

From: The Citizen Advisory Committee on Recycling and Solid Waste

To: The Lopez Community

Subject: Options for a Locally Controlled Recycling and Solid Waste Center on Lopez Island

Date: June 18, 2011

The Port of Lopez (PoL) has tasked the Citizen Advisory Committee on Recycling and Solid Waste (CAC) with developing specific operating plans for providing locally-controlled recycling and solid waste services to the Lopez Community in a manner that is safe, reliable, and environmentally friendly. We have further been instructed to present plans that are financially self-sustaining and draw on a variety of sources of funding.

This memo outlines some of the issues and options the CAC has been thinking about. We invite all members of the Lopez community to give us your feedback and ideas. There is an online survey that can be taken at <http://www.surveymonkey.com/s/LopezSolidWaste>. We would like survey responses by July 5, 2011.

Background: County wide Options

The County has been considering various options for managing solid waste. This is a work in progress, and has included several proposals over the past year including closing the Lopez Transfer station. Currently, there is a subcommittee of the County Council (Jamie Stephens, Patty Miller and Rich Peterson) that is evaluating maintaining the current level of service on all the Islands. They have developed a financial model that includes various options for funding continued service. The current option supported by the Council includes a mix of an annual residential parcel tax of \$100-\$120, garbage fees, recycling fees and a \$5 gate fee for each visit. In all cases, their assumptions include financing approximately \$5.3 million to cover capital improvements (approximately \$3 million for upgrades on San Juan Island) and legacy costs. They intend to refine this proposal over the next month for county voters to consider in November. It is not clear what the fallback option will be if the county wide improvements are not approved by the voters. The County Council analysis does not yet include island specific initiatives such as the Port of Lopez taking over the Lopez transfer facility. The CAC is working with them to accomplish this.

The Economics of Solid Waste on Lopez

Garbage: Over the past decade, the Lopez transfer station has handled about 650 tons of garbage, construction waste, and other non-recycled trash per year. If the transfer station is operated under local control, it appears that the best way to handle non-recyclable garbage would be to truck it from Lopez to the Skagit County transfer station, which will accept it for a charge of \$90 per ton and send it on to a landfill for final disposal. Our estimate is that transportation, including ferry fees, will add about \$70 per ton to costs. The direct (variable) costs of disposing of garbage, then, come to about \$160 per ton, not taking into account overhead costs, which are discussed separately below.

Garbage volumes were fairly steady between 2004 and 2009, and dropped in 2010 and are expected to be even lower in 2011. This is a county wide trend and could be a result of various economic factors. For planning purposes, the CAC has used an estimate of 600 tons of garbage /year and evaluated the sensitivity of various pricing options by looking at a reduced rate of 400 tons/year. This table shows garbage and recycling volumes for Lopez for recent years. About half of the solid waste from Lopez is collected by San Juan Sanitation. The rest goes through the Lopez transfer station. For comparison, the county wide garbage volume was 8,582 tons in 2010.

Year	San Juan Sanitation (Tons)	Self Haul Garbage (Tons)	Recycling (Tons)	Total (Tons)	% recycling
2004	506	675	479	1660	29%
2005	554	646	374	1574	24%
2006	577	635	431	1643	26%
2007	602	719	300	1621	19%
2008	647	656	448	1751	26%
2009	614	694	352	1660	21%
2010	557	544	465	1566	30%
Average Tons 2004-2010	580	653	407	1639	25%

Recyclables. Recyclables can be handled either through commingling or presorting by households before the material is taken to the dump. Each has its advantages and disadvantages.

- *Commingling* reduces collection and handling costs, a factor that is especially important for suburban communities that depend mostly on curbside service. The disadvantage of commingling is that it does not generate revenue for the transfer station. Instead, the transfer station has to pay a substantial tip fee (but less than the fee for garbage) to send commingled recyclables to a sorting station, where high-value components (aluminum, cardboard, steel, etc.) are extracted. On balance, commingled recycling compares favorably both in terms of cost and environmental impact to the alternative of sending the entire solid waste stream to a landfill.
- *Presorting* of recyclables requires more handling, both by the people who bring in the recyclables and by transfer station staff. However, the offsetting advantage is that many kinds of presorted recyclables can be sold at a profit, or at least for enough to break even on handling and transportation.

On balance, it appears that for Lopez, presorting makes more sense both from an economic and an environmental point of view. All of our planning assumes that presorting will be used, and that it will make a positive contribution to net income after direct expenses for transportation and handling.

Overhead. Much of the cost of operating the Lopez transfer station consists of overhead costs that do not depend on the total volume of materials processed, and cannot be allocated in any meaningful way between garbage and recyclables. The CAC thinks that local control can achieve a reduction of about 30% in overhead cost compared to past practices, largely because of lower salary expenses and equipment rental costs. However, even with all reasonable economies, overhead will make up more than half of total cost.

Salaries and benefits, in turn, account for more than half of overhead costs. The remainder includes administrative, audit, and legal costs, insurance, maintenance, equipment rental or purchase, depreciation, and amortization of startup costs.

Summary of net costs. Using a combination of historical data and estimates of future revenues and costs, the CAC estimates that the costs of operating the transfer station under local control will look approximately like this:

Garbage fees paid to Skagit	\$	65,000.00
Garbage transportation cost	\$	44,000.00
<i>Equals: Direct (variable) cost of garbage</i>	\$	109,000.00
Transportation costs for recyclables	\$	17,000.00
Revenue from sale of recyclables	\$	(34,000.00)
<i>Net cost (or income) from recyclables</i>	\$	(17,000.00)
<i>Combined net costs before overhead</i>	\$	92,000.00
Overhead	\$	164,000.00
<i>Total cost of solid waste operations (net of recycling revenue)</i>	\$	256,000.00

(Note: The above calculations do not take into account so-called legacy costs associated with past deficits on county-operated solid waste activities. One way or another, Lopez residents will end up paying their share of legacy costs, but the CAC is operating under the assumption that they will not be charged to future solid waste operations. In addition, the above calculations do not assume any costs for either leasing or purchasing the Transfer station. These issues will need to be discussed between the PoL and the county. It is not clear at this point, whether the County Commissioners would support local control)

Costs and recycling revenues have been estimated conservatively to arrive at these figures. It is possible that in a good year (high recyclable prices, nothing breaks, etc.) net costs could be less. It is also possible that in a bad year they could be higher. The principal economic challenge for the CAC is to develop a

realistic plan to cover all costs and operate on a sustainable, break-even basis, with adequate reserves to cover adverse contingencies. The following three options represent different ways of doing so.

Option 1: Traditional Garbage-Driven Model

One way to cover costs is through garbage tip fees. That is the path followed by the county in the past. For planning purposes, CAC uses a garbage volume of 600 tons per year. This is a little less than the volume that passed through the Lopez transfer station each year from 2004 to 2009 but more than the volume for 2010. On average, a ton of garbage is equivalent to about 50 household-sized 32-gallon cans, meaning that the transfer station handles the equivalent of about 30,000 cans per year.

Based on those assumptions, a tip fee of \$10 per can would generate about \$300,000 in annual revenue. Garbage revenue is subject to a 10% county excise tax and a 3.6% state excise tax. That would leave \$259,000 revenue after tax, just enough to break even given the projected net costs. If the volume dropped to 400 tons, the break even fee is about \$12.50/can.

The big problem with the garbage-driven model is that it is wholly dependent on maintaining a steady stream of trash, even when fees are raised. In practice, though, each increase in tipping fees brings a reduction in garbage volume, until a point is reached where revenue actually falls when fees are raised. Even at that point, fees may not be sufficient to cover costs of operating a safe, sanitary solid waste system.

Although reduction of garbage volume creates financial problems for the garbage-driven business model, it is, of course, good for the planet. Increased environmental awareness is motivating more and more people to work toward zero-waste and 100% recycling in the ways they operate their households and their businesses. Zero-waste is a philosophy that goes beyond recycling to take a “whole system” approach to the flow of resources and waste. It attempts to guide people to emulate sustainable natural cycles, where discarded materials become resources for others to use. A prime example on Lopez is Neil’s Mall, where some people leave things and other people take things. A community-controlled solid waste provider should encourage the trend toward zero waste by constantly adding new opportunities for diverting waste from the garbage stream, like composting and recycling wood from construction waste. It is difficult for a system that is overly dependent on garbage to do so.

Furthermore, when tipping fees become excessive, the reduction in garbage volume, otherwise desirable, takes on a dark side. People turn to self-help garbage disposal in the form of home landfills, burn barrels, and roadside littering. They may also haul their garbage to neighboring jurisdictions where fees are lower, regardless of the fact that transporting small loads of garbage for long distances is, on the whole, neither fuel-efficient nor time-efficient.

Option 2: Funding through taxes

A second way to cover the costs of solid waste operations would be to draw on tax revenues. Using tax revenues would not mean free garbage disposal. Garbage tip fees at least high enough to cover the direct costs of transportation and final disposal are essential in order to ensure that those who produce

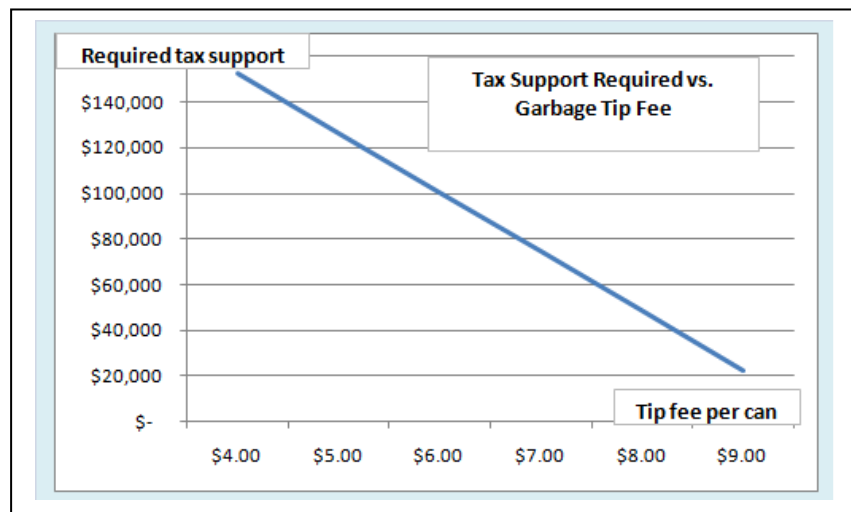
garbage are subject to an economic incentive to reduce wastes. However, many communities use tax revenue to cover all or part of the overhead costs of a solid waste operation.

An example of this approach is provided by Hornby Island in nearby British Columbia, a community that is similar to Lopez in many ways. Hornby Island charges a garbage tip fee to cover the direct costs of garbage transportation and disposal, and uses tax funds to cover overhead and provide free recycling.

The amount of tax support required for the Lopez transfer station under local operation obviously depends on the tip fee. The objective of using tax revenue would be to reduce the tip fee below the \$10 per can needed for break-even operation under Option 1, discussed above. Even if the tip fee were reduced only by a few dollars, it would represent a step toward decoupling solid waste operations from garbage revenue.

The approximate annual tax support needed for any level of the tip fee is shown in the following chart. (It is only an approximation, because it does not take into account the fact that changes in the tip fee are likely to affect garbage volume.)

For example, a tip fee of \$7.50 per can would require tax support of about \$60,000 per year (assuming 600 tons per year). If a property tax were used, that would be less than 6 cents per \$1,000 of assessed valuation for property on Lopez. If the volume dropped to 400 tons, a tip fee of \$7.50 /can would require approximately \$85,000 of tax support.



It should be noted that tax financing could face political hurdles. In the case of Lopez, a proposal for tax financing would first have to be approved by the Port of Lopez Commissioners, and then by voters in a referendum. Neither stage of approval is at all certain. However, in view of the fact that many Lopezians consider recycling and solid waste disposal to be important community services, tax support for solid waste operations deserves discussion.

Option 3: Voluntary funding by users

A third way to cover the costs of solid waste operations would be through voluntary funding by users. Under this option, users would contribute by becoming members of a support organization, and in return, would get benefits including lower garbage disposal fees and free recycling privileges.

Voluntary funding by users would follow a pricing strategy used by many businesses that face high overhead costs. Under this strategy, which is sometimes known as a *two-part tariff*, overhead costs are

covered, at least in part, by fees that members pay regardless of the amount of service they use, and direct variable costs with fees that are paid per unit of service. OPALCO is a familiar example of the two-part tariff in action. OPALCO charges a fixed monthly connection fee to cover the overhead cost of maintaining its network of transmission lines, plus a charge per KWh to cover the direct cost of the electricity used by each customer.

The following fee structure is offered to illustrate the way such a system might work on Lopez assuming a volume of 600 tons /year. Under this version, membership is divided into two Tiers to suit the needs of different kinds of households, and non-members would also have access to the facility.

- Tier 1 membership: Annual membership fee of \$25 per household, free recycling, \$11 per can garbage tipping fee.
- Tier 2 membership: Annual membership fee of \$100 per household, free recycling, \$7.50 per can garbage tip fee
- Business or contractor membership: \$100 per year, volume-based garbage tip fee equivalent to the \$7.50 per can household rate, free recycling.
- Nonmembers: \$11 per can garbage tipping fee, \$5 per visit recycling fee.

Tier 1 membership would appeal to households that make maximum efforts toward the goal of zero waste and produce only a few cans of garbage per year. The small \$25 annual membership would be affordable even by households with limited income.

Tier 2 membership would be attractive to households that produce more than about 20 cans of garbage per year. The \$7.50 per can tipping fee and free recycling would provide a realistic financial incentive to work toward improved management of household solid wastes and would be significantly more affordable than the current county fees, even when the \$100 annual membership is taken into account.

Commercial membership would be available to all kinds of local businesses, including construction and retail. The fee schedule would encourage responsible management of business and construction waste while ensuring that business members made their fair contribution toward costs of running the facility.

Non-member fees would be similar to those now charged by the county. Non-members would have the options of using coop facilities at these higher fees, contracting for commercial curbside pickup, or taking their trash and recyclables off island. This option might be attractive to many seasonal residents, although they, too, would be encouraged to become members.

The illustrative membership schedule and tip fees given above would allow break-even operation of the facility on the assumption of approximately 200 Tier 1 members and 250 Tier 2 members, with 400 tons of garbage from members and 200 tons from nonmembers (mostly seasonal). The member fees would generate approximately \$30,000/year. There is considerable uncertainty in these estimates, as it assumes that non member would still use the facility even though the disposal costs are much higher than other options including opting for “curb side”. Further if volumes declined to 400 tons, then member fees would have to be significantly higher to support this model or augmented by approximately \$40,000 in tax revenues.

The exact form of the membership organization is open for discussion. One possibility would be a very informal organization under the sponsorship of the Port of Lopez, similar in structure to Friends of the Library. At the other end of the spectrum, the membership group could be organized as a free-standing cooperative business, owned and controlled by its members, like the mobile meat processing unit operated by the Island Grown Farmers Cooperative. Other ideas are welcome.

Questions for the Community

The Citizen Advisory Committee appeals to members of the community for feedback on the ideas outlined above, and for new ideas not included there. There is an on line survey that can be taken at <http://www.surveymonkey.com/s/LopezSolidWaste>. We would like survey responses by July 5, 2011.

All ideas are welcome even if they do not fall exactly under one of the responses given above. Please let us know what you think!