

Table 1. Available MSW Disposal Facilities						
Facility Name*	Capacity at Current Disposal Rates**	Distance from North Whitefield	Estimated Tipping Fee*** (\$/ton)	Annual Partnership Fee***	Estimated Total Disposal Cost# (\$/year)	Cost/Ton MSW
Hatch Hill Landfill, Augusta	4 years left	11.2	\$78	\$23,000	\$270,000	\$170
Bath Landfill*	27 years left	30.5	\$130	\$0	\$330,000	\$210
WM - Crossroads Landfill, Norridgewock	17 years left	48.5	\$78	\$0	\$320,000	\$200
Penobscot Energy Recovery Co, Orrington	Incinerator, 100K tons/yr excess capacity	69.2	\$78	\$0	##	##
AWS (landfills in Presque Isle & Caribou)	37 years left	231	\$275 household/yr	\$0	##	##
<p>*Acceptance of Whitefield's MSW is subject to facility approval</p> <p>**From DEP, "Maine Solid Waste Generation and Disposal Capacity Report for Calendar Years 2020 & 2021", January 2023.</p> <p>***These are estimated fees. They are subject to change with market conditions, and are typically negotiated in a contract</p> <p>#These are rough estimates for comparison purposes. See Appendix A for sources and methods</p> <p>## Not calculated due to distance from Whitefield,</p>						

Table 2. Nearest MSW Transfer Stations					
Facility Name*	Distance from North Whitefield	Estimated Tipping Fee** (\$/ton)	Partnership Fees (\$/year)**	Estimated Total Disposal Cost# (\$/year)	Cost/Ton MSW
Windsor Transfer Station	6.7	\$200	\$105,000	\$530,000	\$330
Wiscasset Transfer Station	15.7	\$200	\$200,000	\$640,000	\$410
Troiano Transfer Station in Gardiner	16.3	\$125	\$0.00	\$330,000	\$200
Casella Transfer Station in West Bath	30.5	\$113	\$0.00	\$340,000	\$210
<p>*Acceptance of Whitefield's MSW is subject to facility approval</p> <p>**These are estimated fees. They are subject to change with market conditions, and are typically negotiated in a contract</p> <p>#These are rough estimates for comparison purposes, and include cost estimates of annual tipping, partnership and transportation costs. See Appendix A for sources and methods.</p>					

Scenario	Item	Value	units	Comments
All figures that are Rounded to significant digits	Number of significant digits that were used for rounding	2		This accounts for the imprecision of the inputs and calculation methods use to generate the cost estimates in this workbook. '=ROUND(value,\$C\$2-(1+INT(LOG10(ABS(value))))))

Current DYI & Commercial Haulers: Disposal At Hatch Hill Landfill, Augusta	Whitefield Partnership Fee to Augusta	\$23,000	\$/year	See 'Constants and Inputs' Sheet for details
	Transportation Costs, DIY	\$37,565	\$/year	See 'Hatch Hill Disposal Report Analysis' sheet for details on transportation costs for Do It Yourselfers
	Tipping Fee, DIY	\$33,083	\$/year	See 'Constants and Inputs' Sheet for details on disposal costs for Do It Yourselfers.
	Transportation and Tipping fee by Commercial Haulers	\$176,800	\$/year	Households Using Commercial Haulers X fee per pickup X number of pickups per year. See 'Constants and Inputs' Sheet for details
	Total	\$270,447	\$/year	Sum of Partnership fee, DIY transportation and tipping fee, and tipping and transportation costs of Commercial Haulers
	Total Rounded to Significant Digits	\$270,000	\$/year	
	Total Cost / Ton MSW	\$170	\$/ton	total costs / total tons Municipal Solid Waste generated in Whitefield
	Total Rounded to Significant Digits	\$170	\$/ton	Above rounded to significant Digits
	8.50%	percent	paid directly by Town	

Commercial Haulers Only: Disposal At Hatch Hill Landfill, Augusta	Whitefield Partnership Fee to Augusta	\$23,000	\$/year	See 'Constants and Inputs' Sheet for details
	Transportation Costs	\$93,184	\$/year	See 'Constants and Inputs' Sheet for details
	Disposal Costs	\$123,964	\$/year	Tons MSW generated in Whitefield X Tipping Fee. See 'Constants and Inputs' Sheet for details
	Total estimated Cost/yr with Hatch Hill	\$240,148	\$/year	Partnership Fee + Transportation Costs + Disposal Costs
	Total Rounded to Significant Digits	\$240,000	\$/year	Above rounded to significant Digits
	Total Cost / Ton MSW	\$151	\$/ton	total costs / total tons Municipal Solid Waste generated in Whitefield
	Total Rounded to Significant Digits	\$150	\$/ton	Above rounded to significant Digits

Scenario	Item	Value	units	Comments
Wiscasset Transfer Station	Whitefield Partnership Fee to Wiscasset	\$200,000	\$/year	Personal communication
	Transportation Costs	\$125,840	\$/year	See 'Constants and Inputs' Sheet for details
	Disposal Costs	\$317,856	\$/year	Tons MSW generated in Whitefield X Tipping Fee. See 'Constants and Inputs' Sheet for details
	Total estimated Cost/yr with Wiscasset	\$643,696	\$/year	Partnership Fee + Transportation Costs + Disposal Costs
	Total Rounded to Significant Digits	\$640,000	\$/year	Above rounded to significant Digits
	Total Cost / Ton MSW	\$405	\$/ton	total costs / total tons Municipal Solid Waste generated in Whitefield
	Total Rounded to Significant Digits	\$410	\$/ton	Above rounded to significant Digits
Windsor Transfer Station	Annual Partnership Fee to Windsor from Whitefield	\$105,000	\$/year	Estimate: Actual to be negotiated
	Transportation Costs	\$107,120	\$/year	See 'Constants and Inputs' Sheet for details
	Disposal Costs	\$317,856	\$/year	Tons MSW generated in Whitefield X Tipping Fee. See 'Constants and Inputs' Sheet for details
	Total estimated Cost/yr with Windsor	\$529,976	\$/year	Partnership Fee + Transportation Costs + Disposal Costs
	Rounded Total estimated Cost/yr with Windsor	\$530,000	\$/year	Above rounded to significant Digits
	Total Cost / Ton MSW	\$333	\$/ton	total costs / total tons Municipal Solid Waste generated in Whitefield
	Total Rounded to Significant Digits	\$330	\$/ton	Above rounded to significant Digits

Scenario	Item	Value	units	Comments
Troiano Transfer Station in Gardiner	Annual Partnership Fee to Troiano from Whitefield	0	\$/year	Personal Communication
	Transportation Costs	\$127,088	\$/year	See 'Constants and Inputs' Sheet for details
	Disposal Costs	\$198,660	\$/year	Tons MSW generated in Whitefield X Tipping Fee. See 'Constants and Inputs' Sheet for details
	Total estimated Cost/yr with Windsor	\$325,748	\$/year	Partnership Fee + Transportation Costs + Disposal Costs
	Rounded Total estimated Cost/yr with Troiano	\$330,000	\$/year	Above rounded to significant Digits
	Total Cost / Ton MSW	\$205	\$/ton	total costs / total tons Municipal Solid Waste generated in Whitefield
	Total Rounded to Significant Digits	\$200	\$/ton	Above rounded to significant Digits
Casella Transfer Station in West Bath	Annual Partnership Fee to Casella from Whitefield	\$0	\$/year	Personal Communication
	Transportation Costs	\$156,624	\$/year	See 'Constants and Inputs' Sheet for details
	Disposal Costs	\$179,589	\$/year	Tons MSW generated in Whitefield X Tipping Fee
	Total estimated Cost/yr with Casella	\$336,213	\$/year	Partnership Fee + Transportation Costs + Disposal Costs
	Rounded Total estimated Cost/yr with Casella	\$340,000	\$/year	Above rounded to significant Digits
	Total Cost / Ton MSW	\$212	\$/ton	total costs / total tons Municipal Solid Waste generated in Whitefield
	Total Rounded to Significant Digits	\$210	\$/ton	Above rounded to significant Digits

Scenario	Item	Value	units	Comments
Bath Landfill	Annual Partnership Fee to Bath from Whitefield	\$0.00	\$/year	Personal Communication
	Transportation Costs	\$156,624	\$/year	See 'Constants and Inputs' Sheet for details
	Disposal Costs	\$174,821	\$/year	Tons MSW generated in Whitefield X Tipping Fee
	Total estimated Cost/yr with Casella	\$331,445	\$/year	Partnership Fee + Transportation Costs + Disposal Costs
	Rounded Total estimated Cost/yr with Casella	\$330,000	\$/year	Above rounded to significant Digits
	Rounded Total Cost / Ton MSW	\$209	\$/ton	total costs / total tons Municipal Solid Waste generated in Whitefield
	Total Cost / Ton MSW	\$210	\$/ton	Above rounded to significant Digits
	Total Rounded to Significant Digits	\$210	\$/ton	Above rounded to significant Digits
Waste Management - Crossroads Landfill, Norridgewock	Annual Partnership Fee to WM from Whitefield	\$0.00	\$/year	Personal Communication
	Transportation Costs	\$194,064	\$/year	See 'Constants and Inputs' Sheet for details
	Disposal Costs	\$123,964	\$/year	Tons MSW generated in Whitefield X Tipping Fee
	Total estimated Cost/yr with Casella	\$318,028	\$/year	Partnership Fee + Transportation Costs + Disposal Costs
	Rounded Total estimated Cost/yr with Casella	\$320,000	\$/year	Above rounded to significant Digits
	Total Cost / Ton MSW	\$200	\$/ton	total costs / total tons Municipal Solid Waste generated in Whitefield
	Rounded Total Cost / Ton MSW	\$200	\$/ton	Above rounded to significant Digits

Facility	Item	Value	units	Comments	Reference
Baseline MSW Generation	Population	2408	people	2020 US Census Results	https://data.census.gov/all?q=Whitefield,+Maine
	People per household, Whitefield	2.69	people/ household	Whitefield population / # of households	calculation
	MSW disposed per capita	0.66	tons/person/yr	Maine per capita solid waste disposal (by landfilling and incineration) in 2019	Maine DEP, Maine Solid Waste Generation and Disposal Capacity Report for Calendar Years 2020 and 2021, dated January 5, 2023. https://www.maine.gov/tools/whatsnew/attach.php?id=10031902&an=1
	Tons of Municipal Solid Waste Generated in Whitefield	1589	tons/year	Population X Tons/person/year	calculation
	Tons of Municipal Solid Waste Generated in Whitefield rounded to 2 significant figures	1,600	tons/year	=ROUND(C5,2-(1+INT(LOG10(ABS(C5))))))	calculation
Baseline: Transport Costs	Distance Whitefield to Hauler	11.3	Miles	Assume Whitefield Market (Rts 218 & 126) is the population center of Whitefield. Double this number to obtain round trip mileage. Riverside Disposal is the most common trash hauler in Whitefield. Use this carrier as a default to calculate travel to Whitefield, before can begin trash hauling	Google Maps
	Miles of Road in Whitefield	67.0	Miles	Miles of Road in Whitefield	Whitefield Comprehensive Plan, Nov 2005, pg. 48
	Commercial Transportation cost/mile	\$4	\$/mile	The references provide ranges and factors to consider. We used the same value in the Hatch Hill Landfill Vertical Increase Assessment Report conducted for Augusta by Woodard and Curran dated May 26, 2021.	Woodard & Curran Hatch Hill Landfill, Vertical Increase Assessment May 26, 2021. Also see: What is your fleet's cost per mile and how can you optimize it? - FleetUp. Freight rates: Trucking rates per mile 2022 - Method:CRM.
	Volume of MSW that fits in average Garbage Truck	28.00	yd3/truck	"Most rear-loading garbage trucks can cover around 850 homes before heading for the dump, with hauling capacities of up to 35 cubic yards. Amrep's HX450, the strongest and most reliable rear loader available on the market, can collect 25 to 32 cubic yards of waste or recyclables before it has to be emptied."	https://www.wastequip.com/blog/finding-right-garbage-truck-your-fleet-needs
	Variable for MSW volume to weight conversion	0.25	Tons/yd3	MSW (uncompacted)=225lbs/yd3 (on average). MSW (compacted in truck) = 500-1,000 /bs/yd3. MSW, compacted in packer truck = 2000 lbs/yd3 (n average)	https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/vol-to-weight-conversion.pdf
	Amount of MSW that fits in average Garbage Truck	7.00	Tons/Truck	(Yd3/Truck) X (tons/Yd3). Note: Woodard & Curran used 7 tons of MSW/Truck in Hatch Hill Landfill Solid waste Alternatives Analysis Letter Report of Dec 2, 2021	calculation
	Number of Trucks needed each trash day	4.366153846	Trucks	(Annual MSW generated) / (# of trash collections/yr) / (tons of MSW that a Garbage Truck holds)	calculation
	Number of Trucks	5	Trucks	Number of Trucks needed to collect trash each collection day.	Above Calculation rounded up to 1 significant digit (a whole truck)
	Transportation Costs: Hauler to Whitefield	\$11,752	\$/year	Cost/mile X Distance in Miles X no. of Trucks X Collections/year. Used Riverside Disposal, since that is the most common hauler in Whitefield.	Calculation
	Transportation Costs: Within Whitefield	\$69,680	\$/year	Cost/mile X no. of Trucks X Collections/year X miles of Rd in Whitefield	Calculation
	Transportation Costs: Hauler from Facility to Home base	\$11,752	\$/year	For simplification, used Hauler to Whitefield value	Calculation
	Subtotal Baseline Transportation Costs when no DIY, not including transport to disposal facility	\$93,184	\$/year	Subtotal Hauler to Whitefield + Within Whitefield +	

Facility	Item	Value	units	Comments	Reference
Hatch Hill - current	Whitefield's Annual Partnership Fee paid to Hatch Hill in 2021	\$23,000	\$/year	From Whitefield Annual Report	Whitefield 2021 Annual Report Final https://townofwhitefield.com/annual_reports/
	Hatch Hill Disposal Fee	\$78	\$/ton	Current baseline tipping fee to dispose of MSW. Taxes and fees are added to this fee. Additionally, Hatch Hill charges a minimum tipping fee per vehicle = 1/4 ton of MSW.	Hatch Hill Receipt of 9/20/22
	DIY annual disposal cost	\$34,635	\$/year	Average Annual Tipping Fee plus Average Annual Permit Fee from Disposal Reports provided by Hatch Hill to Whitefield's Solid Waste Committee: See analysis on worksheet "Hatch Hill Disposal Report Analysis".	calculation
	Distance Whitefield to facility	11.2	Miles	Assume Whitefield Market (Rts 218 & 126) is the population center of Whitefield. Double this number to obtain round trip mileage	Google Maps
	DIY Transportation cost/mile	\$0.65	\$/mile	Marginal cost of transport, assuming the owner uses its personal vehicle for other things besides taking trash to the dump. Based on 1/2 ton 4WD pickup truck.	https://newsroom.aaa.com/wp-content/uploads/2020/12/2020-Your-Driving-Costs-Brochure-Interactive-FIN-AL-12-9-20.pdf
	DIY avg no. trips/yr	12	trips	Assumed average based on Best Professional Judgement (BPJ) of members of the Whitefield Solid Waste Committee	BPJ
	DIY annual transport costs	\$37,565	\$/year	DIY transportation cost/mile X number of trips/year X distance to Hatch Hill and Back X No. of DIY households	calculation
	Total Households in Whitefield	895	households	Estimate based on 2020 US Census Results	2021 American Community Survey 5-Year Estimates. https://data.census.gov/all?q=Whitefield+town,+Lincoln+County,+Maine+Families+and+Living+Arrangements
	Households direct to Hatch Hill	215	households	From Disposal Reports provided by Hatch Hill to Whitefield's Solid Waste Committee: See analysis on worksheet "Hatch Hill Disposal Report Analysis".	2020, 2021 & 2022 Hatch Hill Disposal Report (Location Usage) dated 9/12/2022
	Households contracting pickup	680	households	Total households in Whitefield - households direct to Hatch Hill	calculation
	Each Trash Day: household cost to contract with Commercial Hauler for collection, transportation and disposal at Hatch Hill.	\$5	\$/trash collection	This fee covers all the cost of the hauler to collect, transport and dispose of MSW at Hatch Hill Landfill. Generally, Commercial Haulers collect trash at a residential household in Whitefield once a week, and charge \$5-\$10 for each time they collect the household's trash. There is some variation (eg bi-weekly pick-ups or contracting a dumpster for more infrequent collections, but at a greater cost) but this is currently the usual case for a household contracting to have trash picked up.	BPJ - Based on personal conversations with customers and haulers.
	Number of Times a Commercial Hauler collects a household's trash each year	52	trash collections/year	Assume once a week collection = 52 weeks in a year.	BPJ - Based on personal conversations with customers and haulers.
	Commercial Haulers Transport & Disposal Costs	\$176,800	\$/year	Households Contracting Pickup X fee/pickup X Number of Trash Collections per year	calculation
	Total	\$272,000	\$/year		calculation
Hatch Hill - Contract Hauling only	Whitefield's Annual Partnership Fee paid to Hatch Hill in 2021	\$23,000	\$/year	From Whitefield Annual Report	Whitefield 2021 Annual Report Final https://townofwhitefield.com/annual_reports/
	Commercial Haulers Transport & Disposal Costs	\$232,700.00		Current Haulers Cost per household X number of households in Whitefield	calculation
	Total	\$255,700.00		Partnership fee + hauler fee. Assume increase number of trucks would be made up in efficiency of not duplicating routes	

Facility	Item	Value	units	Comments	Reference
Wiscasset	Distance Whitefield to facility	15.7	Miles	Assume Whitefield Market (Rts 218 & 126) is the population center of Whitefield. Double this number to obtain round trip mileage	Google Maps
	tipping fee/ton	\$200	\$/ton		Transfer Station Website
	Whitefield Partnership Fee to facility	\$200,000	\$/year		Personal communication
	Disposal Costs	\$317,856	\$/year	Tons MSW generated in Whitefield X tipping fee	Calculation
	Transportation Costs: Hauler to Whitefield	\$11,752	\$/year	Cost/mile X Distance in Miles X no. of Trucks X Collections/year. Used Riverside Disposal, since that is the most common hauler in Whitefield.	Calculation
	Transportation Costs: Within Whitefield	\$69,680	\$/year	Cost/mile X no. of Trucks X Collections/year X miles of Rd in Whitefield	Calculation
	Transportation Costs: Whitefield to facility	\$32,656	\$/year	Cost/mile X no. of Trucks X Collections/year X miles to the facility to population center of Whitefield (Whitefield Market) X 2 (Round Trip)	Calculation
	Transportation Costs: Hauler from Facility to Home base	\$11,752	\$/year	For simplification, used Hauler to Whitefield value	Calculation
	Transportation Costs: Total	\$125,840	\$/year	Sum of all transportation costs	Calculation
	Total	\$643,696	\$/year	Partnership Fee + Disposal Fee + Total Transportation Fees	Calculation
Windsor	Distance Whitefield to facility	6.7	Miles	Assume Whitefield Market (Rts 218 & 126) is the population center of Whitefield. Double this number to obtain round trip mileage	Google Maps
	Windsor Tipping Fee/ton	\$200	\$/ton	\$.10/lb X 2000 lbs/ton	Windsor Town Website
	Annual Partnership Fee to Windsor from Whitefield	\$105,000	\$/year	Estimate: Actual to be negotiated. Currently Windsor expends \$140,000/yr to run its transfer station, so we are assuming that Windsor's costs would increase by 50% with the addition of Whitefield and Whitefield would pay half of that total.	Estimate: Actual to be negotiated
	Disposal Costs	\$317,856	\$/year	Tons MSW generated in Whitefield X tipping fee	Calculation
	Transportation Costs: Hauler to Whitefield	\$11,752	\$/year	Cost/mile X Distance in Miles X no. of Trucks X Collections/year. Used Riverside Disposal, since that is the most common hauler in Whitefield.	Calculation
	Transportation Costs: Within Whitefield	\$69,680	\$/year	Cost/mile X no. of Trucks X Collections/year X miles of Rd in Whitefield	Calculation
	Transportation Costs: Whitefield to facility	\$13,936	\$/year	Cost/mile X no. of Trucks X Collections/year X miles to the facility to population center of Whitefield (Whitefield Market) X 2 (Round Trip)	Calculation
	Transportation Costs: Hauler from Facility to Home base	\$11,752	\$/year	For simplification, used Hauler to Whitefield value	Calculation
	Transportation Costs: Total	\$107,120	\$/year	Sum of all transportation costs	Calculation
	Total	\$529,976	\$/year		Calculation

Facility	Item	Value	units	Comments	Reference
Troiano - Gardiner	Distance Whitefield to facility	16.3	Miles	Assume Whitefield Market (Rts 218 & 126) is the population center of Whitefield. Double this number to obtain round trip mileage. Industrial Dr, Gardiner, ME 04345	Google Maps
	Tipping fee/ton	\$125	\$/ton		Phone Call with facility, September 2022
	Annual Partnership Fee to Triano from Whitefield	\$0			Phone Call with facility, September 2022
	Disposal Costs	\$198,660	\$/year	Tipping Fee X Tons/year MSW	Calculation
	Transportation Costs: Hauler to Whitefield	\$11,752	\$/year	Cost/mile X Distance in Miles X no. of Trucks X Collections/year. Used Riverside Disposal, since that is the most common hauler in Whitefield.	Calculation
	Transportation Costs: Within Whitefield	\$69,680	\$/year	Cost/mile X no. of Trucks X Collections/year X miles of Rd in Whitefield	Calculation
	Transportation Costs: Whitefield to facility	\$33,904	\$/year	Cost/mile X no. of Trucks X Collections/year X miles to the facility to population center of Whitefield (Whitefield Market) X 2 (Round Trip)	Calculation
	Transportation Costs: Hauler from Facility to Home base	\$11,752	\$/year	For simplification, used Hauler to Whitefield value	Calculation
	Transportation Costs: Total	\$127,088	\$/year	Sum of all transportation costs	Calculation
	Total	\$325,748	\$/year		
Casella Transfer Station, West Bath	Distance Whitefield to facility	30.5	Miles	Assume Whitefield Market (Rts 218 & 126) is the population center of Whitefield. Double this number to obtain round trip mileage. Casella Waste Systems, 64 Arthur J Reno Sr Rd, Bath, ME 04530	Google Maps
	Tipping fee/ton	\$113	\$/ton	From Woodard & Curran report. DW called Casella, good for rough estimates, actual to be negotiated	
	Annual Partnership Fee to Facility from Whitefield	\$0		No annual partnership fee	
	Annual Disposal Costs	\$179,589	\$/year	Annual Tons MSW X Tipping Fee	
	Transportation Costs: Hauler to Whitefield	\$11,752	\$/year	Cost/mile X Distance in Miles X no. of Trucks X Collections/year. Used Riverside Disposal, since that is the most common hauler in Whitefield.	Calculation
	Transportation Costs: Within Whitefield	\$69,680	\$/year	Cost/mile X no. of Trucks X Collections/year X miles of Rd in Whitefield	Calculation
	Transportation Costs: Whitefield to facility	\$63,440	\$/year	Cost/mile X no. of Trucks X Collections/year X miles to the facility to population center of Whitefield (Whitefield Market) X 2 (Round Trip)	Calculation
	Transportation Costs: Hauler from Facility to Home base	\$11,752	\$/year	For simplification, used Hauler to Whitefield value	Calculation
	Transportation Costs: Total	\$156,624	\$/year	Sum of all transportation costs	Calculation
	Total	\$336,213	\$/year		

Facility	Item	Value	units	Comments	Reference
Bath Landfill	Distance Whitefield to facility	30.5	Miles	Assume Whitefield Market (Rts 218 & 126) is the population center of Whitefield. Double this number to obtain round trip mileage.	Google Maps
	Tipping fee/ton	\$110	\$/ton	From Bath Landfill website and confirmed with call to Bath.	https://www.cityofbathmaine.gov/departments/Landfill/landfill-permitsandrates
	Annual Partnership Fee to Facility from Whitefield	\$0		No annual partnership fee	
	Annual Disposal Costs	\$174,821	\$/year	Annual Tons MSW X Tipping Fee	
	Transportation Costs: Hauler to Whitefield	\$11,752	\$/year	Cost/mile X Distance in Miles X no. of Trucks X Collections/year. Used Riverside Disposal, since that is the most common hauler in Whitefield.	Calculation
	Transportation Costs: Within Whitefield	\$69,680	\$/year	Cost/mile X no. of Trucks X Collections/year X miles of Rd in Whitefield	Calculation
	Transportation Costs: Whitefield to facility	\$63,440	\$/year	Cost/mile X no. of Trucks X Collections/year X miles to the facility to population center of Whitefield (Whitefield Market) X 2 (Round Trip)	Calculation
	Transportation Costs: Hauler from Facility to Home base	\$11,752	\$/year	For simplification, used Hauler to Whitefield value	Calculation
	Transportation Costs: Total	\$156,624	\$/year	Sum of all transportation costs	Calculation
	Total	\$331,445	\$/year		
WM - Crossroads Landfill, Norridgewock	Distance Whitefield to facility	48.5	Miles	Assume Whitefield Market (Rts 218 & 126) is the population center of Whitefield. Double this number to obtain round trip mileage. Riverside Disposal is the most common trash hauler in Whitefield. Use this carrier as a default to calculate travel to Whitefield, before can begin trash hauling	Google Maps
	Tipping fee/ton	\$78	\$/ton	From Woodard and Curran, Hatch Hill Landfill Solid Waste Alternatives Analysis Letter Report December 2, 2021	
	Annual Partnership Fee to Facility from Whitefield	\$0		No annual partnership fee	
	Annual Disposal Costs	\$123,964	\$/year	Annual Tons MSW X Tipping Fee	
	Transportation Costs: Hauler to Whitefield	\$11,752	\$/year	Cost/mile X Distance in Miles X no. of Trucks X Collections/year. Used Riverside Disposal, since that is the most common hauler in Whitefield.	Calculation
	Transportation Costs: Within Whitefield	\$69,680	\$/year	Cost/mile X no. of Trucks X Collections/year X miles of Rd in Whitefield	Calculation
	Transportation Costs: Whitefield to facility	\$100,880	\$/year	Cost/mile X no. of Trucks X Collections/year X miles to the facility to population center of Whitefield (Whitefield Market) X 2 (Round Trip)	Calculation
	Transportation Costs: Hauler from Facility to Home base	\$11,752	\$/year	For simplification, used Hauler to Whitefield value	Calculation
	Transportation Costs: Total	\$194,064	\$/year	Sum of all transportation costs	Calculation
	Total	\$318,028	\$/year		

Facility	Item	Value	units	Comments	Reference
Penobscot Energy Recovery Co, Orrington	Distance Whitefield to facility	69.2	Miles	Assume Whitefield Market (Rts 218 & 126) is the population center of Whitefield. Double this number to obtain round trip mileage. Riverside Disposal is the most common trash hauler in Whitefield. Use this carrier as a default to calculate travel to Whitefield, before can begin trash hauling	Google Maps
	Tipping Fee	\$78.20	\$/ton	Seems low. Could increase dramatically if the Hamden MSW processing facility is mothballed	Woodard and Curran Hatch Hill Landfill Solid Waste Alternatives Analysis Letter Report, December 2, 2021
AWS (Presque Isle landfill & TriCommunity landfill in Caribou)	Annual Partnership Fee to Windsor from Whitefield	231	Miles	Assume Whitefield Market (Rts 218 & 126) is the population center of Whitefield. Double this number to obtain round trip mileage. Riverside Disposal is the most common trash hauler in Whitefield. Use this carrier as a default to calculate travel to Whitefield, before can begin trash hauling	Google Maps
	Tipping Fee	\$275.00	\$/household/year	Each household in Partner Communities pays an annual. There could be partnership fees as well. Did not check due to distance from Whitefield.	https://www.aroostookwaste.com/presque-isle/

Hatch Hill Location Usage data printout provided by Augusta to the Whitefield Solid Waste Committee. Data extracted 9/12/2022. Partial 2022 extrapolated to full year					QA Check via per Capita Calc	DEP Per Capita value
Category Description	Year	Tons	Cost	Tipping Fee		
MSW Rubbish	2020	198.57	\$16,808.33	\$84.65		
No Sort Mixed Loads	2020	208.3	\$18,131.22	\$87.04		
Pickup-15 Pickup or Car w/ trailer	2020	16.54	\$1,440.00	\$87.04		
Recycling Rubbish Mixture	2020	40.45	\$2,963.20	\$73.26		
MSW Total	2020	443.64	\$37,861.15	\$83.00	0.77	0.66
MSW Rubbish	2021	212.8	\$18,085.76	\$84.99		
No Sort Mixed Loads	2021	105.46	\$9,202.39	\$87.26		
Recycling Rubbish Mixture	2021	44.63	\$3,458.40	\$77.49		
MSW Total	2021	340.575	\$29,017.35	\$83.25	0.59	0.66
MSW Rubbish	2022	202.32	\$17,221.33	\$85.12		
No Sort Mixed Loads	2022	146.26	\$13,372.22	\$91.43		
Recycling Rubbish Mixture	2022	39.59	\$3,551.13	\$89.70		
MSW Total	2022	368.37	\$32,369.12	\$88.75	0.64	0.66
Average		384.19	\$33,082.54	\$85.00	0.66	0.66

MSW Rubbish	2022 partial	140.79	\$11,984.16	\$85.12	
No Sort Mixed Loads	2022 partial	101.78	\$9,305.60	\$91.43	
Permit Fees	2022 partial	70	\$1,100.00	\$15.71	
Recycling Rubbish Mixture	2022 partial	27.55	\$2,471.20	\$89.70	
Start Date	End Date	Days	Days/yr	Multiplier	Used to extrapolate partial 2022 to full year
1/1/2022	9/12/2022	254	365	1.437007874	

Permit Fees	2020	88	\$1,367.00	\$15.53
Permit Fees	2021	112	\$1,711.00	\$15.28
Permit Fees	2022	101	\$1,580.71	\$15.71
	Average	\$100.20	\$1,552.90	
	Average X 2	200		
	2020 + 2021	200		
	2021+2022	213		
	Use	215		

Item	Value	units
Tons Recycled at Lincoln County Recycling	100.86	tons/yr
Town share of Lincoln County Recycling budget	\$10,958	\$
Whitefield Recycle Center Budget	\$4,000	\$/year
Total Whitefield Recycling Costs	\$14,958	\$/year
Cost per ton to recycle, including transportation	\$148	\$/ton Recycled
Cost per ton to dispose at Hatch Hill, including Transportation	\$170	\$/ton
Avoided Disposal Costs	\$17,164	\$/year
total avoided costs	\$2,206	\$/year
total savings with recycle center	\$2,206	\$/year

Item	Value	units	Comments	Reference
LC Recycle Budget Request Expenses	\$496,046	\$	From the Lincoln County Budget Request of 2021	LC 2021 Budget: https://www.maine.gov/audit/county/Lincoln/2021-lincoln-budget.pdf
LC Recycle Budget Request Revenue	\$164,000	\$	From the Lincoln County Budget Request of 2021	LC 2021 Budget: https://www.maine.gov/audit/county/Lincoln/2021-lincoln-budget.pdf
LC Recycle Budget Net	\$332,046	\$	From the Lincoln County Budget Request of 2021	LC 2021 Budget: https://www.maine.gov/audit/county/Lincoln/2021-lincoln-budget.pdf
Whitefield % of Lincoln County Budget	3.3%	%	Based on Lincoln County Budget	Email from Carrie Kipfer <ckipfer@lincounty.me> to Carole Cifrino, Whitefield dated December 6, 2022
Lincoln County Recycle from Whitefield 2022	105.62	tons/yr	From Lincoln County Recycling Data Output	LCR Report - Material Collected by Town received 1/10/20232
Lincoln County Recycle from Whitefield 2021 - adjusted	96.10	tons/yr	From Lincoln County Recycling Data Output	LCR Report - Material Collected by Town received 12/6/2022
Lincoln County Recycle from Whitefield 2020	53.75	tons/yr	From Lincoln County Recycling Data Output	LCR Report - Material Collected by Town received 12/6/2022

Annual Tons Recycled at Whitefield Recycle Center	100.86	tons/yr	Average of 2021 (adjusted) and 2022. 2020 was not included due to disruptions caused by the Pandemic.	
Whitefield Recycle Center Draft 2023 Budget Request for Wages	\$3,600	\$		Selectmen's meeting of 12/13/2022
Whitefield Recycle Center Draft 2023 Budget Request for Electronics Pickup	\$250	\$		Selectmen's meeting of 12/13/2022
Whitefield Recycle Center Draft 2023 Budget Request for port-a-potty	\$2,100	\$		Selectmen's meeting of 12/13/2022
Whitefield Recycle Center Draft 2023 Budget Request for facility Maintenance			Recycle Center facility Maintenance not separated out in the Whitefield Municipal budget from other municipal facility maintenance costs	Selectmen's meeting of 12/13/2022
Whitefield Recycle Center Draft 2023 Budget Request for	\$5,950		Sum of above 4 categories	
Whitefield Recycle Center Budget 2022	\$4,000			Whitefield 2021 Annual Report Final https://townofwhitefield.com/annual_reports/