1.6	0.1	1.0	10%
Martha Lake	909,000	79.9	0.3	1.0	26%
Bothell North	388,000	20.8	0.4	1.0	43%
Mountlake Terrace North	-	-	-	1.0	0%
Woodway	-	-	-	1.0	0%
Total	1,837,000	137.3	0.3	1.0	31%

Source: Community Attributes, Snohomish County Assessor (2010)

¹⁰ The City of Arlington does not establish an FAR for its receiving area. The receiving area is zoned Suburban Residential (SR). Max FAR is calculated based on height, lot coverage and minimum lot size requirements.

Density trends observation. Analysis of recent development trends and achieved densities does not indicate demand for higher density development in the county’s Urban Centers. This implies that over the past ten years, developers would not have sought TDR credits that exclusively incentivized higher density development with floor area bonuses. Potential economic barriers to achieving higher densities along with potential solutions are discussed in detail later in the report.

Regulatory Guidelines

The Snohomish County code established minimum and maximum FAR standards for development in Urban Centers. Developers may exceed maximum FARs by pursuing density bonuses (**Exhibit 10**).

The FAR density bonus is an additional 2,000 square feet for one purchased TDR. TDR incentives can be applied to both “bonus” and “super bonus” FAR.

There are several options for developers to increase density beyond TDR. Other density incentives for the “bonus” FAR include structured parking, affordable housing and green building elements. “Super bonus” density incentives include 2% of construction costs dedicated to public art and district energy system connections in addition to TDR.

Other zoning requirements that influence density include:

- Max building height of 90 feet.
- Open space requirements are 150 square feet per residential unit and 2% of all non-residential floor area.
- This analysis assumes minimum parking requirements set by code. Retail and office uses require a minimum of 2 stalls per 1,000 square feet of development. Residential units require 1 stall per unit.

**Exhibit 10
Urban Center FAR Requirements and Bonus**

Zoning	Min	Max	Bonus	Super Bonus
Non-Residential	0.50	1.00	1.50	2.50
Residential	0.50	1.00	1.50	2.50
Mixed-Use	1.00	2.00	3.00	5.00
Ground Floor Retail	0.25	2.00	2.25	5.00

Source: Snohomish County Code 30.34A.030

Market Rents

Exhibit 11 presents current market rents and vacancies based on market data from Central Puget Sound Real Estate Research Report and CB Richard Ellis. As shown, rents and revenues vary among receiving areas and real estate products.

Office rents are highest in North Lynnwood, Mountlake Terrace North and Woodway. Retail rents

are highest in Bothell, which also creates greater variance among Urban Centers for retail. Residential rents are more uniform among Urban Centers, though sales prices of condos vary considerably, and Woodway is a noticeable outlier for condo sales, reflecting the area's general affluence.

Market rents assumed for the feasibility analysis are discussed in greater detail in the following section.

**Exhibit 11
Current Market Rents and Vacancies, 2010**

Receiving Areas	Office		Retail		Residential		
	Rent	Vacancy	Rent	Vacancy	Rent	Vacancy	Sale
Arlington TDR Receiving Area	\$ 22.15	10.5%	\$17.73	7.6%	\$12.51	6.2%	\$185,000
Seattle Hill-Silver Firs	\$ 22.15	10.5%	\$17.73	7.6%	\$13.07	5.1%	\$228,000
North Lynnwood	\$ 24.31	29.3%	\$18.91	7.0%	\$13.19	3.6%	\$302,000
Martha Lake	\$ 24.31	29.3%	\$18.91	7.0%	\$13.19	3.6%	\$302,000
Bothell North	\$ 22.58	17.7%	\$22.45	5.2%	\$13.18	6.5%	\$275,000
Mountlake Terrace North	\$ 24.31	29.3%	\$18.91	7.0%	\$11.86	8.4%	na
Woodway	\$ 24.31	29.3%	\$18.91	7.0%	\$11.32	4.7%	\$617,500

Source: CBRE Seattle Local Market View (2010 Q3), Central Puget Sound Real Estate Research Report (First half 2010)

Potential Receiving Areas

Potential receiving areas identified for this analysis include:

- Rural and resource land upzones
- Rural cluster development
- Urban Growth Area expansions

UGA Expansions

There are a total of 11 individual UGAs in Snohomish County, and the larger Southwest County UGA referred to as the MUGA (municipal urban growth area). UGA land area totals nearly 120,000 acres (**Exhibit 12**). The 2007 Snohomish County Buildable Lands Report finds that the County UGA's as a whole are achieving urban densities consistent with GMA comprehensive plans and that adequate land capacity exists to accommodate population and employment growth by 2025.

Buildable land analysis identifies some UGA's where growth is projected to exceed buildable land supply. Population growth is expected to exceed residential land supply in the Monroe UGA, and within in cities of Bothell, Brier and Lynnwood in the MUGA. Employment growth is expected to exceed commercial land supply in Lake Stevens. UGAs that are expected to meet or slightly exceed residential capacity include Gold Bar, Mill Creek, Index, Marysville, and employment in Woodway.

Buildable land analysis findings suggest that UGA expansions may be necessary to accommodate future growth in some areas. Potential TDR applications to support UGA expansions are examined later in the report.

Exhibit 12
UGA Land Area and Growth Capacity

Area	Land Area (acres)	Land Capacity by 2025	
		Population	Employment
Non-S.W. County UGA			
Arlington UGA	6,551	Surplus	Surplus
Darrington UGA	1,883	Surplus	Surplus
Gold Bar UGA	816	At Capacity	Surplus
Granite Falls UGA	1,631	Surplus	Surplus
Index UGA (incorporated)	133	At Capacity	Surplus
Lake Stevens UGA	7,986	Surplus	Deficit
Marysville UGA	13,659	At Capacity	Surplus
Monroe UGA	4,908	Deficit	Surplus
Snohomish UGA	3,176	Surplus	Surplus
Stanwood UGA	2,204	Surplus	Surplus
Sultan UGA	2,622	Surplus	Surplus
S.W. County UGA	73,549	Surplus	Surplus
UGA Total	119,118	Surplus	Surplus

Source: Snohomish County Buildable Lands Report (2007)

This analysis focuses on single family, urban residential zones in UGAs. Single family, urban residential zones represent most likely “upzone density” associated with UGA expansion. In other words, low density zones on the outside of UGAs would be upzoned to single family urban residential zones.

Urban single family detached residential zones allow minimum lot areas of 9,600 to 7,200 square feet or 4.5 to 6 units per acre. Single family zoning districts in UGA's must allow minimum densities of 4 units per acre.

In total, land zoned for urban single family detached housing totals over 20,000 acres (**Exhibit 13**). Vacant land is estimated to total nearly 2,300 acres.

Land capacity is greatest in the R – 9,600 zone. R-9,600 zones encompass 1,200 acres of vacant land, over half

of all vacant urban residential zoned land. Vacant land values average \$4.30 per SF across all urban residential zones. R-9,600 and R-8,400 zones have average land values of \$3.10 to \$3.30 per SF. R-7,200 vacant land values average \$6.70 per SF.

Single family homes built since 2000, have median home values of approximately \$370,000 according to 2010 assessor total assessed value records. Building values average \$87 per SF (based on building value only), and range from \$86 to \$93 per SF. The average home size is 2,500 SF.

Exhibit 13
Urban Residential Zone Land and Market Conditions

	Land Area (Acres)	Vacant Land Area (Acres)	Average Vacant Land Value (\$/SF)	Median Home Price (Total AV)	Med Bldg Imp\$/SF	Median Home Size (SF)
Urban Residential						
R - 9,600	12,940	1,210	\$ 3.10	\$ 365,400	\$ 86	2,500
R - 8,400	2,900	340	\$ 3.30	\$ 352,300	\$ 93	1,800
R - 7,200	5,920	740	\$ 6.70	\$ 381,900	\$ 88	2,500
Total	21,760	2,290	\$ 4.30	\$ 372,000	\$ 87	2,500

Source: Community Attributes, Snohomish County Assessor (2010)

Rural and resource land

CLC cites that rural and resource lands could be targeted for TDR receiving sites where upzones are desired. This analysis documents zoning, land and market conditions for nine of 17 rural, resource and “other” zoning districts.

Rural and resource zoning districts allow single family densities that range from a high of 3.5 units per acre in R-12,500 to a low of one unit per 20 acres in the forestry zoning districts. **Exhibit 14** illustrates density requirements for selected rural and resource zoning districts analyzed in this report.

Note, the Snohomish County code defines RC, R-20,000 and R-12,500 as “Other” zoning districts. This study classifies these zoning districts as rural zoning districts for the purpose of analysis.

Exhibit 14
Rural and Resource Land Zoning Districts

Zoning District		Min Lot Area
Residential 12,500	R-12,500	12,500
Residential 20,000	R-20,000	20,000
Rural Conservation	RC	100,000
Rural Diversification	RD	200,000
Rural-5 Acre	R-5	200,000
Forestry and Recreation	F and R	200,000
Rural Resource Transition – 10 Acre	RRT-10	435,600
Agriculture-10 acre	A-10	435,600
Forestry	F	871,200

Source: Snohomish County Zoning Code

In total, selected rural and resource zoning districts encompass over 1.2 million acres (**Exhibit 15**).

Resource lands cover approximately 990,000 acres. The Forestry (F) zoning districts cover the vast majority of resource land area. A-10 zones cover approximately 60,000 acres.

Rural and other residential zoning districts cover 86,270 acres. R-5 zoning districts account for 86% of total land area for these zoning districts.

Vacant land is most prominent in Forestry and R-5 zones. Vacant land includes parcels with no improvements, and does not account for vacant land on large parcels that have homes, farm or resource facilities.

Resource vacant land values average \$0.09 per SF according to assessor market land values. A-10 zoning district has the highest resource land values at \$0.10 per SF. Rural vacant land values average \$0.50 per SF across all districts. R-5 vacant land prices average \$0.60/SF.

Single family homes from 2000 to 2010 in resource zones, have median home values of approximately \$360,000 according to 2010 assessor total assessed value records. Homes in forestry and A-10 districts have the highest home prices per SF of any rural and resource zone at \$129 per SF and \$116 per SF respectively.

New single family homes in rural zones have median home values of \$430,000. Home prices per SF range from a high of \$116 in RC zones to \$80 in R-12,500.

New homes in RRT-10 have the highest median price homes at nearly \$490,000, followed by homes in R-5 at \$440,000. On a square footage base, homes in lower density rural zones from RRT-10 to RC have home prices. Home prices range between \$108 and \$116 in

these zones compared to home prices from \$80 per SF to \$96 per SF in R-12,500 and R-20,000 zones.

Median home size is 2,500 SF across rural districts and 2,000 SF across resource districts.

Exhibit 15
Rural and Resource Land Zoning Districts

	Land Area (Acres)	Vacant Land Area (Acres)	Average Vacant Land Value (\$/SF)	Median Home Price (Total AV)	Med Bldg Imp\$/SF	Median Home Size (SF)
Rural and Other Residential						
Rural Resource Transition	6,810	1,660	\$ 0.50	\$ 488,600	\$ 110	2,700
Rural Diversification	8,690	2,820	\$ 0.20	\$ 295,700	\$ 108	1,700
Rural 5-Acre	196,880	38,820	\$ 0.60	\$ 439,050	\$ 114	2,500
Rural Conservation	5,770	1,710	\$ 0.30	\$ 329,000	\$ 116	1,800
Residential 20,000	700	40	\$ 0.80	\$ 386,100	\$ 96	2,900
Residential 12,500	420	20	\$ 2.80	\$ 333,500	\$ 80	2,200
Total	219,270	45,070	\$ 0.50	\$ 428,900	\$ 112	2,500
Resource Residential						
Forestry	924,360	603,280	\$ 0.02	\$ 352,100	\$ 129	1,900
Agriculture-10 acre	62,520	8,960	\$ 0.10	\$ 379,800	\$ 116	2,100
Forestry and Recreation	2,530	600	\$ 0.16			
Total	989,410	612,840	\$ 0.11	\$ 363,800	\$ 125	2,000

Source: Community Attributes, Snohomish County Assessor (2010)

Rural cluster development

The Snohomish County code (30.41C) allows rural cluster subdivisions to support conservation design and open space preservation in rural residential development.

Rural cluster subdivisions are allowed in forestry, forestry and recreation, local forest, rural resource transition areas, Rural 5 acre, Rural Conservation and Rural Diversification zoning districts. Zoning guidelines require that 45% to 60% of open space within the subdivision be preserved.

Rural cluster subdivisions incentivize open space preservation with bonus densities (**Exhibit 16**). Cluster subdivisions receive 15% more housing than permitted by underlying zoning. Cluster subdivisions must preserve 45% of land area as open space, except in F and F&R districts where 60% open space preservation is required and 65% in RRT-10 districts.

Cluster subdivisions may increase open space preservation by an additional 20% and receive a housing unit bonus up to 35%. The maximum number of residential lots in a cluster is 13.

Exhibit 16
Cluster Subdivision Open Space and Density Bonus Provisions

Zoning District	Min Open Space		Max Open Space	
	% Open Space	% Increase in Units	% Open Space	% Increase in Units
F	60%	15%	80%	35%
F&R	60%	15%	80%	35%
RRT-10	65%	15%	85%	35%
RC	45%	15%	65%	35%
RD	45%	15%	65%	35%
R-5	45%	15%	65%	35%

Source: Snohomish County Code

The 2007 Snohomish County Buildable Land Report shows a total of nearly 3,950 rural cluster subdivision lots approved, preliminarily proposed, and proposed in the pipeline since December 12, 1996. The majority of rural cluster subdivisions are proposed in RR or RR-5 comprehensive plan areas.

Snohomish County cites that rural cluster subdivision permitting activity increased in recent years. Rural cluster subdivision lot applications increased from 332 in 2004 to 886 in 2005, and grew to 1,805 in 2006.

Receiving Area Analysis Conclusions

Commercial and multifamily rents and vacancies, as well as vacant and redevelopable land values vary across the County's Urban Center receiving areas. These market variations could indicate a different willingness to pay for TDR density bonuses across the different Urban Center areas.

Recent development trends and achieved densities in current receiving areas are below new minimum density standards established in the Urban Centers zoning code. These market trends do not demonstrate demand for higher density development in the county's Urban Centers that could be achieved at bonus densities through TDR.

Potential receiving areas in UGAs as well as rural and resource lands could provide new opportunities to expand TDR. Snohomish County's adopted 2025 growth targets plan for 15% of county growth to occur outside of UGAs in rural areas. Buildable Lands analysis identifies some UGAs where residential land

demand may exceed supply. CLC cites that TDR could be used as a tool to support conditional UGA expansions and encourage higher densities in expansion areas.

In addition to UGA expansions, CLC is exploring opportunities to establish TDR as a condition to upzones in rural and resource land zoning districts, including applications for rural cluster subdivisions. This analysis finds a wide range of rural and resource land zoning densities, along with market variations in new home prices and land values in the different zoning districts. This results in a large number of potential upzone scenarios where TDR could be applied. Each upzone scenario could result in different market returns enabled through building at higher densities, with each potentially resulting in a different willingness to pay for TDR and supported exchange rates.

RECEIVING AREA TDR FEASIBILITY

Receiving area TDR feasibility is analyzed in two cases.

First, TDR feasibility is analyzed for current Urban Center receiving areas based on the existing code structure that incentivizes TDR with density bonuses. Outcomes of feasibility analysis identify a market-based density bonus based on a developer's willingness to pay for TDR and a sending area land owner's willingness to sell TDR.

Second, TDR feasibility options are explored for potential program expansions. TDR feasibility is explored for potential upzone scenarios as specified by CLC. This analysis quantifies market-based exchange rates as they apply to urban and rural residential upzone scenarios. This analysis addresses the role TDR could play in supporting UGA expansion, based on conditional upzoning. This analysis focuses on residential upzoning scenarios only, because commercial capacity is met in all but one UGA.

Both scenarios define market-based exchange rates based on average agricultural TDR prices of \$51,000 and forest land TDR prices of \$31,000.

URBAN CENTER FEASIBILITY SCENARIOS

The following development prototypes are modeled to demonstrate economic feasibility of the TDR program in Urban Centers based on observed development trends:

- Prototype 1: Condo
- Prototype 2: Office
- Prototype 3: Mixed-use apartment and retail

A pro forma feasibility analysis is used to model the costs, economic returns and willingness to pay for TDR credits for each development prototype and various levels of density.

Development feasibility is tested at three levels of density:

- Maximum allowable FAR without density bonuses
- FAR Bonus
- FAR Super Bonus

Development at bonus densities is assumed to take advantage of TDR credits exclusively, rather than alternative density bonus options.

This report presents feasibility under a "base case" scenario which tests feasibility given average market data and assumptions across all receiving areas. A sensitivity analysis is also applied to illustrate TDR feasibility and bonus density variability based on specific market conditions in different Urban Center receiving areas.

See **Appendix A** for all pro forma income statements and data used in this analysis.

Methods

The outcomes of pro forma feasibility analyses for development prototypes are summarized in this section. Detailed pro forma analyses for each development prototype are presented in **Appendix A**.

Feasibility analysis for current receiving areas for each prototype was conducted for three levels of density. The “max” allowable density does not require density bonuses. This represents development feasibility without use of TDR or any other form of FAR bonuses. FAR “Bonus” and “Max Bonus” represent development feasibility at higher densities that take advantage of TDR or other FAR bonuses. FAR “Max Bonus” is the highest allowable density permitted in UC zones.

Redevelopment feasibility is tested using residual land value (RLV) analysis. RLV analysis finds the residual capital available to acquire land after accounting for anticipated developments costs, net operating incomes and required return on investment. Mathematically, residual land values are calculated as follows:

- (1) Present value of net operating incomes (rental income per square feet) generated by new construction over time
- (2) – Development and Demolition Costs (excluding site acquisition)
- (3) – Desirable Return (Profit) on Development

- (4) = Resources (dollars) left to purchase site, or the residual land value

In summary, the formula for determining residual land value is present value – cost – return = residual land value. The outcome of the calculation is a theoretical willingness-to-pay for the opportunity to develop and operate a commercial or residential project at a site, given market conditions and profit requirements. If the residual land value (4) is greater than or equal to the anticipated asking price of the parcel from the seller, then the parcel is considered feasible for redevelopment.

Residual land values are compared to actual land values to determine the economic surplus for TDR buyers and sellers. The economic surplus for TDR is calculated as follows:

- (1) Residual land value
- (2) – Site acquisition cost
- (3) = Gross economic surplus available for TDR buyer
- (4) – Desirable return (profit) on TDR purchase
- (5) = Resources (dollars) left to purchase TDR credits

The net economic surplus is capital available for TDR transactions, which considers the developers profit requirements for the cost of purchasing TDR credits.

The net economic surplus is used to determine market based exchange rates in two ways.

The net economic surplus is used to determine what a developer is willing to pay to gain additional revenues generated from density bonuses. Conversely, the economic surplus can be used to determine how much bonus density is required to incentivize a developer to pay the asking price for TDR credit from TDR sellers.

Assumptions

Development Costs

Exhibit 17 presents construction cost (hard cost) assumptions informed by Rider Levett Bucknall (RLB) 2010 Q4 cost report for the Seattle area

- **Hard costs** applied in this analysis are slightly lower than cost estimates for apartments

(\$120/SF) and condos provided by RLB. All other costs based on “low” market costs.

- **Soft costs**, which include permitting, design, and other tasks pre and post construction, are assumed to be 30% of hard costs for all development types based on input from developers.
- **Site preparation costs**, which includes activities such as grading and landscaping, is assumed to average \$6 per square foot.
- **Return on cost requirements** are assumed to be 10% across all development types (and is also applied to TDR credit purchases).

Exhibit 17
Construction Costs, 2010

	Bldg			Return on Cost
	Hard Cost/ SF	Efficiency	Total \$/SF	
Apartment	\$ 110	80%	\$ 143	10.0%
Condo	\$ 115	80%	\$ 150	10.0%
Office	\$ 110	85%	\$ 143	10.0%
Retail	\$ 70	85%	\$ 91	10.0%
Surface Parking	\$ 6		\$ 8	
Structure Parking	\$ 70		\$ 91	
Underground Parking	\$ 115		\$ 150	

Source: Community Attributes, Rider Levett Bucknall (2010 Q4)

Revenues

Exhibit 18 presents rental rates, sale prices, vacancy and cap rate assumptions that influence revenue projections. Most revenue assumptions assume a rental premium for new construction compared to existing development constructed in the past 20 to 30 years.

- **Apartment** rents of \$13.80/SF per year. This value is approximately 5% higher than current rates of \$13.20 in many urban centers. This equates to \$1,150 per month for a 1,000 square foot, 2-bedroom apartment, which includes parking costs. Vacancies average 6%, operating expenses average 30%.
- **Condos** sales are assumed to average \$280,000 per unit based on a scan of new condo products in Snohomish County and recent data published by the Puget Sound Real Estate Research Report. Units are assumed to average 1,200 square feet. Net sales price averages \$216/SF after deducting sales expenses. Condo values (based on 2010 assessed values) in recent multi-condo developments in receiving areas averaged less than \$190/SF and ranged from \$220/SF to \$150/SF. Condo units averaged \$250,000/unit

and ranged from \$305,000 to \$220,000 per unit. Average condo sizes ranged from 1,100 SF to nearly 1,900 SF. A scan of condo listings on Redfin.com ranging from \$275,000 to \$400,000 in Snohomish County returned 17 results in late 2010. Note condo sale prices from surrounding areas are applied to Urban Centers where limited condo sales data exist. For example, the Woodway Urban Center applies condo sales from zip code 98020 that encompasses the larger Woodway area and parts of Edmonds.

- **Office** rents are assumed to be \$23/SF, reflecting current asking rates in Snohomish County. Vacancies are assumed to be 7.5%, which is significantly lower than current rates averaging between 10.5% to nearly 30% in some areas.
- **Retail** rents (rents are expressed as net rents after operating costs) average \$20/SF, vacancies are assumed to be 7%.

Exhibit 18
Revenue Assumptions

Use	Monthly Rent/SF	Gross Rent/Sf	Vacancy	Operating Expenses	Net Rent/SF
Apartment	\$ 1.15	\$ 13.80	6.0%	30%	\$ 9.08
Office		\$ 23.00	7.5%	25%	\$ 15.96
Retail		\$ 20.00	7.0%	0%	\$ 18.60
Condo		Sales Price/Unit	Sales Price/ SF	Sales Expenses	Net Sales Price/SF
		\$ 280,000	\$ 233.33	8%	\$ 216.00

Source: Community Attributes, CB Richard Ellis (2010)

Financial Assumptions

Cap Rates. Capitalization rates, or cap rates, determine how a development's revenues are converted to reflect the overall current market value of the property. They indicate the investment market's appetite for risk given current real estate market outlooks. Outcomes and analysis are *highly sensitive* to changes and cap rates. Moreover, cap rates range broadly at any given point in time, and can vary between investors based on their perceptions of the relative risk and value of different property types.

Current cap rates are published by CB Richard Ellis in the Capital Markets Cap Rate Survey published in August 2010. Current cap rates for the Seattle area most applicable to Snohomish County receiving areas are 7.5% for suburban Class A office, 8.5% for class B retail, and 6.5% for class B multifamily. This analysis assumes cap rates of 7% for office, 8.5% for retail and

5.5% for multifamily, and a blended cap rate of 6.1% for mixed use apartment and retail.

Developer Return. Developer return on cost requirements are assumed to be 10% across all product types including TDR purchases. This simplified model considers the effect and cost of debt and financing structure within return on cost metrics. The model assumes consistent financing structure across development prototypes.

Urban Center TDR Feasibility Outcomes

Pro forma analysis demonstrates that all development prototypes are feasible at maximum (“Max”) allowed FARs without density bonuses in Urban Centers (**Exhibit 19**). Condo and mixed-use development prototypes are feasible at bonus FAR densities, while office development does not appear feasible at the achievable bonus FAR. None of the development prototypes are feasible at the “super bonus,” given current market conditions.

Bonuses that enable higher density development allow developers to generate more revenue per site. Density bonuses add value for developers only if higher revenues are not offset by higher construction costs.

This analysis demonstrates that density bonuses for condo and mixed-use prototypes can create a “value-added” economic surplus over the maximum FAR. The value-added created by density bonuses is expressed in terms of residual land value, or the capital available for site acquisition after accounting for anticipated developments costs, net operating incomes, and required return on investment. Density bonuses applied to condo prototypes increase the residual land value by approximately \$3 per square foot of land, from \$1 to \$4

per square foot. Density bonuses increase the residual land value for the mixed-use prototype by \$6 per square foot of land, from \$4 to \$9 per square foot.

Residual land values demonstrate the ability to support site acquisition and generate an economic surplus to support purchases of TDR. This analysis quantifies site acquisition costs based on total assessed values for vacant and redevelopable parcels.

Feasibility analysis demonstrates that structured parking restricts development feasibility. Bonus densities increase parking requirements which results in the need for structured parking in the non-residential and mixed-use development prototypes. Structured parking significantly increases construction costs, beyond what can be supported by higher revenue potential. Surface parking construction costs are approximately \$6 per square foot compared to \$70 per square foot for structured parking.

Current market rates do not support feasible office development when structured parking is required at bonus density levels. Similarly, condo uses are not feasible at super bonus densities (2.5 FAR), nor is the mixed-use prototype feasible at super bonus densities (5.0 FAR) due to higher parking requirements and costs.

Exhibit 19
Urban Center Development Feasibility by Use and Density

	Condo			Office			Mixed-Use Apartment & Retail		
	150,000 SF (apprx. 3.5 acres)			150,000 SF (apprx. 3.5 acres)			150,000 SF (apprx. 3.5 acres)		
Lot Size	Super			Super			Super		
	Max	Bonus	Bonus	Max	Bonus	Bonus	Max	Bonus	Bonus
FAR Allowance									
FAR	1.00	1.50	2.50	1.00	1.50	2.50	2.00	3.00	5.00
Development Specifications									
Building SF	150,000	225,000	375,000	150,000	225,000	375,000	300,000	450,000	750,000
Units	100	150	250				192	288	480
Parking SF	30,000	45,000	75,000	76,500	114,900	191,400	88,200	132,300	220,500
Parking Type	Surface	Surface	Structure	Surface	Structure	Structure	Surface/ Structure	Surface/ Structure	Below Grade
Stories	2	3	4	3	3	3	4	7	10
Construction Costs (Millions \$)									
Site Improvement Cost	\$ 0.9	\$ 0.9	\$ 0.9	\$ 0.9	\$ 0.9	\$ 0.9	\$ 0.9	\$ 0.9	\$ 0.9
Hard Cost	\$ 17.4	\$ 26.1	\$ 48.4	\$ 17.0	\$ 32.8	\$ 54.6	\$ 28.9	\$ 43.4	\$ 88.9
Soft Cost	\$ 5.2	\$ 7.8	\$ 14.5	\$ 5.1	\$ 9.8	\$ 16.4	\$ 8.7	\$ 13.0	\$ 26.7
Return on Cost	\$ 2.3	\$ 3.4	\$ 6.3	\$ 2.2	\$ 4.3	\$ 7.1	\$ 3.8	\$ 5.6	\$ 11.6
Total Cost	\$ 25.8	\$ 38.3	\$ 70.1	\$ 25.2	\$ 47.8	\$ 79.0	\$ 42.2	\$ 62.9	\$ 128.0
Total Cost/Bldg SF	\$ 172	\$ 170	\$ 187	\$ 168	\$ 212	\$ 211	\$ 141	\$ 140	\$ 171
Market Value (Millions \$)									
	Sales Price			Annual Rental Revenues			Annual Rental Revenues		
Sale Price or Rent	\$ 28.0	\$ 42.0	\$ 70.0	\$ 2.9	\$ 4.4	\$ 7.3	\$ 3.7	\$ 5.5	\$ 9.2
Vacancy and Expenses	\$ (2.1)	\$ (3.2)	\$ (5.3)	\$ (0.9)	\$ (1.3)	\$ (2.2)	\$ (1.0)	\$ (1.5)	\$ (2.4)
Sale Revenue or NOI	\$ 25.9	\$ 38.9	\$ 64.8	\$ 2.0	\$ 3.1	\$ 5.1	\$ 2.7	\$ 4.0	\$ 6.7
Cap Rate	n/a			7%			5.5% Apt, 8.5% Retail		
Total Market Value (Net Present Value)	\$ 25.9	\$ 38.9	\$ 64.8	\$ 29.1	\$ 43.6	\$ 72.7	\$ 42.9	\$ 64.3	\$ 107.1
Market Value/Bldg SF	\$ 173	\$ 173	\$ 173	\$ 194	\$ 194	\$ 194	\$ 143	\$ 143	\$ 143
Residual Land Value (Millions \$)	\$ 0.1	\$ 0.6	\$ (5.3)	\$ 3.9	\$ (4.2)	\$ (6.4)	\$ 0.6	\$ 1.4	\$ (20.8)
Residual Land Value/Land SF	\$ 1	\$ 4	\$ (36)	\$ 26	\$ (28)	\$ (43)	\$ 4	\$ 9	\$ (139)

Source: Community Attributes (2011)

Supportable TDR Costs and Bonus Densities

This section of the report quantifies the developer's willingness to pay for TDR credits and the density bonuses they receive in return. This analysis assumes that developers obtain FAR bonuses by obtaining TDR certificates exclusively. This analysis does not consider other density bonus options; these findings are presented later in the report.

Exhibit 20 presents the economic surplus available to purchase TDRs and expresses market based bonus density in two ways.

First, the willingness to pay for TDR illustrates how much a developer is willing to pay for TDR credits based on the value of the current exchange rate of 2,000 bonus floor area for one TDR credit, given the economic surplus produced by higher density development.

Second, the "market-based bonus density" illustrates the floor area density bonus a developer would expect in return in order to justify paying the estimated sending area price per TDR credit in sending areas based on allocation ratio of 1:1. Market-based bonus

densities match developer and seller expectations for TDR exchange rates and costs. This analysis quantifies two market-based exchange rates for agricultural and forest TDR prices.

Pro forma income analysis demonstrates that a developer would be willing to pay approximately \$11,700 per TDR credit to receive a 2,000 square foot density bonus for the condo prototype and nearly \$9,100 per TDR credit to increase density for the mixed-use prototype. The office prototype at bonus and super bonus densities does not create an economic surplus to support TDR purchases.

Pro forma income analysis demonstrates that a bonus density of between 8,300 square feet (condo) and 10,700 square feet (mixed-use) is required to support an average agricultural TDR transaction of \$51,000 per credit.

A bonus density between 5,000 square feet (condo) and 6,500 square feet (mixed-use) is required to support an average forest TDR transaction of \$31,000.

Exhibit 20
Supportable Urban Center TDR Costs and Bonus Densities

	Condo			Mixed-Use Apartment & Retail		
	150,000 SF (apprx. 3.5 acres)			150,000 SF (apprx. 3.5 acres)		
Development Density						
FAR Allowance	Max	Bonus	Super Bonus	Max	Bonus	Super Bonus
FAR	1.00	1.50	2.50	2.00	3.00	5.00
Building SF	150,000	225,000	375,000	300,000	450,000	750,000
Economic Surplus for TDR						
Residual Land Value	\$ 75,000	\$ 562,500	NA	\$ 623,447	\$ 1,385,444	NA
Site Acquisition Cost	\$ 75,000	\$ 75,000	\$ 75,000	\$ 623,447	\$ 623,447	\$ 623,447
Gross Surplus for TDR	\$ -	\$ 487,500	NA	\$ -	\$ 761,996	NA
Return on TDR Cost (10%)	\$ -	\$ 48,750	NA	\$ -	\$ 76,200	NA
Net Surplus for TDR	\$ -	\$ 438,750	NA	\$ -	\$ 685,797	NA
Willingness to Pay for TDR @ Current Exchange Rate (1 TDR = 2,000 SF Bonus Density)						
Net Surplus for TDR	\$ -	\$ 438,750	NA	\$ -	\$ 685,797	NA
Density Bonus (Bldg SF)	-	75,000	225,000	-	150,000	450,000
TDR Credits Required @ 1 TDR/2000 SF	-	38	113	-	75	225
TDR Value (Surplus ÷ Credits)	\$ -	\$ 11,700	NA	\$ -	\$ 9,144	NA
Supportable Density Bonus for Agricultural TDR (\$51,000/TDR, Transfer Ratio 1:1)						
TDR Price (Sending Area TDR price)	\$ -	\$ 51,000		\$ -	\$ 51,000	
TDR Credits Required (Surplus ÷ TDR Pric	-	9		-	14	
Market-based Density Bonus (SF)		8,300			10,700	
Supportable Density Bonus for Forest TDR (\$34,000/TDR, Transfer Ratio 1:1)						
TDR Price (Sending Area TDR price)	\$ -	\$ 31,000		\$ -	\$ 31,000	
TDR Credits Required (Surplus ÷ TDR Pric	-	15		-	23	
Market-based Exchange Rate (Floor are		5,000			6,500	

Source: Community Attributes (2011)

Urban Center Sensitivity Analysis

Development feasibility is tested in different receiving areas using a sensitivity analysis. Sensitivity analysis examines how variations in rental rates or sales prices impact residual land values and market support for bonus densities. The sensitivity analysis adjusts revenues for different Urban Centers while holding all inputs (construction costs, development specifications) constant with the base case. Residual land values and density bonuses in the following exhibits are based on development at “bonus” densities.

Condo

Exhibit 21 illustrates that small variations in condo sales prices have a large impact on residual land values and market-support density bonuses. For example,

condo sales in the North Lynnwood and Martha Lake area (\$302,000) are 6% higher than the base case sale price (\$280,000). A 6% increase in sale prices generates residual land values that are eight times higher than the base case, which supports bonus density that are one third of the base case (2,800 SF).

Condo sales in the Woodway area generate the highest residual land values of any UGA. Recent condo sale values in Seattle Hill-Silver Firs and Bothell North do not currently generate sufficient revenues to cover construction costs applied in this analysis, but could in the future. For example, a three percent increase in condo sales value in Bothell North could support feasible development based on analysis, which produce a residual value that could support TDR purchases.

Exhibit 21
Urban Center Condo Sensitivity Analysis

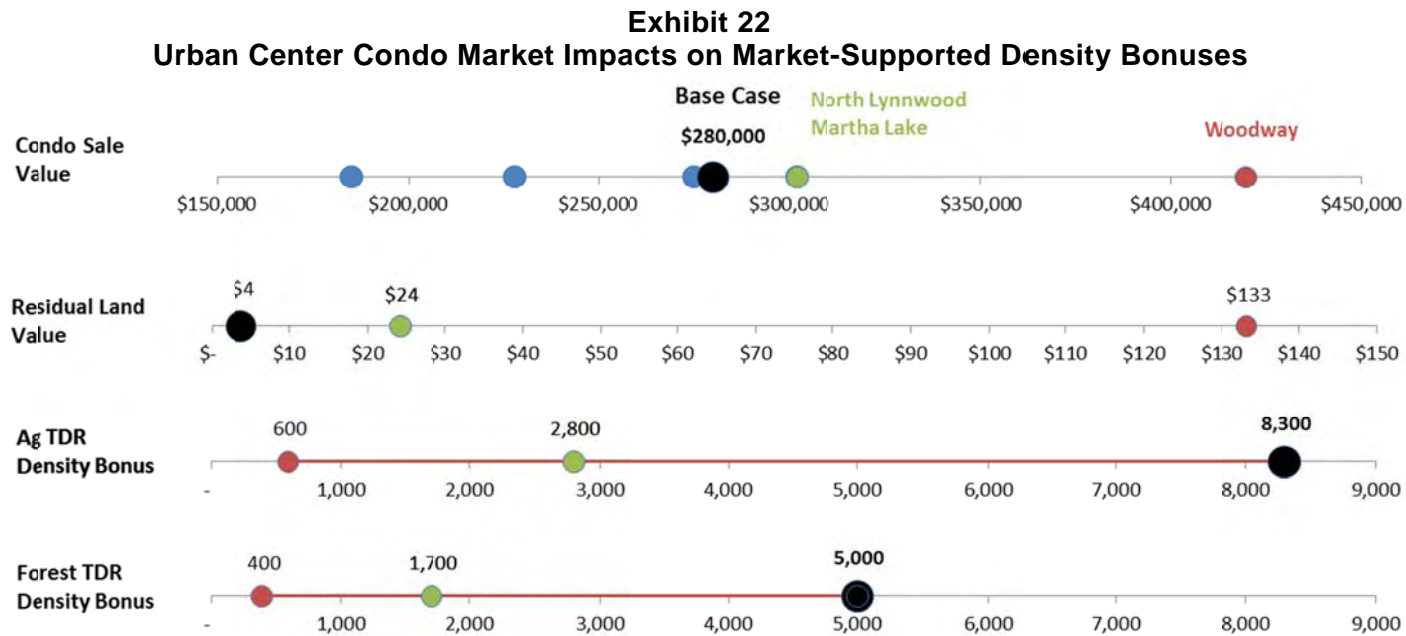
	Condo					
	Sale Value	Supported Density Bonus (SF)				
Residual Land Value		Agricultural TDR (\$51,000/TDR)	Forest TDR (\$31,000/TDR)	Parcels Available	Land Area Available	
Arlington TDR Receiving Area	\$ 185,000	NA	NA	NA	NA	NA
Seattle Hill-Silver Firs	\$ 228,000	NA	NA	NA	NA	NA
North Lynnwood	\$ 302,000	\$ 24.10	2,800	1,700	39	81
Martha Lake	\$ 302,000	\$ 24.10	2,800	1,700	87	154
Bothell North	\$ 275,000	NA	NA	NA	NA	NA
Mountlake Terrace North	\$ 280,000	\$ 3.75	8,300	5,000	1	4
Woodway	\$ 420,000	\$ 133.25	600	400	7	61
Base Case	\$ 280,000	\$ 3.75	8,300	5,000	134	300

Source: Community Attributes (2011)

Exhibit 22 illustrates how small changes in condo market conditions can result in a large range of residual land values and market-supported density bonuses. For example, condo sales of \$302,000 in the North Lynnwood and Martha Lake area are approximately 8% higher than the base case condo sale value of \$280,000. An 8% increase in condo sale value results in a \$20/SF increase in residual land value (RLV is 8 times higher than the base case) and density bonuses of 2,800 square feet compared to the base case of 8,300 (33% times lower than the base case) for agricultural TDR.

Market variation results in varied willingness to pay for TDR density bonuses. Analysis shows that base case

exchange rates would support TDR use in four of six Urban Centers based on current market conditions, and possibly in Bothell North if market conditions improve by 3 to 5%. Market conditions demonstrate that TDR is more likely to be pursued in North Lynnwood, Martha Lake, Mountlake Terrace and Woodway. While condo sale prices less than \$280,000 in Urban Centers may not generate sufficient revenues to support land acquisition and TDR density bonuses, small variations in market conditions within the Urban Centers based on site location, land prices, developer risk tolerance and a host of other potential considerations could result in demand for higher densities.



Source: Community Attributes (2011)

Office

Current receiving area rents do not produce sufficient revenues to cover the development costs at all bonus densities due to structured parking requirements. Office development may require structured parking at densities around 1.4 FAR. Office development could take advantage of some density bonus options, but would not likely pursue density bonuses to reach the maximum level of density allowed under the first bonus density level. Office development is more profitable at maximum densities than bonus or super bonus densities given current lease rates. Lease rates would need to grow by approximately 25%, similar to those found in City of Seattle market areas (\$29/SF), to support development at higher densities. In this case,

development at super bonus densities, rather than bonus densities, could generate sufficient value to support site acquisition and TDR purchases.

Mixed-use

Exhibit 23 demonstrates that mixed-use development may be feasible given current market assumptions in North Lynnwood, Martha Lake and Bothell North receiving Areas. Other receiving areas command slightly lower retail and apartment rents than assumed in the base case, indicating that improved market conditions could generate an economic surplus to support TDR purchases there in the future. Bothell North commands the highest retail and apartment rents of any receiving area and therefore generates the highest residual land values and lowest density bonuses.

**Exhibit 23
Urban Center Mixed-Use Sensitivity Analysis**

	Apt Rent		Retail Rent		Mixed-Use				
					Residual Land Value	Supported Density Bonus (SF)		Parcels Available	Land Area Available
						Agricultural TDR (\$51,000/TDR)	Forest TDR (\$31,000/TDR)		
Arlington TDR Receiving Area	\$ 13.20	\$ 17.73	NA	NA	NA	-	-		
Seattle Hill-Silver Firs	\$ 13.94	\$ 17.73	NA	NA	NA	-	-		
North Lynnwood	\$ 13.94	\$ 18.91	\$ 6.39	13,600	8,300	13	57		
Martha Lake	\$ 13.94	\$ 18.91	\$ 6.39	13,600	8,300	19	39		
Bothell North	\$ 13.94	\$ 22.45	\$ 26.14	5,200	3,200	37	86		
Mountlake Terrace North	\$ 13.20	\$ 18.91	NA	NA	NA	-	-		
Woodway	\$ 13.20	\$ 18.91	NA	NA	NA	-	-		
Base Case	\$ 13.80	\$ 20.00	\$ 9.24	10,700	6,500	69	182		

Source: Community Attributes (2011)

Exhibit 24 illustrates how small changes in apartment and retail market conditions can result in a large range of residual land values and market-supported density bonuses.

In this scenario, apartment rents are very similar across the different urban centers and retail market variations have the largest impact on residual land values and density bonuses. Retail rents are nearly \$4 higher per square foot in Bothell North than other markets such as North Lynnwood, Martha Lake, Mountlake Terrace North and Woodway. The assumed retail cap rate of 8.5% results in a net present value differential of over \$40 per square foot in Bothell North compared to other competitive markets. Higher retail rents in Bothell North result in a \$20/SF increase in residual land value (RLV nearly 3 times higher than the base case) and density bonuses of 5,200 SF compared to 10,700 SF (2 times lower than the base case) for agricultural TDR credits.

Slightly lower retail rents in North Lynnwood and Martha Lake result in a residual land values that are 30% lower than the base case and density bonuses of 13,600 square feet compared to 10,700 SF (25% higher than the base case) for agricultural TDR credits.

Analysis shows mixed-use development in Bothell North is the most probable area where developers would take advantage of TDR based on the base case exchange rates and market conditions. A 5% to 10% increase in retail rents in three other Urban Centers including Seattle Hill-Silver Firs, North Lynnwood and Martha Lake could support TDR at the base case density bonuses.

Similar to condo market variation, residential and commercial rental market conditions illustrates that development and TDR density bonuses could be feasible in many Urban Centers. Small variations in market conditions within the Urban Centers based on site location could result in demand for higher densities today or in the future.

**Exhibit 24
Urban Center Apartment and Retail Market Impacts on Market-Supported Density Bonuses**



Source: Community Attributes (2011)

PROGRAM EXPANSION FEASIBILITY SCENARIOS

This section of the report explores potential TDR program expansions. Cascade Land Conservancy specifically requests analysis to explore how TDR could be used as a requirement for upzones that would be a condition for UGA expansion, rural cluster subdivision or other rural district upzones. CLC identified the following potential TDR upzone scenarios.

Scenario Overview

UGA Expansion Upzone Scenarios

This analysis quantifies market-based exchange rates as they apply to urban single family residential upzone scenarios as a condition for UGA expansion. Urban residential zones are the most frequent zoning district found on the edges of UGAs, and are therefore the mostly likely instance to which upzones would be associated with UGA expansions. In addition, future UGA expansions will most likely be driven by population growth based on findings from the 2007 Snohomish County buildable lands analysis. Commercial upzones are not analyzed because 11 of 12 UGAs including the MUGA have surplus commercial capacity according to buildable lands analysis. The following zoning districts are assumed to be subject to upzones:

- R-5
- A-10
- F
- RRT-10

The zones identified above will be upzoned to the following urban residential UGA zones:

- R-9,600
- R-8400
- R-7,200

In total, this analysis defined 12 UGA expansion upzone scenarios.

Rural and Resource Land Upzones

This analysis identifies market based exchange rates for resource and rural lands that are upzoned to the R-5 zoning district:

- F to R-5
- A-10 to R-5
- RRT-10 to R-5

These zoning districts also represent commercial forest and commercial forest fringe land use areas.

Rural Cluster Subdivisions

This analysis quantifies market-based exchange rates as they apply to the following rural residential zones that allow rural cluster subdivisions:

- F
- F and R
- R-5

- RC
- RRT-10
- RD

The analysis assumes that developers preserve the maximum allowable open space in order to gain the highest possible density bonus of 35%. The Snohomish County Hearing Examiner's office states that the vast majority of rural cluster subdivision applications pursue the maximum bonus density.

Methods

The analysis quantifies market-based exchange rates based on the increase in return a developer receives for building at higher densities under an upzone. In other words, the additional profit generated from building at higher densities could be used to support TDR purchases.

Developer returns, revenue and costs assumptions are informed by median home sale prices for single family homes built from 2001 to 2010, typical construction costs, and vacant land values in each zone.

The incremental gain in return that a developer receives for an upzone, which can be used to support TDR purchases, is calculated as follows:

- 1) Developer return for building at upzone density
- 2) – Developer return for base zone density
- 3) = Additional profit generated by the upzone, or the gross economic surplus available for TDR.

4) – Desirable return (10% of profit) on TDR purchase

5) = Resources (dollars) left to purchase TDR credits.

This analysis quantifies market-based exchange rates for agricultural and forest land TDR prices. Therefore two different exchange rates are defined for each scenario. The assumed agricultural TDR price level is \$51,000 per TDR credit, based value differentials of agricultural properties participating in the RCW 84.34 current use property tax program. The assumed forest TDR price is \$31,000 based on comparable TDR credit prices.

Market-based exchange rates are expressed as the number of additional housing units allowed in the receiving area for one TDR credit purchased in the sending areas. Market-based exchange rates are calculated as follows:

- 1) Resources (dollars) left to purchase TDR credits
- 2) ÷ TDR price (agricultural or forest land TDR price)
- 3) = Market-supported TDR credits
- 4) ÷ Number of additional housing units from upzone
- 5) = Market-based exchange rate (agricultural or forest exchange rate)

Development scenarios are modeled on a 20 acre hypothetical site, which is used to illustrate increases in housing units and supported exchange rates.

All market-based exchange rates are rounded up and expressed as a whole number. For example, if an upzone scenario results an exchange rate of 1.2 additional housing units per one TDR, then the exchange rate is set at 2.0 additional housing units per TDR. This method is necessary because developers cannot buy portions of development rights. Rounding exchange rates up results in lower costs to developers, because developers are required to buy fewer TDR to achieve upzone densities. Rounding exchange rates to the nearest whole number, which in some cases would decrease the exchange rate, would require the developer to buy more TDR than supported by market returns.

Assumptions

Exhibit 25 presents the inputs and assumptions into the TDR analysis for each zoning district associated with upzone scenarios.

- **Revenues.** Home sales price assumptions applied for each zoning district are informed by assessor data. Recent home sales in lower density zoning districts demonstrate higher home prices than in urban residential zoning districts. Home sale price assumptions are set to be consistent across similar density zoning districts in an effort to isolate the economic impacts of upzones, and compare upzone

economic impacts across various zoning scenarios.

- **Developer costs and return requirements.** Rider Levett Bucknall cites that single family construction costs average \$100 per square foot for the Seattle metro in 2010 quarter four. Soft costs which include permitting, design, and other tasks pre and post construction, are assumed to be 30% of hard costs for all development types based on input from developers. Return on cost requirements are assumed to be 10% across all development types (and is also applied to TDR credit purchases).

Land sale price assumptions are informed by assessor data and reflect that higher density land is more expensive.

Note, rural cluster subdivision lot costs shown below in Exhibit 25 are lower than lot costs for the respective zoning district. The total cost of land acquisition is the same for developers, however more lots allowed through cluster subdivision reduces per lot costs.

Exhibit 25
Inputs and Assumptions for Upzone Scenarios by Zoning District

	Lot Size	Housing Size (SF)	Housing Cost	Housing Cost/SF	Lot Cost	Lot Cost/SF	Total Unit Cost	Home Sale Price
Resource Residential								
Forestry	871,200	2,500	\$ 357,500	\$ 143	\$ 43,600	\$ 0.05	\$ 401,100	\$ 440,000
Agriculture-10 acre	435,600	2,500	\$ 357,500	\$ 143	\$ 43,600	\$ 0.10	\$ 401,100	\$ 440,000
Forestry and Recreation	200,000	2,500	\$ 357,500	\$ 143	\$ 30,000	\$ 0.15	\$ 387,500	\$ 440,000
Rural Residential								
RRT-10	435,600	2,500	\$ 357,500	\$ 143	\$ 108,900	\$ 0.25	\$ 466,400	\$ 500,000
Rural Diversification	200,000	2,500	\$ 357,500	\$ 143	\$ 60,000	\$ 0.30	\$ 417,500	\$ 440,000
Rural 5-Acre	200,000	2,500	\$ 357,500	\$ 143	\$ 60,000	\$ 0.30	\$ 417,500	\$ 440,000
Rural Conservation	100,000	2,500	\$ 357,500	\$ 143	\$ 50,000	\$ 0.50	\$ 407,500	\$ 440,000
Residential 20,000	20,000	2,500	\$ 321,800	\$ 129	\$ 16,000	\$ 0.80	\$ 337,800	\$ 375,000
Residential 12,500	12,500	2,500	\$ 321,800	\$ 129	\$ 12,500	\$ 1.00	\$ 334,300	\$ 375,000
Rural Cluster Subdivisions								
F	871,200	2,500	\$ 357,500	\$ 143	\$ 43,560	\$ 0.05	\$ 401,060	\$ 440,000
F&R	145,200	2,500	\$ 357,500	\$ 143	\$ 21,780	\$ 0.15	\$ 379,280	\$ 440,000
RRT-10	290,400	2,500	\$ 357,500	\$ 143	\$ 72,600	\$ 0.25	\$ 430,100	\$ 500,000
RD	145,200	2,500	\$ 357,500	\$ 143	\$ 43,560	\$ 0.30	\$ 401,060	\$ 440,000
R-5	145,200	2,500	\$ 357,500	\$ 143	\$ 43,560	\$ 0.30	\$ 401,060	\$ 440,000
RC	72,600	2,500	\$ 357,500	\$ 143	\$ 36,300	\$ 0.50	\$ 393,800	\$ 440,000
Urban Residential								
R - 9,600	9,600	2,500	\$ 321,800	\$ 129	\$ 29,760	\$ 3.10	\$ 351,560	\$ 375,000
R - 8,400	8,400	2,500	\$ 321,800	\$ 129	\$ 27,720	\$ 3.30	\$ 349,520	\$ 375,000
R - 7,200	7,200	2,500	\$ 321,800	\$ 129	\$ 25,200	\$ 3.50	\$ 347,000	\$ 375,000

Community Attributes (2011), Snohomish County Assessor, Rider Levett Bucknall

TDR Feasibility Outcomes and Costs

Exhibit 26 below demonstrates the number of allowable housing units for prototypical subdivision developments on 20 acre sites based on Snohomish County zoning districts and the associated developer costs, revenues and returns. These development

scenarios illustrate cost and revenue outcomes without TDR. These “base case” scenarios are compared to developer costs and returns associated with upzones in the following section.

Exhibit 26
“Base Case” Single Family Residential Development Costs and Returns, by Zoning District

	Developer Returns Without TDR (20 acre subdivision)				
	Units	Dev. Cost	Revenue	\$ Return	% Return
Resource Residential					
Forestry	1	\$ 401,100	\$440,000	\$38,900	9.7%
Agriculture-10 acre	2	\$ 802,200	\$880,000	\$77,800	9.7%
Forestry and Recreation	4	\$ 1,550,000	\$1,760,000	\$210,000	13.5%
Rural Residential					
RRT-10	2	\$ 932,800	\$1,000,000	\$67,200	7.2%
Rural Diversification	4	\$ 1,670,000	\$1,760,000	\$90,000	5.4%
Rural 5-Acre	4	\$ 1,670,000	\$1,760,000	\$90,000	5.4%
Rural Conservation	8	\$ 3,260,000	\$3,520,000	\$260,000	8.0%
Residential 20,000	43	\$ 14,525,400	\$16,125,000	\$1,599,600	11.0%
Residential 12,500	69	\$ 23,066,700	\$25,875,000	\$2,808,300	12.2%
Rural Cluster Subdivisions					
F	1	\$ 401,060	\$440,000	\$38,940	9.7%
F&R	6	\$ 2,275,680	\$2,640,000	\$364,320	16.0%
RRT-10	3	\$ 1,290,300	\$1,500,000	\$209,700	16.3%
RD	6	\$ 2,406,360	\$2,640,000	\$233,640	9.7%
R-5	6	\$ 2,406,360	\$2,640,000	\$233,640	9.7%
RC	12	\$ 4,725,600	\$5,280,000	\$554,400	11.7%
Urban Residential					
R - 9,600	90	\$ 31,640,400	\$33,750,000	\$2,109,600	6.7%
R - 8,400	103	\$ 36,000,560	\$38,625,000	\$2,624,440	7.3%
R - 7,200	121	\$ 41,987,000	\$45,375,000	\$3,388,000	8.1%

Source: Community Attributes (2011)

Supportable TDR Costs and Bonus Densities

UGA Expansions

Exhibit 27 shows that UGA expansion upzone scenarios support exchange rates of 2:1 for forest TDR credits and 3:1 for agricultural TDR credits. CLC is exploring policy opportunities to require upzones as a condition for UGA expansion, and require that additional revenue generated through higher building densities be used to support TDR purchases.

Actual forest TDR exchange rates range from 1.3 to 1.8 additional housing units per one forest TDR credit. Actual agricultural TDR exchange rates range between two and three additional housing units per one agricultural TDR credit. All exchange rates are rounded up. Based on the scenarios modeled, developers retain 15% to 35% of additional profit generated through upzones.

Exhibit 27
Market-based Exchange Rates for UGA Expansion

	Return Increase	Additional Units	% Gain in Units	Forest TDR @ \$31,000 TDR Credit			Ag TDR @ \$51,000 TDR Credit		
				Supportable TDR	TDR per Added Unit	Exchange Rate	Supportable TDR	TDR per Added Unit	Exchange Rate
R-5 to:									
R - 9,600	\$ 1,817,600	86	2150%	59	0.7	2.0	35.6	0.4	3.0
R - 8,400	\$ 2,281,000	99	2475%	74	0.7	2.0	44.7	0.5	3.0
R - 7,200	\$ 2,968,200	117	2925%	96	0.8	2.0	58.2	0.5	3.0
RRT-10 to:									
R - 9,600	\$ 1,838,200	88	4400%	59	0.7	2.0	36.0	0.4	3.0
R - 8,400	\$ 2,301,500	101	5050%	74	0.7	2.0	45.1	0.4	3.0
R - 7,200	\$ 2,988,700	119	5950%	96	0.8	2.0	58.6	0.5	3.0
A-10 to:									
R - 9,600	\$ 1,828,600	88	4400%	59	0.7	2.0	35.9	0.4	3.0
R - 8,400	\$ 2,292,000	101	5050%	74	0.7	2.0	44.9	0.4	3.0
R - 7,200	\$ 2,979,200	119	5950%	96	0.8	2.0	58.4	0.5	3.0
F to:									
R - 9,600	\$ 1,863,600	89	8900%	60	0.7	2.0	36.5	0.4	3.0
R - 8,400	\$ 2,327,000	102	10200%	75	0.7	2.0	45.6	0.4	3.0
R - 7,200	\$ 3,014,200	120	12000%	97	0.8	2.0	59.1	0.5	3.0

Source: Community Attributes (2011)

Rural and Resource Land Upzones

Exhibit 28 shows exchange rates for rural and resource land upzones. In each scenario, low density zoning districts including F, A-10 and RRT-10 are upzoned to the R-5 zoning district. Exchange rates are expressed as the number of additional housing units allowed in the receiving area for one TDR credit purchased in forest or agricultural sending areas.

- **F to R-5 upzones** support exchange rates of 3:1 for forest TDR credits valued at \$31,000 and 4:1 for agricultural TDR credits valued at \$51,000.
- **A-10 to R-5 upzones** support exchange rates of 6:1 for forest TDR credits and 10:1 for agricultural TDR credits.
- **RRT-10 to R-5 upzones** support exchange rates of 4:1 for forest TDR credits and 5:1 for agricultural TDR credits. RRT-10 upzones generate higher returns through an upzone than A-10 districts, even though they have the same

zoning, therefore different exchange rates are defined. RRT-10 development is more costly due to higher land costs and generates lower “base” returns than development in A-10 districts, therefore upzones to R-5 are more valuable.

Analysis illustrates that land area or project scale could be one limiting factor for rural and resource land upzone receiving areas. For example, upzones from F to R-5 on a 20 acre lot generates \$46,000 to support an exchange rate of 4:1. However, this upzone on 20 acres allows only 3 additional units, less than the four additional units required to purchase one TDR. In this case, a developer would have to spend \$51,000 to gain three additional units, which would only generate \$46,000 in return. A developer would have to raise home prices to cover the added cost, which the market may or may not support. Conversely, on an 80 acre lot, an upzone would generate enough return to buy 3 TDRs in exchange for an additional 12 units (based on the 4:1 exchange rate).

Exhibit 28
Market-based Exchange Rates for Rural and Resource Land Upzones

	Return Increase	Additional Units	% Gain in Units	Forest TDR @ \$31,000 TDR Credit			Ag TDR @ \$51,000 TDR Credit		
				Supportable TDR	TDR per Added Unit	Exchange Rate	Supportable TDR	TDR per Added Unit	Exchange Rate
F to R-5	\$ 46,000	3	75%	1.5	0.5	3.0	0.9	0.3	4.0
A-10 to R-5	\$ 11,000	2	50%	0.4	0.2	6.0	0.2	0.1	10.0
RRT-10 to R-5	\$ 20,500	2	50%	0.7	0.3	4.0	0.4	0.2	5.0

Source: Community Attributes (2011)

Rural Cluster Subdivisions

Exhibit 29 shows that rural cluster subdivisions support exchange rates of 1:1 for forest and agricultural TDR credits in all zoning districts.

Rural cluster subdivisions generate additional revenue through density bonuses awarded for on-site open space preservation, which could be available to support TDRs purchases. Market-based exchange rates are expressed as the number of additional housing units allowed in the receiving area for one TDR credit purchased in forest or agricultural sending areas.

For all scenarios, except in the F district, 20 acre rural cluster subdivisions generate sufficient revenue to support more than one agricultural or forest land TDR purchase per additional housing unit (see “TDR per added unit” column). F districts also support TDR purchases for subdivisions on lots greater than 20 acres, although not shown in Exhibit 29.

Actual forest TDR exchange rates are 0.5 housing units per one forest TDR credit in most cases. Agricultural TDR exchange rates range between 0.4 and 0.8 housing units per one agricultural TDR credit purchased.

All exchange rates are rounded up to one additional housing unit per one TDR credit purchase, or a 1:1 exchange rate. Given equal exchange rates and unequal TDR prices, developers are most likely to purchase the lowest cost TDR credits (forest TDR credits) to receive rural cluster subdivision bonus densities.

Rounding exchange rates up also allows developers to retain some of the added return for pursuing cluster subdivisions. For example, in the R-5 district on a 20 acre lot, a developer buying four TDR to receive an additional four units will pay a total of \$136,000 for four forest TDR. This allows the developer to retain \$129,000 in added profit (50%). A developer who buys agricultural TDR will pay \$204,000 for four TDR credits, leaving \$61,000 in added profit (25%).

Exhibit 29
Market-based Exchange Rates for Rural Cluster Subdivisions

	Return Increase	Additional Units	% Gain in Units	Forest TDR @ \$31,000 TDR Credit			Ag TDR @ \$51,000 TDR Credit		
				Supportable TDR	TDR per Added Unit	Exchange Rate	Supportable TDR	TDR per Added Unit	Exchange Rate
F	\$ -	-	0%	-	-	-	-	-	-
F&R	\$ 138,900	2	50%	4.5	2.2	1.0	2.7	1.4	1.0
RRT-10	\$ 128,300	1	50%	4.1	4.1	1.0	2.5	2.5	1.0
RD	\$ 129,300	2	50%	4.2	2.1	1.0	2.5	1.3	1.0
R-5	\$ 129,300	2	50%	4.2	2.1	1.0	2.5	1.3	1.0
RC	\$ 265,000	4	50%	8.5	2.1	1.0	5.2	1.3	1.0

Source: Community Attributes (2011)

Exchange Rate Conclusions

Urban Center Exchange Rates

Findings suggest that the TDR program should consider changing the TDR bonus density in current Urban Center receiving areas to better align with market conditions and economic requirements for TDR buyers and sellers.

Based on the outcomes of the analysis, a bonus density of 9,500 SF would be required to justify TDR credit purchases for agricultural TDR prices of \$51,000. A bonus density of 5,800 SF would be required to justify TDR credit purchases for forest TDR prices of \$31,000. These bonus densities represent the average bonus densities supported for “base case” condo and mixed-use developments. Market conditions in the various Urban Centers demonstrate that these bonus densities could help generate additional revenues to support TDR purchases in five of six Urban Centers, and all Urban Centers if market conditions improve in the future.

Analysis demonstrates that market conditions vary by building type and by Urban Center. This results in different market-supported exchange rates for different building types in different areas. Policy judgment is

required to determine if a single exchange rate or different exchange rates, based on location and building type, is desired. This analysis provides data to support policy discussions to identify an approach that meets multiple stakeholder objectives.

Factors that restrict TDR feasibility include 1) market conditions 2) “base” FAR policies that meet development demand without the need for bonus density incentives and 3) exchange rates that don’t align TDR buyer and seller economic requirements.

Program Expansion Exchange Rates

Analysis finds that residential growth constraints and market conditions in some UGAs could support new TDR receiving areas in UGA expansion areas where higher density is desired. Rural cluster subdivisions and rural or resource land upzones also demonstrate potential for new TDR receiving sites. In all of these cases, building at higher densities generates additional profit for developers that could be used to support TDR purchases. Project scale could be a limiting factor for rural and resource land upzones where small gains in bonus density may or may not generate sufficient revenues to pursue TDR purchases based on supportable exchange rates.

TDR PROGRAM CONSIDERATIONS

Developer Perspectives

Snohomish County developer perspectives suggest that streamlining and simplifying the TDR program may increase likelihood of participation. One potential solution suggested by the development community is a TDR bank structured similarly to a conservation futures fund. Under this model, developers who wish to increase density or receive other development incentives could simply pay into the fund or TDR bank. Funds generated by the TDR bank or conservation futures fund would be used to support land conservation.

Developer insights also suggests that TDR is just one tool among many and that other established mechanisms such as zoning should be the primary tool to achieve planning and growth objectives. Real estate outlooks also suggest that market conditions will limit demand in the short-term. Martha Lake, the Bothell area, and the Seattle Hill-Silver Firs areas were cited as the receiving areas likely to experience the most

significant growth in unincorporated Snohomish County.

Challenges and Risks

TDR programs will be a successful incentive for increasing density only if purchasing TDRs is a more economical option than pursuing other density bonus incentives. Additional density bonus options that are more affordable or less time consuming than TDR restrict program participation. The Snohomish County code establishes several low cost or time efficient options for pursuing density bonuses, in addition to TDR.

The Snohomish County Urban Centers zoning code establishes several density bonus incentive options. **Exhibit 30** presents these options including a qualitative assessment of density bonus costs compared to TDR costs.

Exhibit 30
Cost Comparison of Selected Density Bonus Options¹¹

Feature	FAR Bonus	Notes
TDR	2,000 SF	Based on current allocation ratios and bonus densities TDR costs approximately \$21/SF based on County fee's in lieu of TDR. Market supported costs of approximately \$5-\$6/SF.
Street level commercial	250 SF floor area for each linear foot of retail frontage	Retail construction costs are generally less than residential construction costs on a SF basis. Mixed use generally adds cost with higher risk and project complexity.
Green roof	5 SF floor area per 1 SF green roof	Green roof installation costs (average \$12.50/SF) are nearly double than traditional roofs (\$6.00/SF). Total lifecycle costs are only 10% for green roofs. ¹²
Daycare	5 SF floor area per 1 SF daycare	Day care facilities have comparable costs than multifamily residential facilities ¹³ .
Community gardens	10 SF floor area per 1 SF community garden	Community gardens can be a low cost solution for FAR bonuses if community gardens can be located in areas dedicated for open space. This could result in lower landscaping costs.
Structured parking	0.5 FAR for 80% or greater parking in contained structure	Structured parking may be required to accommodate higher density development at bonus densities. Structured parking is about \$70/SF compared to \$6/SF for surface parking.
Affordable housing	Affordable housing not included in FAR (15% of entire project) and shall be used to calculate a bonus of 5 SF per 1 SF affordable housing	Current asking multifamily rents in urban centers qualify for affordable housing FAR bonuses, resulting in no added costs over the short-term. Based on the 2010 Snohomish County median household income of \$63,587, eligible households at 80% of median income that spend 30% of income on housing could afford a \$1,272 unit or approximately \$1.27/SF for a 1,000 SF unit. Asking rates range from \$0.95 - \$1.10/SF or \$830 - \$1,274/unit.

Source: Snohomish County Code 30.34A.030(2) and 30.34A.030(2), Community Attributes (2011)

¹¹ Additional density bonus options not shown in Exhibit 18 include solar roofs (10 SF floor area per 1 SF solar roof), Public art (0.2 FAR for public art at 1% of construction costs, and district energy system (1.0 FAR).

¹²Paladino (2004) Green Roof Feasibility Study for King County Office Project
http://your.kingcounty.gov/solidwaste/greenbuilding/documents/KCGreenRoofStudy_Final.pdf

¹³ RS Means. Square Foot Costs (2007).Multifamily costs for projects ranging from 3 – 7 stories ranges from \$130-\$150/SF and \$110-\$180/SF for 1-3 stories. Day care facility costs range from \$110 - \$180/SF. pg 78-80 and pg 120

Density bonuses for TDR may be more effective if tied to parking reduction and aligned with transit goals. Higher building densities require more on-site parking. The pro forma feasibility analyses demonstrate that density bonuses often require construction of structured parking which significantly increases parking costs and restricts project feasibility. Additionally, past construction trends indicate that developers have built to lower densities than incentivized by FAR bonuses outlined in the County code, demonstrating little demand for density bonuses alone.

TDR incentives may be more effective and attractive if parking requirements associated with bonus floor area are reduced or eliminated. Reduced parking could also be tied to density bonuses to differentiate TDR from other development incentives. Lower parking requirements could also be tied to transit-oriented development goals to support ridership. Trade-offs in reduced parking requirements such as accessibility and market support should also be considered.

Current real estate climate and vacancies reduce demand for new construction and limit program participation in the near-term. In the third quarter of 2010, CB Richard Ellis estimated that there is over 900,000 square feet of vacant office space (21.9% vacancy) and over 865,000 square feet of vacant retail space (6.5% vacancy) in Snohomish County markets. Vacancies in existing buildings will likely absorb much of the new growth before demand for new construction resumes.

Regionally, regional home prices declined by nearly 17%, from a high in 2007 to a low in 2010 (Conway

Pedersen Economics). Condo demand has declined due to lower single family home prices.

Program Expansion Considerations and Impacts

Receiving Area Expansion

This analysis explored the role that TDR could play as a condition to UGA expansions, rural and resource land upzones or rural cluster subdivisions. Policies that require TDR as a condition for upzoning approval could expand conservation opportunities and help foster higher densities to further curb open space land consumption. Policies that designate market-based exchange rates based on sending area development right values expand conservation opportunities for both agricultural and forest lands.

Cities may also participate in the County TDR program by establishing receiving areas and adopting an interlocal agreement. The City of Arlington already has an interlocal agreement with the county. The cities of Everett and Mountlake Terrace have also expressed interest in participating in the county program.

Additional receiving areas increase opportunities and potential demand for TDR participation. Cities allow for higher density development without density bonus requirements. For example, the City of Everett allows building heights of up to 80 feet with no maximum lot coverage in R-4, R-5, and M-2 zones (approximately 8.0 FAR, assuming 10 foot stories). Mountlake Terrace allows max FARs of up to 3.75 and 85 ft. building

heights in the Downtown Community Business District.

While the Snohomish County code allows building heights of up to 90 feet and FARs of up to 5.0, the code requires that developers pursue density bonuses at an added cost to obtain maximum densities. Cities that allow higher densities by right, could offer different development incentives such as reduced parking ratios to increase developer options and potential increase TDR demand and participation.

Sending Area Expansion

Expanding the sending area increases the supply of TDR credits. Incorporated areas that establish TDR ordinances may designate sending areas within city boundaries in addition to using County sending areas, therefore further increasing the supply of credits.

Developers will likely purchase the lowest cost TDR credits if all exchange rates and density ratios are equal. This analysis defines exchange rates for typical agricultural and forest land properties to help address this challenge.

Expand TDR Transaction Options

Multiple TDR transaction options increase the probability of TDR participation and program success. Currently, the County program allows private market transactions between buyers and sellers or an option to pay for the TDR density bonus in lieu of obtaining a TDR credit. Presumably the County would also sell the TDR credits they currently hold.

The County could play a more active role in facilitating TDR transactions by maintaining contact lists for interested buyers and sellers and supporting buyer-seller communications. The County could also provide information on recent and potential TDR transactions and support stakeholder outreach and education.

Additional focus on a TDR bank presents opportunities for the County to help facilitate TDR participation. TDR banks are designed to buy, hold and sell credits. Proceeds from TDR sales are used to finance future TDR purchases, in essence creating a revolving loan fund. Local or county governments or non-profit entities such as land trusts may operate the TDR bank. The Snohomish County code (30.35A.130) provides for the purchase, holding and sale of certified development rights.

APPENDIX A. PRO FORMA ANALYSIS

INPUTS AND ASSUMPTIONS

Exhibit 8 - Cost Assumptions

	Hard Cost/ SF	Bldg Efficiency	Total \$/SF	Return on Cost
Apartment	\$ 110	80%	\$ 143	10.0%
Condo	\$ 115	80%	\$ 150	10.0%
Office	\$ 110	85%	\$ 143	10.0%
Retail	\$ 70	85%	\$ 91	10.0%
Surface Parking	\$ 6		\$ 8	
Structure Parking	\$ 70		\$ 91	
Underground Parking	\$ 115		\$ 150	
Land Cost	\$ 10.00	\$ 20.00	<--- Actual average	
Site Improvement Costs	\$ 6.00			
Height Cost Adjustments	0.08	3 Over 3 stories		
	0.11	8 Over 8 stories		
Soft Costs	30%			
Return on Cost (above cap)	1.50%			
Return on Cost for TDR	10.00%			

Exhibit 9 - Revenue Assumptions

\$ 0.05

Use	Monthly Rent/SF	Gross Rent/SF	Vacancy	Operating Expenses	Net Rent/SF	Cap Rate	Market Value/SF
Apartment	\$ 1.15	\$ 13.80	6.0%	30%	\$ 9.08	5.50%	\$ 165.00
Office		\$ 23.00	7.5%	25%	\$ 15.96	7.00%	\$ 228.00
Retail		\$ 20.00	7.0%	0%	\$ 18.60	8.50%	\$ 219.00
Condo		Sales Price/Unit	Sales Price/ SF	Sales Expenses	Net Sales Price/ SF		
		\$ 280,000	\$ 233.33	8%	\$ 216.00		

Development Assumptions

Lot Area	150,000 SF
Apartment Size	1,000 SF
Condo Size	1,200 SF
Parking Area	300 SF
Site area available for surface parking	
Residential	40%
Non-Residential	70%
Mixed-Use	60%

MARKET DATA USED TO INFORM ASSUMPTIONS

Commercial Market Data

Receiving Areas	Zoning	UGA	Office		Retail	
			Rent	Vacancy	Rent	Vacancy
Arlington TDR Receiving Area		Arlington	\$ 22.15	10.5%	\$ 17.73	7.6%
Seattle Hill-Silver Firs	UC	Southwest	\$ 22.15	10.5%	\$ 17.73	7.6%
North Lynnwood	UC	Southwest	\$ 24.31	29.3%	\$ 18.91	7.0%
Martha Lake	UC	Southwest	\$ 24.31	29.3%	\$ 18.91	7.0%
Bothell North	UC	Southwest	\$ 22.58	17.7%	\$ 22.45	5.2%
Mountlake Terrace North	UC	Southwest	\$ 24.31	29.3%	\$ 18.91	7.0%
Woodway	UC	Southwest	\$ 24.31	29.3%	\$ 18.91	7.0%

Source: CB Richard Ellis, Seattle Region Local Market View (2010 Quarter 3)

Residential Market Data

Receiving Areas	Zoning	UGA	Multifamily				Sale (\$/Unit)
			Rent (Unit/Mth)	Rent (SF/Mth)	Avg Unit Size	Vacancy	
Arlington TDR Receiving Area		Arlington	\$ 876	\$ 1.04	840	6.2%	\$ 185,000
Seattle Hill-Silver Firs	UC	Southwest	\$ 1,176	\$ 1.09	1,080	5.1%	\$ 228,000
North Lynnwood	UC	Southwest	\$ 1,121	\$ 1.10	1,020	3.6%	\$ 302,000
Martha Lake	UC	Southwest	\$ 1,121	\$ 1.10	1,020	3.6%	\$ 302,000
Bothell North	UC	Southwest	\$ 1,274	\$ 1.10	1,160	6.5%	\$ 275,000
Mountlake Terrace North	UC	Southwest	\$ 840	\$ 0.99	850	8.4%	na
Woodway	UC	Southwest	\$ 830	\$ 0.94	880	4.7%	\$ 617,500

Source: Dupre + Scott October 2009

Central Puget Sound Real Estate Research Report year end 2009

Development Costs

Development Costs/SF	Low	High
Office	\$ 110	\$ 140
Retail Strip	\$ 70	\$ 120
Retail Center	\$ 75	\$ 140
Multifamily	\$ 120	\$ 235
Single Family	\$ 100	
Structure Parking	\$ 70	\$ 85
Below Grade Parking	\$ 115	\$ 140
Surface Parking	\$ 15	\$ 15
Site Improvements	\$ 6	\$ 6

Source: Ryder Levett Bucknall Quarterly Cost Report for Seattle Region (2010 Q4)

Square Feet Commercial Real Estate Blog <http://www.squarefeetblog.com/commercial-real-estate-blog/2008/07/08/construction-costs-for-parking>

Additional Market Inputs and Assumptions

	Actual Cap Rates
Office	7.500%
Retail	8.500%
Multifamily - For Rent	6.500%

Cap Rate Source: CBRE (August 2010)

ZONING ASSUMPTIONS

Zoning	Min	Max	Bonus	Super Bonus
Non-Residential	0.50	1.00	1.50	2.50
Residential	0.50	1.00	1.50	2.50
Mixed-Use	1.00	2.00	3.00	5.00
Ground Floor Retail	0.25	2.00	2.25	5.00

Mixed Use Requirements

Retail FAR	0.50	1.00	1.00	1.00
Other FAR	0.50	1.00	2.00	4.00

Source: [Snomohish Co Code 30.34A.030](#)

Max Building Height	90
Setbacks	0
Open Space (Open Space SF/ Res. Unit)	150
Open Space (Open Space % com. FA)	2%

Source: [Snomohish Co Code 30.34A.040, 30.34A.070](#)

Parking (Stalls/1,000 SF)	Min	Max	Bicycle		
			Parking	Parking SF/Stall	Bike SF/Stall
Restaurants	2.0	8.0	2.0	300	5
Retail	2.0	4.0	2.0	300	5
Office	2.0	4.0	2.0	300	5
Residential (units ;gt;1000 sq ft each)	1.5	2.5	2.0	300	5
Residential (units ;lt;1000 sq ft each)	1.0	1.5	2.0	300	5

Source: [Snomohish Co Code 30.34A.050\(1\)](#)

FAR Bonuses

TDR Bonus & Super Bonus

TDR Credit FAR Bonus (SF)	2,000
Pay in lieu of TDR credit (per SF FA)	\$ 21
Pay in lieu of TDR credit (per FAR Bonus)	\$ 42,000

Minimum Lot Size

Zoning District	Min Lot Area	
R - 9,600	R-9,600	9,600
R - 8,400	R-8,400	8,400
R - 7,200	R-7,200	7,200
Residential 12,500	R-12,500	12,500
Residential 20,000	R-20,000	20,000
Rural Conservation	RC	100,000
Rural Diversification	RD	200,000
Rural-5 Acre	R-5	200,000
Forestry and Recreation	F and R	200,000
Rural Resource Transition – 10 Acre	RRT-10	435,600
Agriculture-10 acre	A-10	435,600
Forestry	F	871,200

Rural Cluster Subdivisions

Zoning District	% Open Space	Lot Size (unit yield)	Bonus
F	80%	871,200	35%
F&R	80%	200,000	35%
RRT-10	85%	435,000	35%
RC	65%	100,000	35%
RD	65%	200,000	35%
R-5	65%	200,000	35%
Local Forest			5%

Activity

Activity	Fees
Processing and review of application for TDR certificates and issuance of TDR certificate letter of intent	\$600
Issuance of TDR certificates pursuant to SCC 30.35A.060(3)	\$150
Review of conservation easement pursuant to SCC 30.35A.060(2)	\$250
Review of deed of transferable development rights pursuant to SCC 30.35A.070(3)	\$150
Site inspection pursuant to SCC 30.35A.050(1)(b)	\$250
Total TDR application fee (for sending area property owners)	\$1,400

Snomohish Co Agricultural Statistics	2007	2010 \$
Total Land Area Farmed (acres)	76,837	76,837
Net Income	#####	#####
Avg Income per Acre	\$ 230	\$ 243
Avg Income per Farm	\$ 10,597	\$ 11,190

Source: [2007 Census of Agriculture, Snohomish County Washington Profile](#)

Site Suitability Analysis for Option 1: Condo

Site Specifications

Lot Size (SF)	150,000			
		Max	Bonus	Super Bonus
FAR Allowance		1.00	1.50	2.50
Building Area		150,000	225,000	375,000
Gross Leasable Area		120,000	180,000	300,000
Average Unit Size	1,200			
Total Units		100	150	250
Parking Stalls Required	1.00	100	150	250
Parking Area	300	30,000	45,000	75,000
Structured Parking Required		NO	NO	YES
Open Space Required	150	15,000	22,500	37,500
Net Area for Building		105,000	82,500	112,500
Stories		2	3	4
Height	10	20	30	40

Development Costs (except site acquisition)

	Max	Bonus	Super Bonus
Site Improvement Costs	\$ 900,000	\$ 900,000	\$ 900,000
Hard Construction Costs			
Multifamily	\$ 17,250,000	\$ 25,875,000	\$ 43,125,000
Parking	\$ 180,000	\$ 270,000	\$ 5,250,000
Total Hard Costs	\$ 17,430,000	\$ 26,145,000	\$ 48,375,000
Soft Development Costs	\$ 5,229,000	\$ 7,843,500	\$ 14,512,500
Entrepreneurial Return	\$ 2,266,000	\$ 3,399,000	\$ 6,289,000
= Total Property Cost	\$ 25,825,000	\$ 38,287,500	\$ 70,076,500
All in Cost/SF	\$ 172	\$ 170	\$ 187
All in Cost/Unit	\$ 258,250	\$ 255,250	\$ 280,306

Minimum Market Value must equal Property Cost	\$ 25,825,000	\$ 38,287,500	\$ 70,076,500
x Capitalization Rate	5.500%	5.500%	5.500%
= Minimum NOI from All Operations	\$ 1,420,400	\$ 2,105,800	\$ 3,854,200

Site Suitability Analysis for Option 1: Condo

Market Value

		Max	Bonus	Super Bonus
Gross Revenue				
Sales	\$ 280,000	\$ 28,000,000	\$ 42,000,000	\$ 70,000,000
Sales Expenses		(2,100,000)	(3,150,000)	(5,250,000)
= Market Value		\$ 25,900,000	\$ 38,850,000	\$ 64,750,000

Residual Land Value

		Max	Bonus	Super Bonus
Market Value		\$ 25,900,000	\$ 38,850,000	\$ 64,750,000
Construction Cost		\$ 25,825,000	\$ 38,287,500	\$ 70,076,500
= Residual Land Value		\$ 75,000	\$ 562,500	\$ (5,326,500)
Residual Land Value/SF of land area		\$ 0.50	\$ 3.75	\$ (35.51)
Total acres available for acquisition at RLV		350	480	-
Total parcels available for acquisition at RLV		47	78	-

Can market support land acquisition?

YES	YES	NO

TDR Feasibility Analysis

		Max	Bonus	Super Bonus
Residual Land Value		\$ 75,000	\$ 562,500	\$ (5,326,500)
Site Acquisition Cost	\$ 0.50	\$ 75,000	\$ 75,000	\$ 75,000
Gross Economic Surplus Available for TDR		\$ -	\$ 487,500	\$ (5,401,500)
Return on TDR Cost	10%	\$ -	\$ 48,750	\$ (540,150)
Net Economic Surplus Available for TDR		\$ -	\$ 438,750	\$ (4,861,350)

Current Exchange Rate

		Max	Bonus	Super Bonus
Density Bonus (Bldg SF)		-	75,000	225,000
Current Exchange Rate	2,000			
TDR Units Required		-	38	113
Willingness to Pay for TDR Unit		\$ -	\$ 11,700	\$ (43,212)

Market Supported Exchange Rate

		Max	Bonus	Super Bonus
Agricultural TDR				
Sending Rate for TDR Unit		\$ 51,000	\$ 51,000	\$ 51,000
TDR Units Required		0	9	-96
Market Supported Exchange Rate (Bldg SF/TDR)		8,300		
Forest TDR				
Sending Rate for TDR Unit		\$ 31,000	\$ 31,000	\$ 31,000
TDR Units Required		0	15	-157
Market Supported Exchange Rate (Bldg SF/TDR)		5,000		

Site Suitability Analysis for Option 2: Office

Site Specifications

Lot Size (SF)		150,000		
		Max	Bonus	Super Bonus
FAR Allowance		1.00	1.50	2.50
Building Area		150,000	225,000	375,000
Gross Leasable Area		127,500	191,250	318,750
Parking Stalls Required	2.00	255	383	638
Parking Area	300	76,500	114,900	191,400
Structured Parking Required?		NO	YES	YES
Open Space Required	2%	2,550	3,825	6,375
Net Area for Building		70,950	146,175	143,625
Stories		3	2	3
Height	10	30	20	30

Development Costs (except site acquisition)

	Max	Bonus	Super Bonus
Site Improvement Costs	\$ 900,000	\$ 900,000	\$ 900,000
Hard Construction Costs			
Office	\$ 16,500,000	\$ 24,750,000	\$ 41,250,000
Parking	\$ 459,000	\$ 8,043,000	\$ 13,398,000
Total Hard Costs	\$ 16,959,000	\$ 32,793,000	\$ 54,648,000
Soft Development Costs	\$ 5,087,700	\$ 9,837,900	\$ 16,394,400
Entrepreneurial Return	\$ 2,205,000	\$ 4,263,000	\$ 7,104,000
= Total Development Cost	\$ 25,151,700	\$ 47,793,900	\$ 79,046,400
All in Cost/SF	\$ 168	\$ 212	\$ 211

Market Value

		Max	Bonus	Super Bonus
Gross Revenue				
Rent/SF/Yr	\$ 23.00	\$ 2,932,500	\$ 4,398,750	\$ 7,331,250
Rent/Stall/Yr	\$ -	\$ -	\$ -	\$ -
		\$ 2,932,500	\$ 4,398,750	\$ 7,331,250
Losses				
Vacancy	8%	\$ (219,940)	\$ (329,910)	\$ (549,840)
Operating Expenses (% of income)	25%	(678,140)	(1,017,210)	(1,695,350)
Net Operating Income		\$ 2,034,420	\$ 3,051,630	\$ 5,086,060
Capitalization Rate	7.00%			
= Total Market Value		\$ 29,063,143	\$ 43,594,714	\$ 72,658,000

Site Suitability Analysis for Option 2: Office

Residual Land Value

	Max	Bonus	Super Bonus
Market Value	\$ 29,063,143	\$ 43,594,714	\$ 72,658,000
Construction Cost	\$ 25,151,700	\$ 47,793,900	\$ 79,046,400
Residual Land Value	\$ 3,911,443	\$ (4,199,186)	\$ (6,388,400)
Residual Land Value/SF of land area	\$ 26.08	\$ (27.99)	\$ (42.59)
Total acres available for acquisition at RLV	870	-	-
Total parcels available for acquisition at RLV	422	-	-

Can market support land acquisition?

YES NO NO

TDR Feasibility Analysis

	Max	Bonus	Super Bonus
Residual Land Value	\$ 3,911,443	\$ (4,199,186)	\$ (6,388,400)
Site Acquisition Cost	\$ 3,911,443	\$ 3,911,443	\$ 3,911,443
Gross Economic Surplus Available for TDR	\$ -	\$ (8,110,629)	\$ (10,299,843)
Return on TDR Cost	10.00%	\$ -	\$ (811,063)
Net Economic Surplus Available for TDR	\$ -	\$ (7,299,566)	\$ (9,269,859)

Current Exchange Rate

Density Bonus (Bldg SF)	-	75,000	225,000
Current Exchange Rate	2,000		
TDR Units Required	-	38	113
= Willingness to Pay for TDR Unit	\$ -	\$ (194,655)	\$ (82,399)

Market Supported Exchange Rate

Agricultural TDR

Sending Rate for TDR Unit	\$ 51,000	\$ 51,000	\$ 51,000
TDR Units Required	0	-144	-182
Market Supported Exchange Rate (Bldg SF/TDR)	-	-	-

Forest TDR

Sending Rate for TDR Unit	\$ 31,000	\$ 31,000	\$ 31,000
TDR Units Required	0	-236	-300
Market Supported Exchange Rate (Bldg SF/TDR)	-	-	-

Site Suitability Analysis for Option 3: Mixed-Use (For-rent residential and retail)

Site Specifications

Lot Size (SF)		150,000		
		Max	Bonus	Super Bonus
FAR Allowance		2.00	3.00	5.00
Building Area		300,000	450,000	750,000
	Residential - For Rent	240,000	360,000	600,000
	Retail	60,000	90,000	150,000
Gross Leasable Area				
	Residential - For Rent	192,000	288,000	480,000
	Retail	51,000	76,500	127,500
		243,000	364,500	607,500
Units		192	288	480
Parking Stalls Required				
	Residential	192	288	480
	Retail	102	153	255
		294	441	735
Parking Area				
	Residential	57,600	86,400	144,000
	Retail	30,600	45,900	76,500
		88,200	132,300	220,500
Open Space Required				
	Residential (SF/Unit)	28,800	43,200	72,000
	Retail (% of GLA)	1,020	1,530	2,550
		29,820	44,730	74,550
Lot Area for Parking and Open Space		60,420	85,710	74,550
Lot Area for Building and Structured Parking		89,580	64,290	75,450
		150,000	150,000	150,000
Stories		4	7	10
Height		36	63	90
Design		Retail Surface Res. Structured	Retail Surface Res. Structured	Underground

Site Suitability Analysis for Option 3: Mixed-Use (For-rent residential and retail)

Development Costs (except site acquisition)

	Max	Bonus	Super Bonus
Site Improvement Costs	\$ 900,000	\$ 900,000	\$ 900,000
Hard Construction Costs			
Residential - For Rent	21,120,000	31,680,000	52,800,000
Retail	3,570,000	5,355,000	8,925,000
Height Factor (based on increase from max)	-	-	1,791,127
Parking	\$ 4,215,600	\$ 6,323,400	\$ 25,357,500
Total Hard Costs	\$ 28,905,600	\$ 43,358,400	\$ 88,873,627
Soft Development Costs	\$ 8,671,680	\$ 13,007,520	\$ 26,662,088
Entrepreneurial Return	\$ 3,758,000	\$ 5,637,000	\$ 11,554,000
= Total Development Cost	\$ 42,235,280	\$ 62,902,920	\$ 127,989,715
All in Cost/SF	\$ 141	\$ 140	\$ 171

Minimum Market Value must equal Property Cost	\$ 42,235,280	\$ 62,902,920	\$ 127,989,715
x Capitalization Rate	6.100%	6.100%	6.100%
= Minimum NOI from All Operations	\$ 2,576,400	\$ 3,837,100	\$ 7,807,400

Site Suitability Analysis for Option 3: Mixed-Use (For-rent residential and retail)

Market Value

		Max	Bonus	Super Bonus
Residential - For Rent				
Gross Revenue	\$ 13.80	\$ 2,649,600	\$ 3,974,400	\$ 6,624,000
Vacancy	6.0%	\$ (158,980)	\$ (238,460)	\$ (397,440)
Operating Expenses (% of income)	30%	\$ (747,190)	\$ (1,120,780)	\$ (1,867,970)
Net Operating Income		\$ 1,743,430	\$ 2,615,160	\$ 4,358,590
Capitalization Rate	5.5%			
Market Value		\$ 31,698,727	\$ 47,548,364	\$ 79,247,091
Retail				
Gross Revenue (NNN)	\$ 20.00	\$ 1,020,000	\$ 1,530,000	\$ 2,550,000
Vacancy	7.0%	\$ (71,400)	\$ (107,100)	\$ (178,500)
Operating Expenses (% of income)	0%	\$ -	\$ -	\$ -
Net Operating Income		\$ 948,600	\$ 1,422,900	\$ 2,371,500
Capitalization Rate	8.5%			
Market Value		\$ 11,160,000	\$ 16,740,000	\$ 27,900,000
= Total Market Value		\$ 42,858,727	\$ 64,288,364	\$ 107,147,091

Residual Land Value

	Max	Bonus	Super Bonus
Market Value	\$ 42,858,727	\$ 64,288,364	\$ 107,147,091
Construction Cost	\$ 42,235,280	\$ 62,902,920	\$ 127,989,715
Residual Land Value	\$ 623,447	\$ 1,385,444	\$ (20,842,624)
Residual Land Value/SF of land area	\$ 4.16	\$ 9.24	\$ (138.95)
Total acres available for acquisition at RLV	480	640	-
Total parcels available for acquisition at RLV	81	121	-
Can market support land acquisition?	YES	YES	NO

Site Suitability Analysis for Option 3: Mixed-Use (For-rent residential and retail)

TDR Feasibility Analysis

		Max	Bonus	Super Bonus
Residual Land Value		\$ 623,447	\$ 1,385,444	\$ (20,842,624)
Site Acquisition Cost	\$ 4.16	\$ 623,447	\$ 623,447	\$ 623,447
Gross Economic Surplus Available for TDR		\$ -	\$ 761,996	\$ (21,466,072)
Return on TDR Cost	10.00%	-	76,200	(2,146,607)
Net Economic Surplus Available for TDR		\$ -	\$ 685,797	\$ (19,319,465)

Current Exchange Rate

Density Bonus (Bldg SF)		-	150,000	450,000
Current Exchange Rate	2,000			
TDR Units Required		-	75	225
Willingness to Pay for TDR Unit		\$ -	\$ 9,144	\$ (85,864)

Market Supported Exchange Rate

Agricultural TDR

Sending Rate for TDR Unit		\$ 51,000	\$ 51,000	\$ 51,000
TDR Units Required		0	14	-379
Market Supported Exchange Rate (Bldg SF/TDR)			10,700	

Forest TDR

Sending Rate for TDR Unit		\$ 31,000	\$ 31,000	\$ 31,000
TDR Units Required		0	23	-624
Market Supported Exchange Rate (Bldg SF/TDR)			6,500	

Sensitivity Analysis

	Condo							% Developable Land
	Supported Density Bonus (SF)							
	Sale Value	Residual Land Value	Agricultural TDR (\$51,000/TDR)	Forest TDR (\$34,000/TDR)	Parcels Available	Land Area Available		
Arlington TDR Receiving Area	\$ 185,000	NA	NA	NA	NA	NA	0%	
Seattle Hill-Silver Firs	\$ 228,000	NA	NA	NA	NA	NA	0%	
North Lynnwood	\$ 302,000	\$ 24.10	2,800	1,700	39	81	79%	
Martha Lake	\$ 302,000	\$ 24.10	2,800	1,700	87	154	91%	
Bothell North	\$ 275,000	NA	NA	NA	NA	NA	0%	
Mountlake Terrace North	\$ 280,000	\$ 3.75	8,300	5,000	1	4	19%	
Woodway	\$ 420,000	\$ 133.25	600	400	7	61	100%	
Base Case	\$ 280,000	\$ 3.75	8,300	5,000	134	300	32%	

	Mixed-Use								
	Supported Density Bonus (SF)								
	Apt Rent	Retail Rent	Residual Land Value	Agricultural TDR (\$51,000/TDR)	Forest TDR (\$34,000/TDR)	Parcels Available	Land Area Available	% Developable Land	
Arlington TDR Receiving Area	\$ 13.20	\$ 17.73	NA	NA	NA	-	-	0%	
Seattle Hill-Silver Firs	\$ 13.94	\$ 17.73	NA	NA	NA	-	-	0%	
North Lynnwood	\$ 13.94	\$ 18.91	\$ 6.39	13,600	8,300	13	57	56%	
Martha Lake	\$ 13.94	\$ 18.91	\$ 6.39	13,600	8,300	19	39	23%	
Bothell North	\$ 13.94	\$ 22.45	\$ 26.14	5,200	3,200	37	86	89%	
Mountlake Terrace North	\$ 13.20	\$ 18.91	NA	NA	NA	-	-	0%	
Woodway	\$ 13.20	\$ 18.91	NA	NA	NA	-	-	0%	
Base Case	\$ 13.80	\$ 20.00	\$ 9.24	10,700	6,500	69	182	19%	

Exchange Rate Analysis

Inputs and Assumptions

TDR Price	
Forest TDR Price	\$31,000
Agriculture TDR Price	\$51,000
Level 3: Vacant land sales less ag income	\$61,000
Land Assumptions	
Land Area (ac)	20 ac
Land Area (SF)	871,200 SF
Developer Single Family Inputs	
Housing Unit Size	2,500
Hard Cost (SF)	\$ 90
Hard Cost for R-5 zone (SF)	\$ 100
Soft Cost	30%
Return on Cost	10%
Housing Const Cost	\$ 321,750
Housing Const Cost for R-5	\$ 357,500
Housing Unit Sale Price	\$ 375,000
	150

Average R-5 and higher sale price
\$ 440,000

	Vacant Land Area (Acres)	Average Vacant Land Value (\$/SF)	Median Home Price (Total AV)	Med Bldg Imp\$/SF	Median Home Size (SF)	Assumed Vacant Land Value (\$/SF)
Urban Residential						
R - 9,600	1,210	\$ 3.10	\$ 365,400	\$ 86	2,500	\$ 3.10
R - 8,400	340	\$ 3.30	\$ 352,300	\$ 93	1,800	\$ 3.30
R - 7,200	740	\$ 6.70	\$ 381,900	\$ 88	2,500	\$ 3.50
Total	2,290	\$ 4.30	\$ 372,000	\$ 87	2,500	
Rural and Other Residential						
Rural Resource Transition	1,660	\$ 0.50	\$ 488,600	\$ 110	2,700	\$ 0.25
Rural Diversification	2,820	\$ 0.20	\$ 295,700	\$ 108	1,700	\$ 0.30
Rural 5-Acre	38,820	\$ 0.60	\$ 439,050	\$ 114	2,500	\$ 0.30
Rural Conservation	1,710	\$ 0.30	\$ 329,000	\$ 116	1,800	\$ 0.50
Residential 20,000	40	\$ 0.80	\$ 386,100	\$ 96	2,900	\$ 0.80
Residential 12,500	20	\$ 2.80	\$ 333,500	\$ 80	2,200	\$ 1.00
Total	45,070	\$ 0.50	\$ 428,900	\$ 112	2,500	
Resource Residential						
Forestry	603,280	\$ 0.02	\$ 352,100	\$ 129	1,900	\$ 0.05
Agriculture-10 acre	8,960	\$ 0.10	\$ 379,800	\$ 116	2,100	\$ 0.10
Forestry and Recreation	600	\$ 0.16				\$ 0.15
Total	612,840	\$ 0.11	\$ 363,800	\$ 125	2,000	

Source: Snohomish County Assessor

Median Home Price for new single family homes built 2000 - 2010, adjusted to 2010 \$

<u>Urban Res. SF Unit Cost Estimate</u>	<u>Rural Res Unit Cost</u>	<u>All Other</u>	<u>R-5 and higher</u>
Hard Cost		\$ 225,000	\$ 250,000
Soft Cost		\$ 67,500	\$ 75,000
Ent. Return		\$ 29,250	\$ 32,500
Total Unit Cost		\$ 321,750	\$ 357,500

Exchange Rate Analysis

Base Case - Single Family Development without TDR

	Lot Size	Housing Size		Housing Cost		Housing Cost/SF		Lot Cost		Lot Cost/SF		Home Sale Price		Developer Returns Without TDR (20 acre subdivision)				
		(SF)	Housing Cost	Cost/SF	Lot Cost	Lot Cost/SF	Price	Units	Dev. Cost	Revenue	\$ Return	% Return						
Resource Residential																		
Forestry	871,200	2,500	\$ 357,500	\$ 143	\$ 43,600	\$ 0.05	\$ 440,000	1	\$ 401,100	\$440,000	\$38,900	9.7%						
Agriculture-10 acre	435,600	2,500	\$ 357,500	\$ 143	\$ 43,600	\$ 0.10	\$ 440,000	2	\$ 802,200	\$880,000	\$77,800	9.7%						
Forestry and Recreation	200,000	2,500	\$ 357,500	\$ 143	\$ 30,000	\$ 0.15	\$ 440,000	4	\$ 1,550,000	\$1,760,000	\$210,000	13.5%						
Rural Residential																		
RRT-10	435,600	2,500	\$ 357,500	\$ 143	\$ 108,900	\$ 0.25	\$ 500,000	2	\$ 932,800	\$1,000,000	\$67,200	7.2%						
Rural Diversification	200,000	2,500	\$ 357,500	\$ 143	\$ 60,000	\$ 0.30	\$ 440,000	4	\$ 1,670,000	\$1,760,000	\$90,000	5.4%						
Rural 5-Acre	200,000	2,500	\$ 357,500	\$ 143	\$ 60,000	\$ 0.30	\$ 440,000	4	\$ 1,670,000	\$1,760,000	\$90,000	5.4%						
Rural Conservation	100,000	2,500	\$ 357,500	\$ 143	\$ 50,000	\$ 0.50	\$ 440,000	8	\$ 3,260,000	\$3,520,000	\$260,000	8.0%						
Residential 20,000	20,000	2,500	\$ 321,800	\$ 129	\$ 16,000	\$ 0.80	\$ 375,000	43	\$ 14,525,400	\$16,125,000	\$1,599,600	11.0%						
Residential 12,500	12,500	2,500	\$ 321,800	\$ 129	\$ 12,500	\$ 1.00	\$ 375,000	69	\$ 23,066,700	\$25,875,000	\$2,808,300	12.2%						
Rural Cluster Subdivisions																		
F	871,200	2,500	\$ 357,500	\$ 143	\$ 43,560	\$ 0.05	\$ 440,000	1	\$ 401,060	\$440,000	\$38,940	9.7%						
F&R	145,200	2,500	\$ 357,500	\$ 143	\$ 21,780	\$ 0.15	\$ 440,000	6	\$ 2,275,680	\$2,640,000	\$364,320	16.0%						
RRT-10	290,400	2,500	\$ 357,500	\$ 143	\$ 72,600	\$ 0.25	\$ 500,000	3	\$ 1,290,300	\$1,500,000	\$209,700	16.3%						
RD	145,200	2,500	\$ 357,500	\$ 143	\$ 43,560	\$ 0.30	\$ 440,000	6	\$ 2,406,360	\$2,640,000	\$233,640	9.7%						
R-5	145,200	2,500	\$ 357,500	\$ 143	\$ 43,560	\$ 0.30	\$ 440,000	6	\$ 2,406,360	\$2,640,000	\$233,640	9.7%						
RC	72,600	2,500	\$ 357,500	\$ 143	\$ 36,300	\$ 0.50	\$ 440,000	12	\$ 4,725,600	\$5,280,000	\$554,400	11.7%						
Urban Residential																		
R - 9,600	9,600	2,500	\$ 321,800	\$ 129	\$ 29,760	\$ 3.10	\$ 375,000	90	\$ 31,640,400	\$33,750,000	\$2,109,600	6.7%						
R - 8,400	8,400	2,500	\$ 321,800	\$ 129	\$ 27,720	\$ 3.30	\$ 375,000	103	\$ 36,000,560	\$38,625,000	\$2,624,440	7.3%						
R - 7,200	7,200	2,500	\$ 321,800	\$ 129	\$ 25,200	\$ 3.50	\$ 375,000	121	\$ 41,987,000	\$45,375,000	\$3,388,000	8.1%						

Exchange Rate Analysis

Market-based Exchange Rates for Rural and Resource Land Upzones

	Return Increase	Additional Units	% Gain in Units	Forest TDR @ \$34,000 TDR Credit			Ag TDR @ \$51,000 TDR Credit		
				Supportable TDR	TDR per Added Unit	Exchange Rate	Supportable TDR	TDR per Added Unit	Exchange Rate
F to R-5	\$ 46,000	3	75%	1.5	0.5	3.0	0.9	0.3	4.0
A-10 to R-5	\$ 11,000	2	50%	0.4	0.2	6.0	0.2	0.1	10.0
RRT-10 to R-5	\$ 20,500	2	50%	0.7	0.3	4.0	0.4	0.2	5.0

Market-based Exchange Rates for Rural Cluster Subdivisions

	Return Increase	Additional Units	% Gain in Units	Forest TDR @ \$34,000 TDR Credit			Ag TDR @ \$51,000 TDR Credit		
				Supportable TDR	TDR per Added Unit	Exchange Rate	Supportable TDR	TDR per Added Unit	Exchange Rate
F	\$ -	-	0%	-	-	-	-	-	-
F&R	\$ 138,900	2	50%	4.5	2.2	1.0	2.7	1.4	1.0
RRT-10	\$ 128,300	1	50%	4.1	4.1	1.0	2.5	2.5	1.0
RD	\$ 129,300	2	50%	4.2	2.1	1.0	2.5	1.3	1.0
R-5	\$ 129,300	2	50%	4.2	2.1	1.0	2.5	1.3	1.0
RC	\$ 265,000	4	50%	8.5	2.1	1.0	5.2	1.3	1.0

Market-based Exchange Rates for UGA Expansion

	Return Increase	Additional Units	% Gain in Units	Forest TDR @ \$34,000 TDR Credit			Ag TDR @ \$51,000 TDR Credit		
				Supportable TDR	TDR per Added Unit	Exchange Rate	Supportable TDR	TDR per Added Unit	Exchange Rate
R-5 to:									
R - 9,600	\$ 1,817,600	86	2150%	59	0.7	2.0	35.6	0.4	3.0
R - 8,400	\$ 2,281,000	99	2475%	74	0.7	2.0	44.7	0.5	3.0
R - 7,200	\$ 2,968,200	117	2925%	96	0.8	2.0	58.2	0.5	3.0
RRT-10 to:									
R - 9,600	\$ 1,838,200	88	4400%	59	0.7	2.0	36.0	0.4	3.0
R - 8,400	\$ 2,301,500	101	5050%	74	0.7	2.0	45.1	0.4	3.0
R - 7,200	\$ 2,988,700	119	5950%	96	0.8	2.0	58.6	0.5	3.0
A-10 to:									
R - 9,600	\$ 1,828,600	88	4400%	59	0.7	2.0	35.9	0.4	3.0
R - 8,400	\$ 2,292,000	101	5050%	74	0.7	2.0	44.9	0.4	3.0
R - 7,200	\$ 2,979,200	119	5950%	96	0.8	2.0	58.4	0.5	3.0
F to:									
R - 9,600	\$ 1,863,600	89	8900%	60	0.7	2.0	36.5	0.4	3.0
R - 8,400	\$ 2,327,000	102	10200%	75	0.7	2.0	45.6	0.4	3.0
R - 7,200	\$ 3,014,200	120	12000%	97	0.8	2.0	59.1	0.5	3.0