

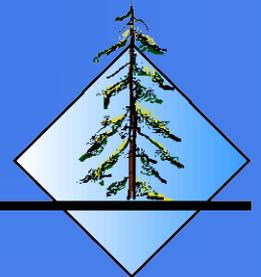
Glass Collection Issues

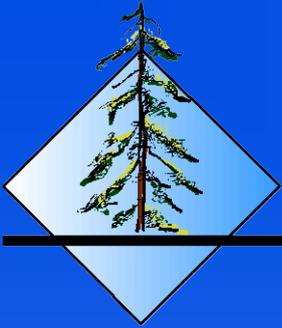
Presented by Rick Hlavka

at the Glass Summit,
November 2, 2009

Green Solutions

ENVIRONMENTAL CONSULTING





Experience, Rick Hlavka

25 years of solid waste / recycling experience:

Created Green Solutions July, 1994

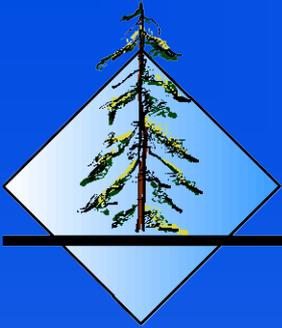
Previously, consulting for 5 years

County solid waste planner for 5 years before that

For Green Solutions, projects have included:

Composition testing (waste and recyclables)

Program evaluations



Glass Collection Issues

Which collection system is best for glass?

Not an easy question to answer, many factors affect recycling results.

Factors influencing recycling results:

Convenience (curbside vs. drop-off, collection frequency, number of materials)

Mandatory vs. optional subscription or participation

Size of curbside containers (bigger is better)

Demographics (income, urban vs. rural, etc.)

Public education (amount, quality)

Quality of service

Local conditions (wind, dogs, long driveways)

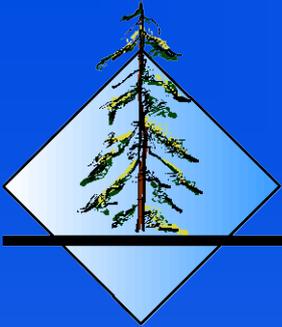
	Type of Program	All Mtls (lb/HH/yr)	Glass Only
Clark Co, 2005	3-bin, weekly	716	126
Clark County, 2007	Dual stream (pilot program), wkly.	768	150
Tacoma, 2008	Dual-stream, eow	639	84
Thurston, 2006	3-bin, eow	415	79
Thurston County, 2008	Dual-stream, eow but monthly for glass	523	58
Bellevue, 2005	Single-stream, wkly.	1,035	127
Pierce County, 2008	Single-stream, eow, with drop-off for glass	581	22

**All of the curbside programs have a long history of problems with glass,
Shown here is a pile of glass from a 3-bin program in SW Washington.**



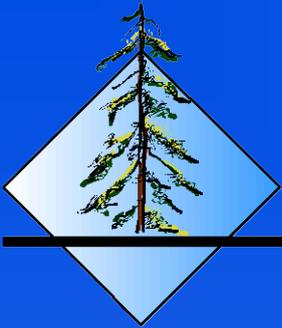
Close-up of glass pile shown in previous slide.





Recovery Rates

	Snohomish County (2007)	State-Wide (2003/2007)
Glass	50%	39%
Aluminum cans	37%	35%
PET bottles	23%	35%
HDPE bottles	33%	26%
Newspaper	83%	66%
Cardboard	72%	67%
Mixed paper	57%	51%
Metals	64 - 88%	80 - 88%



Conclusion

	Single - Stream	Dual - Stream	Drop - Off
Collection cost	Medium	Medium	Lowest
Collection results	Highest	High	Lowest
Marketability of glass	Lowest	Better	Best
Consumer preference	Highest	Medium	Lowest
Impacts to other mtl.	Highest	Low	Lowest
Overall rating		Best?	