EXHIBIT 83
PAGE 1 OF 36

Susie McCann

From: doylefamily5@verizon.net
Sent: Wednesday, March 14, 2007 7:52 AM
To: Susie McCann
Subject: [Fwd: Wellington Housing Development]

Dear Ms. McCann:

The proposed housing development in Wellington hills raises some concerns for our family. If the new neighborhood is allowed to be built as a R-4 and the roads are all interconnected, it will pose grave traffic and safety problems. Additionally, an R-4 development will create more car noise and air pollution for our street, NE 195th.

The proposed 132 homes would equate to at least 264 cars driving through our neighborhood on a daily basis. Of all the roads servicing the proposed neighborhood, NE 195th Street is the closest to the main aterial and therefore will be the most direct and heaviest travelled. More cars travelling on NE 195th poses a threat to the safety of all concerned. Furthermore, we are worried that the intersection on NE 195th and 156th Street NE will become a bottle neck.

Limiting the size of the lots (R-1) and dividing up the traffic flow equally among all existing roads must be done and should address most of the concerns raised above.

Please help us protect our beautiful neighborhood and the lifestyle that made Woodinville an attractive place to raise our family.

Thank you for your consideration.

Sincerely,
The Doyle Family
15515 NE 195th

4/5/07

I HAVE LIVED IN THE WOODINVILLE AREA FOR OVER 20 YEARS. I AM STRONGLY AGAINST ANY AND ALL ZONING CHANGES AND DEVELOPMENT IN THE GREATER WOODINVILLE AREA. TRAFFIC IS ALREADY A NIGHTMARE. UNFORTUNATELY, "WOODINVILLE AIN'T WHAT IT USED TO BE," AND THAT IS A REAL SHAME.

JON OTTO
P.O. BOX 2183
WOODINVILLE, WA 98072.
485-6055

EXHIBIT 83
PAGE 2 OF 36

CC: S. Guinn. Admin File

COPY

RECEIVED
APR 05 2007
City of Woodinville

From: Julie Parrott
To: charleines@ci.woodinville.wa.us
Cc: cvonwald@ci.woodinville.wa.us; cprice@ci.woodinville.wa.us
Date: 4/5/2007 11:59:08 AM
Subject: Comments for public record for Woodtrails,Montevello and Sustainable Development

PLEASE ADD TO THE PUBLIC RECORD FOR WOODTRAILS, MONTEVELLO AND SUSTAINABLE DEVELOPMENT

RECEIVED
APR 06 2007
CITY OF WOODINVILLE
DEVELOPMENT SERVICES

Julie Parrott
16212 NE 200TH CT
Woodinville, WA 98072

Cathy VonWald
Woodinville City Council
Hearing Examiner
Woodinville, WA

Madame Mayor,

Once again I would like to voice my displeasure concerning the Montevello/Woodtrails proposed development. Some points to consider:

1) This will not be "affordable housing" as Phoenix promises. We would need signed documentation from Phoenix that they intend to sell these houses at $250k to $325K. We all know they will list these properties at NO LESS that $500 to $600K. Oops! there goes one of the three criteria they need.

2) Woodtrails/Montevello would destroy at least 1/3 of the tree and vegetation canopy of the current R1 zoned area. Please refer to the Concerned Neighbors of Wellington ariel map and in particular to the revised edition showing a 3rd development on private land that has been committed if Phoenix development goes in reducing the canopy EVEN MORE. This being the domino effect no one seems to want to acknowledge. Oops! there goes number two of the three criteria they need.

3) GMA requirement. Everyone in Woodinville knows by now that Woodinville has enough housing until 2022. Oops! there goes the third of the three requirements.

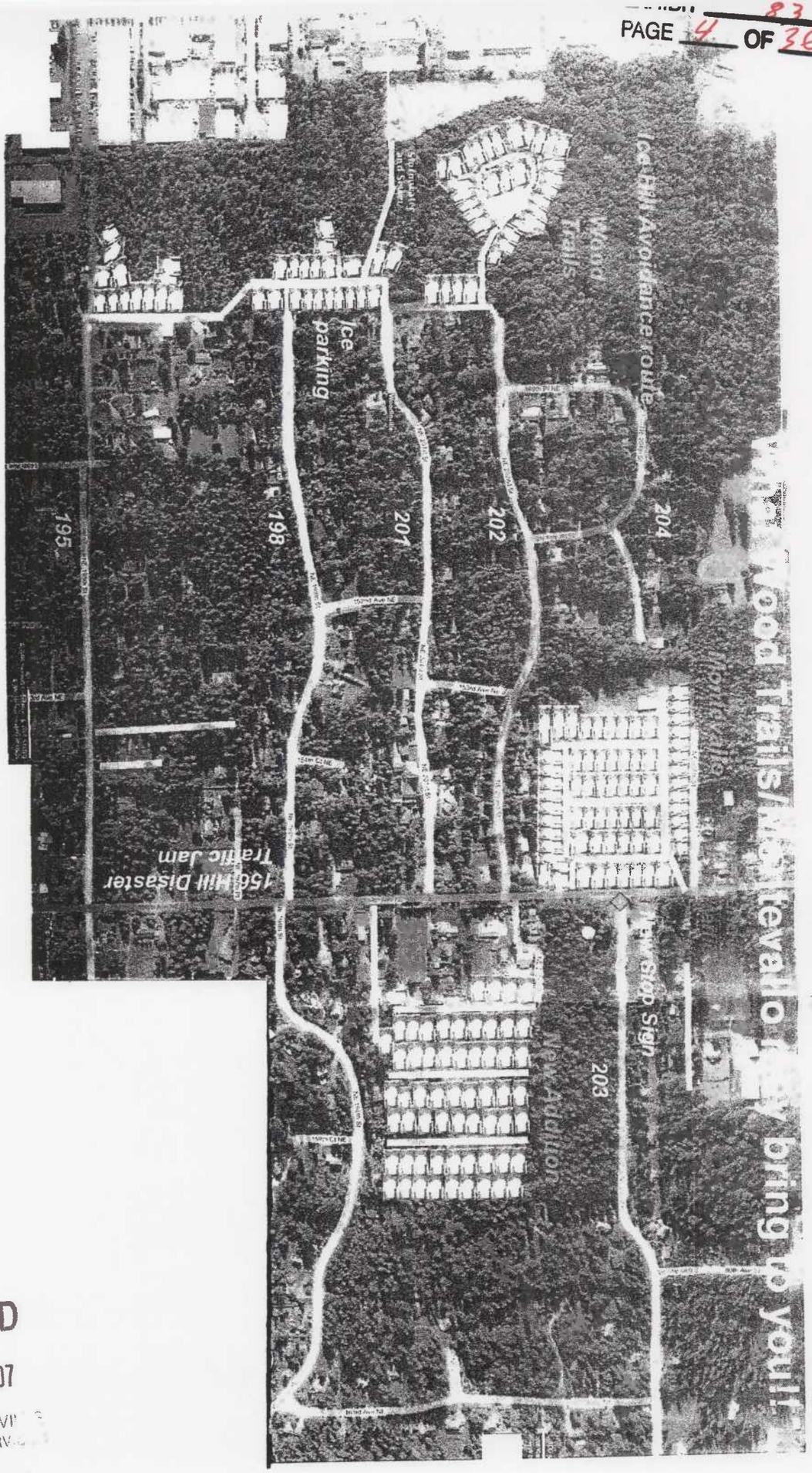
4) I did not understand how Cindy Baker could say that Phoenix had met 2 of the 3 criteria at the Public Hearings. Now I know why, anyone who has won awards from building/development groups in past jobs should not be working on this project. That is a blatant conflict of interest and the City Manager and City Council should have taken action on this apparent vested interested by Cindy Baker. This conflict taints everything she worked on and you can see it in her slanted report to the Hearing Examiner! I can see this entire question going back to square one if conflict/failure to report unbiased information enters the judicial court arena.

5) Hasn't our own GOVERNOR made plans to set aside funding to preserve neighborhood character and green space/forest character for wildlife and quality of life?

6) With no factual/legal criteria met by the developer I ask why should the citizens of Woodinville have to defend their way of life? By what right should a developer get to change my life style and future? I do not believe a developer should be allowed to come into a community and dictate that they have the right to do whatever they want. This is MY community, My town, My life style. What ever happened to "for the people,by the people and of the people"! I believe the R1 zoning was a contractual promise between the City and the People and the City, and those working for the City to defend!

Thank you.

COPY



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APR 06 2007
CITY OF WOODINVILLE
DEVELOPMENT SERVICES

EXHIBIT 83
PAGE 5 OF 36

Susie McCann

From: J Gunnarsson [j.gunnarsson@comcast.net]
Sent: Thursday, April 05, 2007 5:21 PM
To: Cindy Baker
Cc: Susie McCann
Subject: Montevallo and Wood Trails comments

Cindy,
I am a resident of the Wellington neighborhood and I am writing regarding the proposed Montevallo and Wood Trails developments. I am deeply concerned about the impact that the zoning change to R-4 would have on the traffic and safety in the area and feel that this area should remain zoned as R-1.

I am very concerned about the traffic that we already have on 156th Ave NE. Since the building of Costco the traffic has gotten worse. Due to the traffic on 156th Ave NE, the lack of shoulder and the deep ditch on the northbound side of the street, and the limited sight distances we do not let our teenage daughter ride her bike on this street. My husband and I are both cyclists but we are not even comfortable when we ride on this street. This is the only north/south arterial to provide access to the Wellington neighborhoods so we don't have other options. The traffic and the danger to bicyclists and pedestrians will get much worse if the zoning is changed to R-4 and 130 plus houses are added.

Another area that will be impacted is where kids are dropped off behind Wellington Elementary. I live in a neighborhood on the east side of NE 156th and walk my daughter to Wellington on school mornings. We walk along NE 198th St to 164th Ave NE and then along that street to the barricade on the west side of Wellington Elementary. Many families who live on streets along both sides of 156th Ave NE drop their kids off at this area. They do this so they can avoid the awful traffic that they would face if they went all the way around to the actual parking lot of Wellington by going along 156th Ave NE and Woodinville-Duvall Road to Mac's Corner and past Leota Junior High to get to Wellington.

In the mornings and afternoons when school is starting or letting out, traffic is heavy along NE 198th St. The section of 164th Ave NE between NE 198th St and NE 195 St is narrow. At the crosswalk at the corner of NE 198th St and 164th Ave NE there is no place for children to walk once they cross the street using the crosswalk but on the street itself. Cars that stop for children who are crossing at the crosswalk have to drive on the wrong side of the road to get around the kids after they cross the street. Adding 130 or more houses to the Wellington area would mean even more parents trying to drop off their kids in this area especially with the added traffic these developments will bring to 156th Ave NE and Woodinville-Duvall Road. This would mean more danger to our children as they make their way to and from school.

According to Joel Birchman of Perteet Engineering, the City of Woodinville's adopted level of service for roads was an "E" on a A-F scale where A would represent the best and F the worst traveling conditions. Clearly an "E" rating is not something desirable, and not something we should accept for our city. Adding more traffic from 130 extra homes to already poor roads will only make matters worse, cause a drop in the level of service and increase the number of accidents.

Please consider the traffic and safety issues in these neighborhoods and keep the zoning at R-1.

Sincerely,
Juliana Gunnarsson
19924 163rd Ave NE
Woodinville WA 98072

04/06/2007

Sandy Guinn

From: Cindy Baker
Sent: Monday, April 09, 2007 10:36 AM
To: Sandy Guinn
Subject: FW: Montevallo and Wood Trails comments

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PAGE 6 OF 36

Send to examiner and put on the record

From: J Gunnarsson [mailto:j.gunnarsson@comcast.net]
Sent: Thursday, April 05, 2007 5:21 PM
To: Cindy Baker
Cc: Susie McCann
Subject: Montevallo and Wood Trails comments

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Sincerely,
Juliana Gunnarsson

19924 163rd Ave NE
Woodinville WA 98072

EXHIBIT 83
PAGE 7 OF 36

04/13/2007

EXHIBIT 83
PAGE 8 OF 36

Sandy Guinn

From: Cindy Baker
Sent: Monday, April 09, 2007 10:49 AM
To: Sandy Guinn
Subject: FW: Noise Attenuation from Trees
Attachments: Noise_Atten_040607.pdf

Please send to the examiner with attachment and put on the record.

From: Lisa Grueter [mailto:LGrueter@jsanet.com]
Sent: Friday, April 06, 2007 3:22 PM
To: Cindy Baker
Cc: Ray Sturtz; Gilbert Cerise
Subject: Noise Attenuation from Trees

Hi Cindy,

Per your voicemail, we have collected some information on attenuation of trees. Please see the attached PDF for some research. The first page summarizes our noise expert's research results and his contact information.

Thanks,

Lisa Grueter
Jones & Stokes
Senior Planner
11820 Northup Way, Suite E300 •
Bellevue, WA 98005-1946
W: 425-893-6428• Fx: 425-822-1079•
Reception: 425-822-1077
lgrueter@jsanet.com www.jonesandstokes.com

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James Wilder

From: James Wilder
Sent: Friday, April 06, 2007 2:18 PM
To: Lisa Grueter
Cc: James Wilder
Subject: Negligible noise reduction from tree buffers.

Lisa - I have 4 noise citations regarding the negligible benefit of tree buffers. I'll get you a copy of each.

FHWA 1995. Dense trees can provide 10 dBA reduction for a 200-foot wide buffer. Benefit is more psychological than acoustical.

ISO 9613. Trees provide "a small amount of attenuation". 660 foot tree buffer can provide up to 10 dBA reduction.

USFS 1980. At buffer distances less than 75 feet the noise reduction is neglible.

FHWA TNM model: Tall, dense tree buffer 100 feet wide provides a modeled noise reduction of 3 dBA, which is the lower detectablity limit for noise reduction.

Your Project Means the World to Us

Jim Wilder, P.E.
Jones & Stokes
11820 Northup Way, Suite E-300
Bellevue, WA 98005
Tel. 425/893-6445
jwilder@jsanet.com

Jim Wilder

EXHIBIT 83
PAGE 10 OF 36

HIGHWAY TRAFFIC NOISE ANALYSIS AND ABATEMENT POLICY AND GUIDANCE

by

U.S. Department of Transportation
Federal Highway Administration
Office of Environment and Planning
Noise and Air Quality Branch
Washington, D.C.
June 1995

4. Flexibility in Decisionmaking

The Federal-aid highway program has always been based on a strong State-Federal partnership. At the core of that partnership is a philosophy of trust and flexibility, and a belief that the States are in the best position to make investment decisions that are based on the needs and priorities of their citizens. The FHWA noise regulations give each SHA flexibility in determining the reasonableness and feasibility of noise abatement and, thus, in balancing the benefits of noise abatement against the overall adverse social, economic, and environmental effects and costs of the noise abatement measures. The SHA must base its determination on the interest of the overall public good, keeping in mind all the elements of the highway program (need, funding, environmental impacts, public involvement, etc.). Congress affirmed and extended the philosophy of partnership, trust, and flexibility in the enactment of ISTEA.

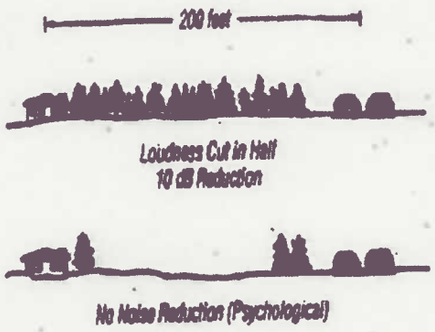
The flexibility in noise abatement decisionmaking is reflected by data indicating that some States have built many noise barriers and some have built none. From 1970 to 1992, forty SHAs and the Commonwealth of Puerto Rico have constructed over 1,486 linear kilometers of barriers at a cost of over $816 million ($875 million in 1992 dollars). Ten States and the District of Columbia have not constructed noise barriers to date.

Vegetation

Vegetation, if it is high enough, wide enough, and dense enough that it cannot be seen through, can decrease highway traffic noise. A 61-meter width of dense vegetation can reduce noise by 10 decibels, which cuts in half the loudness of traffic noise. It is usually impossible, however, to plant enough vegetation along a road to achieve such reductions.

Roadside vegetation can be planted to create a psychological relief, if not an actual lessening of traffic noise levels. Since a substantial noise reduction cannot be obtained for an extended period of time, the FHWA does not consider the planting of vegetation to be a noise abatement measure. The planting of trees and shrubs provides only psychological benefits and may be provided for visual, privacy, or aesthetic treatment, not noise abatement.

Figure 4: Vegetation
Vegetation and Noise Reduction



Traffic Management

Controlling traffic can sometimes reduce noise problems. For example, trucks can be prohibited from certain streets and roads, or they can be permitted to use certain streets and roads only during daylight hours. Traffic lights can be changed to smooth out the flow of traffic and to eliminate the need for frequent stops and starts. Speed limits can be reduced; however, about a 33 kilometer-per-hour reduction in speed is necessary for a noticeable decrease in noise levels.

ISO/TC 43/SC 1 Secretariat: DS

Voting begins on 1992-04-30

Voting terminates on 1992-10-30

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

ISO 9613

Acoustics — Attenuation of sound during propagation outdoors —

Part 2:
A general method of calculation

Acoustique — Atténuation du son lors de sa propagation à l'air libre —

Partie 2: Méthode générale de calcul

UDC 534.833.522.2.001.24

Descriptors: acoustics, noise (sound), airborne sound, attenuation, rules of calculation.

To expedite distribution, this DIS is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent DIS est distribué tel qu'il est parvenu du secrétariat du comité. La rédaction et la composition de texte seront effectuées au Secrétariat central de l'ISO au stade de publication.

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Annex A (Informative)

Additional types of attenuation (A_{misc})

The term A_{misc} in Eq.(2) covers contributions to the attenuation from miscellaneous effects not accessible by the general methods of calculating the attenuation specified in clause 7. These contributions include $A_{foliage}$, the attenuation of sound during propagation through foliage; A_{site}, the attenuation during propagation through an industrial site; and $A_{housing}$, the attenuation during propagation through a built-up region of houses, all to be considered here.

For these additional contributions to the attenuation the curved downwind propagation path may usefully be approximated by an arc of a circle of radius 5 km, as shown in figure 10.

A.1 Foliage ($A_{foliage}$).

The foliage of trees and shrubs provides a small amount of attenuation, but only if it is sufficiently dense to completely block the view along the propagation path; i.e., it is impossible to see a short distance through the foliage. The attenuation may be by vegetation close to the source, or close to the receiver, or by both situations, as illustrated in figure 10.

The first line in table 5 gives the attenuation to be expected from dense foliage if the total path length through the foliage is between 10 m and 20 m, and the second line if it is between 20 m and 200 m. For pathlengths greater than 200 m through dense foliage the attenuation for 200 m should be used.

A.2 Industrial sites (A_{site}).

At industrial sites an attenuation can occur due to scattering from installations (and other objects), which may be described as A_{site}, unless accounted for under A_{screen}, or the source specification. The term installations includes miscellaneous pipes, valves, boxes, structural elements, etc.

As the value of A_{site} depends strongly on the type of site, it is recommended to determine it by measurements. However, for a rough estimate of this attenuation the values in table 6 may be used. The attenuation increases linearly with the length of the curved path d_s through the installations (see figure 11), with a maximum of 10 dB.

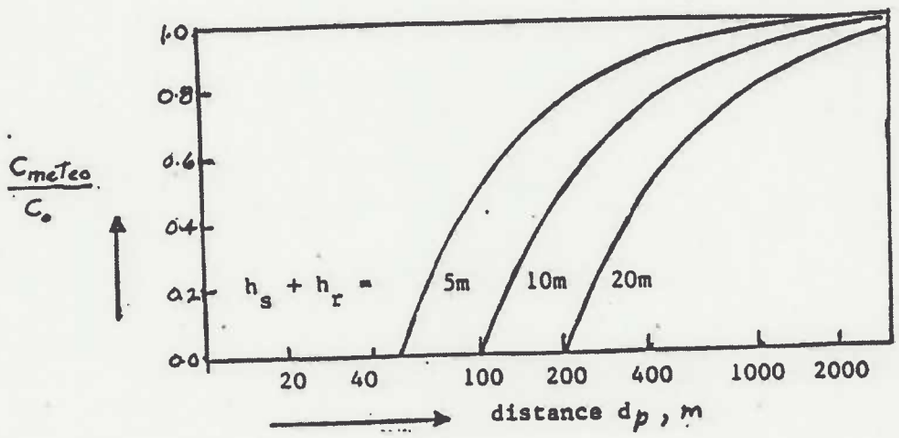

Figure 9. The meteorological correction C_{meteo}.

Figure 10. The attenuation due to propagation through foliage increases linearly with propagation distance d_f through the foliage: $d_f = d_1 + d_2$. Curved path radius is 5 km.

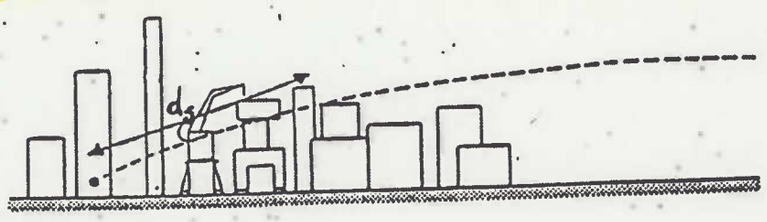

Figure 11. The attenuation A_{site} increases linearly with the propagation distance d_s through the installations at industrial plants.

Table 4. Estimated accuracy (in dB) of $L_{Aeq,T}$(downwind) calculated using Eqs.(1) to (11). h is the mean height of source and receiver (in metres), and d is the distance between source and receiver (in metres). Note that these estimates have been made from situations where there is no attenuation due to screening.

Height h m	Distance d,m	
	0 < d < 100	100 < d < 1000
$0 \leqslant h \leqslant 5$	± 3 dB	± 3 dB
$5 < h \leqslant 30$	± 1 dB	± 3 dB

Table 5. Attenuation of an octave band of noise due to propagation a distance d_f through dense foliage.

Propagation distance d_f, m	Nominal midband frequency, Hz							
	63	125	250	500	1000	2000	4000	8000
$10 \leqslant d_f \leqslant 20$	attenuation, dB							
	0	0	1	1	1	1	2	3
$20 \leqslant d_f \leqslant 200$ m	attenuation, dB/m							
	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,12

Table 6. The attenuation per unit distance (in dB/m) of an octave band of noise during propagation through installations at industrial plants.

Nominal midband frequency, Hz							
63	125	250	500	1000	2000	4000	8000
0	0,02	0,05	0,05	0,05	0,05	0,05	0,05

SD
388
U67b
3023

Project Record

[redacted]

Jim Wilder

APRIL 1980

FOREST SERVICE–U.S. DEPARTMENT OF AGRICULTURE
SAN DIMAS EQUIPMENT DEVELOPMENT CENTER

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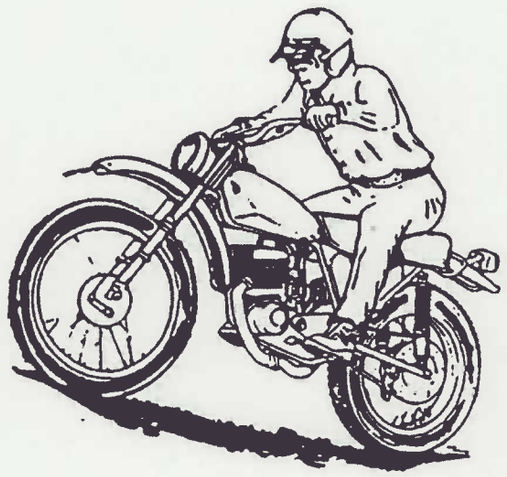
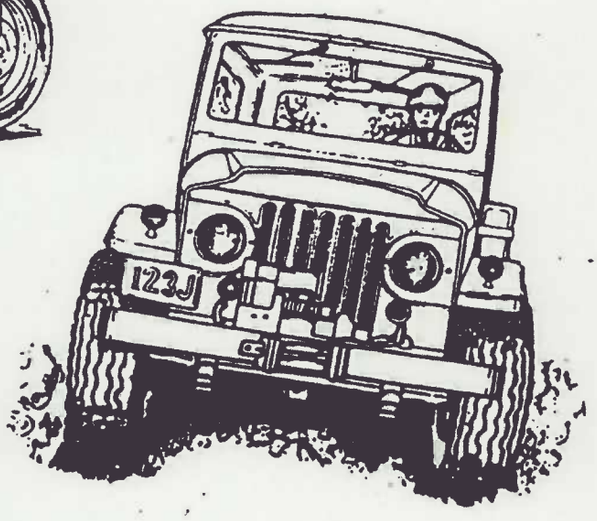
Predicting IMPACT of Noise on Recreationists





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EPA U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF NOISE ABATEMENT AND CONTROL–WASHINGTON, D.C.

- **Amplitude**—Measured in decibels (dB); determines loudness.
- **Frequency**—Measured in Hertz (Hz, cycles per second); determines pitch.
- **Duration**—Measured in seconds (sec), minutes (min), hours (hr), or days; is elapsed time.

Amplitude only determines loudness; it is not loudness. Likewise, frequency is not pitch. Amplitude, frequency, and elapsed time are physical measurements; loudness and pitch are subjective impressions that depend on the amplitude and frequency of the sound, ***plus*** the characteristics of the listener.

Sound Propagation

Several factors affect how loud a particular sound seems to a listener. As sound waves travel through the air, they loose energy (i.e., the amplitude decreases) via several mechanisms that are discussed in the paragraphs that follow.

Spherical Spreading Loss

Spherical spreading is the loss of energy that occurs when sound waves spread over a larger and larger area. The loudness of a sound decreases as the distance between the sound source and the listener increases. Doubling the distance causes a reduction (or loss) in loudness of approximately 6 dB. (This value is not exact due to rounding-off of calculations.)

For instance, if at 50 ft the sound level from a snowmobile is 72 dB; at 100 ft, the level will be 66 dB; at 200 ft, 60 dB; at 400 ft, 54 dB. At distances of less than 1,500 ft, spherical spreading loss has an impact greater than any other factor on how loud the listener perceives the sound from the source.

Atmospheric Absorption Loss

Atmospheric absorption is the loss caused by the sound waves imparting energy to the molecules of the atmosphere as the sound travels through the air. This energy loss varies with temperature, elevation (air pressure), relative humidity, and the frequency content of the particular sound. The prediction of atmospheric absorption is very complex, as each of the variables mentioned affects the energy loss in a different way. Atmospheric absorption causes the greatest reduction in a perceived loudness of a sound at distances that are over ¼ mi.

Foliage and Ground Cover

In the great outdoors, trees and shrubs that are between a sound source and a listener absorb some acoustic energy, as does the porous surface of the forest floor. Experiments show that the amount of sound absorbed by various types of trees and shrubs varies only slightly. At distances of less than 75 ft, even if foliage restricts visibility, the acoustic energy loss is negligible. Beyond distances of approximately 350 ft, the foliage loss does not increase.

While these effects are somewhat frequency dependent, this dependence is small and difficult to calculate. For our purposes, the foliage and ground cover loss can be considered independent of the frequency of the sound source.

Table 8. Foliage and ground cover loss (dB)

Distance (X) between sound source & listener locations (ft)	Conifers	Hardwoods	Grassland or open brush by spectra (Hz)				
			>800	800–1,000	1,250	1,600	2,000
75	7	4	4	3	3	2	0
100	8	6	4	3	3	2	0
125	9	7	4	4	3	2	0
150	10	8	4	4	3	2	0
175	11	10	4	4	3	3	0
200	12	11	4	4	3	3	0
250	13	12	4	4	4	3	2
300	14	13	4	4	4	4	3
350 and greater	14	14	4	4	4	4	4

NOTE: For X's not listed, use nearest X in the table.

Table 9. ϕ as a function of seasonal conditions

Sky, wind, season, time of day	ϕ (°)
Clear, calm 1/ summer day	180
Clear, calm winter day	180
Clear, calm summer night	0
Clear, calm winter night	180
Clear, windy summer day	144
Clear, windy summer night	62
Clear, windy winter night	70
Cloudy, calm	90
Cloudy, windy	90

1/ Calm means wind of less than 5 mph.

Table 10. Downwind loss

Product of frequency times distance X (Hz-ft)	Loss (dB)
Less than 456,000	0
456,001–577,000	1
577,001–730,000	2
730,001–923,000	3
923,001–1,170,000	4
1,170,001–1,480,000	5
1,480,001–1,870,000	6
1,870,001–2,360,000	7
2,360,001–2,990,000	8
2,990,001–3,780,000	9
3,780,001–4,770,000	10
4,770,001–6,040,000	11
6,040,001–7,640,000	12
7,640,001–9,660,000	13
9,660,001–12,200,000	14
12,200,001–15,400,000	15
15,400,001–19,500,000	16
19,500,001–24,700,000	17
24,700,001–31,200,000	18
31,200,001–39,500,000	19
39,500,001–50,000,000	20
50,000,001–63,200,000	21

Table 11. Upwind loss

$\phi - \theta$ (°)	Loss (dB)
0	0
1	3
2	6
3	8
4	10
5	12
6	13
7	14
8–9	15
10–11	16
12–13	17
14–15	18
16–18	19
19–21	20
22–25	21
26–29	22
29–35	23
36–50	24
50	25

Table 12. Distance to shadow zone

Wind speed (mph)	d (ft)
1	375
2	200
3	150
4	120
5	90
6	80
7	70
8	65
9	55
10–12	48
13–16	42
17–20	33
21–30	25
30	18

EXHIBIT 83
PAGE 48 OF 76

Lawn vs. Tree Zone Noise Reduction

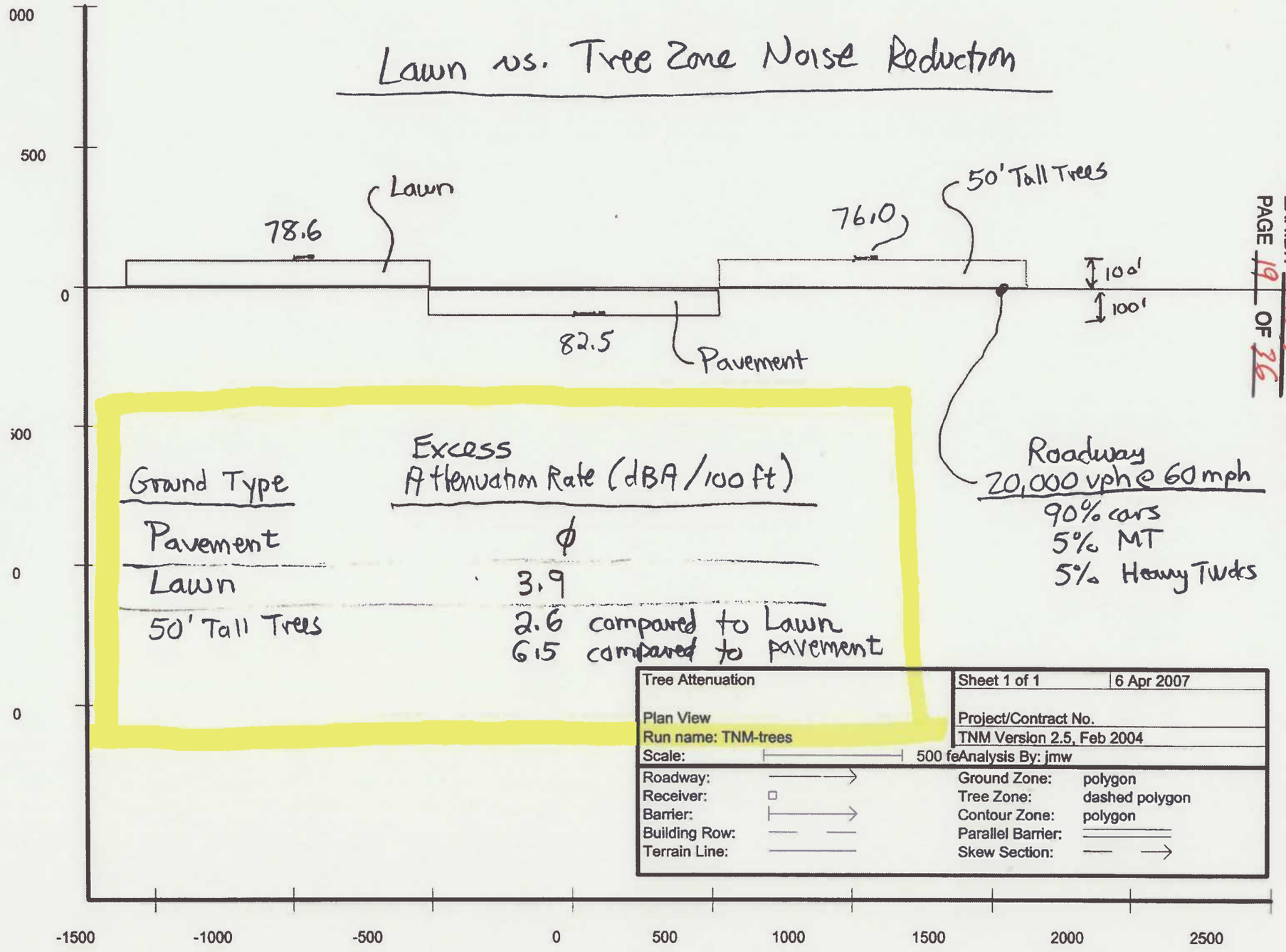

EXHIBIT PAGE 19 OF 26

Ground Type	Excess Attenuation Rate (dBA/100 ft)
Pavement	ϕ
Lawn	3.9
50' Tall Trees	2.6 compared to Lawn 6.5 compared to pavement

Roadway
20,000 vph @ 60 mph
90% cars
5% MT
5% Heavy Trucks

Tree Attenuation		Sheet 1 of 1	6 Apr 2007
Plan View		Project/Contract No.	
Run name: TNM-trees		TNM Version 2.5, Feb 2004	
Scale:	500 fe	Analysis By: jmw	
Roadway:		Ground Zone:	polygon
Receiver:		Tree Zone:	dashed polygon
Barrier:		Contour Zone:	polygon
Building Row:		Parallel Barrier:	
Terrain Line:		Skew Section:	

<Organization?>						6 April 2007						
jmw						TNM 2.5						
						Calculated with TNM 2.5						
RESULTS: SOUND LEVELS												
PROJECT/CONTRACT:		<Project Name?>										
RUN:		Tree Attenuation										
BARRIER DESIGN:		INPUT HEIGHTS						Average pavement type shall be used unless				
								a State highway agency substantiates the use				
ATMOSPHERICS:		68 deg F, 50% RH						of a different type with approval of FHWA.				
Receiver												
Name	No.	#DUs	Existing	No Barrier					With Barrier			
			LAeq1h	LAeq1h		Increase over existing		Type	Calculated	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n	Impact	LAeq1h	Calculated	Goal	Calculated
							Sub'l Inc					minus
												Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Lawn-100	1	1	0.0	78.6	66	78.6	10	Snd Lvl	78.6	0.0	8	-8.0
Pavement-100	2	1	0.0	82.5	66	82.5	10	Snd Lvl	82.5	0.0	8	-8.0
Trees-100	3	1	0.0	76.0	66	76.0	10	Snd Lvl	76.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	3	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

EXHIBIT 83
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PAGE 21 OF 36

Sandy Guinn

From: Cindy Baker
Sent: Tuesday, April 10, 2007 6:02 PM
To: Sandy Guinn
Cc: barbara.czuba@bayer.com
Subject: FW: Comments on the proposed Wood Trails and Montevallo developments

Importance: High

Attachments: 4-10-07 BCzuba -- additional comments on WoodTrails and Montevallo.zip

4-10-07 BCzuba
-- additional c...

Sandy, please place these documents on the record and send to the hearing examiner.

Thank you Barbara and Sandra for your input!

Sincerely,

-----Original Message-----
From: barbara.czuba@bayer.com [mailto:barbara.czuba@bayer.com]
Sent: Tuesday, April 10, 2007 1:11 PM
To: Cindy Baker; Susie McCann
Subject: Comments on the proposed Wood Trails and Montevallo developments
Importance: High

Dear Ms. McCann, Ms. Baker, and Hearing Examiner --

Please find attached our additional comments on the proposed Wood Trails and Montevallo developments within the Wellington area of Woodinville.

As residents of the Wellington neighborhood we would to have the Hearing Examiner and the City of Woodinville review and consider our comments as the decision process proceeds on how to effectively handle these new housing developments within the Wellington neighborhood.

Thank you so much for your time and consideration,

Barbara Czuba and Sandra Carroll
Wellington area resident
NE 203rd Place
Woodinville, WA

(See attached file: 4-10-07 BCzuba -- additional comments on WoodTrails and Montevallo.zip)

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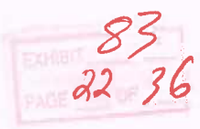

EXHIBIT 83
PAGE 23 OF 36

April 10, 2007
Barbara Czuba & Sandra Carroll
15808 NE 203rd Place
Woodinville, WA 98072

Subject: Additional Comments on the Proposed Subdivisions of Wood Trails (File No. PPA2004-056) and Montevallo (File No. PPA2004-093)

To: The Hearing Examiner and The City of Woodinville

We would like to take this opportunity to provide additional comments on the proposed subdivisions of Wood Trails and Montevallo located within the West Wellington Hills Neighborhood of Woodinville. These additional comments are the result of our attending the three public hearings held recently by the City of Woodinville on the proposed developments.

During the public hearings, the lawyer for the developer as well as the developer himself commented upon the 'need' for the re-zone from R-1 to R-4. Part of their comments concerned the 'need' for affordable housing as well as the 'market need' for R-4 housing densities over R-1 housing densities.

We would like to take this time to respond to the above 'need' comments made by the developer and his representative:

1) When the developer and his representative discussed the 'need' for affordable housing as a driver for re-zoning to R-4, it was not clearly stated by them whether or not 'affordable housing' would indeed be implemented as part of the proposed developments, where 'affordable housing' is defined as housing that is made assessable to low income families and individuals.

   In response, we would like the Hearing Examiner and the City of Woodinville to explicitly request that the developer set aside a defined percentage of housing (i.e., minimally 10%) to meet the above definition of 'affordable housing', regardless of the final zoning.

2) With respect to the perceived 'market need' for only R-4 housing densities over R-1 housing densities, this appears to not be the case. As indicated by a local realtor who spoke at the April 5, 2007 public hearing, there is indeed a market for R-1 zoned properties. This 'R-1 need' arises from the fact that there are families and individuals who would like to own a house that has a large yard and / or land associated with it.

   In support of the market demand for R-1 housing developments, we would like to point out that there are at least three new R-1 housing projects being pursued that are located near the Wellington neighborhood. One development is located at the junction of Woodinville-Duval road and 156th Ave NE, which is just down the street from the proposed Wood Trials and Montevallo developments. A second development is located near-by just off Hwy 522 between Woodinville and Monroe (development is titled 'Echo Creek', which is a 'planned community with 35 estate sized lots'; it is advertised as "Almost Sold Out!"). The third new R-1 development is located just south of the Woodinville Village along the Woodinville-Redmond road, where 'homes on estate sized lots' will overlook the agricultural valley between Redmond and Woodinville.

These 3 relatively new developments more than indicate that there is indeed an active market for R-1 zoned housing, rather than just R-4 housing developments as we were led to believe during the recent public hearings on the Wood Trials and Montevallo developments.

We would thus like to again recommend that the following be considered and approved as a way to meet not only the City of Woodinville's needs but also the needs of it's residents, especially those located within the Wellington area of Woodinville:

- **R-1 Zoning Alternative:** Approve the R-1 Zoning Alternative as proposed in Section 2.2.1 - pg 2-27 of the FEIS document, and do not approve the R-4 rezone. This proposed alternative as overviewed on pages 2-27 and 2-28 maintains the current zoning of R-1 for each of the new developments, and as such results in developments that are similar in character and density to the existing low-density residential development on adjacent properties.

  As indicated within the FEIS (refer to pages 2-27 and 2-28), the resulting net-density equates to a total of 37 new single-family houses: 23-units for the Wood Trails site, with a average lot size of 0.45-acres, and 14-units for the Montevallo site, with a average lot size of 0.85-acres.

  In addition, we request that a certain percentage of the homes (minimally 10%) be set aside as 'affordable housing' for qualified low income families and/or individuals.

Thank you for this opportunity to review our comments and hopefully we can develop a path forward that meets all needs and concerns.

Sincerely,

Barbara Czuba and Sandra Carroll
15808 NE 203rd Place
Woodinville, WA 98072

CC: NT/MT FILE
C. BAKER
R STURTZ
WT/MT PUBLIC COMMENTS

EXHIBIT 83
PAGE 25 OF 36

APR 11 2007

Jeanette van der Heyden
20324 136th AVE NE
Woodinville WA, 98072
425.481.7348

April 10,2007

Woodinville City Hall
133rd Avenue NE
Woodinville, WA 98072

Dear Planning Staff,

I have enclosed a couple of newspaper articles from the April 9th Herald. Looks like all the towns around us have figured out there is a problem with stuffing more houses than can be livable on one piece of property. Why is it a town like Bothell can see the problem and be willing to rectify the situation and Woodinville, just rolls over for the developers?
I know the planning staff feels the two parks at the south end of 136th Ave NE will make the over crowding acceptable. The only way that will work is if we all stick our heads in the sand along with the entire planning staff.
Planning should just allow for townhouses if they must insist on the high density. This would make room for more green space, parking and buffer for the existing neighborhood.
I'll be seeing you at the hearing for the last plot of ground on this street.

As always, thank you for your time.

Jeanette van der Heyden

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APR 11 2007
CITY OF WOODINVILLE
DEVELOPMENT SERVICES

EXHIBIT 93
PAGE 26 OF 36

New rule for homes that share single lot?

There's a forum this week as the county considers new building restrictions.

By Jeff Switzer
Herald Writer

Cities have attacked them.

Builders have defended them.

Families have paid hundreds of thousands of dollars to live in them.

They're just houses with four walls and a roof. Even so, how they look and fit into Snohomish County's unincorporated neighborhoods has ignited a debate that has stretched on for more than a year.

City steps up its fight

Lynnwood tries to stop controversial development by halting new sewer service.
Page B1

The projects are single-family detached homes built on shared lots — a move that allows them to bypass county rules that apply to other housing developments.

This week, the debate might close as the County Council considers stricter rules for the housing.

Proposed rules would mandate open space, landscaping and parking requirements for these projects where today there is none. A public hearing is planned Wednesday afternoon.

As urban land prices in the county have skyrocketed, the projects have become more popular with builders, said Mike Pattison of the Master Builders Association of King and Snohomish Counties.

Builders applied for 118 such projects last year, nearly three times the 40 sought in 2005 and

See HOUSING, back page this section

Housing: Current rules don't apply

From Page A1

the 32 applied for in 2004.

"They're one of the few forms of development where we can get the densities we need to make projects profitable," Pattison said. "Land prices are so high we have to get this sort of density to get your development to pencil out."

Such developments have been called "air condos" in cases where residents share responsibilities for roads and common spaces. Such projects have been built in low-density multiple residential zones, which led to the debate being dubbed "LDMR."

Building the homes all on a common property has allowed developers to bypass county rules that would require landscaping, open space and safe walkways if the homes were on separate properties.

Public hearing

The Snohomish County Council will hear comments on proposed regulations for single-family detached units at 1:30 p.m. Wednesday in the eighth-floor council chambers, 3000 Rockefeller Ave., Everett.

The proposed rules would change that, county principle planner Karen Watkins said.

"We're trying to fill a hole in the code," Watkins said. "This will make life easier for not only the people that want to do this type of development, but also for the county reviewers."

City officials have pressed for a countywide moratorium to halt the projects being built near cities.

City officials say they don't want to annex such projects and formed a coalition spearheaded by Mill Creek and including Lynnwood, Edmonds, Mountlake Terrace, Bothell, Brier, Woodway and Mukilteo.

Instead of calling a time-out for developers, the County Council moved ahead to change the rules. Meanwhile, builders continued to apply for permits.

The proposed rules don't go far enough to require wide enough streets, enough guest parking spaces or enough open space, Mill Creek Mayor Pro Tem Terry Ryan said.

"The standards the county is proposing are so low that they are unacceptable to the cities," Ryan said. "For the cities to even consider annexing them, we want the developments to be consistent with the city's development standards."

Cities are pressing for twice as much open space per home as the county would require, and more guest parking spaces per home, Ryan said.

Builders are lobbying for exceptions to the parking and open-space rules, Pattison said. Also, they oppose strict design guidelines that might be added by the County Council.

Still, Pattison is optimistic that a compromise will be found.

"There has been a lot of rhetoric and a lot of complaining about these developments, but really, when you boiled it all down, the issues were simple, solvable and reasonable, and people came together to fix it," Pattison said. "I hope we can put this behind us."

Ryan and city officials plan to speak at the county hearing and press their case, too.

"We'll see if the county accepts it or not," Ryan said.

City stops services to guide growth

■ Lynnwood controls areas it may one day annex by refusing sewer lines to areas where homes may be built on tiny lots.

By Scott Pesznecker
Herald Writer

LYNNWOOD — The city of Lynnwood is halting new sewer service to the Maple Precinct neighborhood and other areas outside city limits in an effort to stop a controversial style of housing development.

The city's beef is with a type of development nicknamed "air condos," which operate like condominiums with common ownership of streets and land. Some of these homes are built 11 to the acre under multifamily zoning rules but lack open space and standards found in typical neighborhoods.

An Everett developer plans to replace a single family home on a .64-acre lot in the Maple Precinct neighborhood — an island of unincorporated land surrounded by the city of Lynnwood — with seven air condo units, Lynnwood Interim Community Development Director Paul Krauss said.

The Lynnwood City Council responded by cutting off new sewer service to areas the city may someday want to annex.

"We want to make sure any development in that area, as long as we can influence it, would be consistent with development inside the city," City Councilman Ted Hikel said.

The air condo development already planned for Maple Precinct will be granted sewer hookups because the developer obtained his sewer certificates last November, Krauss said.

Mike Pattison, government affairs manager for the Master Builders Association of King and Snohomish Counties, said the City Council is wrong to withhold sewer connections to unincorporated areas.

"It's our view that's pulling the rug out from underneath the

See LYNNWOOD, Page B6

Lynnwood

From Page B1

property owners who've come to expect a certain set of standards, and that's unfortunate," Pattison said. "We don't believe the city has the right to control development outside of its city limits by holding them hostage to sewer service."

Air condos do not meet Lynnwood building codes, Hikel said.

Lynnwood and several other cities in Snohomish County have passed resolutions opposing these developments, which are built on land zoned as low-density multiple residential, or LDMR for short.

Most of the area inside Lynnwood's urban growth boundary is served by the Alderwood Water & Wastewater District and won't be affected by the city's stand.

Already, the county has approved roughly 135 air condo units to be built in Lynnwood's urban growth area. The City Council is scheduled to begin discussing this week whether some of those areas should be annexed into the city.

If that happens, the city will be left to deal with housing developments that aren't to par with city codes, Hikel said.

"We need some better communication to make sure the actions of the (Snohomish) County Council are not going to leave problems behind that cities will have to deal with down the road," he said.

Reporter Scott Pesznecker: 425-339-3436 or spesznecker@heraldnet.com.

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EXHIBIT 83
PAGE 28 OF 36

Sandy Guinn

From: Cindy Baker
Sent: Thursday, April 12, 2007 12:03 PM
To: Sandy Guinn
Subject: FW: WT & Montevallo Rebuttal
Attachments: 0883_001.pdf

Put this on the record if it is not. Thanks

From: Joel Birchman [mailto:JoelB@perteet.com]
Sent: Wednesday, April 04, 2007 11:42 AM
To: Cindy Baker
Cc: Mick Monken; Yosh Monzaki
Subject: WT & Montevallo Rebuttal

Cindy:
I'm planning on submitting an exhibit to the Examiner Thursday evening. The exhibit is the attached PDF is an excerpt from the AASHTO "A Policy on Geometric Design of Highways and Streets" pertaining to stopping sight distance and intersection entering sight distance. There is a critical difference between the two that the Examiner needs to full understand.

How do you want this exhibit presented and how many copies will you need before or at the hearing?

Since early yesterday afternoon I've been trying to send to you a copy of my power point file for presentation during the rebuttal. Unfortunately the file is too large to load on to your internet server. I' desperately trying to find a way to get it to you so you, Mick and Yosh have an opportunity to review and comment, and I can make revisions prior to the hearing.

Joel E. Birchman
Vice President / Branch Manager
Perteet Inc.
253-984-7138 | 1-800-615-9900 | cell 253-318-7447
FAX: 253-589-0399 | WWW.PERTEET.COM
3625 Perkins Lane, Suite 300 | Lakewood, Washington 98449

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29 36

A Policy on Geometric Design of Highways and Streets

2004

Fifth Edition

American Association of State
Highway and Transportation Officials
444 North Capitol Street, N.W., Suite 249
Washington, D.C. 20001
(202) 624-5800
www.transportation.org

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ISBN: 1-56051-263-6

right-of-way, terrain, likely pedestrian presence, adjacent development, and other area controls. In the typical street grid, the closely spaced intersections usually limit vehicular speeds, making the effect of design speed less important. Since the function of local streets is to provide access to adjacent property, all design elements should be consistent with the character of activity on and adjacent to the street, and should encourage speeds generally not exceeding 50 km/h [30 mph].

Sight Distance

Minimum stopping sight distance for local streets should range from 30 to 60 m [100 to 200 ft] depending on the design speed (see Exhibit 3-1). Design for passing sight distance seldom is applicable on local streets.

Grades

Grades for local residential streets should be as level as practical, consistent with the surrounding terrain. The gradient for local streets should be less than 15 percent. Where grades of 4 percent or steeper are necessary, the drainage design may become critical. On such grades special care should be taken to prevent erosion on slopes and open drainage facilities.

For streets in commercial and industrial areas, gradient design desirably should be less than 8 percent, grades should desirably be less than 5 percent, and flatter grades should be encouraged.

To provide for proper drainage, the desirable minimum grade for streets with outer curbs should be 0.30 percent, but a minimum grade of 0.20 percent may be used.

Alignment

Alignment in residential areas should closely fit with the existing topography to minimize the need for cuts or fills without sacrificing safety. The alignment of local streets in residential areas should be arranged to discourage through traffic. Street alignment in commercial and industrial areas should be commensurate with the topography but should be as direct as possible.

Street curves should be designed with as large a radius curve as practical, with a minimum radius of 30 m [100 ft]. Where curves are superelevated, lower values may apply, but the radius should not be less than approximately 25 m [75 ft] for a 30-km/h [20-mph] design speed.

intersections to allow drivers to perceive the presence of potentially conflicting vehicles. This should occur in sufficient time for a motorist to stop or adjust their speed, as appropriate, to avoid colliding in the intersection. The methods for determining the sight distances needed by drivers approaching intersections are based on the same principles as stopping sight distance, but incorporate modified assumptions based on observed driver behavior at intersections.

The driver of a vehicle approaching an intersection should have an unobstructed view of the entire intersection, including any traffic-control devices, and sufficient lengths along the intersecting highway to permit the driver to anticipate and avoid potential collisions. The sight distance needed under various assumptions of physical conditions and driver behavior is directly related to vehicle speeds and to the resultant distances traversed during perception-reaction time and braking.

Sight distance is also provided at intersections to allow the drivers of stopped vehicles a sufficient view of the intersecting highway to decide when to enter the intersecting highway or to cross it. If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions. However, in some cases, this may require a major-road vehicle to stop or slow to accommodate the maneuver by a minor-road vehicle. To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road.

Sight Triangles

Specified areas along intersection approach legs and across their included corners should be clear of obstructions that might block a driver's view of potentially conflicting vehicles. These specified areas are known as clear sight triangles. The dimensions of the legs of the sight triangles depend on the design speeds of the intersecting roadways and the type of traffic control used at the intersection. These dimensions are based on observed driver behavior and are documented by space-time profiles and speed choices of drivers on intersection approaches (**10**). Two types of clear sight triangles are considered in intersection design, approach sight triangles, and departure sight triangles.

Approach Sight Triangles

Each quadrant of an intersection should contain a triangular area free of obstructions that might block an approaching driver's view of potentially conflicting vehicles. The length of the legs of this triangular area, along both intersecting roadways, should be such that the drivers can see any potentially conflicting vehicles in sufficient time to slow or stop before colliding within the intersection. Exhibit 9-50A shows typical clear sight triangles to the left and to the right for a vehicle approaching an uncontrolled or yield-controlled intersection.

Where the grade along an intersection approach exceeds 3 percent, the leg of the clear sight triangle along that approach should be adjusted by multiplying the appropriate sight distance from Exhibit 9-51 by the appropriate adjustment factor from Exhibit 9-53.

If the sight distances given in Exhibit 9-51, as adjusted for grades, cannot be provided, consideration should be given to installing regulatory speed signing to reduce speeds or installing stop signs on one or more approaches.

No departure sight triangle like that shown in Exhibit 9-50B is needed at an uncontrolled intersection because such intersections typically have very low traffic volumes. If a motorist finds it necessary to stop at an uncontrolled intersection because of the presence of a conflicting vehicle on an intersecting approach, it is very unlikely another potentially conflicting vehicle will be encountered as the first vehicle departs the intersection.

Case B—Intersections with Stop Control on the Minor Road

Departure sight triangles for intersections with stop control on the minor road should be considered for three situations:

Case B1—Left turns from the minor road;
Case B2—Right turns from the minor road; and
Case B3—Crossing the major road from a minor-road approach.

Intersection sight distance criteria for stop-controlled intersections are longer than stopping sight distance to ensure that the intersection operates smoothly. Minor-road vehicle operators can wait until they can proceed safely without forcing a major-road vehicle to stop.

Case B1—Left Turn from the Minor Road

Departure sight triangles for traffic approaching from either the right or the left, like those shown in Exhibit 9-50B, should be provided for left turns from the minor road onto the major road for all stop-controlled approaches. The length of the leg of the departure sight triangle along the major road in both directions is the recommended intersection sight distance for Case B1.

The vertex (decision point) of the departure sight triangle on the minor road should be 4.4 m [14.5 ft] from the edge of the major-road traveled way. This represents the typical position of the minor-road driver's eye when a vehicle is stopped relatively close to the major road. Field observations of vehicle stopping positions found that, where necessary, drivers will stop with the front of their vehicle 2.0 m [6.5 ft] or less from the edge of the major-road traveled way. Measurements of passenger cars indicate that the distance from the front of the vehicle to the driver's eye for the current U.S. passenger car population is nearly always 2.4 m [8 ft] or less (**10**). Where practical, it is desirable to increase the distance from the edge of the major-road traveled way to the vertex of the clear sight triangle from 4.4 m to 5.4 m [14.5 to 18 ft]. This

increase allows 3.0 m [10 ft] from the edge of the major-road traveled way to the front of the stopped vehicle, providing a larger sight triangle. The length of the sight triangle along the minor road (distance a in Exhibit 9-50B) is the sum of the distance from the major road plus 1/2 lane width for vehicles approaching from the left, or 1-1/2 lane width for vehicles approaching from the right.

Field observations of the gaps in major-road traffic actually accepted by drivers turning onto the major road have shown that the values in Exhibit 9-54 provide sufficient time for the minor-road vehicle to accelerate from a stop and complete a left turn without unduly interfering with major-road traffic operations. The time gap acceptance time does not vary with approach speed on the major road. Studies have indicated that a constant value of time gap, independent of approach speed, can be used as a basis for intersection sight distance determinations. Observations have also shown that major-road drivers will reduce their speed to some extent when minor-road vehicles turn onto the major road. Where the time gap acceptance values in Exhibit 9-54 are used to determine the length of the leg of the departure sight triangle, most major-road drivers should not need to reduce speed to less than 70 percent of their initial speed (**10**).

The intersection sight distance in both directions should be equal to the distance traveled at the design speed of the major road during a period of time equal to the time gap. In applying Exhibit 9-54, it can usually be assumed that the minor-road vehicle is a passenger car. However, where substantial volumes of heavy vehicles enter the major road, such as from a ramp terminal, the use of tabulated values for single-unit or combination trucks should be considered.

Exhibit 9-54 includes appropriate adjustments to the gap times for the number of lanes on the major road and for the approach grade of the minor road. The adjustment for the grade of the minor-road approach is needed only if the rear wheels of the design vehicle would be on an upgrade that exceeds 3 percent when the vehicle is at the stop line of the minor-road approach.

The intersection sight distance along the major road (dimension "b" in Exhibit 9-50B) is determined by:

Metric	**US Customary**
$ISD = 0.278\, V_{major}\, t_g$	$ISD = 1.47\, V_{major}\, t_g$ **(9-1)**
where:	where:
ISD = intersection sight distance (length of the leg of sight triangle along the major road) (m)	ISD = intersection sight distance (length of the leg of sight triangle along the major road) (ft)
V_{major} = design speed of major road (km/h)	V_{major} = design speed of major road (mph)
t_g = time gap for minor road vehicle to enter the major road (s)	t_g = time gap for minor road vehicle to enter the major road (s)

EXHIBIT 83
PAGE 34 OF 36

TURNED IN APRIL 13 2007

TO) HEARING EXAMINER
FROM: Bob Harman 40 year resident geologist, 14949 N.E. 202 St
TOPIC: REBUTTAL TO WETLAND & GEOLOGIST HEARING TESTIMONIES

WETLAND TESTIMONY

The developer has not visited(?) or described the unclassified but obvious "CLASS 1 WETLAND" that is adjacent to the north of Wood Trails. Richard Hill & this wetland expert stated that " **the FEIS has completed it's wetland evaluation for Wood Trails.**" This is true if only the boundaries of the present developments are consider. The city "best available science" would never exclude the need to examine the impact at adjacent habitats caused by the developments. The city wetland expert said in her response to the CNW lawyer "it has not been evaluated yet". I gave her a tour of this wetland and she did not indicate to me any objections to the arguments I gave you for her to give this a future class 1 wetland. She indicated to me that this habitat could not be replaced and was similar to the other major tree shaded wetland of Woodin Creek (that I'm now gathering creek discharge data that the city & developers do not do.). The DOE wetland expert (Dr. Richard Robohm 425 649 4447) said if a class 1 wetland is established then the state setback would most likely be 200 feet.

The wetland plant distribution map that is attached to the Golf Course Wetland Photo Tour shows water loving plants beyond the uppermost top of the steep slopes (which most exceed 100%). This then gives grave concern for wetland protection and COUNTERS THE GEOLOGIST CLAIM THAT GROUND WATER RECHARGE DOES NOT OCCUR IN THESE WOOD TRAIL DEVELOPMENT SITES. Not mentioned was Montevallo connection with R-1 wetlands.

CITY RARITY USES ENDANGERED SPECIES. Why would a city next to larger cities such as Seattle, Bothell, & Kirkland expect to find endangered wildlife ? This criteria can only favor developers. The STATE DEPARTMENT OF ECOLOGY USES THE CRITERIA OF **HABITAT ENDANGERMENT**. I've worked as a paleoleontologist and if we expect to see why species become extinct we EXAMINE HOW OTHER SPECIES IN THE PALEOHABITAT HAS CHANGE IN ORDER TO ASSESS THE EXTINCTION. This is exactly what Matt Schultz suggested based on discussion with a salmon expert that a polluted Golf Course Wetland Creek can bring about the extinction of the Chinook Salmon. This developer's wetland expert did finally admit the existence of this perennial creek but downplayed the size of it's discharge (when he has never made measurements). The creek photos I gave you show at the time the picture was taken the typical relative small creek flow. However, elevated bent grass, sand flows, channels above the present creek flow and the 8 inch high cobble bars indicate very high discharges during high rainfall events. The booklet 6 divider has a example of calculated expected discharges that can be as nearly as large as the summertime discharges of Little Bear Creek. So large volumes of polluted water can be flushed from pollutants in the filtering wetland sand beds that would be introduced if these developments exist.

GEOLOGIST TESTIMONY

Wood Trails contains ravines that were formed by creek erosion in the past when vegetative cover must have been very low or absent during the post-glacial period. AT PRESENT THE TREE COVER ACTS AS A PROTECTIVE BARRIER TO EROSION. This is done by branches, leaves etc diminishing rain drop sizes (mass) and their velocity. This then accounts for the decrease in rain drop momentum and kinetic energy that creates erosion conditions. Wood Trails will remove all vegetation and WILL NOT HAVE THE EROSION PROTECTION VEGETATION COVER.

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The EIS reports of geologist has not plotted the sediment descriptions of the short cores & digs (see booklet divider 1). Field description of "density" is not explained. Laboratory measurements of shear strength, porosity, & permeability were not made. Only 4 sediment analysis were performed in the highest 31 home 202nd ST site (located in the outwash sands), 8 in the 19 home 201 site, & 11 in the 11 home 195 (located in the upper till strata), 13 analyzed at the detention pond (transition clays).The dense sands create fragments which come up in the test dig sites disappear during the raining season. At the Northwest Geology Meeting Dr. Curtis Koger indicated that these dense outwash sands are easily eroded and create problems with foundations & cement structures (see booklet divider 11 for Redmond EIS geological accomplishments).

INFILTRATION IS HIGH BASED ON THE WETLAND PLANTS LOCATED AT THE UPPER LEVELS OF WOOD TRAILS so apparently the "dirty sands" have not impeded the surface recharges. "Clean sands" are found if more samples would have been taken in the Outwash Sand Home Sites. The difficult coring at the vault site is obvious because the lower strata Transition strata (blue clays).

In the booklet divider 7 calculation are made to demonstrate erosion examples in adjacent R-1 development sites. From these calculation I predicted that DETENTION PONDS WILL FILL UP AS SOON AS 10 YEARS. Examination of SEDIMENT TRAP FILLS in the R-1 area have traps completely filled on slopes of 3 degrees. Slopes of the Wood Trails to the vaults are up to 22 degrees so greater street erosion and sediment deposition into the street traps are going to present a greater problem. The high velocity of these piped sediments will create turbulent flows that will keep fines in suspension and then exit into the industrial drains during excess rainfalls. Michael Ochau (198th resident) had a business in the industrial park where he witnessed during high rainfalls displaced street drain lids and flooded streets. Sheet flows were common during this year's high rainfall events into city streets (see booklet divider 7 photo examples)

UNSTABLE SLOPES ARE COMMON ON THE NORTHERN WETLAND CANYON SIDE THE CITY CONSULTANTS RECOGNIZED but apparently the development property borders excluded their visit ? Because most slopes are outwash sands the large trees have roots that maintain near upright positions despite their slumping. This is seen by depressions behind the trees that have slowly slide down the slopes. During freezing weather condition periods soil slump is very commonly found on the canyon slopes. SMALL SCALE LANDSLIDES are found and mapped (in divider 4) in the FEIS. Most important is the LINEAR 25 FOOT SLOPE THAT RUNS ACROSS THE MID SECTION OF WOOD TRAILS. This appears to be a SLUMP LIKE LANDSLIDE since water seeking red cedars & willows line the front edge of the possible slump(see hearing photo). The largest ground water eroded gully and the possible silt slip surface silt is located at this site. This should have been examine GEOPHYSICALLY OR BY LONG CORES TO DETERMINE WHETHER BLUE CLAYS ARE FREQUENTLY PRESENT UNDER WOOD TRAILS. Susan Boundy-Sanders has given testimony of potential faults. The FEIS does not try to tie in the possibility of EARTHQUAKE STIMULATIND LANDSLIDES. Ground seepage's dominate the mid to lower portion of the wetland canyon slopes (see the profile attached to the latest hearing handout or booklet divider 4).

ALL OF THE ABOVE COMMENTS INDICATE THAT WOOD TRAILS IS LOCATED IN BOTH AN EROSION & LANDSLIDE HAZARD SITE. REMOVAL OF VEGETATION FOR R-4 DEVELOPMENT WILL INCREASE THESE HAZARDS AND SERIOUSLY CONTRIBUTE ALSO TO DAMAGING THE CLASS 1 WETLAND AND THE ADDITION OF SEDIMENT TO THE INDUSTRIAL PARK & LITTLE BEAR CREEK SALMON HABITAT.

COMPARISON OF THE GOLF COURSE BASIN WETLANDS & WOODIN CREEK WETLANDS

* TREE SHADED CANYON WETLAND

VEGETATION	*GOLF COURSE	*WOODIN CREEK
Skunk Cabbage	common	rare
Piggy Back plants	common	common
Moss covered trees	common	very common
Salmonberries	common	common
Stinging Needle	common upper slope	present
Devils Club	present	not observed yet
Willows	common upper slope	present
MONTEVALLO CONNECTS WITH R-1 202 PARK FLAT CITY SUNNIER WETLANDS		
Blackberry Bushes	common-abundant	not present in Woodin Ck.
Salmonberries	abundant	
Cottonwoods	present	
Alders	common	
Willows	common	
WILDLIFE		
Deer(feces, bedded grass)	present; R-1 observations	none? road
Mountain Beaver Holes	common	present ?
Birds (no survey yet)	common	common
Salmon-Fish	none (drain pipe)	none (drain pipe)
Contributions Fish	yes deep G.W. cold water	none surface warmer water
CANYON CHARACTERISTICS		
Shaded Canyon Length	1,200ft ?	1500ft ?
Degree Human Isolation	highly isolated	road but creek away
Canyon Depth	very deep	moderate depth
Slopes	very steep >100%	>40%
Ground Water	abundant	rare
Ground Water Erosion	common	not observed yet
Slumping	common, soil creep	present(probable)
Creek Bed Sediment	cobbles-gravel-sand	cobbles-gravel-sand
Creek Bed Erosion	common	very common
Slope Erosion	tree-plant protection	tree-plant protection
Downstream Condition	Industrial drains-L.B. Ck	City drains-ditch-river
Pollution (no survey)	minor ? R-1 septic	present-up slope homes-road
Landslides	present	probably present

CREEK FLOW DISCHARGE RATES

	GOLF COURSE CREEK	WOODIN CREEK
Perennial Creek	yes	no ? Ground Water rare
Maximum estimated	**1/2** (24ftwide(1ftbank)(2ft/sec))=**24cfs**	6ftwide(1ftbank)(3ft/s)=**18cfs**
April 7 2007	2ftwide(1.5/12ftdeep)(1ft/s)=**0.25cfs**	2ftwide(1.5/12ftdeep)(1ft/sec)= **.25cfs**
varies	***GW Gully***	***Entrance canyon*** 171st ST 2.3ftwide(1.5/12ftdeep)(1ft/sec)=**0.28cfs**
	Industrial Park Bridge 2ftwide(2/12ftdeep)(1ft/sec)=**.33cfs**	***Sammamish River Park*** 8ftwide(1.5/12ftdeep)(1ft/sec)= **1.0cfs**
	NOTE THIS CANYON HAD A REDUCED HIGHER MAX ***NO DATA AT LITTLE BEAR CREEK***	*NOTE CITY INCREASES INPUT FROM THE CANYON RIVER EXIT*
WETLAND CLASSIFICATION	**1 ?**	**1-2 ?**