



IDOT HMA Technical Briefs

Brian Pfeifer, Bureau Chief of Materials

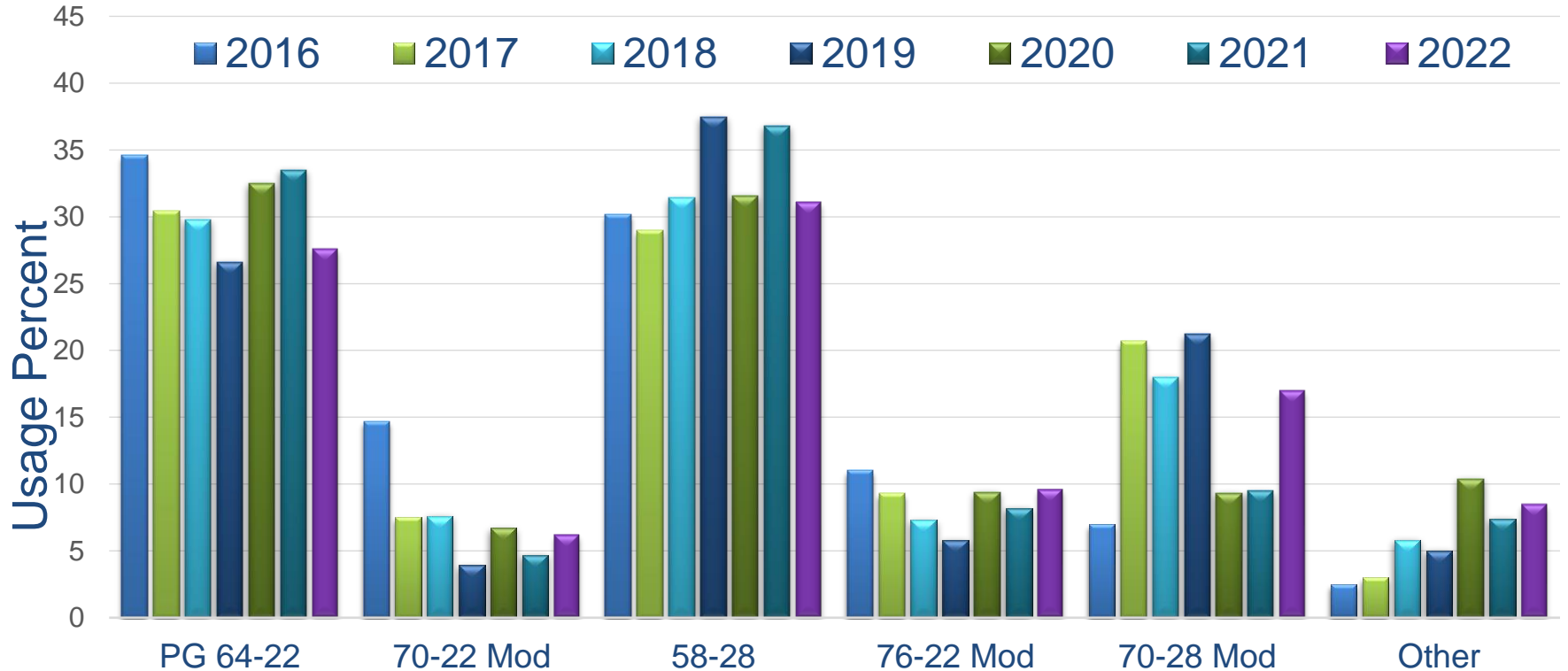


HMA Trends at IDOT

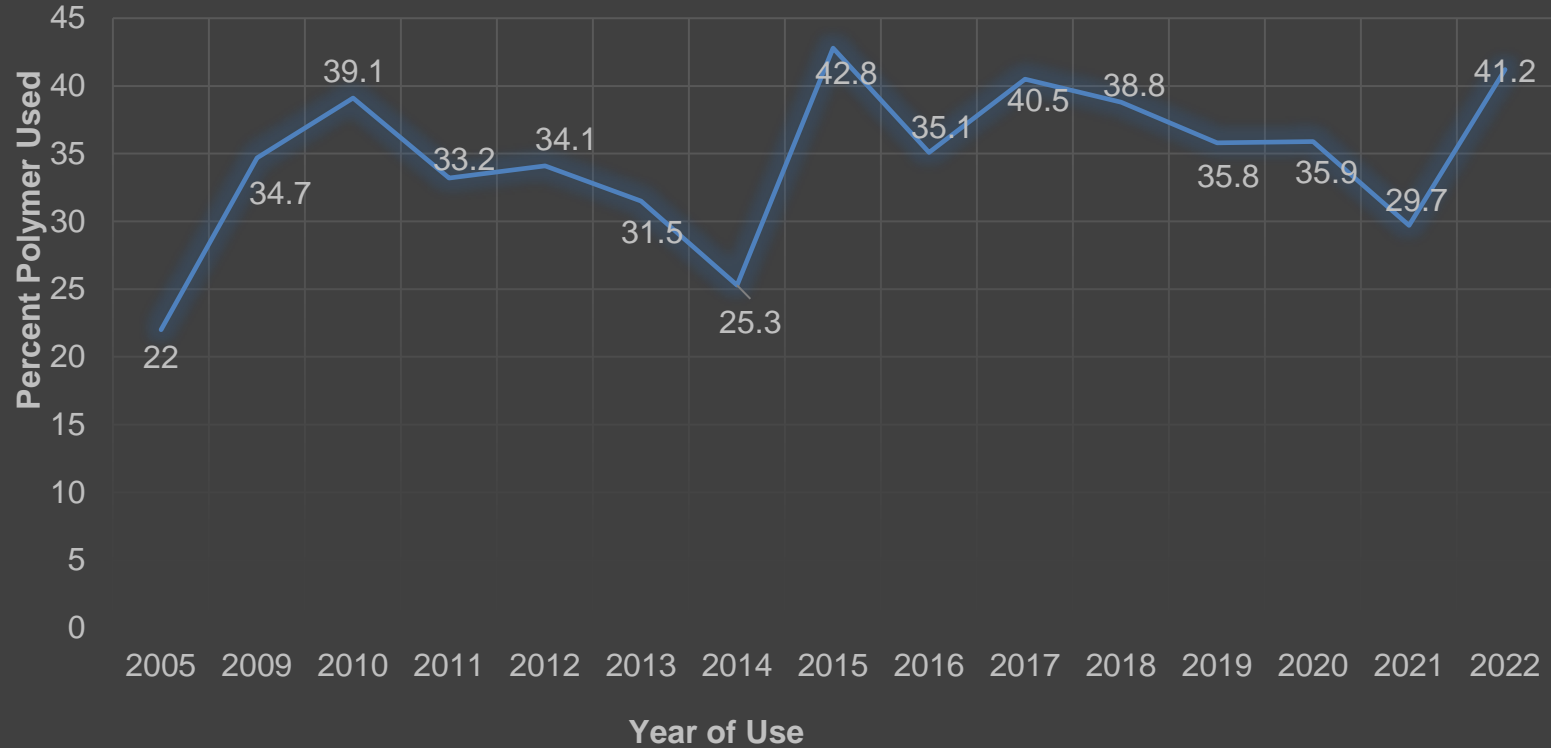
- 2017: 4.7M tons
- 2018: 3.2M tons
- 2019: 4.7M tons
- 2020: 6.6M tons
- 2021: 5.1M tons
- 2022: 4.7M tons as of Feb
 - Estimated 5.1M after additional data
- 2023 projected: 3.8M tons
 - Nov-June lettings, no carry-over



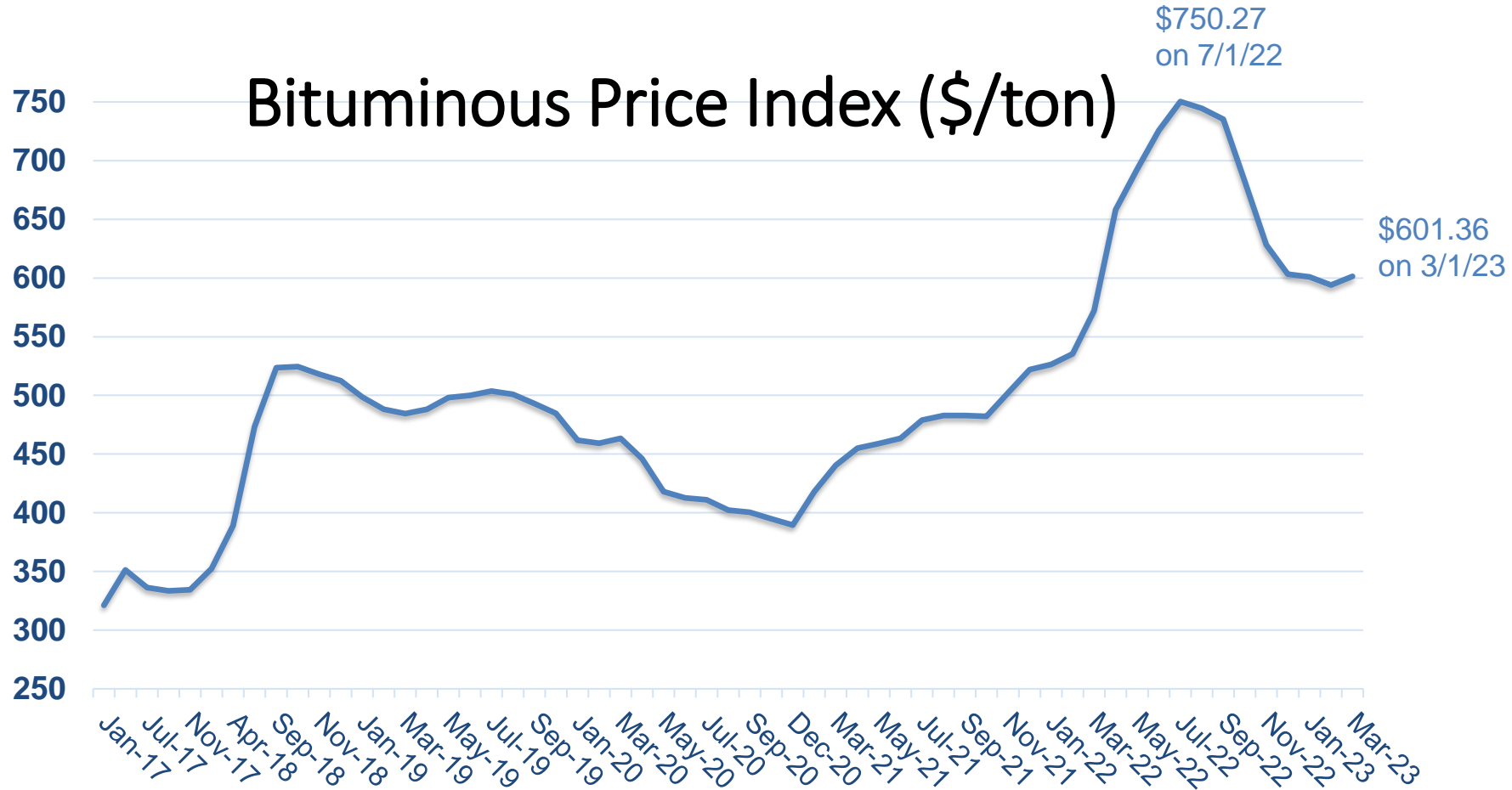
Binder Grade Usage



Percent Polymer Used vs. Time



Bituminous Price Index (\$/ton)



Construction & Materials Management System (CMMS)

- Improved collaboration between Construction and Materials
- QMP Package – web-based solution, interface with CMMS
 - Mix designs and test data
- QMP Package tools – stand-alone, random numbers and pay factor calculations





Incentives, Disincentives & Credits for Non-Compliant Material

- Data from report developed by Bureau of Construction
- Requested by IAPA
- Summary of Totals from 2015-2022
- Does not include Remove & Replace (~2% of OAL)

	2022	2021	2020	2019	2018	2017	2016
PFP disincentives	-\$73,649	-\$464,826	-\$109,113	-\$313,068	-\$645,878	-\$638,345	-\$1,462,489
QCP disincentives	-\$209,129	-\$313,205	-\$192,970	-\$328,757	-\$255,672	-\$394,407	-\$533,526
PFP non-comp credits	-\$107,212	-\$310,898	-\$297,828	-\$61,775	-\$245,339	-\$369,385	-\$188,251
QCP non-comp credits	-\$144,562	-\$365,758	-\$553,014	-\$762,480	-\$234,636	-\$88,557	-\$349,596
PFP dispute testing	-\$1,000	-\$10,900	-\$900	-\$1,500	-\$9,200	-\$2,900	-\$4,200
Total	-\$535,552	-\$1,465,587	-\$1,153,826	-\$1,467,579	-\$1,390,725	-\$1,493,595	-\$2,538,063
All HMA pay items	\$460,900,212	\$368,351,575	\$486,894,663	\$322,445,089	\$209,045,775	\$268,755,477	\$294,289,563
As % of all pay items	0.12%	0.40%	0.24%	0.46%	0.67%	0.56%	0.86%

HMA disincentives and credits

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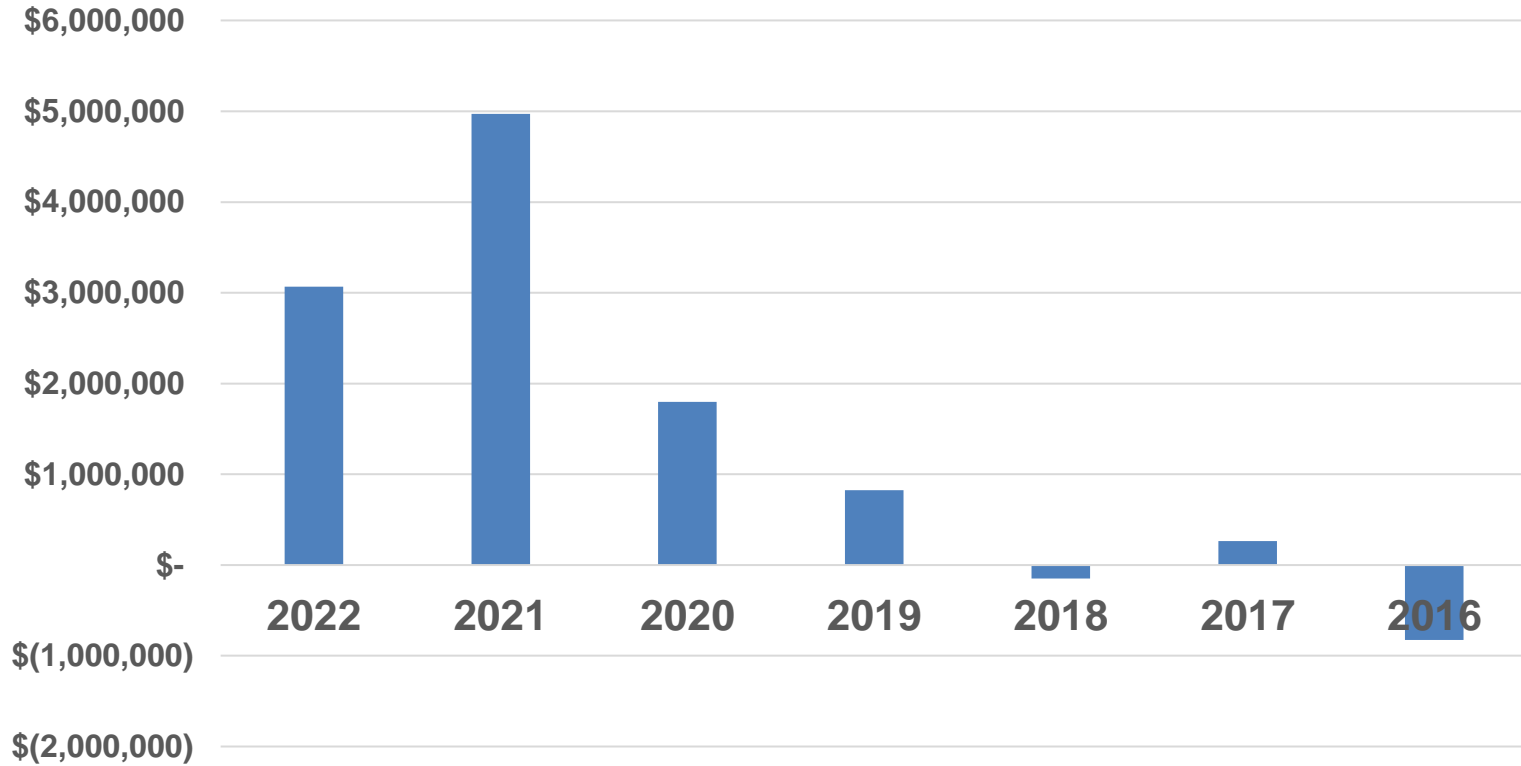
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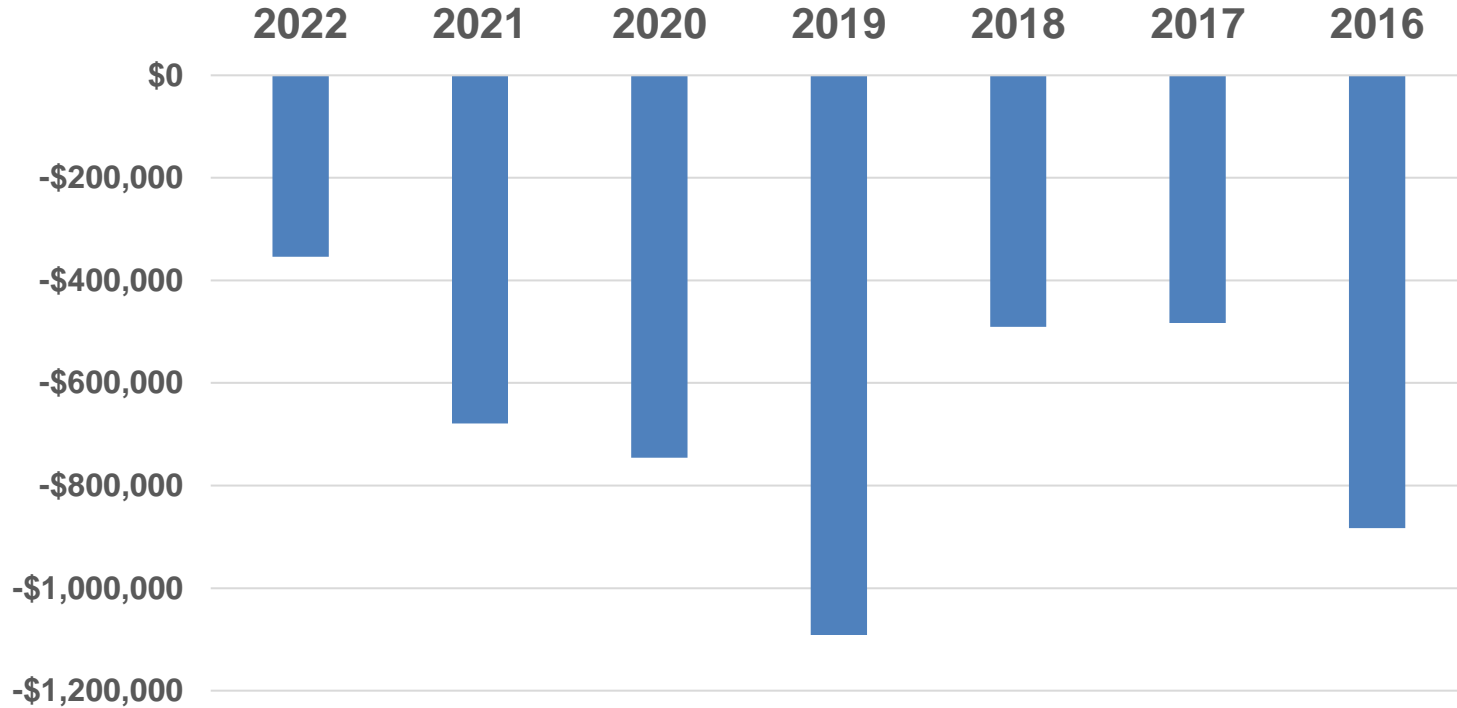
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HMA disincentives and credits

PFP Net (Incentives – Disincentives/Credits)



QCP Total Disincentives and 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



FLS Waterproofing System for Bridge Decks

- FLS and low permeability HMA (easier to achieve higher density with static rolling)
- Prevents ingress of water and chlorides
- Improved wearing surface
- More efficient & cost-effective means of construction than System in 581





FLS Waterproofing System for Bridge Decks

- Good performance after 3 years
- No longer experimental
- Working on BDE Special Provision

Local Agency QC/QA Training

- Live Webex Training Sessions held March 10 & 18, 2022
- Recordings available thru IDOT Technology Transfer (T2) Center
 - <https://idot.illinois.gov/transportation-system/local-transportation-partners/county-engineers-and-local-public-agencies/technology-transfer-center/index>
- Additional training videos to be posted soon:
 - Truck Sampling at HMA Plants
 - HMA Blending & Splitting
 - Random Density Location / Mix Sample Determinations

Quality Management Training Program: *5-Year Recertification*

- Working with Lake Land College and CTL
- Planned for Fall 2023
- Online, self-paced refresher material





QUESTIONS?

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Illinois Department of Transportation