

Meat & Poultry Products Effluent Limitations Guidelines Rulemaking SBREFA Pre-Panel Outreach

May 2, 2023



Overview

- **Background**
- **Applicable Small Entity Definitions**
- **Small Entities Potentially Subject to Regulation**
- **Rulemaking Scope**
- **Wastewater Treatment Option Development**
- **Potential Economic Impact on Small Entities**
- **Questions and Next Steps**

Key Terms Used in this Briefing

- **Effluent Limitations** – Discharge standards, typically expressed as numeric pollutant limits (e.g., 10 mg/L of Nitrogen). May also include “non-numeric” requirements such as management practices or process changes to reduce pollution (pollution prevention)
- **Direct Discharger** – An industrial facility that discharges industrial process wastewater directly to a surface water
- **Publicly Owned Treatment Works (POTW)** – A municipal wastewater treatment plant that treats domestic waste (sewage) along with any industrial wastewaters that are discharged to the collection system
- **Indirect Discharger** – An industrial facility that introduces pollutants into a POTW from any non-domestic source regulated under section 307(b), (c) or (d) of the Act.
- **Pretreatment Standards** – Effluent limitations that apply to indirect discharging facilities
- **Conventional Pollutants** – Oil and grease, total suspended solids (TSS), biochemical oxygen demand (BOD), and fecal coliform
- **Nutrients** – Various forms of nitrogen and phosphorus

Background: Effluent Limitations Guidelines (ELGs)

- ELGs are national standards developed under the Clean Water Act (CWA) that apply to industrial wastewater discharges
 - These standards are based on available treatment technology and pollution control measures
 - The technology selected must be economically achievable for the industry as a whole
- ELG pollutant limits are incorporated into National Pollutant Discharge Elimination System (NPDES) and pretreatment permits
 - NPDES permits provide pollutant-specific limits that direct dischargers are required to meet before sending their wastewater to a surface water
 - Pretreatment permits provide pollutant-specific limits that indirect dischargers are required to meet before sending their wastewater to a publicly owned treatment works (POTWs). There are currently no industry specific pretreatment standards for the MPP industry

Background: Meat and Poultry Products ELG

- The original MPP ELGs rule was issued in 1974
- The MPP ELGs were last revised in 2004
- In September 2021 (Preliminary Effluent Guidelines Program Plan 15), EPA announced a rulemaking to revise the existing discharge standards for the meat and poultry products industry

MPP Questionnaire – Thank you!

- All facilities should have received a questionnaire
 - Census or detailed
- Questionnaire status
 - Received about 2,800 short (census) questionnaires
 - Received about 830 detailed questionnaires
- Reviewing response data and following up for clarification
- Response data is used in the engineering, environmental, and economic analyses

Small Entity Definitions

NAICS	Industry Description	Monthly Average # of Full/Part time Employees over last 24 months*
311611	Animal (except Poultry) Slaughtering	1,000
311612	Meat Processed from Carcasses	1,000
311613	Rendering and Meat Byproduct Processing	750
311615	Poultry Processing	1,250

The definitions of small entities for the MPP industry are listed in SBA's regulations at 13 CFR 121.201 (SBA's method of calculation can be found in 13 CFR 121.106). The SBA definitions for small businesses vary by NAICS category and are regularly updated.

Small Entities Potentially Subject to Revisions

NAICS	Industry Description	Number of Small Firms with in-scope facilities (preliminary analysis)	Number of Large Firms with in-scope facilities (preliminary analysis)
311611	Animal (except Poultry) Slaughtering	469	18
311612	Meat Processed from Carcasses	592	12
311613	Rendering and Meat Byproduct Processing	33	3
311615	Poultry Processing	276	23
	Other	362	75
	Total	1732	131

Consultation with Small Entity Representatives

- EPA is interested in information, advice, and recommendations from the small entity representatives (SERs)
- This information will be used to develop a regulatory flexibility analysis, which becomes part of the record for the potential regulation
- For rules that may have a significant economic impact on a substantial number of small entities, the Regulatory Flexibility Act (RFA) requires agencies to evaluate regulatory alternatives that may minimize the burden on small entities expected to be regulated.
- Your feedback can help shape selection of regulatory alternatives

Consideration of Regulatory Alternatives

- The RFA notes that the regulatory alternatives must be consistent with the stated objectives of applicable statutes (i.e., the Clean Water Act (CWA)), and suggests significant alternatives such as:
 - the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities
 - the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;
 - the use of performance rather than design standards; and
 - an exemption from coverage of the rule, or any part thereof, for such small entities.

CWA 301(b) and 304(b) – Statutory Factors for Revising ELGs:

- The industry processes, raw materials, products, and byproducts
- Locations, age of equipment and plant size
- Types and amounts of pollutants discharged
- Control technology performance and cost
- Financial status of the industry
- Impacts of the regulations on other media such as air pollution and solid waste (sludge disposal)

Current ELG Applies To Direct Dischargers Only

Subparts	Facility Type	Facility Size	# of facilities	Currently Regulated Pollutants
A – D	Meat Slaughterhouses and Packinghouses	>50M lb/yr	39	Conventional, Ammonia, Total Nitrogen
		<50M lb/yr	13	Conventional
E	Small Processors of finished meat products	<6000 lb/day	18	Conventional
F - I	Meat Cutters, sausage & luncheon meats, ham, and canned meat processors	>50M lb/yr	20	Conventional, Ammonia, Total Nitrogen
		<50M lb/yr	14	Conventional, Ammonia
J	Renderers*	>10M lb/yr	19	Conventional, Ammonia, Total Nitrogen
K	Poultry First Processors**	>100M lb/yr	79	Conventional, Ammonia, Total Nitrogen
L	Poultry Further Processors***	>7M lb/yr	1	Conventional, Ammonia, Total Nitrogen

Conventional Pollutants = BOD, Fecal Coliform, Oil & Grease, Total Suspended Solids

*Renderers processing <10M lb/yr are not subject to ELGs. Estimate there are 4 such direct discharge facilities.

Existing Poultry First processors processing <100M lb/yr are not subject to ELGs. Estimate there are 4 direct discharge facilities.*Existing Poultry Further processors processing <7M lb/yr are not subject to ELGs. Estimate there are no direct discharge facilities.

Rulemaking Scope: Potential Revisions to the ELG

1. Update nutrient effluent limits for nitrogen (TN) and phosphorus (TP) - Part of EPA's strategy to reduce nutrient discharges to the nation's waters
2. Evaluate and consider setting effluent limits for other pollutants including: conventionals and chlorides
3. Add pretreatment standards for facilities that discharge to POTWs. Considering: conventionals, nitrogen, phosphorus, chlorides
4. Revise production size thresholds and subcategories

Wastewater Treatment Options Development

- **Considerations for Direct Dischargers to update limits to reflect current technology:**
 - Phosphorus removal
 - More complete denitrification to reduce TN
 - Chlorides removal
 - *E. coli*
- **Considerations for Indirect Dischargers to protect POTWs from passthrough and interference:**
 - Screening, oil and grease removal, and equalization
 - Phosphorus removal
 - Nitrogen removal including denitrification to address nitrate
 - Chlorides removal
 - Conditional limits to allow off-ramp from pretreatment standards for nutrients where POTW already removing nutrients.
 - Reduces costs for indirect dischargers and eliminates redundant treatment

Example Treatment Technologies

- **Pretreatment** - Screens, grit removal, DAF
- **Anaerobic lagoon**
- **Bio = Biological treatment with Nitrification/Denitrification**
 - Activated sludge
 - Anoxic, aerobic basins (4-5 stage or SBR)
 - Secondary clarifier
- **Solids** - Belt filter press, gravity thickening, hauling and landfilling
- **Phosphorus Removal** - Alum or ferric chloride chemical addition
- **Disinfection** - Chlorination/dechlorination
- **Chlorides for specific waste streams** - evaporation, haul off-site, deep-well injection

Facilities may comply with effluent limits using any technologies they choose.

Economic Analysis: Data Sources

- 2022 MPP Detailed and Census questionnaires
- Hoovers Dun & Bradstreet - estimates for revenue and employment
- Economic census data
- USDA-Food Safety and Inspection Service (FSIS) data
 - Facility employment information
 - Facility production information
- USDA-Economic Research Service (ERS) data
 - Meat and poultry prices
 - Sales volumes
 - Market trends

Economic Analysis

- **The Economic Analysis will assess:**
 - Facility-level Impacts
 - Firm-level Impacts
 - Market-level Impacts
 - Societal Benefits
- **Considerations for the analysis:**
 - Potential revisions to the ELGs may expand regulations to cover small facilities and indirect dischargers, which may impact small entities.
 - This emphasizes the importance of Regulatory Flexibility Analysis requirements to consider impacts to small businesses.

Example: Indirect Meat Slaughterhouse

- Beef slaughter, 30 million lbs/yr, discharges to POTW
- Not currently covered by the MPP ELGs
- Treatment in Place (TIP): Pretreatment

***Other:** Capital - site prep, engineering, contingency, etc.
Annual – auxiliary functions, lab/admin staff, etc

Capital Costs						
	Pretreatment	Anaerobic Lagoon	Bio	Chem P Removal	Solids	Other*
Add C	\$0	\$0	\$0	\$0	\$0	\$0
Add C, N, P	\$0	\$52,000	\$720,000	\$22,000	\$1,090,000	\$800,000

Annual O&M Costs							
	Pretreatment	Anaerobic Lagoon	Bio	Chem P Removal	Solids	Other*	Monitoring
Add C	\$0	\$0	\$0	\$0	\$0	\$0	\$6,000
Add C, N, P	\$0	\$10,000	\$230,000	\$40,000	\$79,000	\$44,000	\$110,000

Example: Indirect Poultry Slaughterhouse

- Poultry slaughter, 42 million lbs/yr, discharges to POTW
- Not currently covered by the MPP ELGs
- TIP: Pretreatment

Capital Costs						
	Pretreatment	Anaerobic Lagoon	Bio	Chem P Removal	Solids	Other
Add C	\$0	\$0	\$0	\$0	\$0	\$0
Add C, N, P	\$0	\$110,000	\$1,370,000	\$22,000	\$1,100,000	\$1,120,000

Annual O&M Costs							
	Pretreatment	Anaerobic Lagoon	Bio	Chem P Removal	Solids	Other	Monitoring
Add C	\$0	\$0	\$0	\$0	\$0	\$0	\$6,000
Add C, N, P	\$0	\$10,000	\$302,000	\$29,000	\$192,000	\$64,000	\$110,000

Example: Indirect Meat Further Processor

- Beef deboning/marinating, 25 million lbs/yr, discharges to POTW
- Not currently covered by the MPP ELGs
- TIP: Pretreatment

Capital Costs						
	Pretreatment	Anaerobic Lagoon	Bio	Chem P Removal	Solids	Other
Add C	\$0	\$0	\$0	\$0	\$0	\$0
Add C, N, P	\$0	\$26,000	\$428,000	\$22,000	\$1,160,000	\$705,000

Annual O&M Costs							
	Pretreatment	Anaerobic Lagoon	Bio	Chem P Removal	Solids	Other	Monitoring
Add C	\$0	\$0	\$0	\$0	\$0	\$0	\$6,000
Add C, N, P	\$0	\$6,000	\$142,000	\$43,000	\$70,000	\$31,000	\$110,000

Example: Indirect Renderer

- Beef and chicken rendering, 60 million lbs/yr, discharges to POTW
- Not currently covered by the MPP ELGs
- TIP: Pretreatment

Capital Costs						
	Pretreatment	Anaerobic Lagoon	Bio	Chem P Removal	Solids	Other
Add C	\$0	\$0	\$0	\$0	\$0	\$0
Add C, N, P	\$0	\$88,000	\$2,000,000	\$22,000	\$995,000	\$1,340,000

Annual O&M Costs							
	Pretreatment	Anaerobic Lagoon	Bio	Chem P Removal	Solids	Other	Monitoring
Add C	\$0	\$0	\$0	\$0	\$0	\$0	\$6,000
Add C, N, P	\$0	\$10,000	\$403,000	\$38,000	\$154,000	\$54,000	\$110,000

Example: Direct Poultry Slaughterhouse

- Chicken slaughter and cutting/seasoning, 190 million lbs/yr, discharges to river
- 40 CFR 432 subpart K and L
- TIP: Pretreatment, BOD removal, nitrification, partial denitrification, disinfection

Capital Costs

	Pretreatment	Anaerobic Lagoon	Bio	Chem P Removal	Solids	Other
Add partial N, P	\$0	\$0	\$0	\$94,000	\$0	\$41,000
Add full N, P	\$0	\$225,000	\$1,290,000	\$22,000	\$1,380,000	\$1,270,000

Annual O&M Costs

	Pretreatment	Anaerobic Lagoon	Bio	Chem P Removal	Solids	Other	Monitoring
Add partial N, P	\$0	\$0	\$0	\$31,000	\$0	\$3,000	\$6,000
Add total N, P	\$0	\$16,000	\$457,000	\$45,000	\$256,000	\$92,000	\$110,000

Implementation schedule

- Existing Direct dischargers limits will be implemented as permits are renewed according to their 5-year permitting cycle.
- Existing Indirect dischargers must comply with pretreatment standards no later than 3 years after the final rule is published.
 - Required to submit to the Control Authority a report which contains the information listed in paragraphs 40 CFR 403.12 (b)(1)-(7) within 180 days after the effective date of a categorical Pretreatment Standard
- New Facilities/Sources (direct and indirect dischargers) must comply with the limitations and standards on the date they begin discharging after promulgation of the rule.
 - New Sources shall be required to submit to the Control Authority a report which contains the information listed in paragraphs 40 CFR 403.12 (b)(1)-(5) at least 90 days prior to commencement of discharge.

Outreach and Schedule

- Small Business Regulatory Enforcement Fairness Act
 - Sent news releases Jan. 18 requesting small entity representative volunteers
 - Pre-Panel meeting May 2023
 - Formal Panel meeting June 2023
- Proposed Rule: December 2023

Questions for Small Entity Representatives

- How may proposed amendments affect your business?
 - Revised limits; new limits on additional pollutants
 - Pretreatment Standards
- What recommendations do you have for small business flexibilities to reduce burden?
- Do you anticipate any unique legal, administrative, or recordkeeping burdens associated with this action? Any issues not addressed?
- Are there other federal regulations that apply to small entities that may overlap with this EPA action?
- Any other feedback for EPA on the MPP ELG

*This information will be used to develop a regulatory flexibility analysis, which becomes part of the record for the potential regulation

Closing Session

- Closing remarks from EPA, SBA, and OMB
- Next Steps:
 - Written comments submitted to Lanelle Wiggins by May 16, 2023

Contact Information

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