



IDOT HMA Technical Briefs

BRIAN PFEIFER, P.E., BUREAU CHIEF OF MATERIALS, IDOT

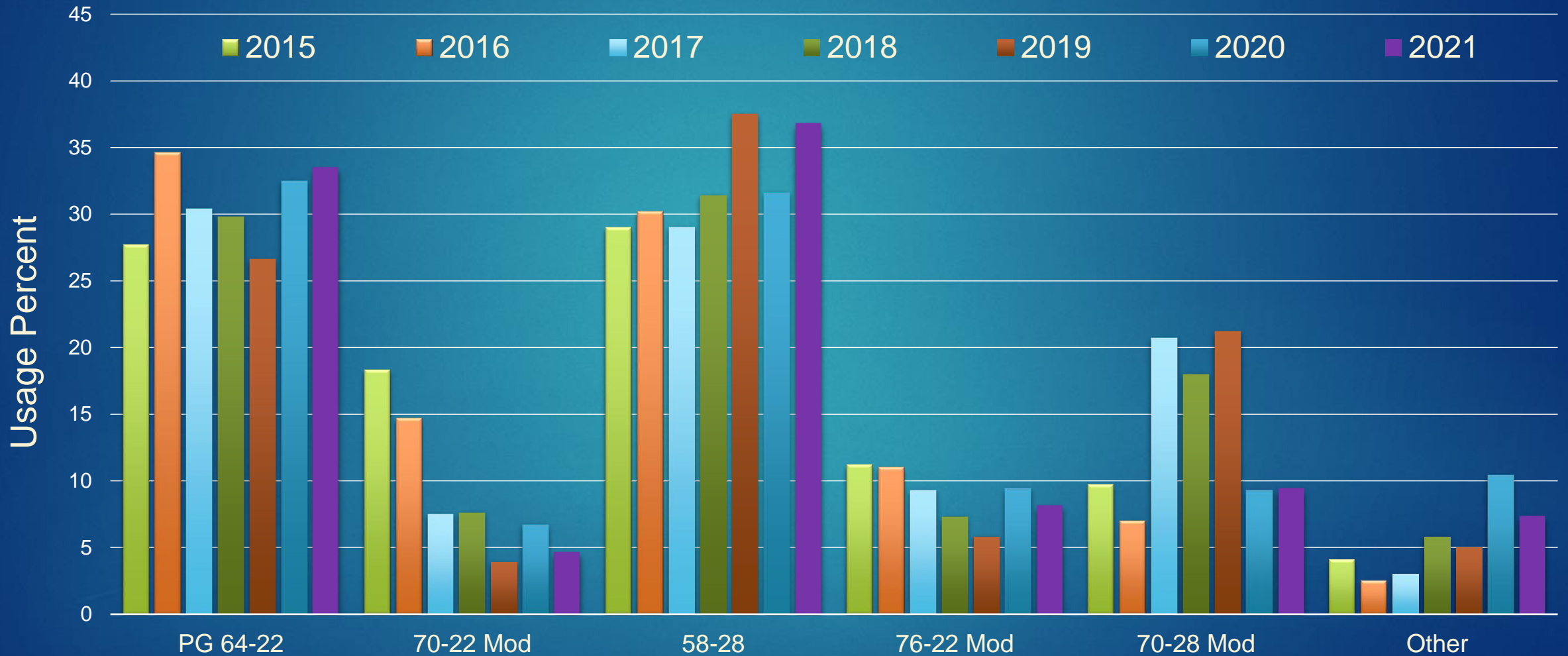
IAPA 85TH ANNUAL CONFERENCE

MARCH 14TH, 2022

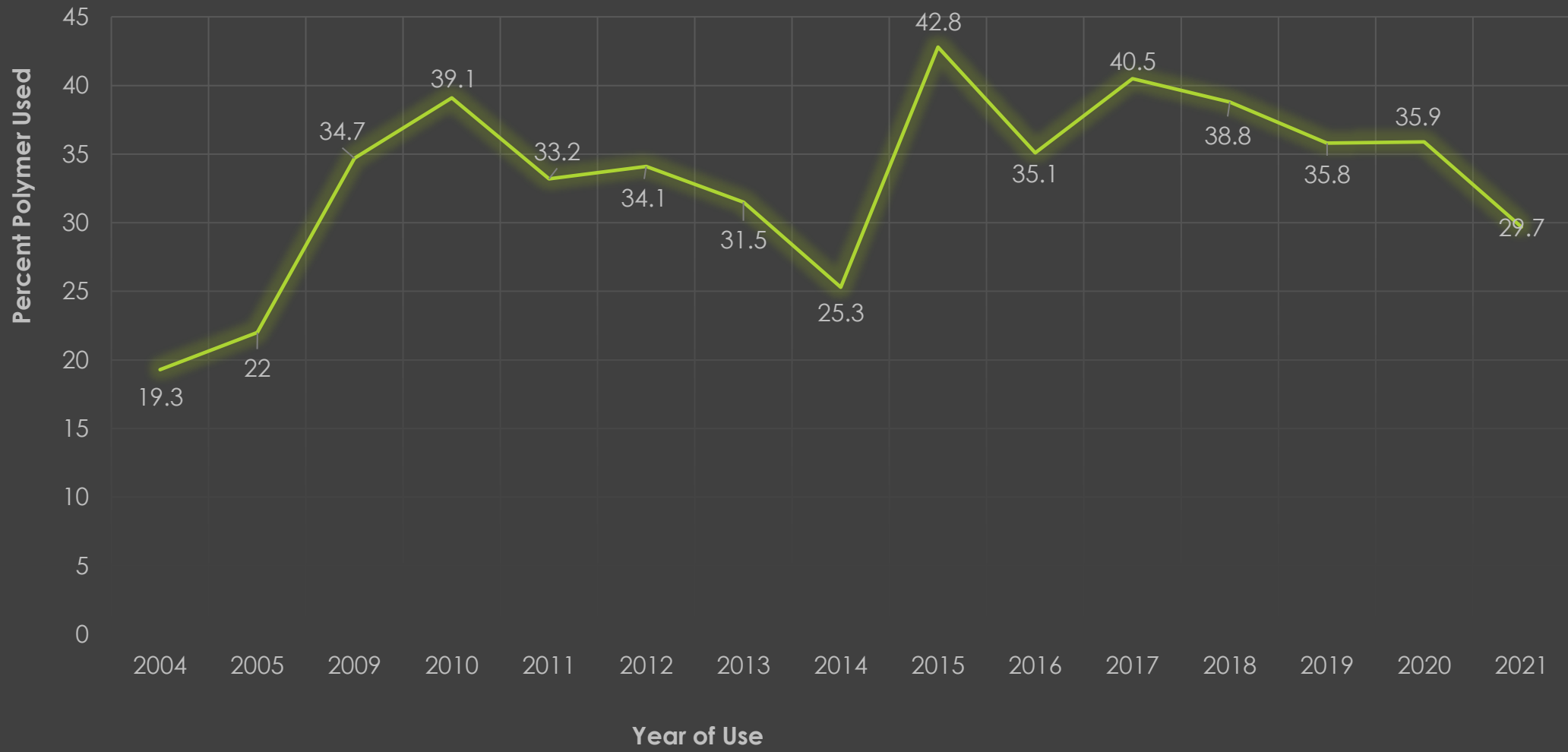
IDOT Hot-Mix Asphalt Trends

- ▶ 2022 projected: 5.1M tons (Nov-June lettings, not incl. carry-over work)
- ▶ 2021 projected: 3.8M tons
- ▶ 2021 actual: 4.7M tons
- ▶ 2020 projected: 4.2M tons
- ▶ 2020 actual: 6.1M tons
- ▶ 2019: 4.7M tons
- ▶ 2018: 3.2M tons
- ▶ 2017: 4.7M tons

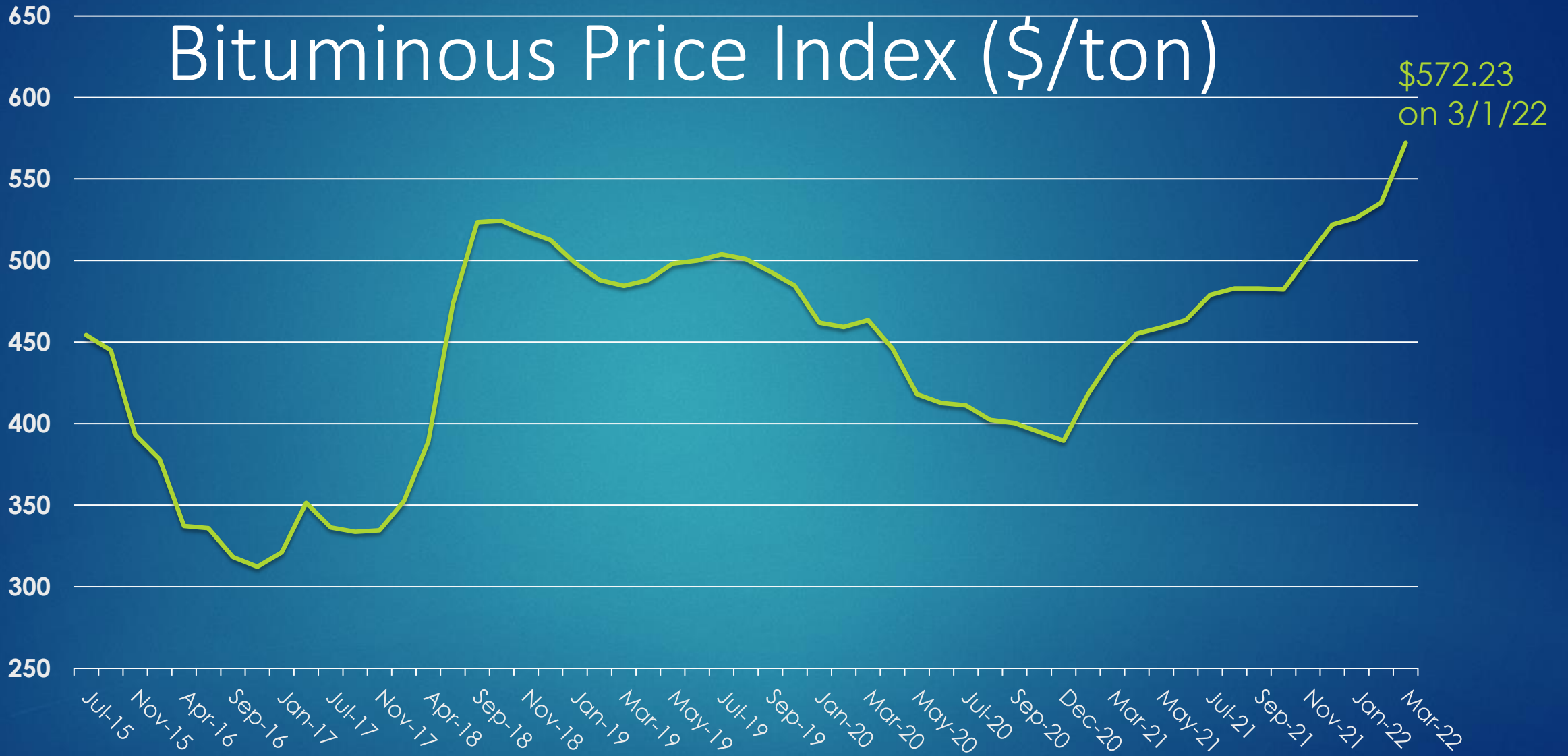
Binder Grade Usage



Percent Polymer Used vs. Time



Bituminous Price Index (\$/ton)



Asphalt Binder Specifications

- ▶ Criteria for Softener-Modified (SM) and Unmodified Binders Based on ICT Study
- ▶ BDE Special Provision for January 2023
- ▶ Ongoing Testing to Prepare (ΔT_c and ΔG)
 - ▶ CBM testing all paving grades in 2022, split samples
- ▶ Industry Meeting in Summer 2022
- ▶ ICT Study – SM/SBS Combination

Lake Land College QMP Training

- ▶ Recertification Program Under Development
 - ▶ 5 years, beginning in Fall 2023
 - ▶ Phase-in Starting with >15 Years, 10-15 Years, etc.
 - ▶ Online On-Demand, Self-Paced Review Sessions
 - ▶ Tests at Highest Level and will include Lower Levels
 - ▶ 5-Day Aggregate & Level I will have Proficiency Tests

Construction & Materials Management System (CMMS)

- ▶ Developing Materials Functionality
- ▶ QMP Package Import: Mix Designs & Test Reports
- ▶ Pilots after QMP Import function developed

HMA Incentives, Disincentives, and Credits for Non-Compliant Material

- ▶ Data from Report Developed by Bureau of Construction
- ▶ Requested by IAPA
- ▶ Summary of Totals from 2015-2021
- ▶ Does not include Remove & Replace (~2% of OAL)

	2021	2020	2019	2018	2017	2016	2015
PFP disincentives	-\$464,826	-\$109,113	-\$313,068	-\$645,878	-\$638,345	-\$1,462,489	-\$1,196,485
QCP disincentives	-\$313,205	-\$192,970	-\$328,757	-\$255,672	-\$394,407	-\$533,526	-\$513,311
PFP non-comp credits	-\$310,898	-\$297,828	-\$61,775	-\$245,339	-\$369,385	-\$188,251	-\$33,150
QCP non-comp credits	-\$365,758	-\$553,014	-\$762,480	-\$234,636	-\$88,557	-\$349,596	-\$348,515
PFP dispute testing	-\$10,900	-\$900	-\$1,500	-\$9,200	-\$2,900	-\$4,200	-\$12,000
Total	-\$1,465,587	-\$1,153,826	-\$1,467,579	-\$1,390,725	-\$1,493,595	-\$2,538,063	-\$2,103,462
All HMA pay items	\$368,351,575	\$486,894,663	\$322,445,089	\$209,045,775	\$268,755,477	\$294,289,563	\$444,547,434
As % of all pay items	0.40%	0.24%	0.46%	0.67%	0.56%	0.86%	0.47%

HMA disincentives and credits

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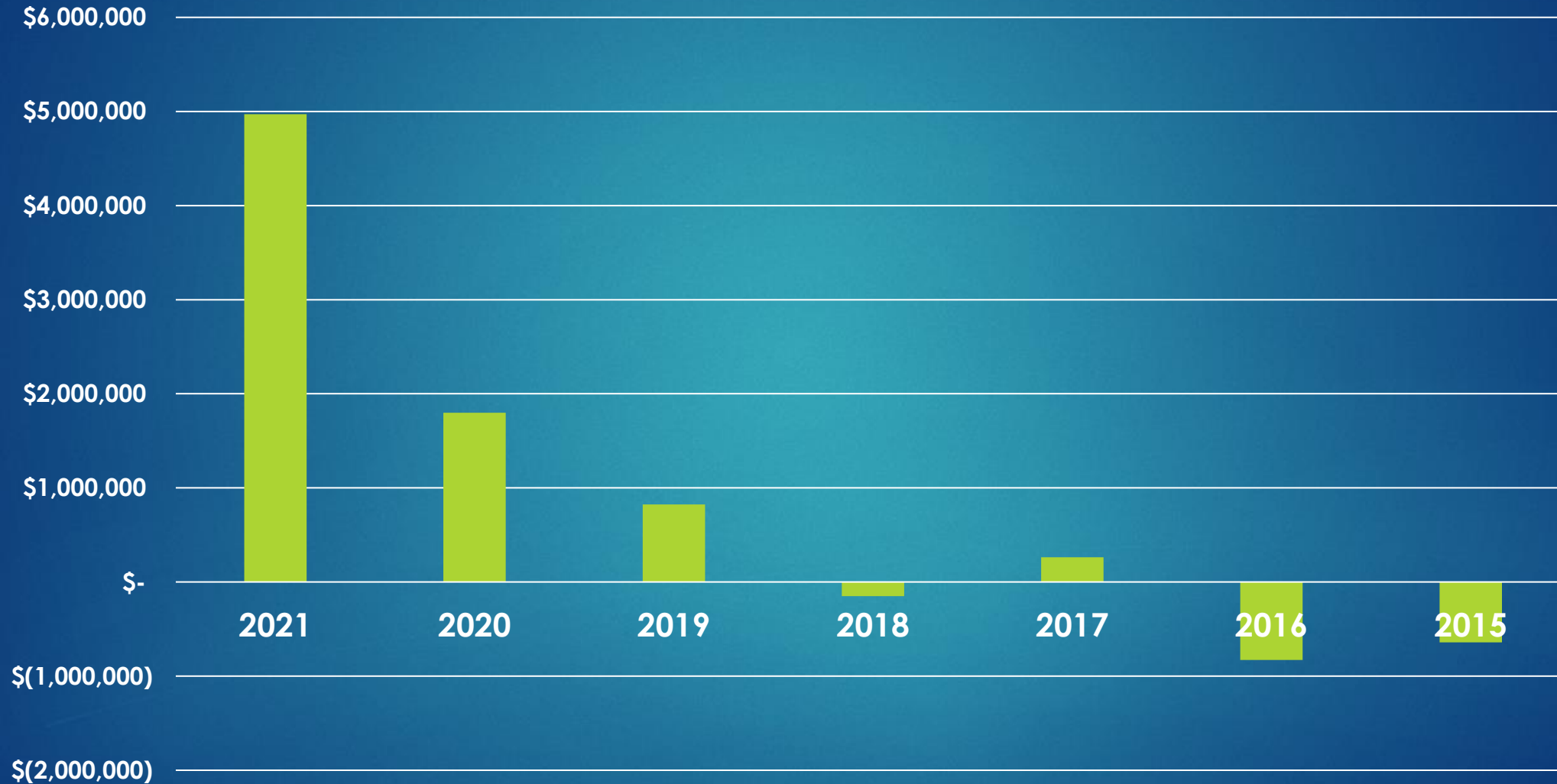
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HMA disincentives and credits

	2021	2020	2019	2018	2017	2016	2015
PFP incentives	\$5,446,794	\$1,908,994	\$1,140,171	\$506,748	\$904,075	\$638,692	\$567,173
PFP disincentives	-\$464,826	-\$109,113	-\$313,068	-\$645,878	-\$638,345	-\$1,462,489	-\$1,196,485
PFP non-comp credits	-\$310,898	-\$297,828	-\$61,775	-\$245,339	-\$369,385	-\$188,251	-\$33,150
PFP dispute testing	-\$10,900	-\$900	-\$1,500	-\$9,200	-\$2,900	-\$4,200	-\$12,000
PFP net	\$4,971,068	\$1,798,981	\$825,603	\$ (148,330)	\$262,829	\$ (827,998)	\$ (641,312)

PFP incentives, disincentives, and credits

PFP Net (Incentives – Disincentives/Credits)

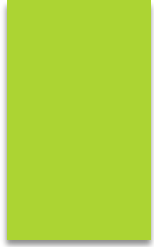


	2021	2020	2019	2018	2017	2016	2015
QCP disincentives	-\$313,205	-\$192,970	-\$328,757	-\$255,672	-\$394,407	-\$533,526	-\$513,311
QCP non-comp credits	-\$365,758	-\$553,014	-\$762,480	-\$234,636	-\$88,557	-\$349,596	-\$348,515
Total	-\$678,963	-\$745,984	-\$1,091,237	-\$490,308	-\$482,964	-\$883,123	-\$861,826
As % of all pay items	0.18%	0.15%	0.34%	0.23%	0.18%	0.30%	0.19%

QCP disincentives and credits

QCP Total Disincentives and Credits





	2021	2020	2019	2018	2017	2016	2015
Total non-compliant	-\$676,656	-\$850,843	-\$824,255	-\$479,975	-\$457,942	-\$537,847	-\$381,665
As % of all pay items	0.18%	0.17%	0.26%	0.23%	0.17%	0.18%	0.09%

Total Non-Compliant Credits

Some Things to Acknowledge...



- ▶ By no means easy
- ▶ QC Managers have a very difficult job
- ▶ Always open to discuss and make improvements
- ▶ Collaboration is critical



Thank You!

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