

PAY AS YOU THROW ON THE GO!

PocketBook Incentives for Diversion and Recycling Success...



December 11, 2008



Assistance from ABA

skumatz@serainc.com

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Assistance to communities on PAYT

AGENDA

Introduction to PAYT <input type="checkbox"/> Impacts, systems & prevalence <input type="checkbox"/> Ordinances/contracts/legislation <input type="checkbox"/> Pros/cons, summary	45 min	Skumatz
Fort Collins, CO example <input type="checkbox"/> PAYT via ordinance	20 min with quests	Gordon
Urban vs. Rural PAYT, Introduction for hauler issues	5 min	Skumatz
Hauler Perspective on PAYT <input type="checkbox"/> Question driven	20 min with questions	Horton
<input type="checkbox"/> Education / outreach on PAYT <input type="checkbox"/> Implementation	5 min	Skumatz
Lafayette, CO example <input type="checkbox"/> PAYT via contract	20 min + 10 min quests	Short
Wrap-up and Questions <input type="checkbox"/> 5 Key Steps to Diversion and PAYT	25 min	Skumatz

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PANELISTS

Lisa Skumatz, Ph.D.

Skumatz Economic Research Assoc.
Econservation Institute
skumatz@serainc.com;
skumatz@econservationinstitute.org
303/494-1178

Susie Gordon

Environmental Planner
City of Fort Collins
970/221-6265
sgordon@fcgov.com

Gary Horton

President, Western Disposal
Boulder, CO

Doug Short

Public Works Director
Lafayette, CO
303/665-5588
douglass@cityoflafayette.com

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WHAT IF SOMEONE TRIED TO SELL YOU A PROGRAM THAT...

- Almost doubles diversion?
- Leads to no increase in costs for 2/3 of towns?
- Significantly reduces greenhouse gas?
- Is demonstrated in thousands of towns nationwide in all types of communities?
- ... and is preferred after the fact by more than 90% of the residents where it is in place...?

➔ *This is Pay As You Throw (PAYT)...*

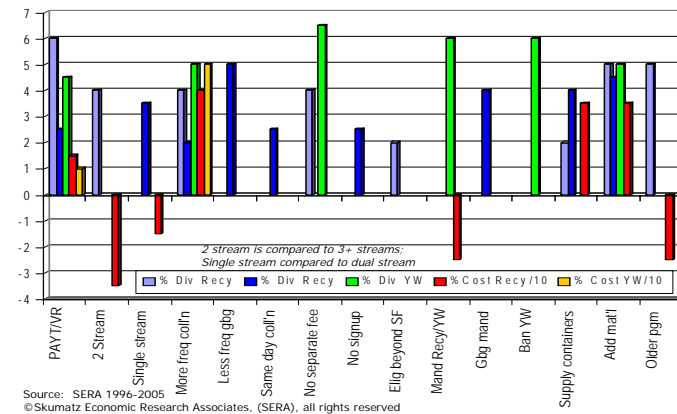
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PAYT – IMPACTS ON DIVERSION & COST

- Impacts – SERA estimates based on data from more than 1,000 communities
 - Controlled for community demographics
- PAYT is single biggest impact on diversion - curbside and drop-off recycling

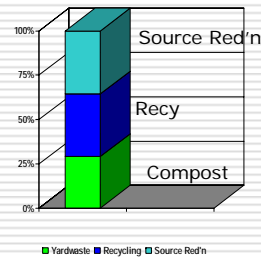
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BEST PRACTICES RESEARCH DIVERSION & COST ANALYSIS – RECYCLING & YARD WASTE



PAYT – IMPACTS ON DIVERSION & COST: RESULTS

- PAYT diverts 16-17% from residential trash
 - “Triple” impact - 1/3 each to recycling, yard waste, and source reduction
 - More powerful than programs that only encourage recycling (recycling incentives)



Source: SERA ©2001

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PAYT AS STATE DIVERSION DRIVER

- Interviews with leading states (Source: SERA CDPHE study, 2007)
- Key diversion drivers mentioned include:
 - Legislation
 - Measurement/goal
 - Funding
 - PAYT
 - Other



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COST, ACCEPTANCE OF PAYT

- Cost & workload impacts – 2/3 no increase (source: State surveys)
- Attitudes / Survey results

Communities – after PAYT	89%-95%
PARADE™	2/3 in favor

- Strengths / weaknesses

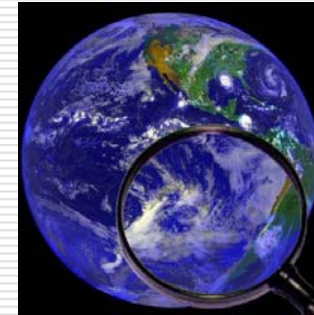
Key Advantages	Disadvantages
Rewards all diversion activities No new trucks down street Behavior / reminder; choice Utility; equity Works in variety of systems, tailor	Concerns about illegal dumping, equity (low income, large families), MF (see FAQs), change... More complex rate study, outreach Costs & savings - "Net" depends on local conditions



Source:

STRONG ENVIRONMENTAL IMPACTS

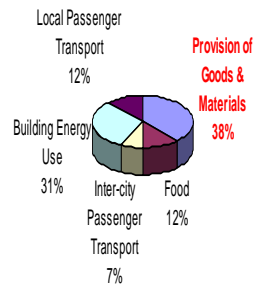
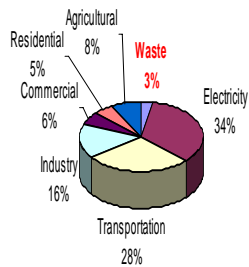
- Millions of tons diverted
- Millions of Metric Tons Carbon Equiv
- Economic development impacts
 - Jobs, income



Source: Skumatz, PAYT in US: 2006 Update & Analyses, 2006, © SERA/EPA 2006 all rights reserved

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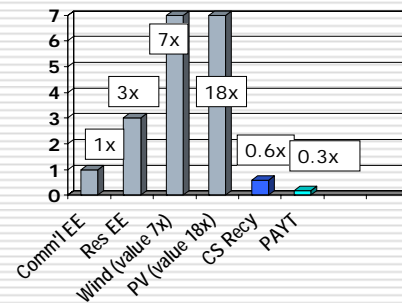
US GREENHOUSE GAS EMISSIONS (2005) – CONVENTIONAL vs. UPDATE (2008)



Source: USEPA

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PAYT CHEAPEST WAY TO REDUCE GHG EMISSIONS



Comparison to Energy Efficiency (EE) Programs – PAYT & recycling (SERA):
 **Cheaper per MTCE
 **Faster
 **Participation
 **Direct Authority
 **Retention

Results show MSW programs cheapest and fastest ways to reduce CO2 – better than energy programs! (Skumatz, Resource Recycling)

(Source: Skumatz Economics SERA 2008©; see also Resource Recycling 10/08)

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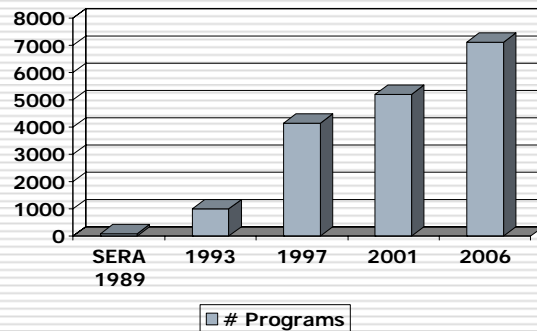
PAYT – HOW IT WORKS

PAYT – BIGGEST IMPACT – BASIC SYSTEM TYPES

- Variable cans/subscription
- Bags
- Tags/stickers
- Hybrid
- Weight-based (GBTP – technology adopted by RecycleBank™)
- Drop-off variations
- Pros and cons –
 - Variations by region
 - Historical recycling “rebates”- less strong than PAYT / only recycling



COUNTS OF PROGRAMS NATIONWIDE – 7,100+ (SERA)



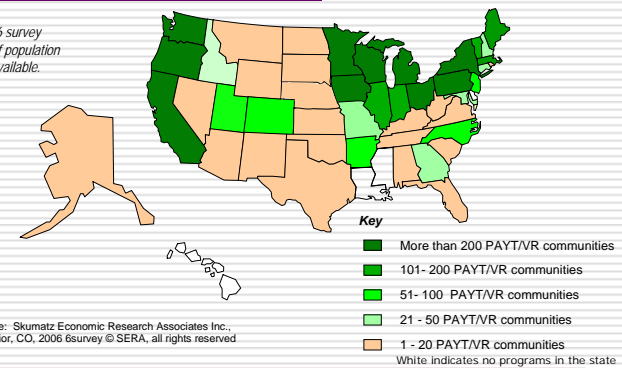
Source: All collected via SERA studies, © SERA all rights reserved

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PAY-AS-YOU-THROW (PAYT) / VARIABLE RATES COMMUNITIES

SERA's 2006 survey found almost **7,100** PAYT/VR communities and only 3 states without programs

SERA's 2006 survey found 25% of population with PAYT available.



Source: Skumatz Economic Research Associates Inc., Superior, CO, 2006 Survey © SERA, all rights reserved

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PAYT WORKING ACROSS US IN ALL COMMUNITY SITUATIONS

- Large communities
 - 30 of largest 100
- Small, rural communities
 - WI, IA, other (thousands)
- Tourist / student / mountain
 - CO, CA, ON, FL, NW, MW
- Isolated / island / self-haul
 - Island communities, MA, VT, WA
 - Isolated AK, CO
- Multiple Coll'n actors
 - Multi hauler: CO, NY, oth
 - Muni: CA, WA, oth
 - Contract, franchise
- Coll'n method
 - Automated: NW, CA
 - Manual: MW, NE
 - Hauler & munis
- Ethnic diversity
 - CA, FL, TX
- Climate extremes
 - TX, FL
 - Canada, MN, NY, CO
- Curbside and dropoff recycling
- All geographic regions of US
- SERA maintains inventory, detailed info, peer match capability

Source: SERA surveys © all rights reserved

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GETTING THE PROGRAMS IN PLACE



***State, County, Local Level...
Legislation, ordinance, contract, muni...***

COLORADO STUDY – DRIVERS FROM LEADING STATES

- What led to programs?
 - NOT natural flow, economics
 - Not market development efforts
- Consistent drivers / enablers → convenient programs
 - Legislation
 - Measurement
 - Funding
 - PAYT
 - Subtitle D, "Ethic", Bottle Bill

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KEY – GETTING PAYT IN PLACE → LOCAL ORDINANCE

- Ordinances at local or county level very do-able; other options include contracts – more political...
- Key elements of successful PAYT ordinance
 - Level playing field (haulers willing if...)
 - Recycling, service definition, embedded fee
 - PAYT with:
 - Small containers (32 gal) available
 - Significant variation in rates (80% for double)
 - Reporting, education, rights to audit
- → PAYT DO-ABLE AT LOCAL LEVEL
- Sample Ordinances & case studies on web site www.paytwest.org, paytinfo.org

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ANOTHER OPTION FOR LOCAL PAYT - CONTRACTING

- Request for proposals from haulers
 - Notice first, wide distribution, PAYT in conditions of service in RFP

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KEY – GETTING PAYT IN PLACE ORDINANCE VS. CONTRACT...

Ordinance Pros	Contract Pros (similar for muni)
<ul style="list-style-type: none"> □ Fewer Hauler (“Taking”) & Citizen Complaints (“Choice”) □ Maintains competition □ No need for “notice” □ Quick □ Can specify rate “structure” □ Minimal City effort (RFP, etc.) □ Retains “level playing field” for haulers – each implements the program and provides services knowing others will be operating under same rules. 	<ul style="list-style-type: none"> □ Lower Cost / bills □ Fewer trucks, “cleaner” set outs, reduced wear/tear on streets □ One hauler to contact if problems arise. □ City “control” including control over rates/setting □ Can “designate” facility destinations for materials.

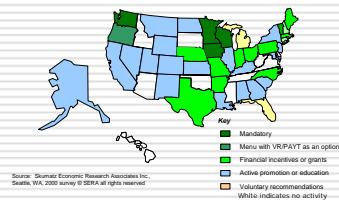
Sample language available for State legislation, and County/local ordinances

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STATE PAYT LEGISLATION OPTION

- Varies from mandates to encouragement – pros and cons
 - Viewed as key for diversion
 - Best: mandatory, mandatory IF, select from menu
- Essential elements same as ordinance (recycling, PAYT containers size, rate differences, etc.)
- Detailed analysis and sample language available... likelihood in your state?

PAYT/VARIABLE RATES LEGISLATION AT THE STATE LEVEL



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STREETS WEAR AND TEAR

- Streets: depends on weight, axles, type of road (argued starts / stops)
 - 1 trash truck = (250), 830, 857, 1000, 1125, 1500, 1650 cars
 - 1 recycling truck=525 car trips
 - Some argue... extend street life 10 years; 5% of traffic but 95% of wear & tear; solid waste trucks responsible for 18% wear & tear; alley issues
 - Cost residents \$60-\$70/yr taxes; other; estimates vary
- Pollution impacts disproportionate (NY and other)

(Source: SERA research)

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PAYT - LARGEST SINGLE IMPACT...

- Diversion – 17% decrease
- Cost – no increase for majority
- Attitudes – favorable, overwhelming after the fact
- Environmental – Greenhouse gas (GHG) and job creation – and cost-effectiveness!
- Do-able...

- →Barriers?...

PAYT may not be right for community now, but almost ALWAYS worth investigating to see.

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NEGATIVE OUTCOMES & CONCERNS FROM PAYT?

ILLEGAL DUMPING

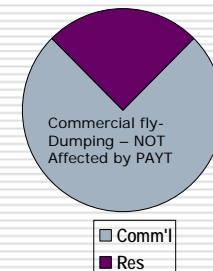


Photos: Skumatz, SERA 1999

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ILLEGAL DUMPING - MAJORITY NOT RESIDENTIAL

- Exists in towns without PAYT
- SERA survey of 1,000
- Composition data
- Implications
 - Enforcement range
 - Burning ordinance
 - "Free/base unit"
 - Bulky / recycling MUST be available
 - Local consideration...



Source: SERA

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ILLEGAL DUMPING STRATEGIES



- Education
 - Signs
 - Stickers on dumpsters
 - Community org
 - Public humiliation
- Physical barriers
 - Locks on dumpsters
- Ordinances
 - Fines
- Enforcement
 - Surveillance/stings
 - Fines / search
 - Bounty program
- Clean-ups
 - Pay cleanup (owner/generator / dumper)

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EQUITY / COVERAGE CONCERNS

- Low income
 - PAYT workable, strategies available
 - Control over bill... appreciated by fixed income
 - Special rates (avoid identifying colors)
 - Certification / recertification
- Large families
 - Parallel to Utility – use more, pay more
 - Options to recycle, reduce
 - Non-PAYT unfair to small generators
- Compaction – weight limits
- Multifamily (MF)
 - Anonymity / signal difficulty
 - Building level strategies, technology solutions
 - Conclusion NOT to hold back single-family PAYT for MF



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OTHER CONCERNS

- Confusion / resistance
 - Education, re-education
- Hauler concerns – level playing field
- Billing systems
- Workload
- Contamination
- Fears greater than reality (SERA surveys)
- All can be / have been worked out ...see FAQs (payt.org; paytwest.org)

ALUMINUM CANS



LATAS DE ALUMINO



- **Political will, acceptance, entrenchment the biggest barrier**

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PROBLEMS: FEAR GREATER THAN REALITY

Solvable... see faqs

Fear	Reality
Illegal dumping	Minimal / low, short-lived
Confusion, resistance to change	Continuing education (prior, free stickers)
Non-compliance	Minimal
Contamination	Minimal
Burning	Banned (60%, illegal, seasonal, warn once then remove, charge more)
Self-haul and by-pass	Base fee, mandatory (impacts on rates and setouts)
Revenues (esp. haulers)	Less volatile systems, work with haulers in design, pilot
Private/multiple haulers	Multiple colors, work with haulers
Local and regional economics	Depends on markets, LF ownership, processing, cost structure, prices

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IMPLEMENTATION OPPORTUNITIES

- Contracts, franchises, rates or billing system being changed
- Landfill or disposal problems
- New or modified programs
- Existing system perceived as unfair
- Need to free up tax authority



PAYT may not be right for a community now, but almost ALWAYS worth investigating to see.

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PAYT CONCERNS & TIPS

- Technical issues rarely the problem
 - Pilot test / phase in
- Politics, political will is the stumbling block
 - Suggestions from communities; & champion
- Public process, public education. Good customer education / understanding crucial
 - Education / why, how it works, how to make it work for me, packages for move-ins



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SUMMARY

OVERALL PAYT SUMMARY

- Diversion
 - Low cost, speedy
 - Favorable attitudes
 - Environment
 - Retention
- Manageable "negatives" IF desire...
- Tested & Flexible:
 - 7100 towns, range of population, haulers & municipal, multiple types
- Encourages ALL types of diversion
 - 50%-doubling recycling: same tonnages for YW, SR
- Work with programs and education
- **DO-able at local level... NOW!**

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SUSIE GORDON

Environmental Planner,
City of Fort Collins, CO
sgordon@fcgov.com

RURAL VS. URBAN PAYT



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PAYT IN RURAL AREAS

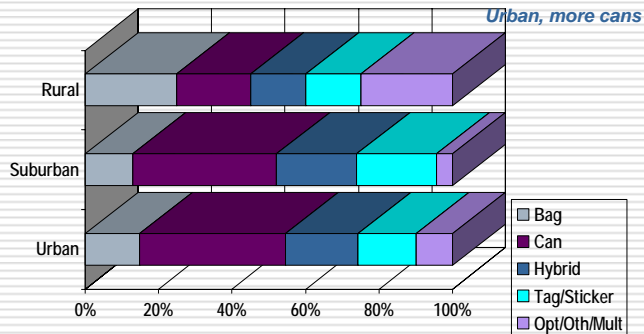
- In place in more than 1,200 rural locations in 32 states
 - 90% in NE/MW (NY, MN, VT, PA, IA, WI, IN and others)
 - 75% population less than 3,000
 - 1953 to present
- Designs include bag/tag for curb collection
- Drop-off options
 - Pay, punchcards, other
- Strong success in encouraging diversion



Source: All collected via SERA studies, © SERA all rights reserved SERA

URBAN VS. RURAL TYPES

RURAL: MORE BAGS/ DROPOFF, FEWER CANS.



Source: Skumatz Economic Research Associates, Inc., 2000© all rights reserved

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SELECTION OF PROGRAM TYPES

- Toward cans in urban
 - automated collection, containerization, billing
- Bags / hybrid in rural
 - Clean/fast collection, easy for customers, distribution, revenue options, billing, flexible / multiple haulers
- Some differences in impacts (bag vs. can)



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HAULER ISSUES / CONCERNS

HAULER ISSUES

- Revenues, uncertainty, cash flow
- Involving / incenting haulers
- Works with multiple haulers
- Hauler suggestions
- Level playing field



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GARY HORTON

President, Western Disposal

QUESTION-DRIVEN SESSION

EDUCATION / OUTREACH ISSUES

EDUCATION STUDY

- Outreach expenditures research
 - Impacts / variations (after “controlling” for other program and demographic differences)
 - Impacts from dollars spent - \$1 /hh / year addition increases diversion
 - By 3 percentage point if currently spending \$0.30/hh/yr; by 1 percentage point if currently spending \$1.40/hh/yr; add 1 percentage point for “doubling” annual expenditures.
 - Most gain in “underspending” communities
 - Media suitability
 - Differences for urban/ rural

(Source: SERA / Iowa DNR 2002)

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EDUCATION MATTERS!

- SERA research BEYOND dollars & demographics:
 - Attitudes / self-efficacy - deeply held beliefs / self-efficacy matters
 - Linked to 11% higher recycling

Source: © Skumatz Economic Research Associates, Inc., SERA 2001-2003

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PUBLIC PROCESS

- Public process
- Outreach
 - Rural: Civic organizations, radio stations / talk shows, newspapers, face-to-face
 - Urban / suburban: articles, stuffers, brochures, etc.
- Education key...



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DISCUSSION OF IMPLEMENTATION ISSUES

Discussion...



STEPS TO IMPLEMENT PAY AS YOU THROW / VARIABLE RATES

- Political support
- Ordinances (fees, dumping, error tags, wgt limits)
- Make sure legal alternatives available / changes to other programs
- System configuration; planning/analysis
- Order equipment, adjust staffing, training, establish procedures
- Rate study/billing system
- Outreach / education (& ongoing political support)
- Implementation and enforcement
- Monitor and refine

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IMPLEMENTATION STEPS: CITY PERSPECTIVE (LAFAYETTE)

- | | |
|---|---|
| <input type="checkbox"/> Plant seed with citizen advisory & council 2005-6 | <input type="checkbox"/> Pick roll-out date based on containers / hauler ability to start (9/07) |
| <input type="checkbox"/> Council decisions spring 2006 | <input type="checkbox"/> May to Dec meetings with haulers to set up billing system and communication, software, reprogramming |
| <input type="checkbox"/> RFP elements / issuance | <input type="checkbox"/> 2 mailings to HH's - bi-lingual, 2 open houses including translator |
| <input type="checkbox"/> Pre-bid meeting with haulers; proposals due 7/06 | <input type="checkbox"/> Haulers told date to remove carts end of Sept. |
| <input type="checkbox"/> Public meeting presenting results of lowest responsible bidder 8/06 | <input type="checkbox"/> Cart delivery / rollout 10/1 |
| <input type="checkbox"/> Council vote 8/06 | <input type="checkbox"/> 2.5 months of calls |
| <input type="checkbox"/> Contract hammered out | <input type="checkbox"/> Died down mid-December |
| <input type="checkbox"/> Timing issues with BoCo facility going SS 5/07 | <input type="checkbox"/> TIPS: Need a champion (not reluctant / ownership pride), need a capable hauler |
| <input type="checkbox"/> Implementation with containers (owned), meetings with County Council | |

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IMPLEMENTATION STEPS (HAULER PERSPECTIVE)

- Affected addresses – hard to get accurate list
- Examine type of HH
- Rate setting
- Notification to residents (Newspaper, mail door hangers, phone)
- Who will calculate bill & maintain customer records (& handle calls) – party with bill settles customer disputes
- Who will bill – interface? How bad debt handled?
- Who buys & delivers carts? How much choice for residents (not one size).
- Cart issues: ordering, receiving, staging for delivery, delivery of proper sizes, exchanging when HH changes mind, maintaining damaged carts, maintaining inventory
- Monitoring / reporting / recording of volumes, weights, set outs, tonnages
- TIPS:
 - Must order carts 3-4 months ahead (and can be backlog if big city ahead of you). Can order 1000 or so quickly
 - Printed materials lead time 3 months or less.

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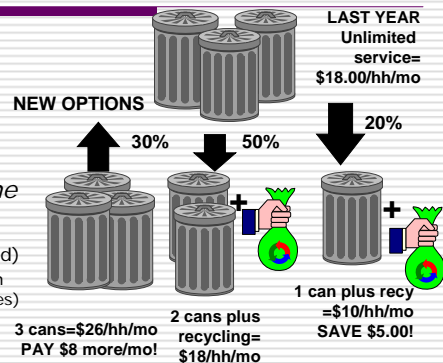
RATE DESIGN / POLICY CHOICES: EMBEDDED PROGRAM FEES & RATE DIFFERENTIALS

- Policy decision with impact on incentives - Recycling vs. yard waste programs
 - More participation if “free” / no additional cost / embedded; however
 - Making yard waste “free” discourages back yard composting, and may have inequities for large vs. small yards
 - Line iteming makes apparent rates lower
 - Embedding supports higher “differentials”
 - → We usually recommend recycling with no separate fee; yard waste paid
- Research on needed level of differential to balance incentive vs. revenue risk
 - 80% compromise... Balances large difference to provide incentive vs. small difference to minimize risk of not recovering needed revenues. FLAT (small difference) isn't worth administrative headache.

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RATES / ACCEPTABILITY

- In outreach, highlight winners (and losers) -- % and \$
- Rates vs. BILLS For example: “70% pay same or less!” (vs. \$/can increased) (outcomes depend on structure, changes)



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PLANNING NOT ALWAYS PERFECT

- Pilot test helpful
 - Example → phase in
- Ongoing monitoring, revision
- Frequently asked questions
- Peer Match at www.serainc.com www.paytwest.org



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DOUG SHORT

Public Works Director,
City of Lafayette, CO

WRAP-UP AND QUESTIONS

FUNDING PROGRAMS...

- PAYT needs no separate funding...
 - Cost of curbside recycling program paid through PAYT
 - Recycling paid by all, so more cost-effective (fixed costs across more households)
 - Business opportunity for haulers
- Infrastructure and other programs
 - SERA study of 700 US communities and counties showed funding methods were: #1 user fees, #2 tip fee surcharge.

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"TOP 5" - WHAT A COMMUNITY OR COUNTY CAN DO TO INCREASE DIVERSION... NOW!

- #5 Citizen sustainability committee
- #4 Measurement and goal-setting
- #3 Basic programs & ordinances
- #2 Education
- #1 PAYT / Ordinance → **Number 1 thing you can do!!**

(Source: SERA 2007; handout available on web)

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SUMMARY

- Strong positive impacts (tons, cost, equity, environment) with manageable negatives...
- Single biggest impact on recycling & diversion (50% to doubling)
 - Encourages all types of diversion / stronger than "recycling only" programs
- Tested and flexible – 7,100 examples
- Do-able locally and state level – worth examining in all communities

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QUESTIONS

Thank you for attending!



Research support from ABA

QUESTIONS / ASSISTANCE:

Lisa A. Skumatz, Ph.D.
Principal, SERA, Inc.
762 Eldorado Drive, Superior, CO 80027
Phone: 303/494-1178
email: skumatz@serainc.com

Website – www.serainc.com
Also: www.paytwest.org, paytinfo.org; payt.org

To help on statistical studies, consider filling out survey on:

www.serainc.com (national survey)

PAY AS YOU THROW ON THE GO! SERA

BIOGRAPHY - SKUMATZ



- Principal, Skumatz Economic Research Associates
- Hands-on research & consulting firm with client communities / counties / states all across US & Canada
- Extensive database and research on PAYT. Real world data on program operation in all community types - database of 1,300 community programs and more than 7,000 PAYT programs
- National Award-winner (national lifetime achievement awards from SWANA, NRC)
- Economist, Mayor Pro-tem

skumatz@serainc.com; www.serainc.com;
303/494-1178

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