



Recycling Update: Operation Blue Sky

October 2018



Background - Timeline

2013: Operation Green Fence (2013) – Focus on quality (plastic)

2017:

- **National Sword** – Effort to eliminate illegal waste smuggling
- **Bans** - Announced bans of 24 materials, including mixed paper and mixed plastics
- **Contamination limit** - Announced 0.5% contamination limit
- **Suspended licenses** - Chinese government began limiting licenses to close down mills in China.

2018:

- **January 2018** – Bans in effect
- **March 2018** – 0.5% contamination limit in effect
- **March 2018** - **Operation BLUE SKY**. Chinese Customs to inspect all loads at point of entry into China. In effect through 2018.
- **May 2018** – Suspended all inspections for US imports. Since the inspections are required, all exports to China stopped – regardless of quality, stressing markets across the globe.
- **June/October 2018** – China allowing some inspections and some ships on the water for non-banned materials

Global Market Changes & Impacts on Recycling

External Factors



2017: Over 25% of world's recyclables were imported by China, including >50% of paper & plastics



China's new import policies banning materials & limiting contamination have global impacts on recycling programs in communities across US



Operation Blue Sky = screening effort at China's ports to inspect loads, enforce material bans & 0.5% contamination limit. Trade wars adding to supply glut



Situation not likely to improve – China appears to be on path to eliminate imports of all post-consumer recyclables by 2021



The reduction of China's markets resulted in oversupply of commodities & depressed commodity pricing – Supply is high & commodity pricing low

IN THE WAKE OF CHINA'S IMPORT BAN ON MIXED PAPER, PAPER RECYCLERS AND TRADERS ARE RUSHING TO FIND NEW MARKETS. BY MEGAN QUINN

Oh, Scrap! China, Biggest Buyer of U.S. Trash, Wants It No More

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Piles of recycled bottles and boxes are 'backing up right now as we speak'

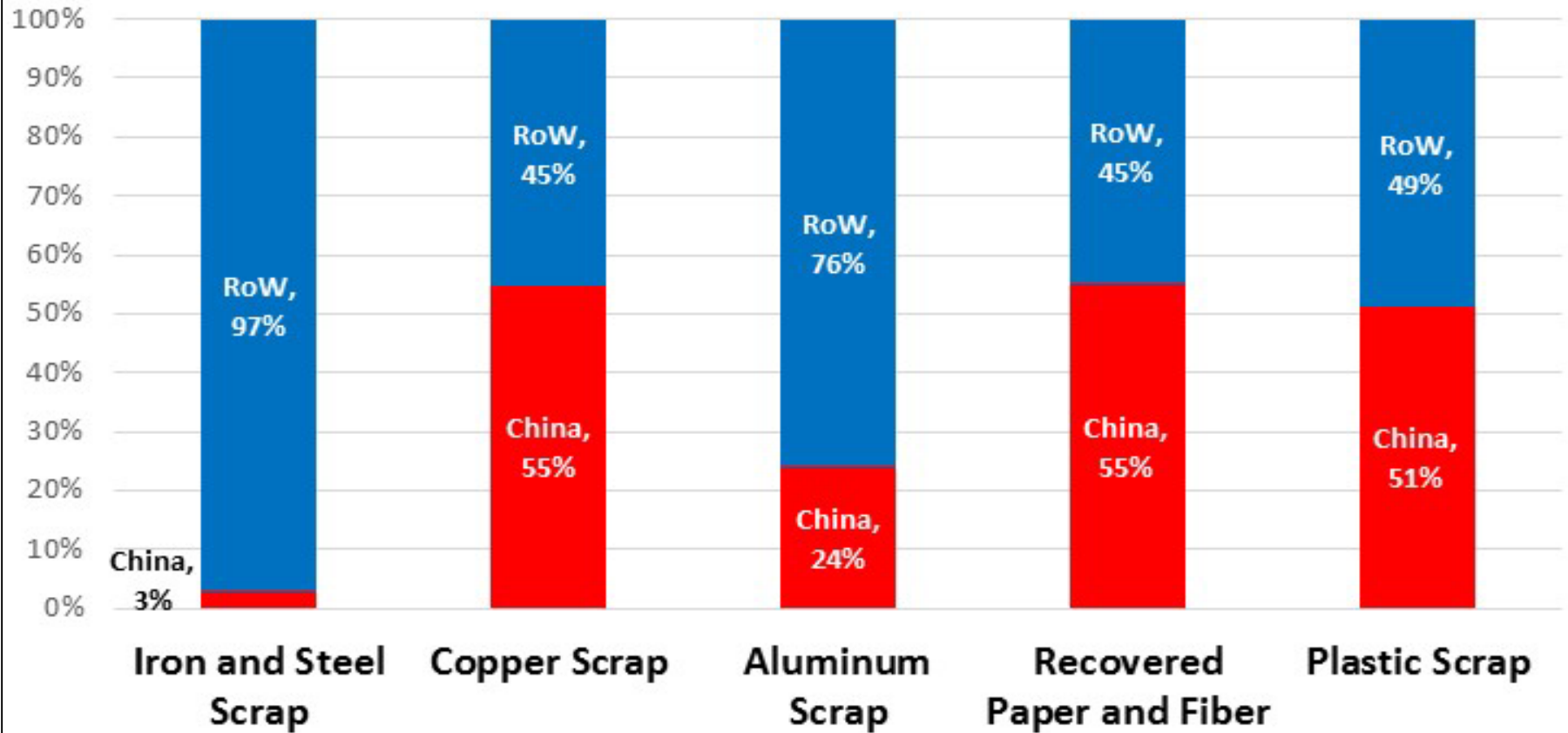
"The whole world is going to have to re-calibrate to the 0.5%. Everything is driven on quality now."

- Mill Buyer

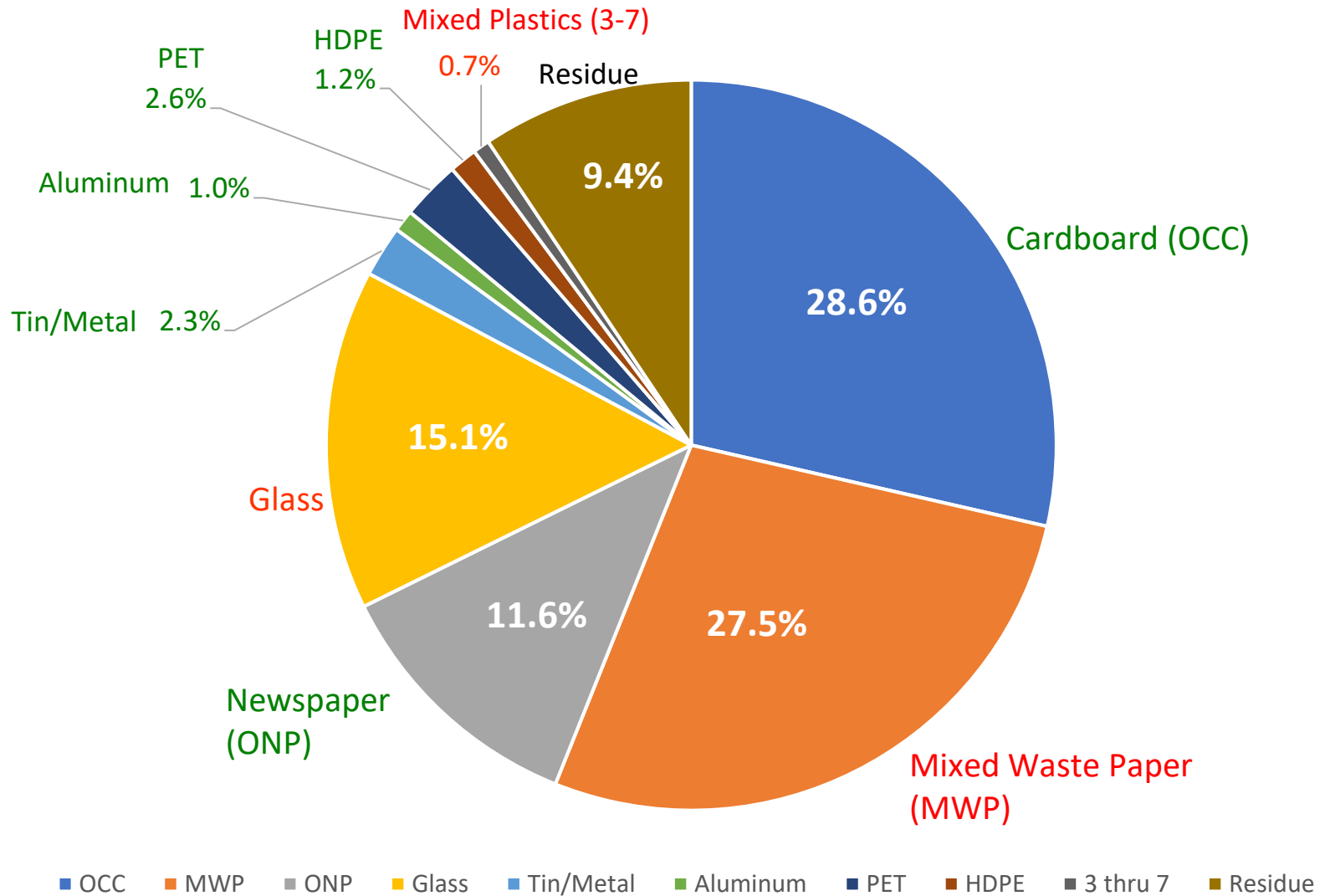
Why China is so Important to Recycling?

Mainland China's Share of Global Imports for Selected Recycled Commodities, 2016(p)

Source: UN Comtrade Database

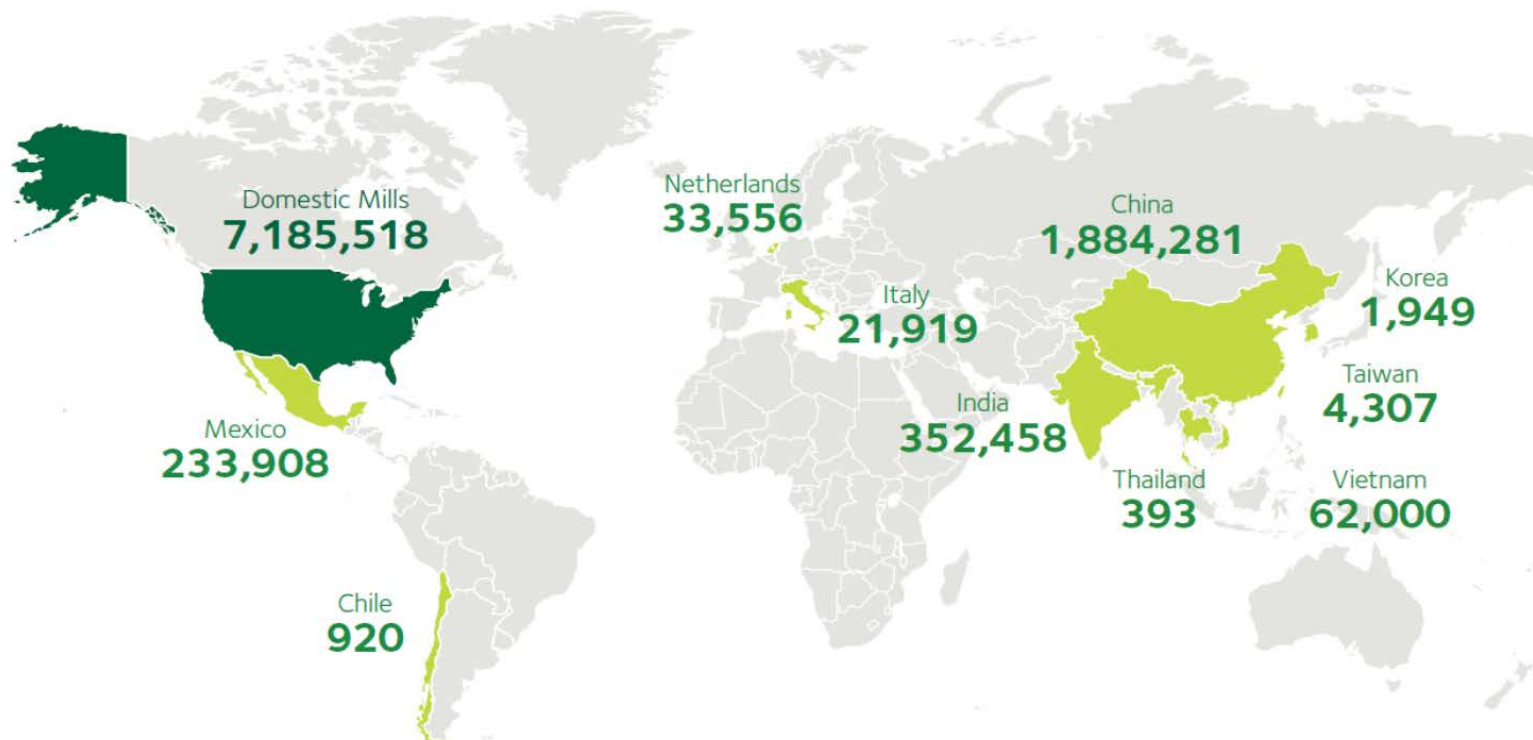


Average PNW Single Stream Recycling Composition



WM Exports Materials Around the World

In 2017 WM shipped 27% of its material to markets around the world



WM continues to move commodities, although at lower prices and to a broad variety of customers across the globe

Customer Education & Outreach

Contamination Reduction

Proactive Outreach

- Social media
- WM blog
- Customer mailings



Residential Feedback & Contamination Fee

- Revised residential contamination specific oops tags
- Driver trainings
- Tag tracking

Commercial feedback and Contamination Fee

- HOC Process

NO PLASTIC BAGS		
Item	Rule	Expert Tip
NO Bagged Recyclables 	Do not bag recyclables. They must be loose in the bin!	If you store your recyclables in a bag, simply dump them out when you get to your bin and re-use the bag!
NO Plastic Bags 	Plastic bags are included in a few curbside programs, check with your local program.	Do not bag recyclables. Plastic bags have a habit of getting tangled in equipment. Find where you can recycle them at plasticfilmrecycling.org .
NO Plastic Wraps & Film 	Plastic wrap, bubble wrap, plastic sandwich bags or freezer bags shouldn't go in the recycle bin.	Please whenever possible for presents, moving or storage of similar items.
NO Flexible Packaging 	Flexible packaging like chip bags and juice or soup pouches cannot be recycled in curbside programs.	This type of packaging is made from multiple materials preventing it from being recycled. It must be trashed.

Resetting the Industry – WM Requests

- ✓ Rate Relief Recovery
- ✓ Haul or Call - Contamination Fee Rate (change)
- ✓ Recycling List Changes
- ✓ Recycling/Contamination Language Changes
- ✓ <http://recycleoftenrecycleright.com/rorr-widgets/>

Resetting the Industry – WM Requests (example)

Services	rate	request	new rate	% increase
Resi carts (12,103 customers)	\$4.79	\$0.73	\$5.52	15.2%
Multifamily 2 yard steel (529 tons)	\$25.41	\$0.31	\$25.72	1.2%
Commercial 4-yard steel (1,377tons)	\$24.14	\$0.65	\$24.79	2.7%

*Wholesale rates
*Commercial rates - This is the per pick up rate

China Sword Impact - Residential

Municipality: **Marysville**

WM MRF Used: **Cascade Recycling Center (CRC)**

1. Increased MRF Processing Costs

Explanatory Notes

a	Previous WUTC Processing Cost per Ton	\$ 78.99	Based on previous WUTC tariff for CRC
b	Current WUTC Processing Cost per Ton	\$ 92.86	Per May 2018 WUTC tariff for CRC
c	Increased Cost per Ton	\$ 13.87	[b - a]
d	Annual Residential Recycling Tons	3,707	2017 actual resi recycling tons
e	Total Increased Processing Cost - Residential	\$ 51,416	[c x d]
f	Total Residential Accounts	12,103	Total accounts as of 4/30/2018
g	Monthly Rate Increase per Residential Account	\$ 0.35	[e / f / 12]

2. Change in Commodity Values

h	Q4-2017 Average Commodity Value per Ton	\$ 66.91	Per Q4-2017 reported CRC commodity values
i	Q1-2018 Average Commodity Value per Ton	\$ 51.88	Per Q1-2018 reported CRC commodity values
j	Revenue Loss per Ton	\$ 15.03	[h - i]
k	Annual Residential Recycling Tons	3,707	2017 actual resi recycling tons
l	Total Commodity Value Decrease	\$ 55,716	[j x k]
m	Total Residential Accounts	12,103	Total accounts as of 4/30/2018
n	Monthly Rate Increase per Residential Account	\$ 0.38	[l / m / 12]

3. Total Monthly Adjustment Requested*

\$ 0.73

[g + n]

*Excludes any other adjustments that may be necessary due to contract requirements.

China Sword Impact - Multifamily

Municipality: **Marysville**

WM MRF Used: **Cascade Recycling Center (CRC)**

1. Increased MRF Processing Costs

Explanatory Notes

a	Previous WUTC Processing Cost per Ton	\$ 78.99	Based on previous WUTC tariff for CRC
b	Current WUTC Processing Cost per Ton	\$ 92.86	Per May 2018 WUTC tariff for CRC
c	Increased Cost per Ton	\$ 13.87	[b - a]
d	Annual Multifamily Recycling Tons	529	2017 actual multifamily recycling tons
e	Total Increased Processing Cost - MF	\$ 7,337	[c x d]
f	Total Annual Multifamily Recycling Yards	48,647	
g	Rate Increase per Multifamily Recycling Yard	\$ 0.15	[e / f]

2. Change in Commodity Values

h	Q4-2017 Average Commodity Value per Ton	\$ 66.91	Per Q4-2017 reported CRC commodity values
i	Q1-2018 Average Commodity Value per Ton	\$ 51.88	Per Q1-2018 reported CRC commodity values
j	Revenue Loss per Ton	\$ 15.03	[h - i]
k	Annual Multifamily Recycling Tons	529	2017 actual multifamily recycling tons
l	Total Commodity Value Decrease	\$ 7,951	[j x k]
m	Total Annual Multifamily Recycling Yards	48,647	
n	Rate Increase per Multifamily Recycling Yard	\$ 0.16	[l / m]

3. Total Yardage Rate Adjustment Requested*	\$ 0.31	[g + n]
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*Excludes any other adjustments that may be necessary due to contract requirements.

China Sword Impact - Commercial

Municipality: **Marysville**

WM MRF Used: **Cascade Recycling Center (CRC)**

1. Increased MRF Processing Costs

Explanatory Notes

a	Previous WUTC Processing Cost per Ton	\$ 78.99	Based on previous WUTC tariff for CRC
b	Current WUTC Processing Cost per Ton	\$ 92.86	Per May 2018 WUTC tariff for CRC
c	Increased Cost per Ton	\$ 13.87	[b - a]
d	Annual Commercial Recycling Tons	1,377	2017 actual commercial recycling tons
e	Total Increased Processing Cost - MF	\$ 19,099	[c x d]
f	Total Annual Commercial Recycling Yards	60,700	
g	Rate Increase per Commercial Recycling Yard	\$ 0.31	[e / f]

2. Change in Commodity Values

h	Q4-2017 Average Commodity Value per Ton	\$ 66.91	Per Q4-2017 reported CRC commodity values
i	Q1-2018 Average Commodity Value per Ton	\$ 51.88	Per Q1-2018 reported CRC commodity values
j	Revenue Loss per Ton	\$ 15.03	[h - i]
k	Annual Commercial Recycling Tons	1,377	2017 actual commercial recycling tons
l	Total Commodity Value Decrease	\$ 20,696	[j x k]
m	Total Annual Commercial Recycling Yards	60,700	
n	Rate Increase per Commercial Recycling Yard	\$ 0.34	[l / m]

3. Total Yardage Rate Adjustment Requested*	\$ 0.65	[g + n]
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*Excludes any other adjustments that may be necessary due to contract requirements.