



Executive Summary

*Projected FY 2022
Water Units of Service
November 19, 2020*



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Charge Season Schedule

- This is the second formal “charge rollout” meeting for the FY 2022 Budget and Charges
 - ✓ **11/10/2019** - *Capital Improvement Programs*
 - ➔ ✓ **11/19/2020** - *Preliminary Units of Service*
 - ✓ **1/7/2021** – *Preliminary Proposed FY 2022 Budget and Financial Plan and Preliminary Charges*
 - ✓ **1/21/2021** – *Comprehensive Follow Up Review Session*
 - ✓ **2/24/2021 (tentative)** – *GLWA Public Hearing*
 - ✓ **7/1/2021** – *Effective Date for Charges*
- Parallel meetings of Outreach Work Groups

Key Takeaways

- FY 2020 wholesale master metered water sales volumes were materially higher than FY 2019 due to increased use in “peak” months;
- Total FY 2022 projected master metered sales volumes are ~ 0.3% higher than the projected FY 2021 figures;
- All else being equal, this will create a positive budgeted revenue variance of ~ 0.2% (~ \$675,000) for FY 2022
 - ✓ *Commodity sales account for 40% of budgeted revenue*
- Contract Alignment Process (“CAP”) effective in FY 2020 does not create any modified “demand related” allocation of costs of service to most Member Partners
 - ✓ *5 Member Partners have negotiated new demands via out of sequence reopeners and/or to reflect contract exceedances in 2020*

Member Partner Status Report

- Of the 87 wholesale Member Partners:
 - ✓ *85 are Master Metered, of which:*
 - **82** are under the “model” contract;
 - **3** remain under “older” contract structures;
 - » Negotiations towards “model” contracts underway with 2
 - ✓ *Dearborn and Highland Park are not Master Metered*
- Detroit is also not Master Metered and is being served under a “Water and Sewer Services Agreement”

FY 2022 Water Sales Volume Projections

November 19, 2020



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Water Volume Analysis Units

- Water volume figures in this presentation are presented using two separate units, to align with the manner in which the data is reported.
- Water sales figures are reported in thousands of cubic feet (“**Mcf**”)
 - ✓ *Aligns with billing meters and commodity charges.*
- Water production figures (and peak demands) are reported in millions of gallons per day (“**mgd**”)
 - ✓ *Aligns with production reports and contract demands*
- 1 mgd = ~ 48,800 Mcf

Water Sales Volume Analysis Basics

- Water Sales Volumes presented today continue to reflect “Adjusted Fiscal Year” convention
- “Adjusted Fiscal Year” = October through September
 - ✓ *Allows for consideration of most recent data for peak demand season*
- Presentation also summarizes sales volume for Base and Peak months
 - ✓ *Base = October through March*
 - ✓ *Peak = April through September*

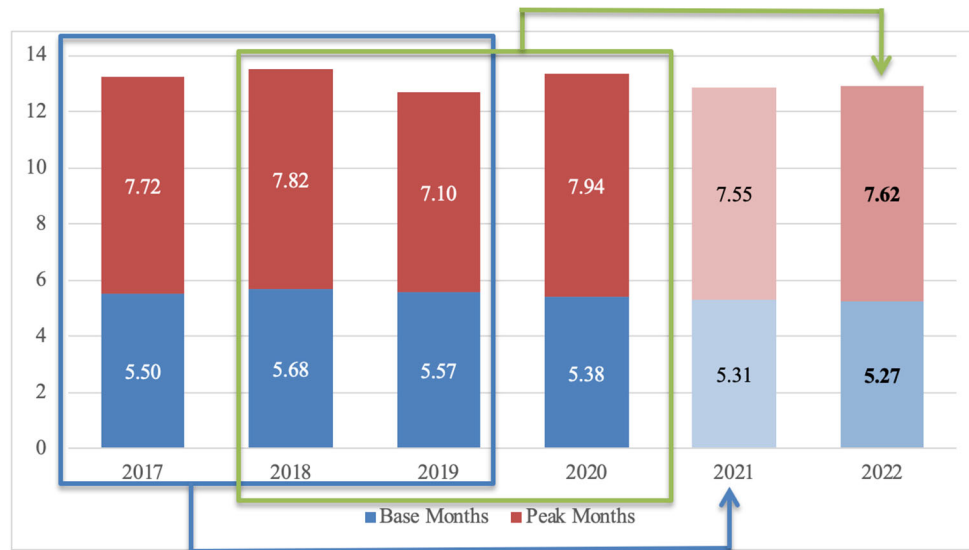
Recommended Projection Approach for FY 2022 Cost of Service / Charges

- NO CHANGE FROM UNIFORM FORECASTING METHOD IN PLACE SINCE FY 2018
- “Hybrid” approach based on review of Base and Peak month results
- Start with 3-Year average: Adjusted FYs 2018, 2019 and 2020
- Reduce “Base” month totals by 5% (*2.5% per year for 2 years to get from FY 2020 to FY 2022*) to reflect demographic reduction in potable water use based on recent trends
 - ✓ *These trends are being experienced worldwide*
- Do not adjust “Peak” month average
 - ✓ *Data reflects one very low demand year and two “average” years*

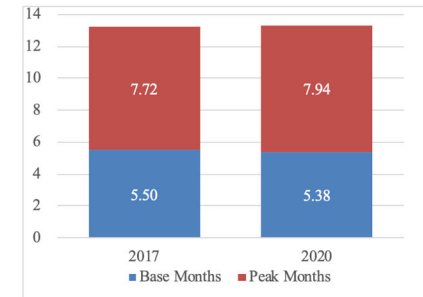
Recommended Projection Approach for FY 2022 Cost of Service / Charges

Metered Wholesale Water Sales - *millions of Mcf*

	Actual 2017	Actual 2018	Actual 2019	Actual 2020	Initial Proj 2021	Projected 2022	2022 / 2021 Variance	
							Mcf	%
Base Months	5.50	5.68	5.57	5.38	5.31	5.27	(0.04)	-0.7%
Peak Months	7.72	7.82	7.10	7.94	7.55	7.62	0.07	1.0%
Total	13.22	13.51	12.67	13.32	12.85	12.89	0.03	0.3%



	Actual 2017	Actual 2020	2020 / 2017 Variance	
			Mcf	%
Base Months	5.50	5.38	(0.12)	-2.18%
Peak Months	7.72	7.94	0.22	2.81%
Total	13.22	13.32	0.10	0.73%



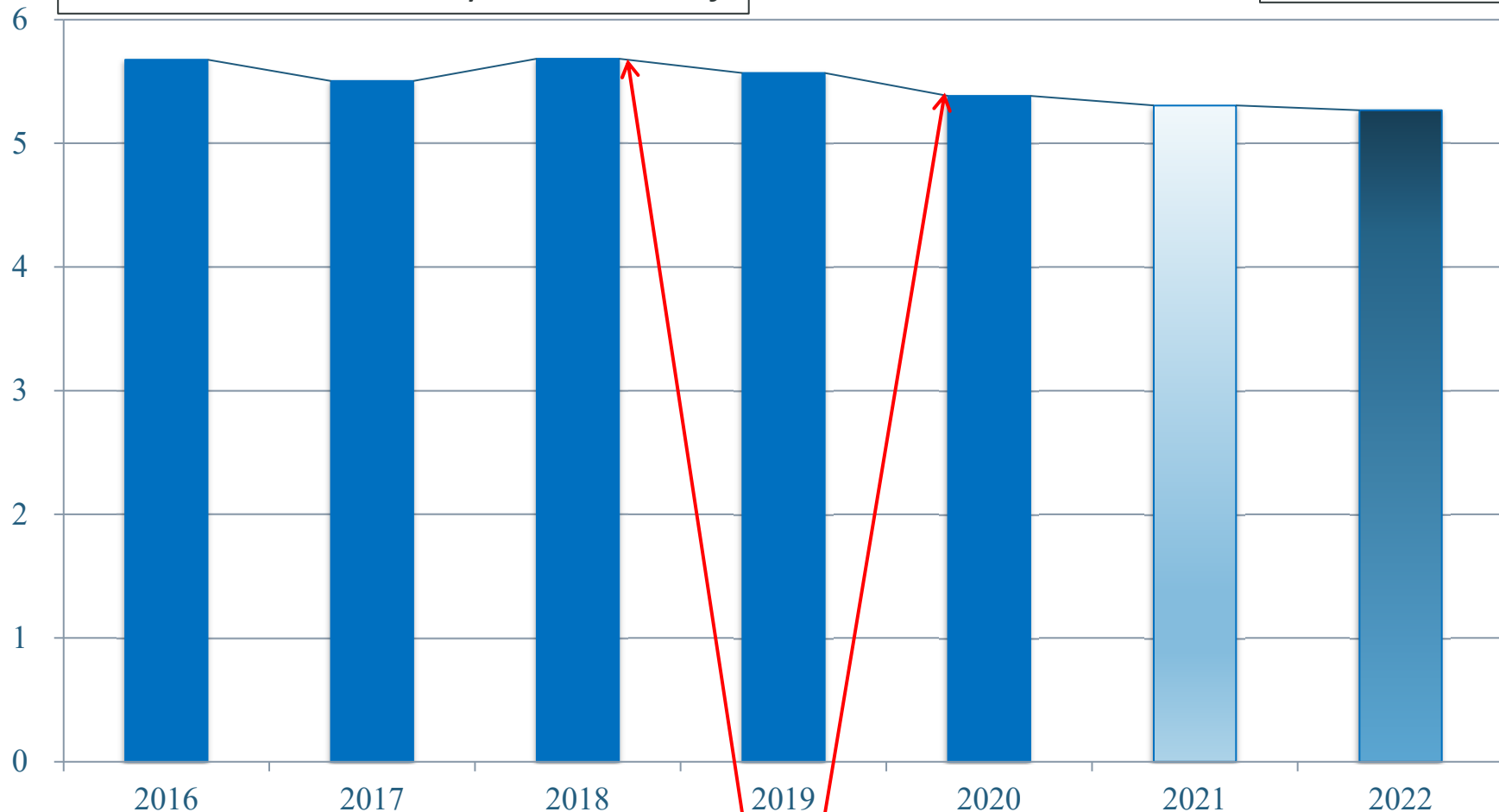
Preliminary Adjusted FY 2020 Master Metered Water Sales Volumes

- Preliminary Adjusted FY 2020 data presented today reflects review of billings through September 2020
- Preliminary Adjusted FY 2020 total for Master Metered Customers:
 - ✓ *Base months 2.2% lower than FY 2019, 5.3% lower than FY 2018, and 2.2% lower than FY 2017*
 - ✓ *Peak months 11.8% higher than FY 2019, 1.5% higher than FY 2018, and 12.8% higher than FY 2017*
 - ✓ *Total 5.1% higher than FY 2019, 1.4% lower than FY 2018, and 0.7% higher than FY 2017*

Recommended Projection Approach for FY 2022 Cost of Service / Charges – *Base Months*

Master Meter Data Only – *millions Mcf*

Handout Pages 2-4

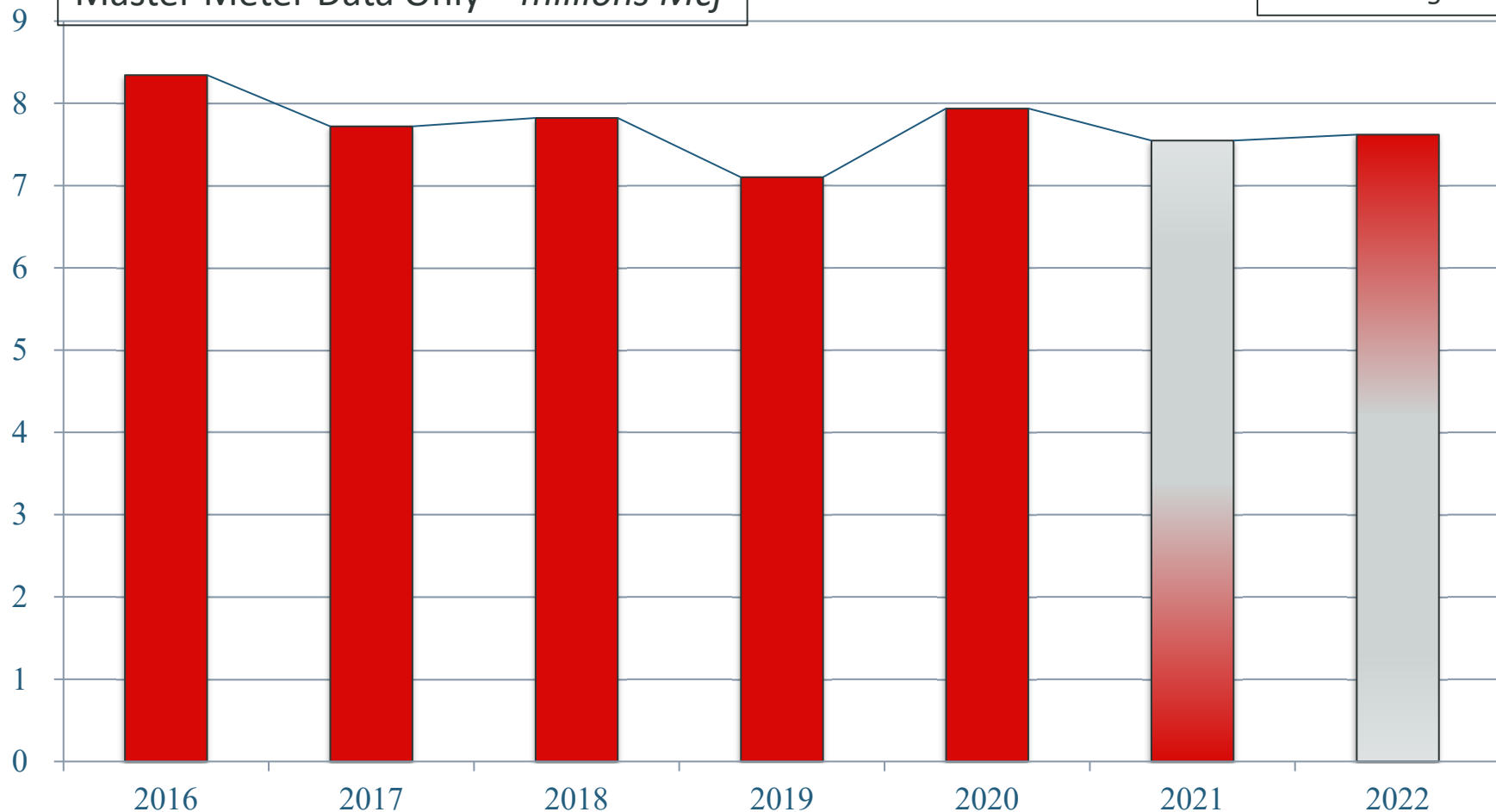


5.3% Reduction from 2018 to 2020

Recommended Projection Approach for FY 2022 Cost of Service / Charges – *Peak Months*

Master Meter Data Only – *millions Mcf*

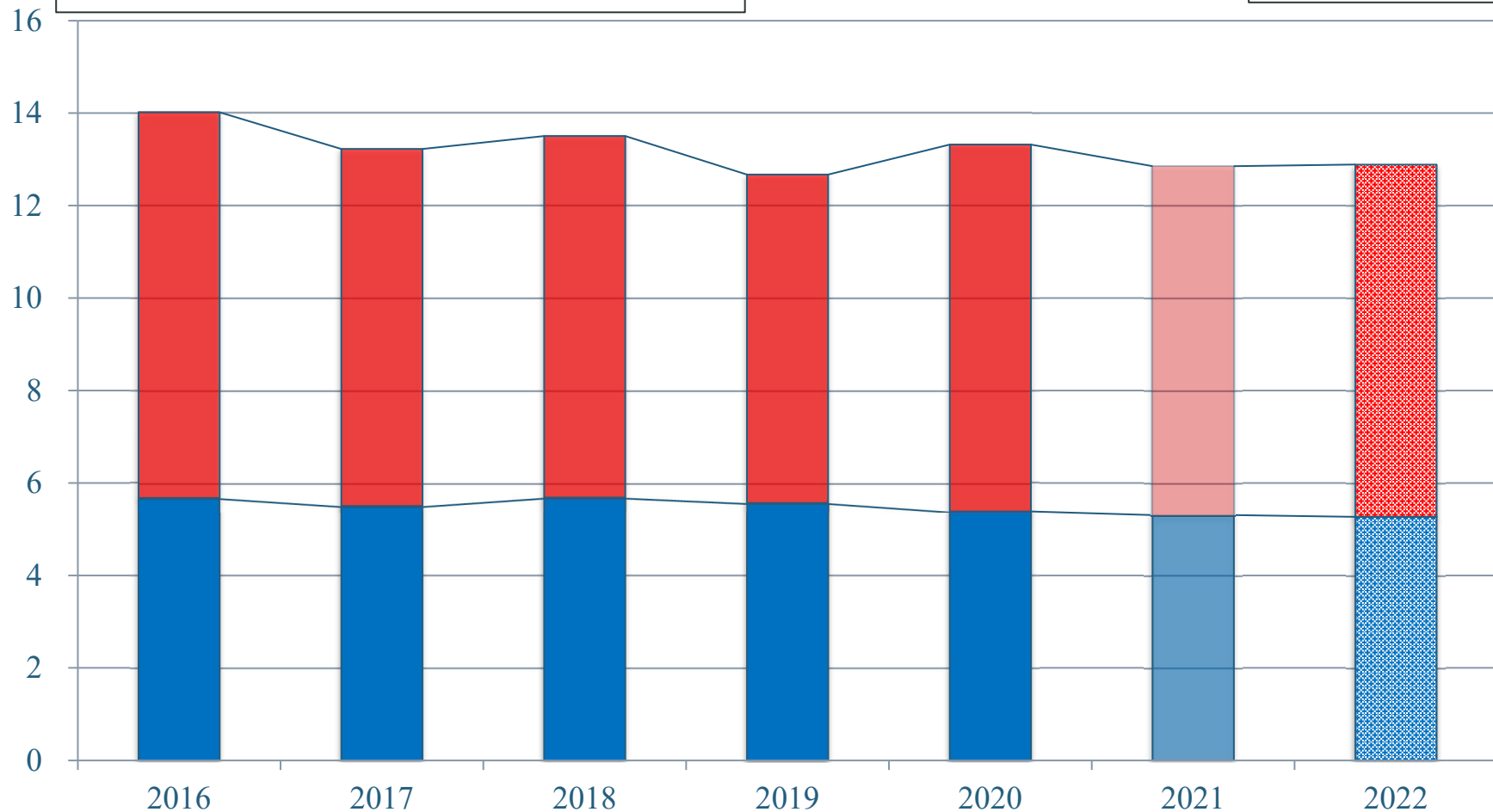
Handout Pages 5-7



Recommended Projection Approach for FY 2022 Cost of Service / Charges – All Months

Master Meter Data Only – *millions Mcf*

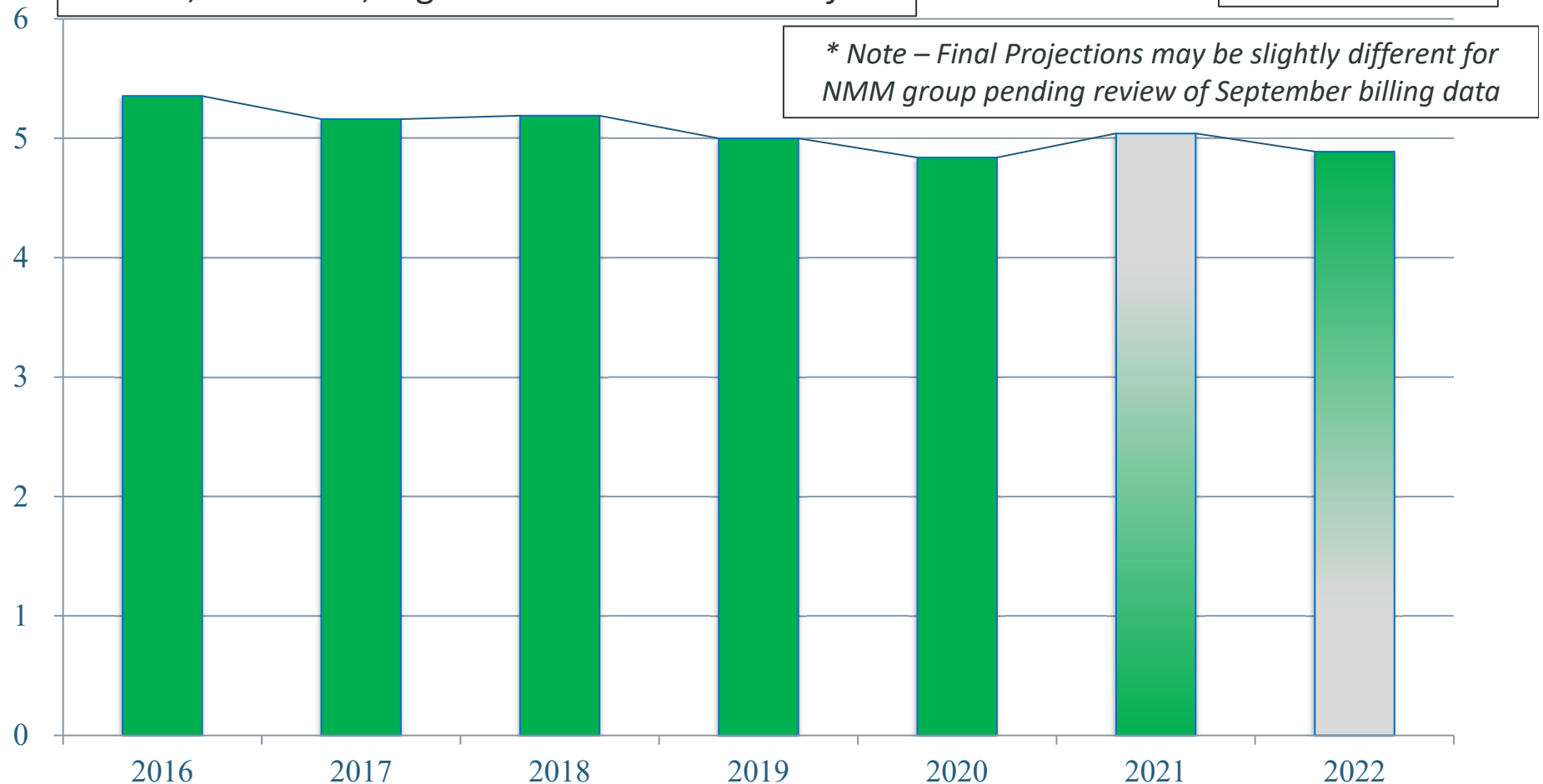
Handout Pages 8-10



Historical / Projected Non Master Metered Wholesale Water Sales Proxy – All Months

Detroit, Dearborn, Highland Park – millions Mcf

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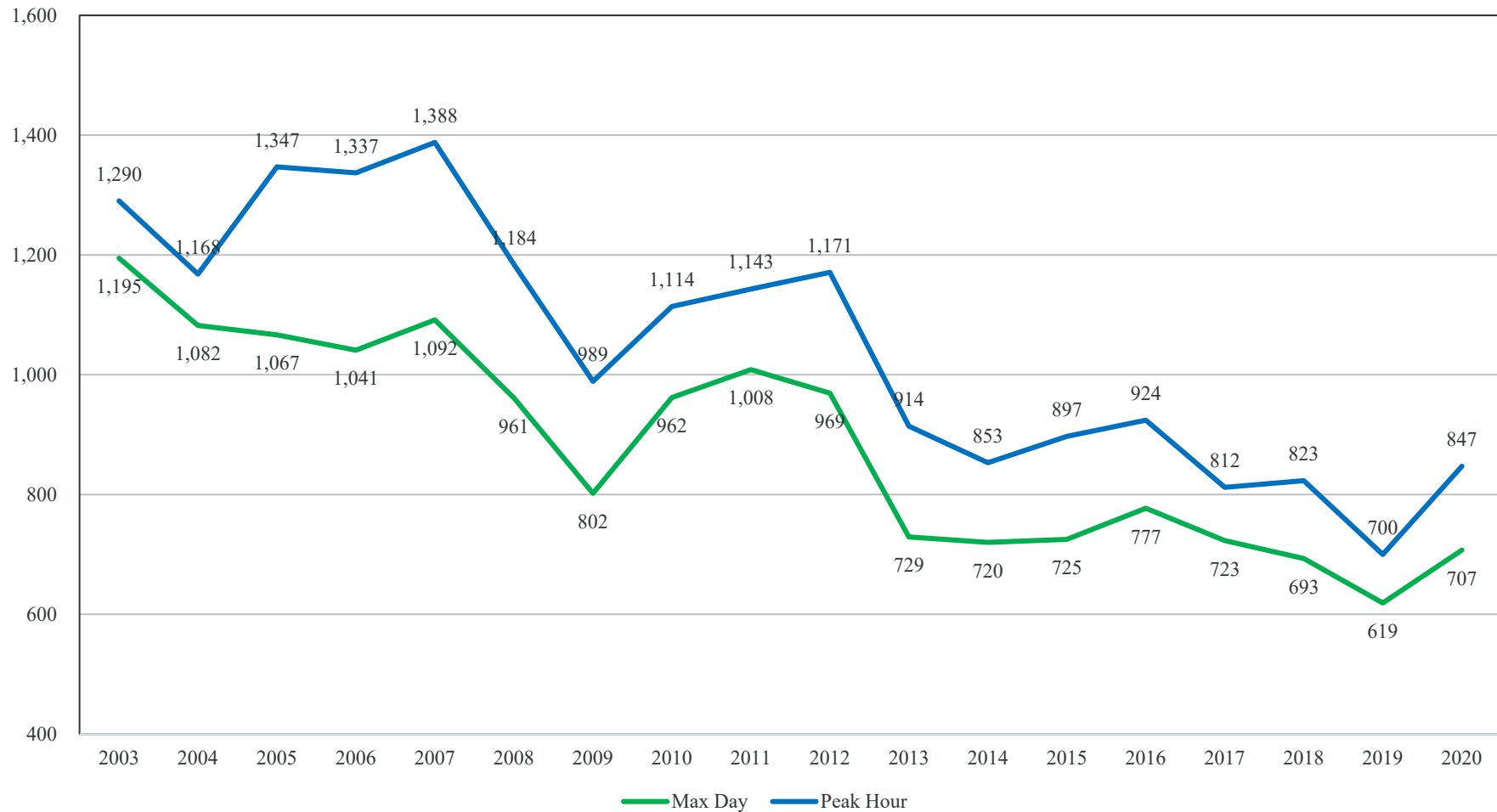


Reported Water Production Observations

	Customer Proxy		System Max Day		Reported Pumpage Days Over . . .				
	Max Day	Peak Hour	Max Day	Peak Hour	600 mgd	700 mgd	800 mgd	900 mgd	1,000 mgd
2003	13	13	1,195	1,290					
2004	2	1	1,082	1,168					
2005	26	26	1,067	1,347					
2006	17	8	1,041	1,337					
2007	16	18	1,092	1,388			96	40	11
2008	3	2	961	1,184			23	5	-
2009	-	1	802	989			1	-	-
2010	1	-	962	1,114			4	2	-
2011	-	4	1,008	1,143			22	6	1
2012	4	8	969	1,171			32	8	-
2013	-	1	729	914	47	7	-	-	-
2014	1	1	720	853	23	2	-	-	-
2015	NA	NA	725	897	18	2	-	-	-
2016	NA	NA	777	924	70	30	-	-	-
2017	NA	NA	723	812	38	4	-	-	-
2018	NA	NA	693	823	20	-	-	-	-
2019	NA	NA	619	700	6	-	-	-	-
2020	NA	NA	707	847	19	2	-	-	-
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	83	83	1,195	1,388			178	61	12

Reported Water Production Observations

Millions of gallons per day (mgd)



Projected FY 2022 TOTAL Master Metered Sales Volumes

- Compared to FY 2021 projections ...
 - ✓ 0.7% lower for Base months;
 - ✓ 1.0% higher for Peak months;
 - ✓ 0.3% higher overall
- Compared to FY 2020 actual sales ...
 - ✓ 2.2% lower for Base months;
 - ✓ 4.0% lower for Peak months;
 - ✓ 3.2% lower overall

Projected FY 2021 NMM Wholesale Sales Proxies * *Pending Final AFY 2020 Data*

- Reflects Retail sales, adjusted to reflect estimated local non revenue water as determined by UoS Study
- 2.9% **lower** Compared to FY 2021 projections
- 0.9% **higher** Compared to FY 2020 actual amounts

Non Master Metered UoS Update

November 19, 2020



NMM UoS Update

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- Retail sales projections calculated based on same approach as wholesale sales projections
- Converted to wholesale sales proxies based on UoS Study
- No changes are planned for core assumptions
- Peaking factors used to establish max day and peak hour demands

✓ *No Change in Peaking Factors for FY 2022*

** Note – Final Projections may be slightly different for NMM group pending review of September billing data*

Other Units of Service

November 19, 2020



Water Model Contract Updates

Handout Pages 12-14

- 5 Member Partners have met with GLWA to review contract demands this year
 - ✓ *No significant changes (if any) in contract demands will impact other member partners*
- GLWA continues to meet with Grosse Pointe Park and Greenwood Township (DTE facility) to discuss possible model contracts
 - ✓ *If model contracts are approved prior to January 8, 2021, resulting contract demands will be included for FY 2022 charges*
 - ✓ *Greenwood Township demands have been adjusted based on Summer 2020 data*

Other Units of Service

Handout Pages 15-17

- The cost allocation model also incorporates each Customer's distance, elevation, and meter inventory
- The meter inventory impacts the calculation of distance and elevation, since it impacts the measurement used to establish the capacity weighted "point of commerce"
- The Preliminary FY 2022 distance, elevation, and meter inventory reflects ongoing updates to master meter database to reflect meter replacements and updated survey information
 - ✓ *Changes to 17 Member Partner "Other" Units*
 - ✓ *Not expected to result in material changes*

Other Units of Service – Methodology Review

Handout Pages 15-17

- The current Charges Methodology allocates “delivery” costs of service to Customers in part based on distance and elevation factors
- Each Customer’s “point of commerce” establishes their baseline;
 - ✓ *Distance factor = average distance between point of commerce and the 5 WTPs*
 - ✓ *Elevation factor = difference between point of commerce elevation and average elevation of the 5 WTPs*

Other Units of Service – Methodology Review

- GLWA is undertaking a methodology review
 - ✓ *In part due to pending repurposing of Northeast WTP*
- Methodology review tentatively scheduled to begin in mid Calendar 2021
 - ✓ *Will NOT impact FY 2022 Charges*
 - ✓ *MAY impact FY 2023 Charges*



GLWA
Great Lakes Water Authority

