



# The Region's Organics Diversion Journey

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SWANA

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  - The Start of Our Journey
  - Incoming Organics Regulations
  - The Investigation: 2017 to 2022
  - The Short-Term Organics Plan
  - The Long-Term Organics Plan



## Organics Waste Diversion Journey



# Region of Durham

**2,537 sq. km**

**220,000 households**

**25,000 multi-residential units**

**750,000 Population (1.2 million by 2041)**

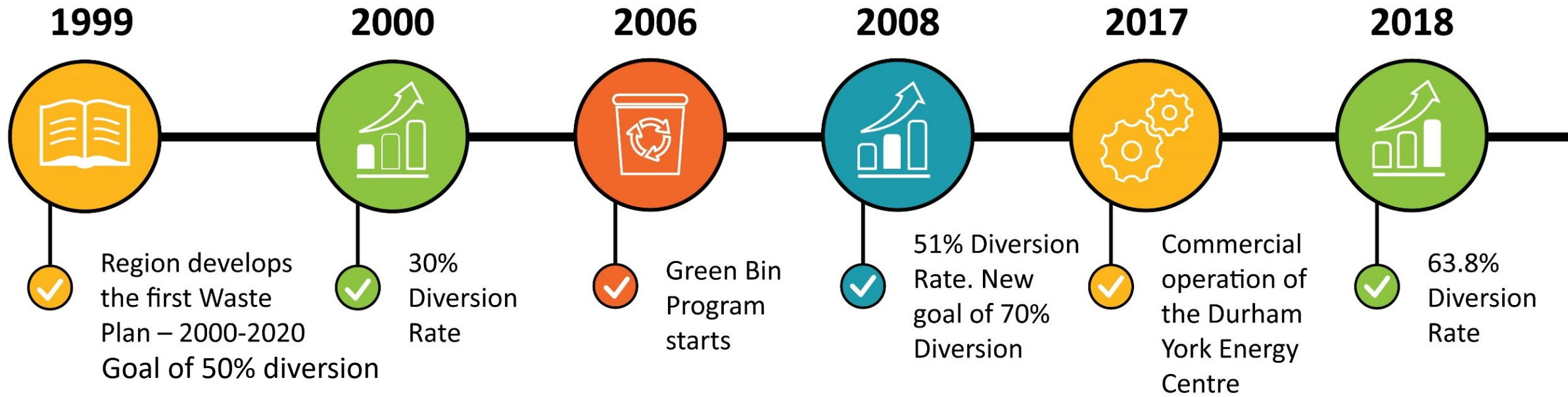
**Eight local area municipalities  
(Pickering, Ajax, Whitby, Oshawa,  
Clarington, Uxbridge, Scugog, Brock)**

**Upper-tier municipality - waste  
collection and processing, waste  
transfer and disposal and composting  
(except collection in Whitby/Oshawa)**



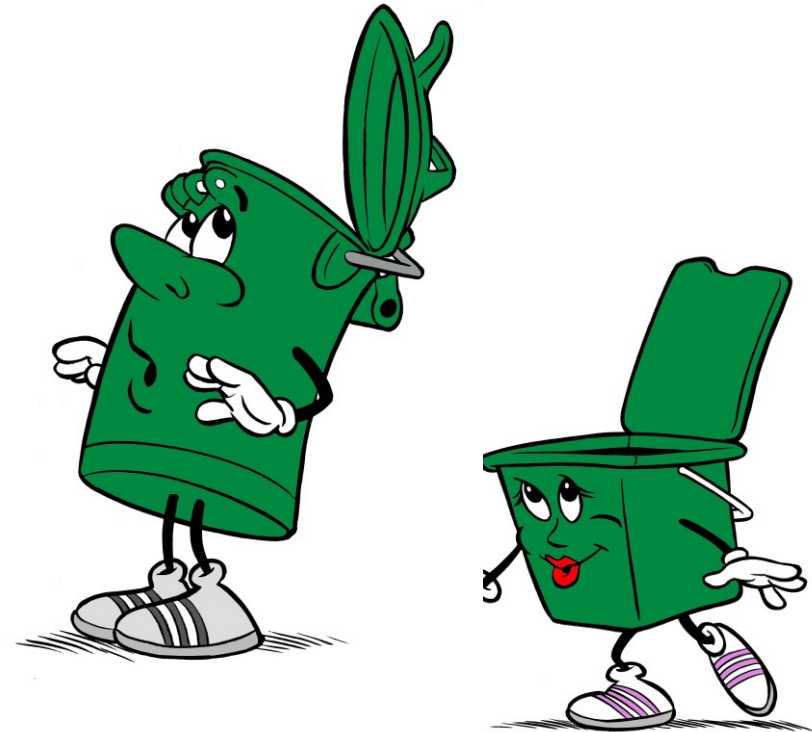
# Where have we been and where are we going?

## What we have accomplished over the last 20 years



# 2006 Curbside Green Bin Launched

- Launched Region-wide, both urban and rural areas
- P&E Campaign
  - Calendar, how-to literature
  - Community promotion
  - Free green bins
- 12-gallon green bin
- Compostable bag liners required
- Aerobic composting process



# Curbside Organics



## Clean Stream Composting

- All food waste
- Table scraps
- Soiled paper products
- Paper egg cartons
- Moulded paper drink trays
- Paper plates
- Paper towels, napkins, serviettes
- House plants
- NO PLASTIC

# 2018 - Food and Organic Waste Policy Statement

To increase organics diversion in the Province, Ontario's Food and Organic Waste Policy Statement requires municipalities to achieve:

- 70 per cent waste reduction and resource recovery of food and organic waste generated by single-family dwellings in urban settlement areas by 2023;
- 50 per cent waste reduction and resource recovery of food and organic waste generated at multi-residential properties by 2025.



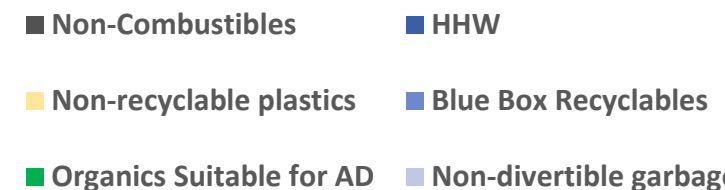
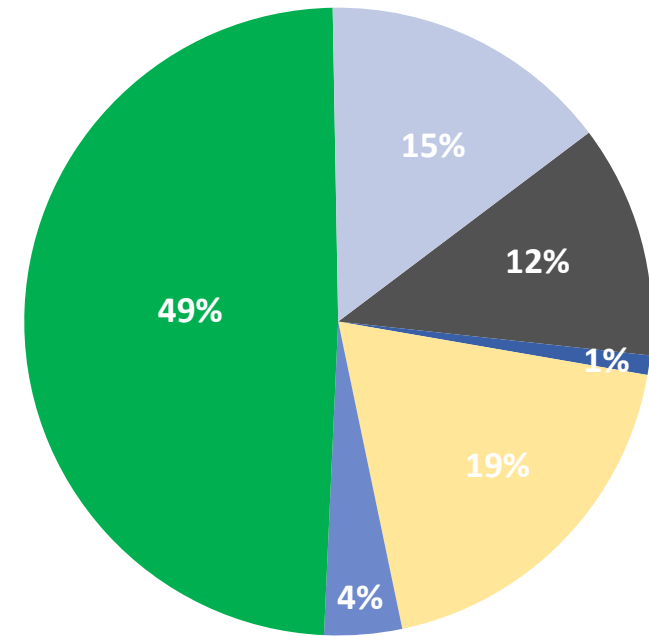
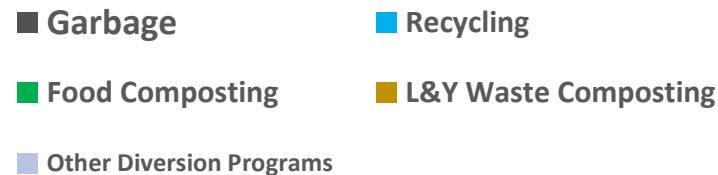
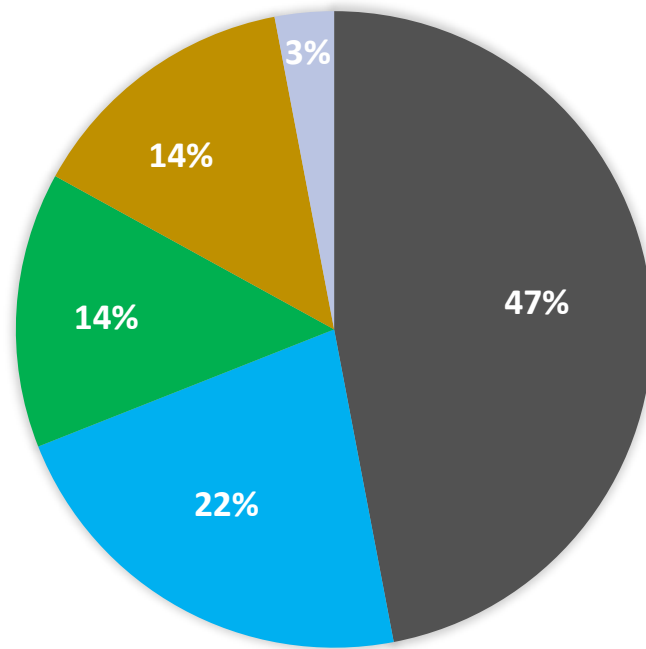
# Food and Organic Waste Policy Statement

- Entities responsible for management of food waste ensure that all collected organic waste be sent for resource recovery
- Operators of resource recovery facilities shall use appropriate technologies that can effectively recover collected materials
- Not direct any source separated materials for disposal
- ➔ • Supports Mixed Waste processing as a recovery option



# Mixed Waste/AD Project Vision: >70% Diversion

- Capture organics from the black bag (up to 49%), non-combustibles (up to 12%), marketable recyclables (up to 4%)
- Generate Renewable Natural Gas from anaerobic digestion



# The Potential:

## Anaerobic Digestion

- expand Green Bin program to include new materials - pet waste, cat litter, diapers and sanitary products
- Renewable natural gas opportunities

## Mixed waste pre-sort

- Durham's strategy for fulfilling Ontario's organic and food waste framework requirement for multi-residential organics capture (i.e. no source separation required)
- Divert non-combustible material from DYEC
- Divert marketable recyclables
- Opportunity for future diversion

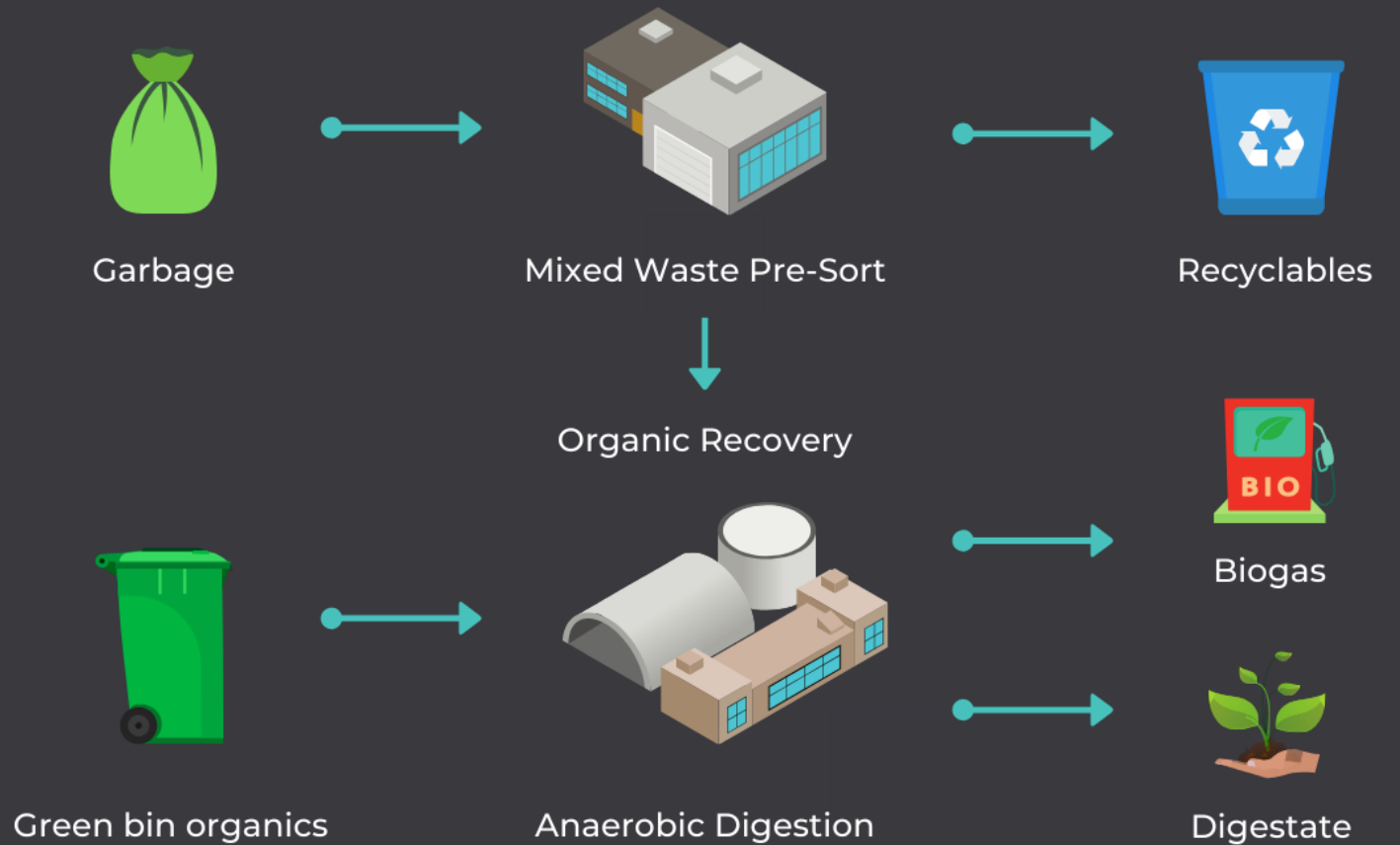
# Mixed Waste Processing and Anaerobic Digestion

In 2017, the Region saw an opportunity to explore innovative technologies to sort organics from both residential and multi-residential sources and use waste as a resource...

a Mixed Waste Pre-sort and Anaerobic Digestion (AD) Facility



## Mixed Waste Pre-Sort and Anaerobic Digestion: Waste as a resource



Two lines

# The Investigation: RFPQ-1062-2020

**June 23, 2021** - Report #2021-COW-14 informed Council of the outcome of RFPQ-1062-2020 (**DBOM Project**) and Council authorized staff to issue a NRFP to the three qualified respondents.

## 3 Respondents:

- a) Durham Renewable Resources Group (“DRRG”): Maple Reinders PPP Ltd., AIM Group Capital Ltd., and EllisDon Capital Inc.
- b) Durham Recovery Solutions (“DRS”): Sacyr Environmental USA LLC and Anaergia
- c) Durham Organics Processing Partners (“DOPP”): Alberici Constructors Inc. and Acciona

**Aug 9, 2021** - NRFP and draft Project Agreement issued

**Oct 2021 - Jan 2022** - commercially confidential meetings with Respondents to refine Project Agreement



# The Investigation: NRFP

- **April 2022** - Two of the three respondents submitted proposals to the NRFP:
  - a) Durham Renewable Resources Group (DRRG)
  - b) Durham Recovery Solutions (DRS)
- Both sound technical proposals in alignment with the Region's mandate and overall objectives
- **May 2022** - both respondents provided confidential financial submissions to support their technical submissions

# The Investigation: Anticipated project costs

- Estimated \$242 million capital cost for the AD Project (Report #2022-COW-2).
  - Approximately \$40.1 million more than 2020 estimate (Report #2020-COW-20).
  - Approximately \$78.5 million more than the 2019 estimate (Report #2019-COW-17).
- 2022 estimate accounted for the impact of COVID-19 and other market pressures on infrastructure projects known at the time and anticipated proposal premiums due to reduced market tolerance for project risks.

# The Investigation: Affordability

- Both Financial proposals were well above the Region's projected costs
- Why?
  - a) unexpected and rapid rise in material, shipping and labour costs
  - b) uncertainty of how these costs may continue to increase
- met with the two respondents to explore if the capital costs could be substantively reduced without changing the technical scope of the Project
- **June 22, 2022** – Council cancelled AD Project procurement process (Report #2022-COW-22)



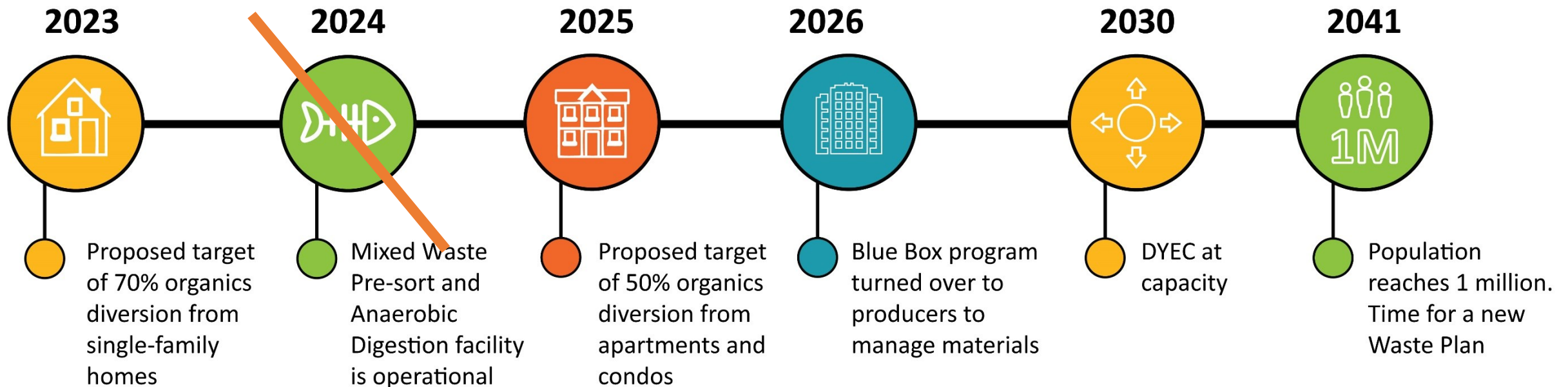


**Where does that leave us now? Future of SSO?**



# Organics Plan

## What will impact our waste management decisions over the next 20 years?



**We still have Ontario's Food and Organic Waste Policy Statement and a Green Bin program to operate**

# Organics Plan – Short and Long Term

**2023** – Council approves short-term and long-term organics plan (Report #2023-WR-3)

## Short Term

- 10 + 3 Year Organics Processing Contract
  - July 1, 2024 - Seaclyff Energy Corp.
  - Anaerobic Digestion
  - Allows for expansion of accepted SSO materials/RNG potential
- Multi-Residential Source Separated Organics program
  - Researched other municipal programs
  - On-site investigations (96% properties onboarded in first year)
  - RFP procurement process
  - Negotiation participation with Whitby and Oshawa

# Long-Term Organics Plan

- Continue assessing market volatility and alternate contract models
- Refine business case of Mixed Waste Pre-sort/ AD Facility
- Research/scan market for new and emerging technologies
- Continue to find ways to support the diversion of organics from disposal to support the Long-Term Waste Management Plan.







# Thank-you!

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