

In the Spotlight: The City of Juneau, AK's Waste Management Department: Staying Ahead of the Game

Through efficient coordination, successful collection programs, maintaining environmental responsibility and dealing with unique disposal situations, the City of Juneau's Waste Management Department has continued to look at inventive ways to handle solid waste that protects the health of their citizens and environment.

Incorporating into a municipality in 1960, the City and Borough of Juneau (CBJ), capitol city of Alaska is located along the inside passage and within the 300 mile Alexander Archipelago with more than 1,000 islands. Juneau is physically isolated and accessible only by boat or aircraft. Seattle is 970 air miles to the south and Anchorage is 570 air miles to the north. Juneau consists of 3,250 square miles total, with 928 miles of ice cap and glaciers and 704 square miles of water. Dramatic terrain changes from sea-level to mountains within a short distances. Service area for solid waste encompasses the City of Juneau, Douglass Island, and the Borough that includes Auk Bay, Thane and the outside road area. The Juneau roaded area goes roughly 45 miles end to end, while Douglass Island is roughly one main road that is 18 miles end to end. Population is relatively stable with no large increases; the 2008 census was 32,413 residents and projected for 2018 is 34,447. There are approximately 8,000 single-family housing units and additional 5,000 units in condominiums and mobile homes, and multiple state office facilities and supporting businesses.

Arrow Refuse, a private company and subsidiary of Pacific Waste, who are regulated by the Regulator Commission of Alaska (RCA), provide solid waste collection while the landfill is operated and owned by Capitol Landfill, a Waste Management company. All CBJ solid waste operations are contracted out or privately operated. Household hazardous waste operation is contracted with PSC Environmental Service, a subsidiary of Stericycle. Recycling operation is contracted Capitol Landfill. CBJ recycles cardboard, plastics #1 and #2, tin, glass, aluminum, mixed paper and glass. E-Waste recycling services are contracted with TotalReclaim out of Seattle and collected through the HHW operation.

Waste collection in Juneau and the borough is not mandatory. Generators that do not wish to partake in collection services can take their waste to the Capitol Landfill or get a burn permit from CBJ Fire Department. CBJ also has a bear ordinance for solid waste. To protect citizens and bears, all solid waste must be placed and stored in bear resistant receptacles. Residents or businesses will be fined if bears get into their waste. In addition, from March to September, the summer months, a whole new waste stream is brought in due to cruise ships, which brings in more than 950,000 tourists to Juneau with over 450 ships docking per season. CBJ supplies services to the cruise ships when possible, including supplying domestic water (Juneau has some of the purest water in the world off glaciers) as well as taking wastewater and garbage between 250 to 350 tons from ships when they are in port. Waste containers are loaded off the ship on the waterside and put on a transport to motor it to shore. Then, a roll-off truck from Arrow Refuse picks up the container takes it to the landfill.

The Waste Management Department is responsible for contract administration, household hazardous operation and recycling, include the recycling programs that collect weekly pickups at city facilities. The Department also coordinates shipping, final disposal and recycling documentation, and assists citizens, business and city departments in disposal of waste streams and recycling programs. Junk vehicles were collected until 2013, when a private contractor started a ferrous metal recycling business. Prior to that, CBJ would hold two events per year to collect junk vehicles—one in the spring and one in September. The collection program was very successful—more than 450 to 500 junk vehicles were collected per event.

The Local Economy

According to Jim Penor, the City of Juneau's Solid Waste Coordinator, the local economy has been stable compared to the lower 48 states. Operating on a two-year budget cycle has tightened the financial belts and conserved the solid waste funds generated by a \$4 per month fee on utility bills.

“The Waste Management Division also collects taxes from the Alaska State Department of License on vehicle registration recorded in Juneau. Because of these strategies, no programs have been cut in the waste management Division of Public Works at this time.”

As a member of SWANA, the Waste Management Department uses the association’s online training, State Chapters contacts, certification and other available resources as its most valuable asset to keeping up with solid waste issues. “Being so remote, the SWANA Web site has been a big help with keeping cost down and obtaining needed information concerning programs and projects in the solid waste arena,” says Penor. Since Juneau is the biggest city in Southeast Alaska, other cities and boroughs often call Penor when they have a solid waste issue. There is also a Southeast Solid Waste Authority that has monthly meeting that helps keep the communication going between the Southeast Cities on solid waste issues. “Being that Juneau can only be accessed by boat or air makes its extremely difficult. I have worked with Gustavus a small community 70 miles east of Juneau. Their population is approximately 1,200 and the community is very environmental when it comes to handling their waste and recycling. We are currently working on trying to ship recyclables to Juneau by way of the Alaska Marine highway system.”

In order to keep their city in the know, the CBJ Waste Management Department does a lot of outreach through radio, newspaper advertisements and community events, such as setting up a booth anytime there are elementary school functions. Penor also does speaking engagements around Juneau and has plans to participate more into parades in the future.

The Challenges and Successes of Solid Waste

Solid waste is a very challenging in Southeast Alaska, especially with regards recycling and household hazardous waste programs. Penor emphasizes that the transportation to market for recycling or disposal for HHW is the biggest obstacle since it is very limited. “All commodities, fuel,

retail, food, building supplies entering Juneau have to be barged in, or a small percentage enters Juneau by boat. Very little comes in by plane due to the cost, but when there are emergencies, airfreight is the way to go.” Alaska Marine Lines (AML) does service Juneau with two barges per week transportation from Seattle. “During the summer, trips are three to four days (Juneau to Seattle), while in the winter months, when storms come in from the Pacific Ocean, it slows barge traffic down to one week or longer one way. So available storage for recycling material and HHW is a necessity. Storing bales of recycling material is usually done at the landfill we also store as long as we can when the price is down.”

Household Hazardous Waste

The household hazardous waste program has been one of their real challenges and greatest successes. The program started out holding monthly, one day collection events at a facility CBJ built in summer 2000. By 2008, the program was so successful that the one day events were overflowing with dropped off waste and more than 500 vehicles coming through. CBJ had to make signs to block off roads and deal with unhappy customers because of the wait in line. Penor says that this year, CBJ contracted out with PSC Environmental to operate the program as a fixed facility open to the public Fridays and Saturday and Thursdays for SQGs (small quantity generators). “Operating as a fixed facility gives us more time to go through the dropped-off waste stream and do more with it other than ship it out of Juneau. To date we have now started recycling all of the dropped-off waste oil. We also started what we call a HaszBin exchange program that has been very successful. Products that can still be used (unopened or half-full) are shelved for other citizens to go through and take what they can use—approximately 550 pounds of products per week. CBJ now has deferred the cost of paying for 28,600 pounds of HHW annually, that was previously being shipped out, not to mention paying for disposal.” CBJ also purchased a paint can crusher that gives options to fill 55 gallon drums to ship unusable paint; the city has a paint giveaway program and the paint cans get crushed to recycle, resulting in an estimated savings of \$80,000 or more. CBJ also recycles old propane tanks, with equipment purchased from Kings supply that removes all gas; then, the brass vales are removed and recycled along with the steel, brass and propane.

Recycling

In 2005, Juneau recycled 452 tons of recycling. In 2013, the city recycled 2,336 tons of recycling with approximately another 750 comingled tons from Arrow Refuse curbside recycling program. Arrow Refuse contracts with Capitol Landfill WMI to store and bale recycling for shipping to market. Capitol Landfill uses CBJ balers to process Arrow Refuse Recycling material. With a total of 3,086 recycled tons collected, the city is gaining some ground towards their goal of 25 percent. In 2012 Juneau received the 2012 outstanding community recycling award from the Alaska Litter Prevention and Recycling Association (ALPAR) and the city has continued to increase recycling volumes grass-roots style. As an incentive, the Capitol Landfill offers a stamp program for every 20 visits dropping off recycling. Once you reach 20 visits, the next one is a free dump at the landfill (value = \$160 per ton). CBJ's recycling program is a source-separated drop-off program. Recyclables are dropped off by the public or business and are processed and baled at the capitol landfills recycling facility. Baled recyclables are loaded and transported in intermodal shipping container via barge to Seattle for further processing. Early in 2014, CBJ sent out an RFB (request for bid) for shipping recycling and HHW to Seattle on a five-year contract; the current cost to ship is \$84 per ton plus a fuel service charge. The intent of the bid was to secure a more fixed cost on a five-year contract for shipping of recycling material.

Limited Land Space

Although CBJ faces a list of solid waste challenges, the Public Works Director, Kirk Duncan, thinks of it as more of an adventure. "We have a real problem with our bio-solids that are currently being shipped south to a landfill. That could be a whole other story by itself. Bio-solids are currently are being shipping south to a landfill in Oregon. It is very expensive and not a long-term solution. It has many operational logistic problems to deal with like leaking containers and odor control to name a couple. We need a Juneau solution for a Juneau problem in order to handle the bio-solids locally. In addition, with regards to long-term MSW disposal, there is no land available for siting a new sub D

landfill, so the options are keeping an eye on new technology, incineration, bale, and transport that includes barge, rail and truck just to get it to a landfill in one of the lower 48 states.”

Marine Flares

Marine flares are a big problem in Alaska. Coast Guard regulations are that the flares have to be within three years old and not past the manufactured expiration date. These regulations for shipping flares make disposal very expensive and cost-prohibitive. “Currently there is no place that will accept flares for disposal in Southeast Alaska and with Alaska being so spread out it make it more difficult for transportation because it is so costly,” says Penor. “We have started a Pyro work group in the last two months that have all the stakeholders and manufacturers at the table in Alaska to come up with a solution for Alaska and hopefully a national model will come out of it so other States have something to start from. If anyone else has any information on dealing with flares, I would like to hear from them.”

Future Plans

“To date we have actually saved substantial funds by being open 156 days per year from the old seven events held in the summer months,” says Penor. “In 2008, we hired WIH Resource Group to do a Solid Waste Management Strategy for CBJ. The recommendations were a 12-step program including hiring a solid waste coordinator. The 12 steps were adopted by the Assembly and the final report can be found online at www.juneau.org/pubworks/projects/SWMS/index.php.” Currently, CBJ’s plans are to review the 12 adopted WIH Group recommendations from 2008 and see if they apply to where they are at today with solid waste and make revisions where needed. “We continue to look for savings in the HHW program, expand our recycling program to have drop-box site location recycling drop offs at five locations throughout the city and borough as well as inventive ways to handle solid waste that protects the health of our citizens, including our pristine environment and safety of the animals.”

For more information, contact Jim Penor at (907) 780-6009 or e-mail Jim.Penor@Juneau.org.

Sidebar

Coordinator Focus

Jim Penor has 45 years of experience in the waste management industry, holding certifications from the Governmental Refuse Collection and Disposal Association, Solid Waste Association of North America and the State of Washington. Jim started in solid waste industry at the Olympic View Landfill in Washington state, salvaging metals generated from the Bremerton Naval ship yard. He then went on to Landfill Equipment Operator and from there moved to the collection division for Brem-Air disposal until 1984 when he took a landfill management position for the City of Richland, WA. Jim has set up waste programs on which the Washington State Department of Ecology has modeled regulations and waste-tracking programs—specifically the disposal of petroleum-contaminated solids, Subtitle D regulations, cost analyst and compliance. Throughout his career, Jim has been called on to provide expert testimony before the Environmental Protection Agency in Washington, DC (1993) regarding problems that affect the solid waste industry and compliance issues with the new subtitle D CFR-257 State required waste regulations. He currently resides in Juneau, AK where he has been the Solid Waste Coordinator for the Capitol city since late 2009.

Sidebar

Fast Facts

- Juneau generates approximately 34,000 tons of waste per year.
- 22,000 is MSW remaining 12,000 is inert, dirt, concrete, demolition waste
- Population 32,000

- Industry is fishing Juneau has two fish and crab processing company's and two mines are also located with Juneau boundary's. Green creek mine on Admiralty Island and Kensington Mine.

Source: <http://wasteadvantagemag.com/spotlight-city-juneau-aks-waste-management-department-staying-ahead-game/>