

# The Future of Inflation

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## Florida SWANA Summer Conference 2022

Geosyntec<sup>®</sup>  
consultants



**Bill Gaffigan, Principal**  
**Giorgio Castro, Senior Staff Analyst**  
**Montana Meeker, Staff Analyst**



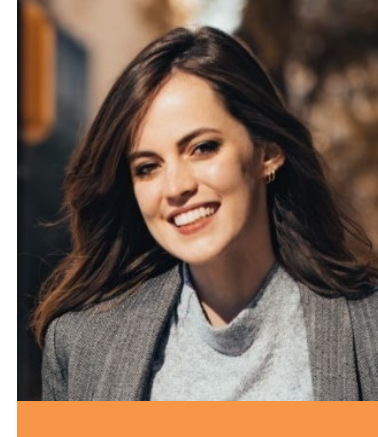
➤ ***Bill Gaffigan***  
***Principal,***  
***SWANA Member***

Bill has 35+ years of environmental industry economic and financial experience. He delivers analysis, valuation, planning, and advisory services for private and public sector clients.



➤ ***Giorgio Castro***  
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Giorgio holds a bachelors degree in Economics and a Masters in Sustainable Finance. He has four years of post-graduate experience in financial analysis and financial modelling.



➤ ***Montana Meeker***  
***Staff Analyst,***  
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Montana holds a bachelors degree in Management Science and Supply Chain Management. She has five years of experience in municipal solid waste management and project management across the public and private sectors.

## SECTION 1

Introduction to Inflation



## SECTION 2

Implications for Municipal  
Solid Waste Systems



## SECTION 3

Solid Waste Rate Survey



## SECTION 4

Conclusion and  
Recommendations



# SECTION 1

## Introduction to Inflation



**Where has inflation impacted you the most?**

Go to [www.menti.com](http://www.menti.com)

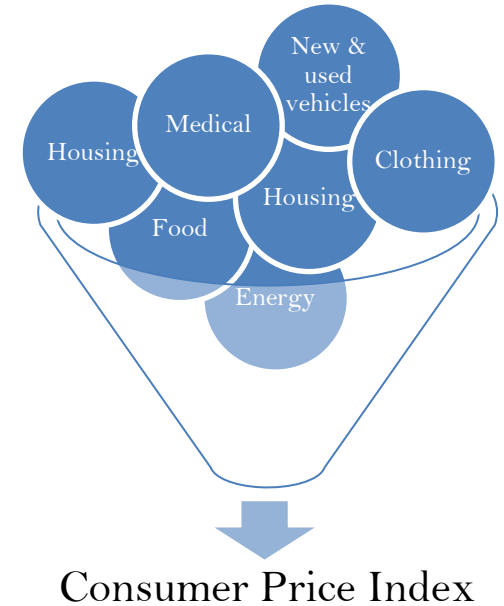
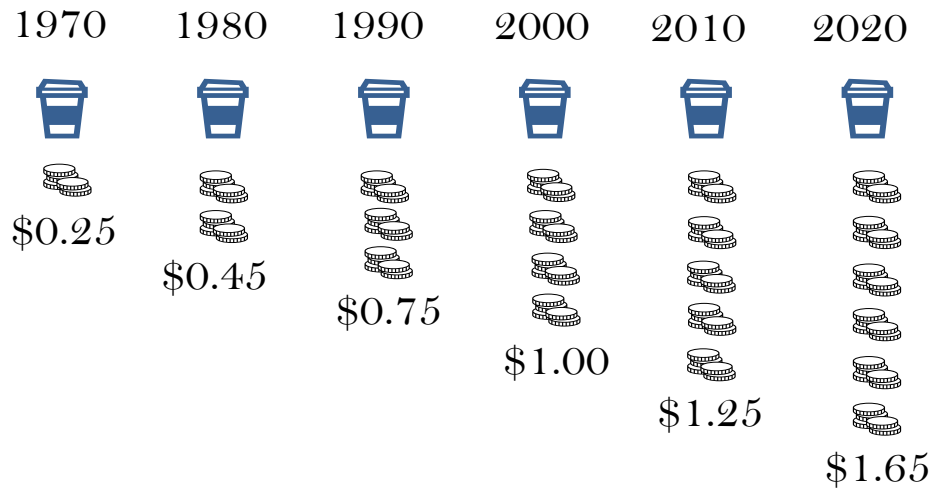
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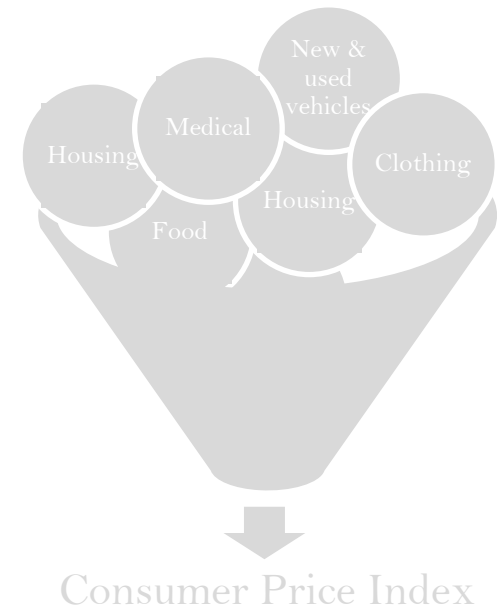
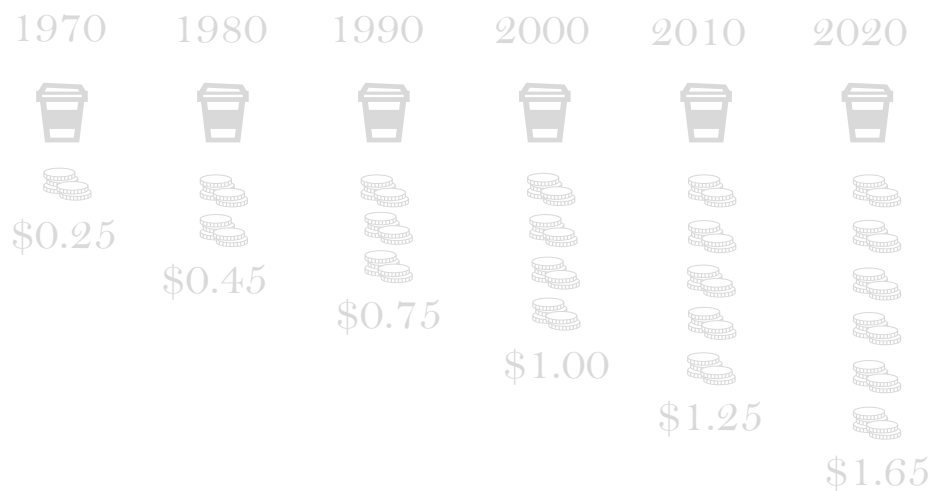
**Or use this QR code!**



*“Inflation is the decline in purchasing power of a given currency over time”*



*“Inflation is the decline in purchasing power of a given currency over time”*



Federal Reserve targets:

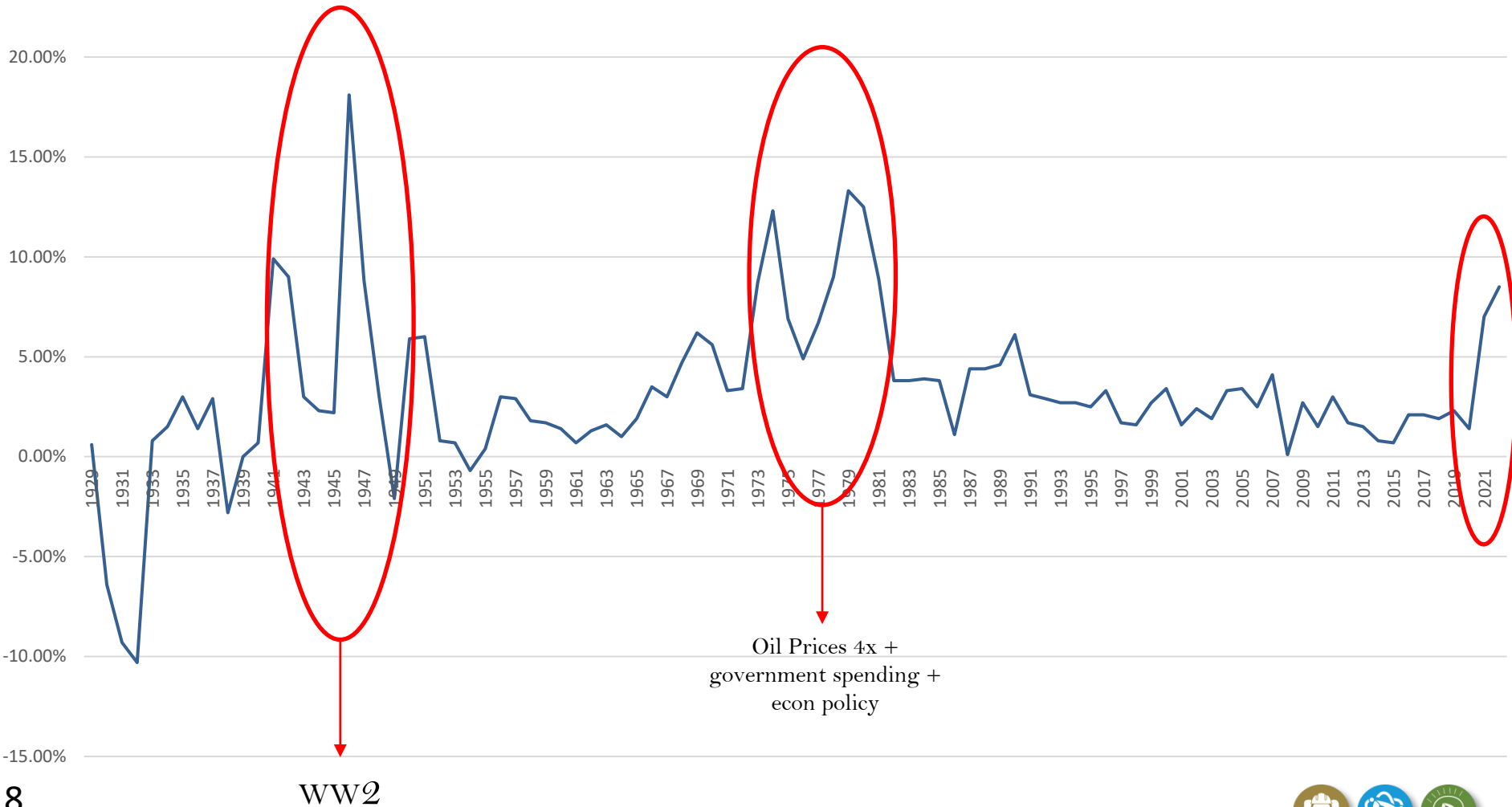
2.0% inflation

Using tools to effect two economic components

- ① Money Supply
- ② Interest Rates

③ Expectations

## Historical CPI







J.P.Morgan

TRANSAMERICA

Insights > Research > What's Behind the Global Supply Chain Crisis

RESEARCH

## What's Behind The Global Supply Chain Crisis?

Looking inside supply chain issues and logistics within a geopolitical context.



U.S. BUREAU OF LABOR STATISTICS

## TED: The Economics Daily

TED HOME TOPICS ARCHIVE BY YEAR ARCHIVE BY PROGRAM ABOUT TED SUBSCRIBE

### 12 states set all-time low unemployment rates in December 2021

JANUARY 31, 2022

In December 2021, Nebraska (1.7 percent) and Utah (1.9 percent) had the lowest jobless rates. In addition to those states, the following states set all-time low unemployment rates:

Kentucky (3.9 percent), Mississippi (4.5 percent), and North Carolina (2.8 percent). (All state data begin in January 2000.)

OPINION | COMMENTARY

### Today's Soaring Energy Prices Are Only the Beginning

Current 'net zero' plans will cost many trillions while doing little to slow global warming.

## \$1.9 Trillion Covid-19 Stimulus Package: What it Means for Investors

By Tom Wald, CFA®, Chief Investment Officer, Transamerica Asset Management, Inc.

MARKET INSIDER

## Sharp surge in energy prices threatens economic recovery and is already slowing growth

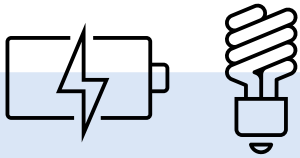
## Life after lockdown: spending and shopping habits post-Covid-19.

Posted by Katie Allen on the 7th April, 2021

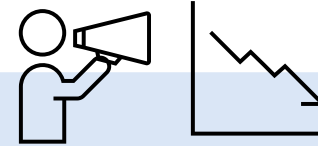
The Guardian

### Russia-Ukraine war latest: Ukraine rules out ceasefire deal





Energy prices surge



Further market uncertainty

# SECTION 2

## Implications for Municipal Solid Waste Systems



They are just like us...



Rising Prices for Equipment,  
Gas, Supplies

Rising Financing and  
Construction Costs

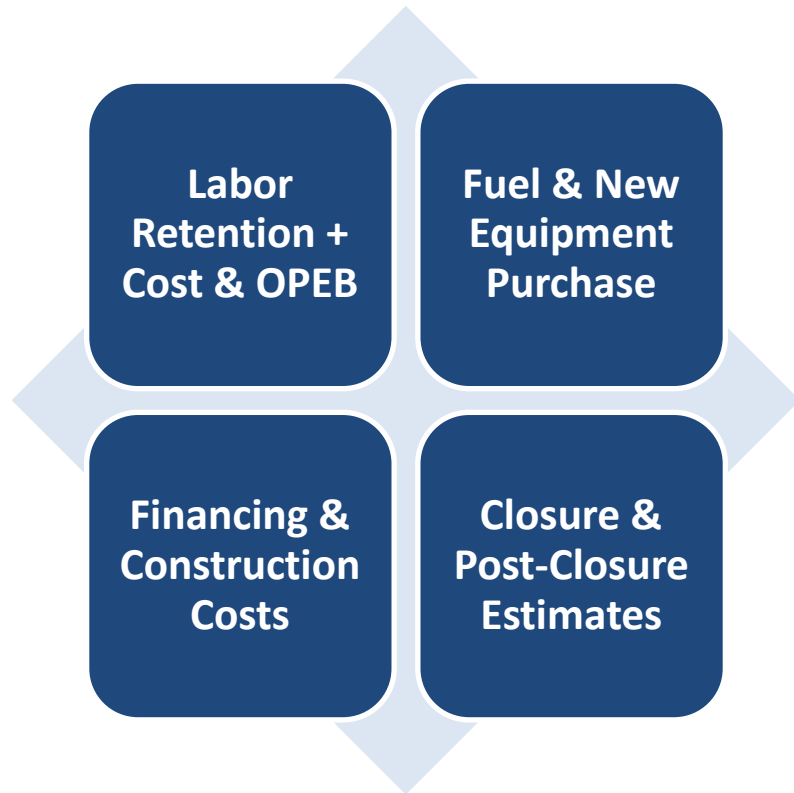
Closure and Post-Closure Costs

Rising Prices for Gas, Food,  
& Consumer Goods

Increased Cost to Rent  
and Buy Homes

Planning and Saving  
for Retirement

## Challenges



## Strategies



**Plan ahead...**

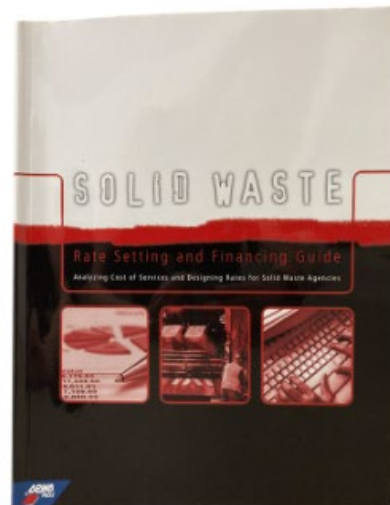


**And know the market!**

## The Long Game: Strategic Planning for Inflation

### Solid Waste Cost of Services and Rate Studies

Solid waste rate studies are tools used to assess current and future (projected) system expenses and revenues in relation to current and proposed rates for services.





## What Makes a Useful Cost of Service and Rate Study?

01

A solid foundation of historical data

02

Reasonable projections for each element of the solid waste system

03

An easy-to-understand, customizable output displaying possible futures



## Elements of a Cost of Services and Rate Study

Material  
Tonnages



Landfill  
Revenues &  
Expenses



Recycling  
Revenues &  
Expenses



Closure and  
Long-Term  
Care Costs

Capital  
Improvements



Customers,  
Fees, Rates



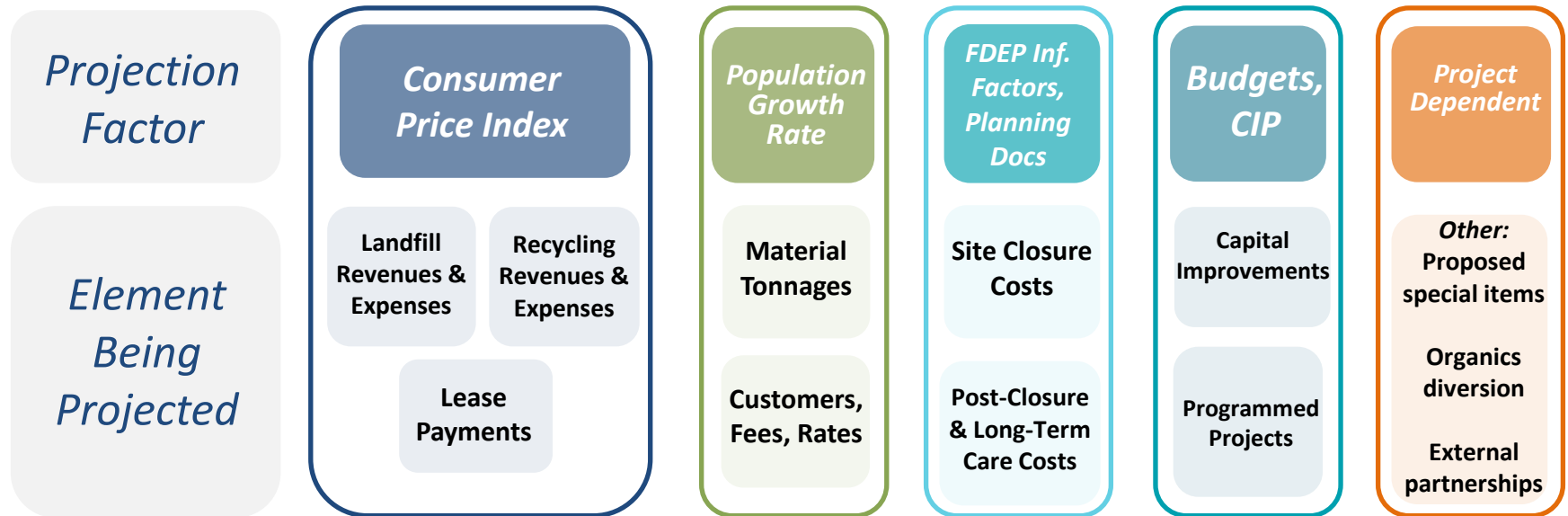
Lease  
Payments



Evaluation of  
level of Services

## Back to the Future

Rate study projections are created after a foundation of clean, reliable historic data has been input and organized. Projections are customized for each element of the solid waste system. Below are some examples of possible projection factors by element type.



## Factoring Volatile Inflation Into Projections

1. Periods of high and low inflation come and go.
2. This can cause unwelcome discrepancies in annual financial projections if growth factors do not move those projections in tandem with actual values.
3. Adjusting your growth factors for ranges of time (short and long term) can make projections more accurate and limit the impact of incorrect assumptions.



## Using Short- and Long-Term CPI

### 1. Develop assumptions for short- and long-term CPI

Input Category	Input	Quantity
<b>Revenue</b>	Growth in Annual Tonnage (MSW+C&D) Low	4.5%
<b>Expenses</b>	Short-run CPI - 2022-2023 Forecast Low	4.6%
	Short-run CPI - 2022-2023 Forecast High	7.3%
	Long-run CPI - Low	1.5%
	Long-run CPI - High	3.3%

Once inflation assumptions have been decided, users can quickly view the impact of changes in inflation on their revenues and expenses.

Financial Metrics	
Select CPI Estimates from dropdown below:	
Short-run CPI - 2022-2023 Forecast Low	4.60%
Short-run CPI - 2022-2023 Forecast Low	1.50%
Short-run CPI - 2022-2023 Forecast High	

### 2. Use predicted revenues and expenses to assess rates

Revenues	Actual		Projected					
	2020	2021	2022	2023	2024	2025	2026	2027
Revenues by Type								
TOTAL LICENSES AND PERMITS	\$76,400	\$275,500	\$79,563	\$82,749	\$83,990	\$85,250	\$86,528	\$87,826
TOTAL CHARGES FOR SERVICES	\$12,521,108	\$16,686,461	\$15,373,634	\$16,065,447	\$16,788,392	\$17,543,870	\$18,333,344	\$19,158,345
TOTAL MISCELLANEOUS	\$570,817	\$120,345	\$348,101	\$364,113	\$369,575	\$375,119	\$380,745	\$386,457
<b>TOTAL REVENUES</b>	<b>\$13,174,105</b>	<b>\$17,082,305</b>	<b>\$15,801,297</b>	<b>\$16,512,309</b>	<b>\$17,241,957</b>	<b>\$18,004,238</b>	<b>\$18,800,618</b>	<b>\$19,632,628</b>

## Scenarios & Strategies - Uniquely Affected Expenses

### Leases

Leases have different lifetimes and supply chain issues may affect prices for certain equipment.

Multi-year leases should be adjusted by term and compounded short- and long-term inflation estimates.

### Salaries

Labor squeezes are putting pressure on government salaries that are otherwise slow to increase.

Contact HR and Budget to determine compensation increases in the short and long term.

### Closure Costs

May need to be adjusted if closure cost estimates were created a couple years ago.

Use latest FDEP inflation factors for the next couple of years, then an average of past FDEP inflation estimates.

# SECTION 3

## Solid Waste Rate Survey



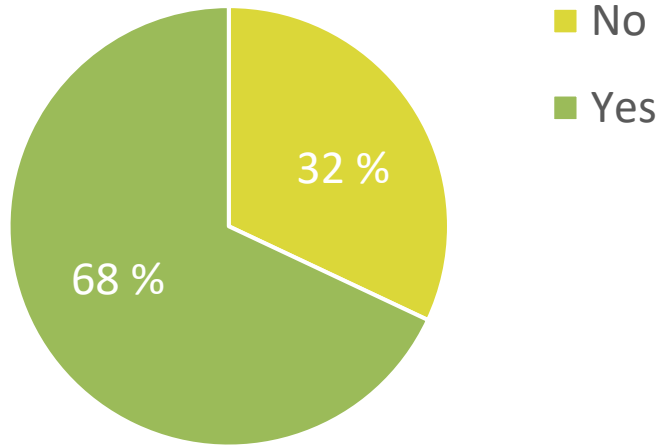
For 2022 Geosyntec initiated a first annual rate survey of municipal solid waste agencies nationally.

1. We contacted more than 300 MSW managers and personnel from different regions in the United States
2. We asked them 10 questions on their present, past and future rates.
3. The survey was conducted over the course of two months.





Participants that have increased rates in the last 3 years



Those that haven't raised rates in the last 3 years are planning to do so before 2025

General awareness on rate increases is high among the respondents

PARAMETER	DISPOSAL	COLLECTION	
	Average monthly rate for MSW curbside collection for single family homes	Average cost per ton for landfill disposal of MSW	Average cost per ton for landfill disposal of C&D waste
AVERAGE	\$19.50	\$63.10	\$63.58
MEDIAN	\$18.50	\$52.00	\$46.00
MIN	\$7.00	\$25.00	\$19.00
MAX	\$41.00	\$205.00	\$187.00
COUNT	20	21	19

**What would you like to see  
in a future rate survey?**

Go to [www.menti.com](http://www.menti.com)

Use the code 9728 2456



**Or use this QR code!**



# SECTION 4

## Conclusion and Recommendations



- Current inflation, uncertainty and volatility is historically high
- Significant impact on the Cost of Services for Waste Agencies
- Current Economic environment requires additional study, planning and action
- Level of Service or Cost of Service must be balanced with rates and reserves

1.  
Rate adjustment

2.  
Contracts review,  
rebiting

3.  
Program or  
infrastructure  
grants

## Future Outlook

Interest Rate  
increases

01

Interest rate might increase as high as inflation levels

Inflation  
forecasted at 6-7%  
for year 2022

02

Inflation will be higher than target levels for 2022 and 2023

Potential for a mild  
economic downturn  
in the next two years

03

Tightening credit has a 50-70% chance of causing in a mild recession in the next two years

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**THANK YOU!**

**...Questions?**

