

# Contaminants of Emerging Concern Initiative

## RANKING RESULTS AND PRELIMINARY FY2021 WORKPLAN

June 2020

### Slide 1



### Slide Title

Contaminants of Emerging Concern Initiative: Ranking Results and Preliminary FY2021 Workplan

### Slide Text and Image Description

Department of Health logo and Clean Water, Land and Legacy Logo

Health Risk Assessment Unit

### Summary

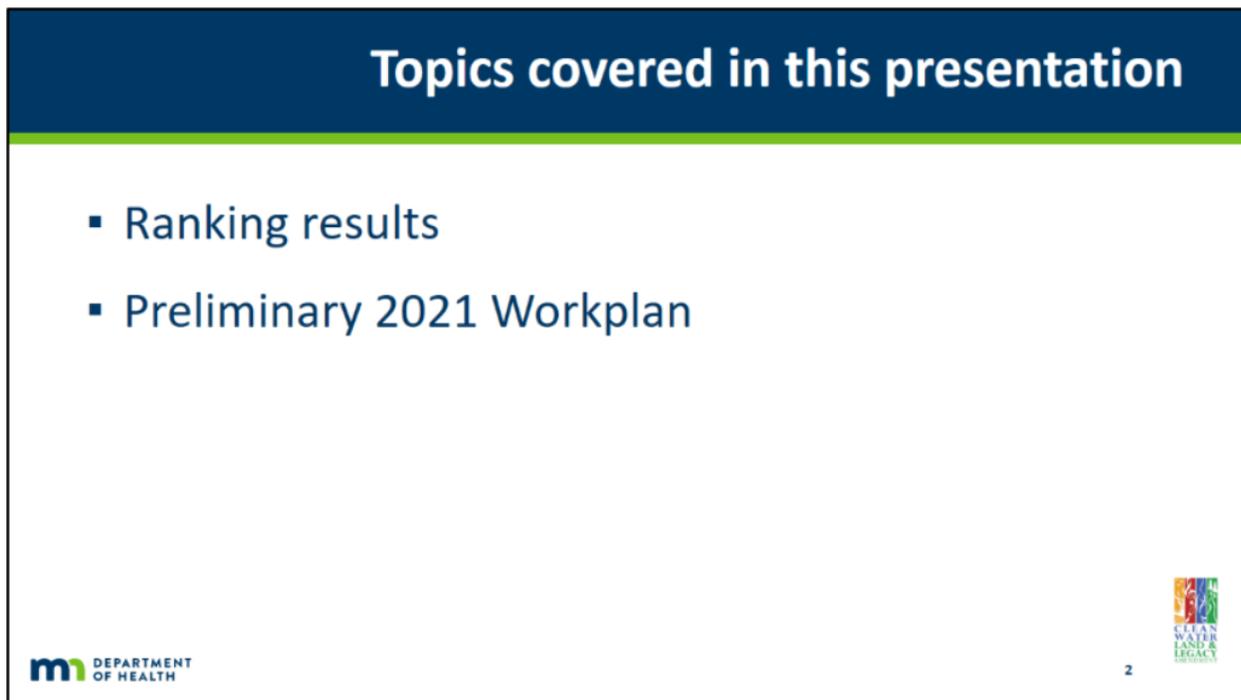
Welcome to the Minnesota Department of Health's Contaminants of Emerging Concern Initiative's annual workplan stakeholder discussion.

Unfortunately, the Health Risk Assessment Unit was unable to host the June 3rd face-to-face meeting, which had to be cancelled. We are glad that you have been able to join us for this on-line virtual presentation.

This presentation is the second of a two part series and provides the results of this years' screening and ranking as well as a preliminary workplan for the next fiscal year. The first presentation of the series provided an overview of the process for nominating, screening and ranking nominated contaminants.

Throughout the presentation, the abbreviation MDH will be used for the Minnesota Department of Health, and CEC will be used for Contaminants of Emerging Concern.

## Slide 2



The slide features a dark blue header with the title "Topics covered in this presentation" in white. Below the header is a white area containing two bullet points: "Ranking results" and "Preliminary 2021 Workplan". In the bottom left corner, there is a logo for the Minnesota Department of Health (MDH) with the text "mi DEPARTMENT OF HEALTH". In the bottom right corner, there is a logo for "CLEAN WATER LAND & LEGACY" with the text "OUR SOURCE" below it. A small number "2" is located in the bottom right corner of the slide content area.

### Slide Title

Topics covered in this presentation

### Slide Text

- Ranking results
- Preliminary 2021 Workplan

### Narrative

This presentation will cover two main topics:

First - the results of the ranking of screened nominated contaminants; and

Second - MDH's preliminary list of candidates for the 2021 workplan.

Reference to various web-based resources will be made throughout the presentation. A list of these references will be provided at the end of the presentation.

## Slide 3



### Slide Title

Ranking of Screened Nominated Contaminants

### Slide Text and Image Description

Game tokens on stacked wooden blocks of various heights

### Narrative

The previous Part 1 presentation outlined 4 steps of the process: Nomination, Eligibility, Screening and Ranking

This slide, showing small building blocks, introduces the section which focuses on the nominations received this year and the results of this year’s ranking of eligible screened contaminants.

## Slide 4

### Eligible Nominations received April, 2019 to March, 2020

Contaminant	CASRN
Androsterone	53-41-8
Colchicine	64-86-8
Fluoxetine	54910-89-3
Oxybenzone	131-57-7
6:2 Fluorotelomer sulfonic acid	425670-75-3
Perfluorohexanoic acid (PFHxA)	307-24-4
Perfluoroheptanoic acid (PFHpA)	375-85-9
Perfluoropentanesulfonate (PFPeS)	175905-36-9
Perfluoropentanoic acid (PFPeA)	2706-90-3
Perfluorononanoic acid (PFNA)	375-95-1
Perfluorodecanoic acid (PFDA)	335-76-2
Perfluorodecanesulfonate (PFDS)	126105-34-8
Perfluorooctanesulfonamide (PFOSA)	754-91-6
Piperonyl butoxide	51-03-6




### Slide Title

Eligible Nominations received April, 2019 to March, 2020

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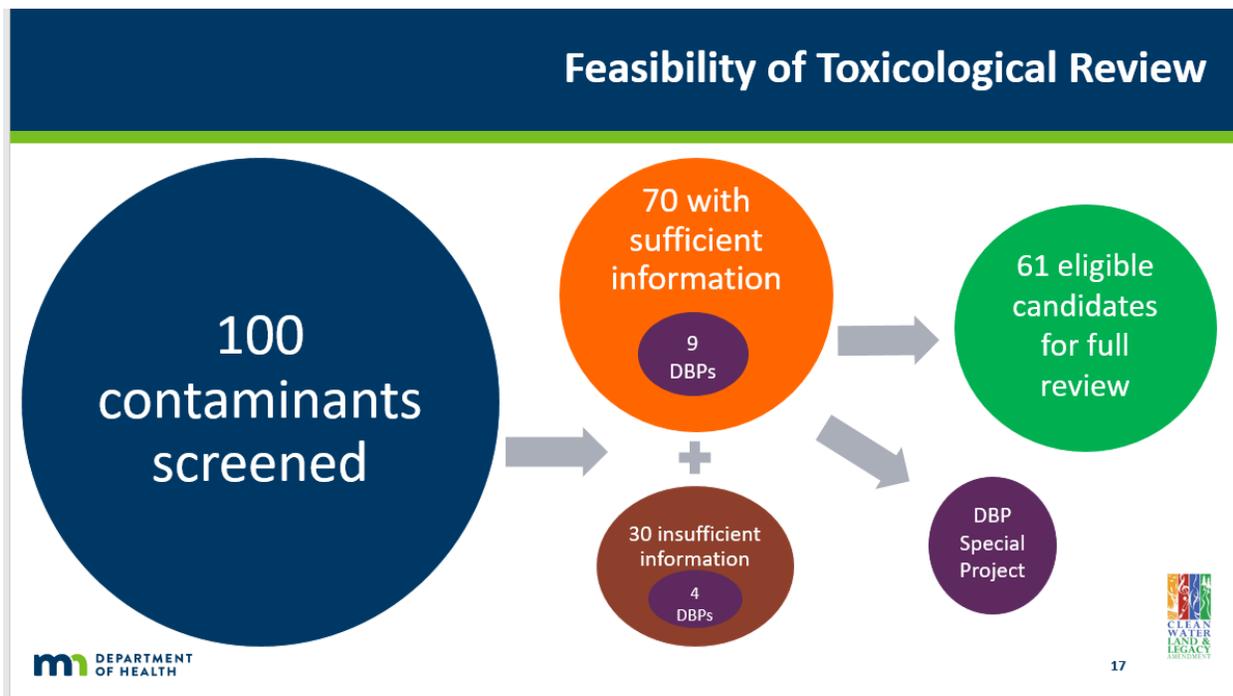
## Narrative

Listed on this slide are the 14 CEC eligible contaminants that were nominated since the ranking for last year's workplan. Two additional nominations were also made, but were determined to be ineligible for the CEC initiative. The two ineligible contaminants were 1,2-Dichloroethene and PFAS

1,2-Dichloroethene has an MDH health-based value and was already under re-evaluation when it was nominated. This re-evaluation has now been completed.

PFAS are a large class of per- and polyfluorinated substances that potentially contains 1,000s of chemicals. This nomination did not contain sufficiently clear contaminant specific identification to be considered eligible for consideration. MDH has reviewed and developed guidance for several individual PFAS chemicals that are prevalent in Minnesota's environment and still considers individual PFAS that are nominated.

## Slide 5



## Slide Title

Feasibility of Toxicological Review

## Slide Text

100 contaminants screened

70 with sufficient information (9 DBPs) + 30 insufficient information (4 DBPs)

DBPs for special review project.

61 eligible candidates for full review

## Narrative

The screening and scoring results for the 14 recently nominated contaminants were added to the existing pool of previously screened nominated contaminants, creating a pool of 100 contaminants for consideration. A complete list of the 100 screened contaminants and their preliminary ranking was posted in the updated Nomination Status Table earlier in June (2020). A link to the Nomination Status Table will be provided at the end of this presentation.

30 of the 100 contaminants, including 4 disinfection byproducts, were considered to have insufficient information for a full review. The remaining 70 screened contaminants were considered to have sufficient information for an in-depth toxicological review. Nine of the 70 are disinfection byproducts (DBPs).

Exposure to DBPs result from the necessary health protective process of disinfection. You may recall from last year that because the standard risk assessment process focuses only on health risks and does not consider health benefits, the DBPs were removed as candidates for the standard full review workplan. However, these DBPs, will be evaluated through a Special Project. Details of this project are provided on the DBP Special Project webpage, and a link to this page will be provided at the end of the presentation.

Removal of the DBPs left 61 screened chemicals with sufficient information for a full review. It is this group of 61 that were considered eligible candidates for the 2021 workplan and that underwent ranking.

## Slide 6

### Contaminants Not Feasible for Full Review

Androsterone*	Iodoacetamide	Nonylphenol monoethoxylate
Bromoacetic acid	Iodoacetic acid	4-Nonylphenol triethoxycarboxylate
Chloroanil	Iodoform	Perfluorodecanesulfonate (PFDS)*
Colchicine*	Iopamidol	Perfluoroheptanoic acid (PFHpA)*
Colloidal silver	Lidocaine	Perfluorooctanesulfonamide (PFOSA)*
Cotinine	Meprobromate	Perfluoropentanesulfonate (PFPeS)*
Dichloriodomethane	Nanosilver	Perfluoropentanoic acid (PFPeA)*
Estrone	Nodularin	Polydiallyl dimethyl ammonium chloride
6:2 Fluorotelomer sulfonic acid*	Nonylphenol diethoxylate	Skatol
Germanium	4-Nonylphenol diethoxycarboxylate	Tribromoacetic acid

\*April 2019-March 2020 nominations  
Contaminants are determined to be not feasible for full review when toxicity data are either not available or extremely limited.




## Slide Title

Contaminants Not Feasible for Full Review

## Slide Text

Androsterone\*  
 Bromoacetic acid  
 Chloroanil  
 Colchicine\*  
 Colloidal silver

Cotinine  
Dichloriodomethane  
Estrone  
6:2 Fluorotelomer sulfonic acid\*  
Germanium  
Iodoacetamide  
Iodoacetic acid  
Iodoform  
Iopamidol  
Lidocaine  
Meprobromate  
Nanosilver  
Nodularin  
Nonylphenol diethoxylate  
4-Nonylphenol diethoxycarboxylate  
Nonylphenol monoethoxylate  
4-Nonylphenol triethoxycarboxylate  
Perfluorodecanesulfonate (PFDS)\*  
Perfluoroheptanoic acid (PFHpA)\*  
Perfluorooctanesulfonamide (PFOSA)\*  
Perfluoropentanesulfonate (PFPeS)\*  
Perfluoropentanoic acid (PFPeA)\*  
Polydiallyl dimethyl ammonium chloride  
Skatol  
Tribromoacetic acid

\*April 2019-March 2020 nominations

Contaminants are determined to be not feasible for full review when toxicity data are either not available or extremely limited.

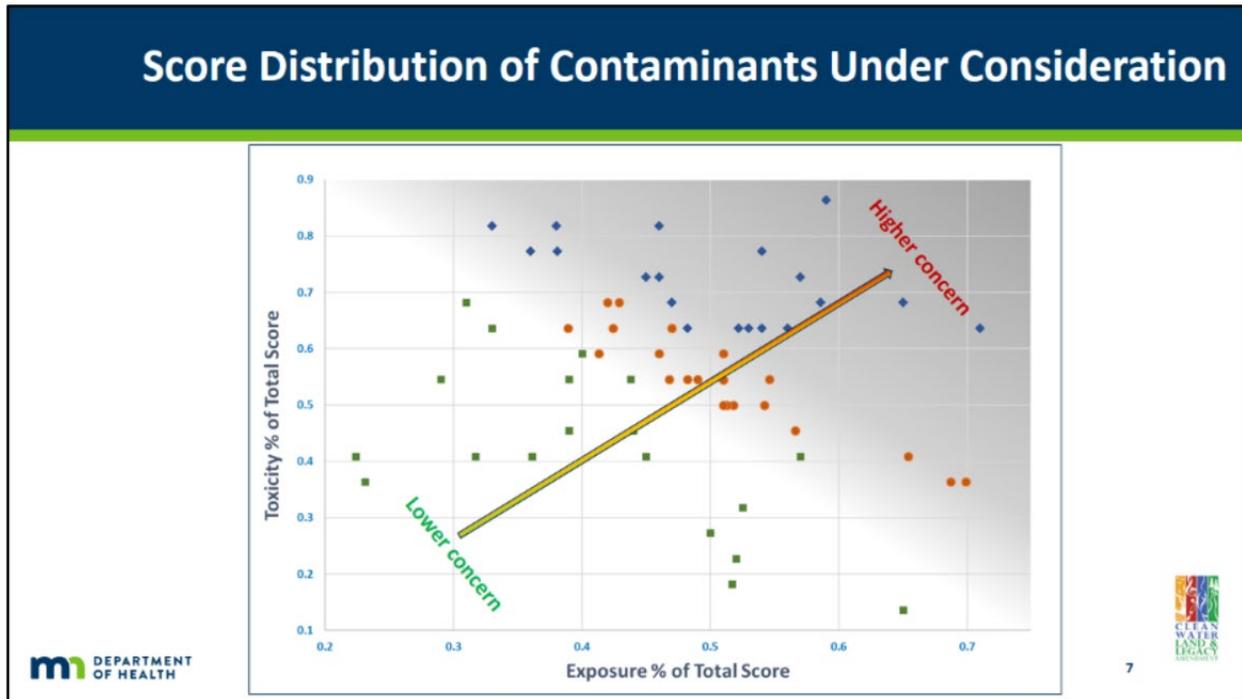
## Narrative

The 30 nominated contaminants that were considered to have insufficient information for a full review and guidance development are presented in this slide.

8 of the 30 (denoted with an asterisk) are contaminants that were nominated just this past fiscal year:

Androsterone is a steroid hormone, Colchicine is a pharmaceutical used to treat gout, and the remaining 6 were PFAS chemicals.

## Slide 7



### Slide Title

Score Distribution of Contaminants Under Consideration

### Slide Text and Image Description

Image: Graph with Exposure percent of Total Score on the x-axis and Toxicity % of Total Score on the y-axis. Data points from the 61 eligible screened nominated contaminants are plotted on the graph. There is a loose cluster near the center of the graph, sloping downward from left to right, and other data points radiating outward. Lower left side is of lower concern and upper right side is of higher concern.

No slide text.

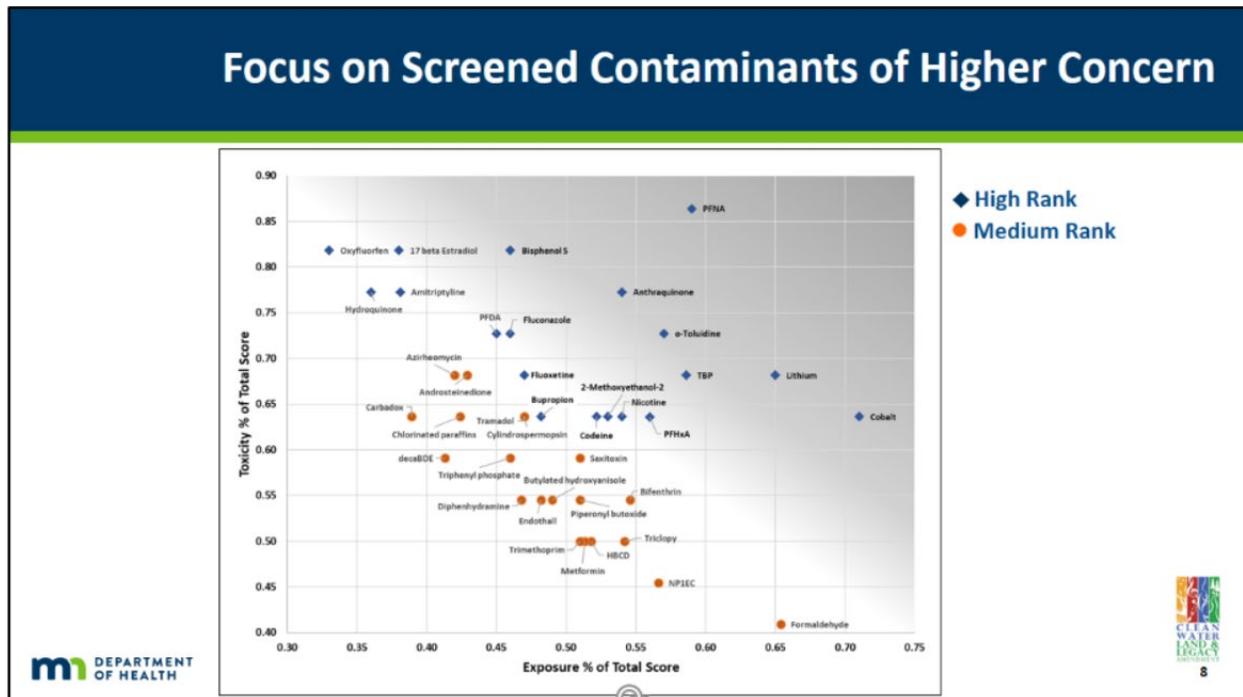
### Narrative

The distribution of the toxicity and exposure scores of the 61 contaminants considered eligible for the 2021 workplan are shown in this slide. The Y-axis is the toxicity score as a percentage of the maximum total score and the X-axis is the exposure score as a percentage of the maximum total score. Data point for chemicals in the lower left quadrant are of lower concern and those in the upper right quadrant are of higher concern. The blue triangles represent those at higher concern. The orange circles represent those at medium concern and the green squares represent those of lower concern.

Please remember this ranking is to prioritize the list of eligible contaminants relative to each other.

A complete list of the chemicals and their rank category is provided in Table 1 of the Nominated Contaminant Status Table document.

## Slide 8



## Slide Title

Focus on Screened Contaminants of Higher Concern

## Slide Text and Image Description

Image: Graph with Exposure percent of Total Score on the x-axis and Toxicity % of Total Score on the y-axis. Data points from the screened nominated contaminants in the medium and high categories are plotted and labeled on the graph. Along an invisible line sloping downward from the top left to the bottom right of the graph in the center of the graph, high rank chemical are to the right and low rank chemicals are to the left.

No slide text.

## Narrative

This is the same figure but with the medium and higher concern area magnified in size. The data points for each contaminant in the medium or high relative concern category are identified by name.

## Slide 9



### Slide Title

Preliminary 2021 Chemical Review Workplan

### Slide Text and Image Description

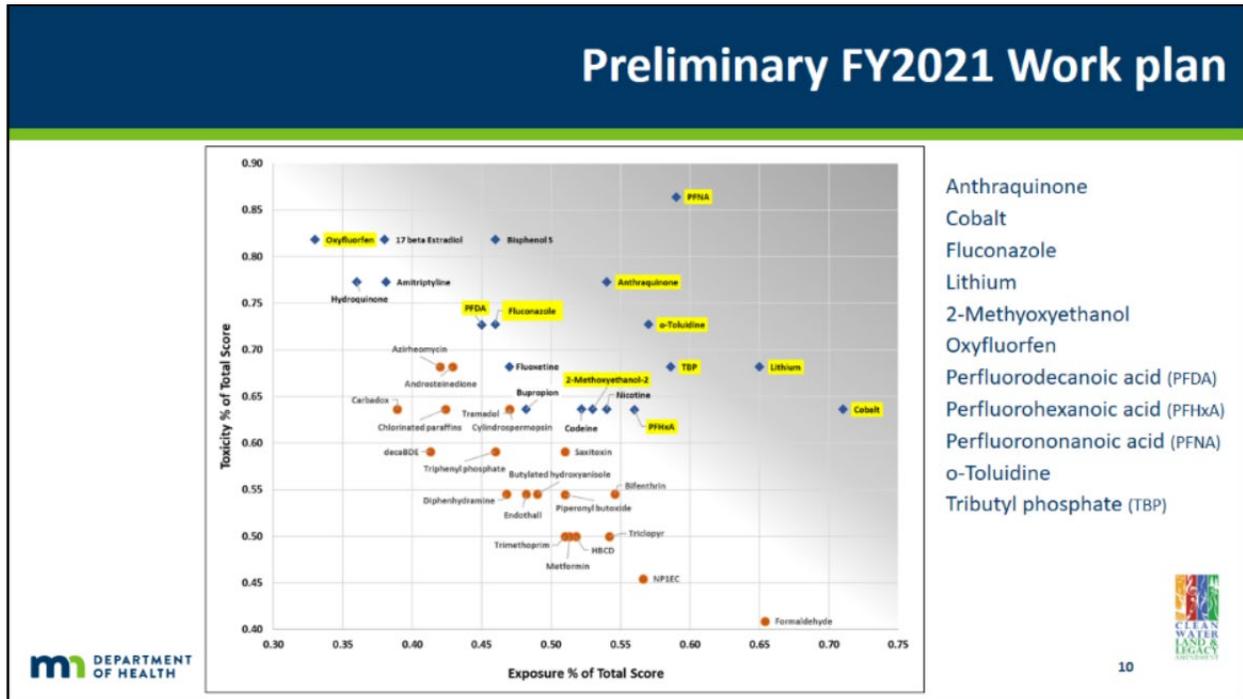
Clear drinking water being poured into a drinking glass.

No slide text

### Narrative

This slide with a glass of water picture starts the section of the presentation in which the CEC Initiative's preliminary workplan for fiscal year 2021 will be presented.

Slide 10



Slide Title

Preliminary FY2021 Workplan

Slide Text and Image Description

Image: Graph with Exposure percent of Total Score on the x-axis and Toxicity % of Total Score on the y-axis. Data points from the screened nominated contaminants in the medium and high categories are plotted and labeled on the graph. Along an invisible line sloping downward from the top left to the bottom right of the graph in the center of the graph, high rank chemical are to the right and low rank chemicals are to the left. The contaminants preliminarily identified by MDH for the 2021 workplan highlighted in yellow and listed to the right of the graph.

Slide Text

- Anthraquinone
- Cobalt
- Fluconazole
- Lithium
- 2-Methoxyethanol
- Oxyfluorfen
- Perfluorodecanoic acid (PFDA)

Perfluorohexanoic acid (PFHxA)  
Perfluorononanoic acid (PFNA)  
o-Toluidine  
Tributyl phosphate (TBP)

## Narrative

- This is the same figure in which shows the medium and high relative concern ranking areas. Contaminants proposed by MDH for the preliminary 2021 workplan are highlighted in yellow. The chemicals are also listed on the right side of the graphic.
- The proposed contaminant candidates are:
- Anthraquinone - used in dye manufacturing, goose repellent, and in the paper pulping process
- Cobalt – a naturally occurring element used in alloys, in electroplating and in alternative energy (improves performance of rechargeable batteries)
- Fluconazole – an antifungal agent
- Lithium – a naturally occurring element, used in batteries and as a pharmaceutical
- 2-Methoxyethanol - used as a solvent and in deicing solutions
- Oxyfluorfen – a pesticide
- 3 PFAS compounds – PFNA, PFHxA, and PFDA
- O-Toluidine – a semivolatile chemical used in dyes, manufacturing of some pesticides, an accelerator in several glues, and a reagent in some clinical tests
- Tributyl phosphate – a solvent, anti-foaming agent, and plasticizer

## Slide 11



### Slide Title

Stakeholder Feedback and Input

### Slide Text and Image Description

Image: Felt tip pen checking checkboxes

No slide text

### Narrative

This proposed workplan is preliminary. As indicated in this slide showing a series of check-boxes

Stakeholder feedback and input is the final step in developing the workplan that will guide MDH's chemical review efforts over the next fiscal year. The goal of the CEC Initiative is to complete 10 full toxicological reviews every two years. It is unlikely that all chemicals on the 2021 workplan will be reviewed in the next fiscal year. Those that are not reviewed remain eligible for future review.

Please be aware that MDH may review a contaminant not on the workplan should an unforeseen need arise (e.g., a previously unknown contaminant is discovered in a drinking water supply).

## Slide 12

### Informal Comment Period

- Provide comments, questions, or feedback on
  - The provided materials and information
  - The nomination, screening, & ranking process
  - Contaminants identified as eligible for full review
  - Contaminants identified in the preliminary workplan

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### Slide Title

Informal Comment Period

### Slide Text

Provide comments, questions, or feedback on

- The provided materials and information
- The nomination, screening, & ranking process
- Contaminants identified as eligible for full review
- Contaminants identified in the preliminary workplan

### Narrative

Stakeholders are encouraged to make suggestions for improving:

- the type and format of materials and information provided, and
- the nomination, screening and ranking process

Stakeholders are encouraged to provide feedback on the need and usefulness of guidance development for the contaminants identified as eligible for full review and, specifically those identified in the preliminary workplan.

## Slide 13

**End of Informal Comment Period – July 31, 2020**

- [health.risk@state.mn.us](mailto:health.risk@state.mn.us)
  - Provide comments and feedback
  - Ask clarifying questions or request a virtual meeting prior to submission of comments

DEPARTMENT OF HEALTH

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CLEAN WATER LANDS LEGACY

### Slide Title

End of Informal Comment Period – July 31, 2020

### Slide Text

[health.risk@state.mn.us](mailto:health.risk@state.mn.us)

- Provide comments and feedback
- Ask clarifying questions or request a virtual meeting prior to submission of comments
- Contaminants identified in the preliminary workplan

### Narrative

Many MDH CEC Initiative staff have been reassigned to work full or part time in COVID response roles that have taken priority. Therefore, a specific staff contact is not being provided.

The preferred method for submitting informal comments is via email to [health.risk@state.mn.us](mailto:health.risk@state.mn.us)

Staff are happy to answer clarifying questions or to discuss issues. Please use the [health.risk@state.mn.us](mailto:health.risk@state.mn.us) email address to ask questions or request to set up a meeting as well as to provide written comments during the informal comment period.

Informal comments should be submitted by Friday, July 31<sup>st</sup>.

## Slide 14



### Slide Title

2021 Workplan

### Slide Text and Image Description

Image: A runner at the starting line for a race poised to start the race.

No slide text

## Narrative

This slide, showing a starting line, begins the last section of our presentation, which will discuss the steps following receiving stakeholder comments.

## Slide 15

### Comment Summary and 2021 Workplan

- By the end of August, MDH will post on the CEC homepage...
  - A Summary of Comments and Feedback Received
  - The 2021 Workplan

A GovDelivery announcement will be sent to subscribers

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### Slide Title

Comment Summary and 2021 Workplan

### Slide Text

By the end of August, MDH will post on the CEC homepage...

- A Summary of Comments and Feedback Received
- The 2021 Workplan

A GovDelivery announcement will be sent to subscribers

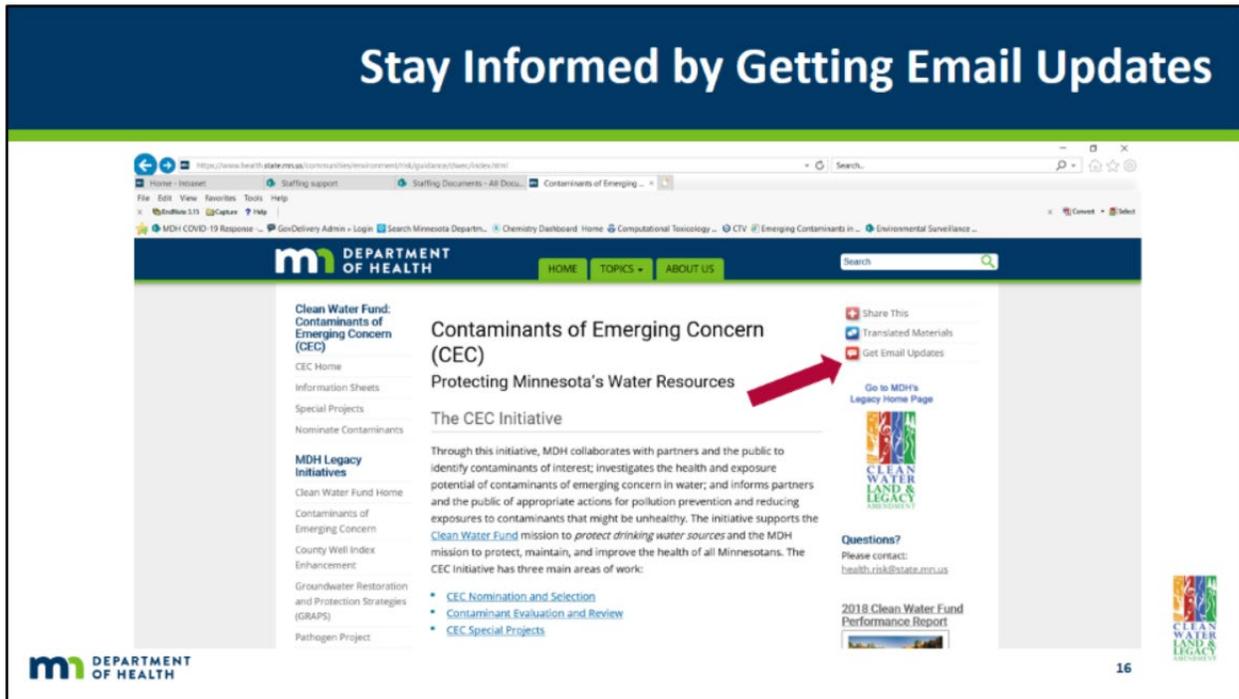
### Narrative

Comments received will be considered and the workplan for fiscal year 2021 (July 1, 2020 to June 30, 2021) will be revised, if needed.

A summary of stakeholder comments and feedback received as well as the 2021 workplan will be posted to CEC website by the end of August. A GovDelivery announcement will be sent to subscribers to alert them that the materials have been posted.

GovDelivery announcements are also sent out to subscribers when a chemical review is begins and when it is completed.

## Slide 16



### Slide Title

Stay Informed by Getting Email Updates

### Slide Text and Image Description

Image: Screen shot of the Contaminants of Emerging Concern home page with an arrow pointing to Get Email Updates.

No slide text.

### Narrative

Just a reminder that it is easy to become a GovDelivery subscriber:

Simply click on the "Get Email Updates" link in the upper right hand corner of MDH's CEC home page

## Slide 17

# RESOURCES

**MDH CEC homepage** <https://www.health.state.mn.us/cec>

- MDH CEC Nominate Contaminants web page  
<https://www.health.state.mn.us/cec#cecnom>
- MDH online public nomination form  
<https://survey.vovici.com/se/56206EE31C3C546B>
- MDH Human Health-Based Water Guidance Table  
<https://www.health.state.mn.us/communities/environment/risk/guidance/gw/table.html>
- MDH Disinfection Byproduct Special Project page  
<https://www.health.state.mn.us/communities/environment/risk/guidance/dwec/dbps.html>



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### Slide Title

Resources

### Slide Text

MDH CEC homepage <https://www.health.state.mn.us/cec>

MDH CEC Nominate Contaminants web page <https://www.health.state.mn.us/cec#cecnom>

MDH online public nomination form <https://survey.vovici.com/se/56206EE31C3C546B>

MDH Human Health-Based Water Guidance Table  
<https://www.health.state.mn.us/communities/environment/risk/guidance/gw/table.html>

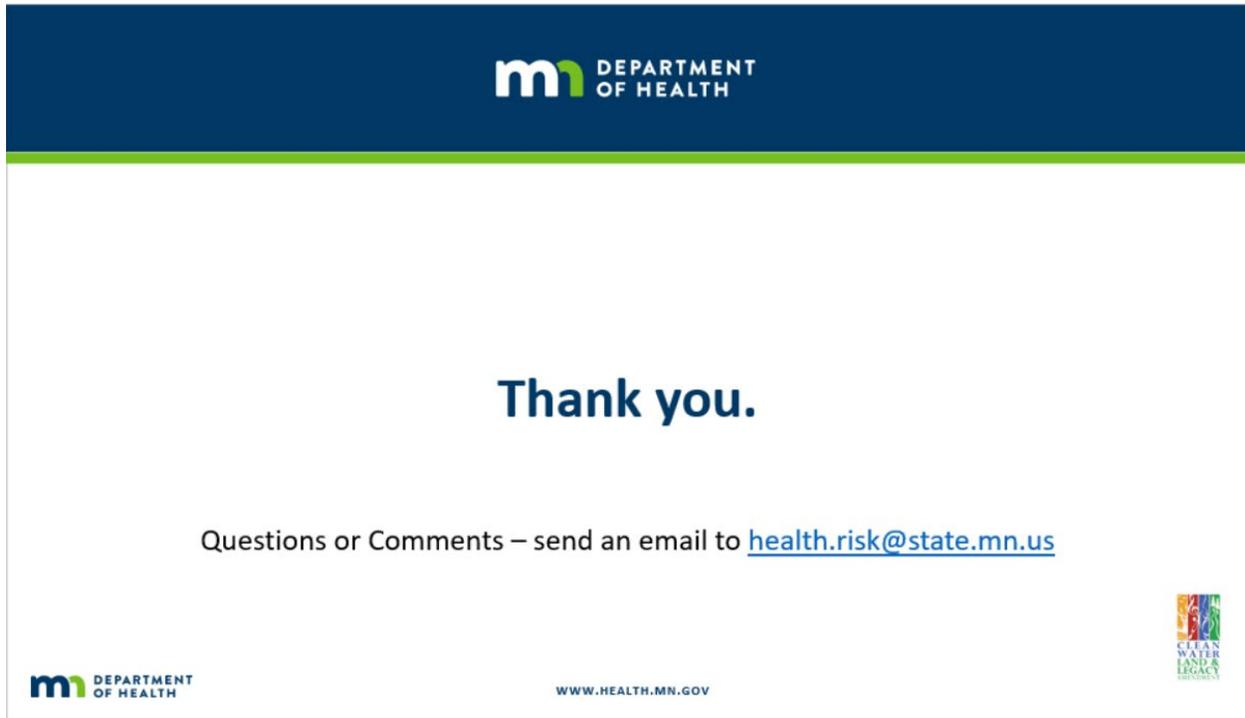
MDH Disinfection Byproduct Special Project page  
<https://www.health.state.mn.us/communities/environment/risk/guidance/dwec/dbps.html>

### Narrative

The MDH CEC homepage is a key resource and is located at [www.health.state.mn.us/cec](http://www.health.state.mn.us/cec) and Nominated Contaminants Status Table document and preliminary ranking results can be found on this page.

Urls for individual additional CEC webpages, including the Disinfection Byproduct Special Project page, are also provided in this slide.

## Slide 18



**m** DEPARTMENT OF HEALTH

**Thank you.**

Questions or Comments – send an email to [health.risk@state.mn.us](mailto:health.risk@state.mn.us)

**m** DEPARTMENT OF HEALTH

WWW.HEALTH.MN.GOV

CLEAN WATER FUND LEGACY

### Slide Title

Thank you

### Slide Text

Questions or Comments – send an email to [health.risk@state.mn.us](mailto:health.risk@state.mn.us)

### Narrative

This concludes the presentation of this year’s ranking and preliminary workplan.

Thank you for participating in the presentation and we hope that it was informative.

If you have questions or comments related to the ranking results or the preliminary workplan please send an email to [health.risk@state.mn.us](mailto:health.risk@state.mn.us) .

Minnesota Department of Health  
Health Risk Assessment Unit

CEC SCREENING & RANKING PROCESS PRELIMINARY FY2021 WORKPLAN

651-201-4899  
[health.risk@state.mn.us](mailto:health.risk@state.mn.us)  
[www.health.state.mn.us](http://www.health.state.mn.us)

June 29, 2020

*To obtain this information in a different format, call: 651-201-4899*