

Division of Water

Wastewater Risk-Based Inspection Ranking Model

The Department developed this inspection ranking model to identify for inspection those permitted facilities that pose a higher risk to human health or the environment. For each facility, points are assigned for each of the scoring criteria listed in Section II. Under a given criterion, more points are assigned for characteristics posing greater risks.

When fully automated in the DROPS database, points for each facility will be totaled and scores for all facilities ranked in order of inspection priority. Annual Inspection Plans are generated using this ranking as a guide. Use of filtering and selection capabilities in DROPS allows Inspection Plans to be developed and updated as conditions warrant. On an ongoing basis, certain facilities may dictate an automatic inspection and become a higher priority based on factors listed below in Section I, Automatic Inspections.

The Work Sheet criteria and scoring may be modified as the Compliance and Enforcement Program gains experience working with this inspection ranking model and the DROPS database. The availability of additional information may also prompt revisions. This model is a living document intended to evolve with improvements and modifications as experience warrants.

When fully operational, the DROPS database, in conjunction with currently employed Complaint Automated Tracking System (CATS), will function in a manner similar to EPA's Enforcement & Compliance History Online (ECHO) system and provide the user with current multi-media information regarding compliance inspections, violations, and enforcement actions.

Construction General Permit Issues

The Department considered if ranking construction activities with a Construction General Permit (CGP) authorization is even possible or desirable in terms of generating an annual inspection schedule. Ranking CGP activities is particularly challenging due to two primary factors. The biggest challenge is that while a large number of notices of intent (NOIs) may be submitted prior to or at the beginning of the construction season, NOIs continued to be submitted throughout the year. The second factor is that construction may commence and then terminate before an inspection could be made based upon scoring.

The Department plans to use a combination of planning methods for scheduling construction site inspections. The Department will use a rotating geographic area basis for CGP inspection planning. The Department may also schedule CGP inspections in an area when inspecting a major facility or investigating a complaint in that area. The latter will allow the Department to maximize inspection efficiency while in the area.

Construction projects affecting wetlands require a Section 404 permit issued by the Army Corps of Engineers (ACOE). Section 401 of the Clean Water Act requires the state to review the Section 404 permit application and, when warranted, grant Section 401 certification. The Inspection Ranking Model is intended to rank NPDES permits and does not specifically address permits issued by other agencies, such as ACOE 404 permits. During the course of inspecting industrial facilities, the

Department conducts a thorough review of the facility's pollution prevention plan, assuring appropriate development, implementation, and maintenance.

The Department will consider the following when selecting specific sites for inspections:

- A previous inspection revealed conditions that warrant a follow-up inspection;
- a project is on-going, particularly through more than one season;
- the total disturbed area;
- proximity to surface waters; and
- a legitimate complaint of human health or environmental hazards.

I. Automatic Inspections

DEC will perform an inspection, even though a facility may score lower in the overall ranking, if the facility:

- has a legitimate complaint of human health or environmental hazards;
- is a new facility or has a significant modification to existing permitted facility;
- has significant permit violations; or
- has other factors as determined by staff, including fish kills, significant environmental or human health problems, joint inspections with other agencies, or inspections of opportunity due to travel to the vicinity, etc.

II. The Scoring Criteria

Eight criteria provide a basis for assigning risk to facilities discharging wastewater into Alaska's land and waters. The criterion number corresponds to the numbered fields in the existing scoring spreadsheet. DROPS and the internal Inspection Ranking Web Tool will automatically calculate the scoring once this module and reporting mechanism are fully deployed.

Each facility receives a score for:

Criterion 1: Time Since Last Inspection

- 1 point for every year since last inspection. Cap at 8.

Staff Guidance: Inspection goals of the state Compliance and Enforcement Program is 1) to conduct an annual inspect of a major facility operating under an APDES individual permit or an APDES general permit, and 2) to conduct an inspection of a minor facility operating under an APDES individual permit at least once every five years.

Criterion 2: Receiving Environment

- 3 points for discharge to fresh waters, surface waters, or wetlands
- 3 points for discharge to subsurface or uplands within 1 mile of drinking water wells
- 2 points for discharge to marine waters
- 1 point for discharge to subsurface and uplands greater than 1 mile from drinking water wells

Criterion 3: Cumulative Effects from Other Discharges

- 1 point for multiple permitted discharges within 1 mile

Staff Guidance: this criterion considers four elements:

- Cumulative impacts are addressed, to some extent, during permit development including monitoring requirements in a permit (see Criterion 6);
- DROPS automates for permitted and nonpermitted facilities;
- one mile is a realistic scale to match current locational data, but may be refined to ½ mile in the future; and
- this particular criterion is restricted to cumulative effects caused by discharges, whereas other reviews (e.g., ACMP or an EA/EIS) may consider cumulative effects on a broader scale.

Criterion 4: Impaired Water Body

- 2 points for discharge of a pollutant to an impaired waterbody if that pollutant is listed as a source of the impairment
- 1 point for discharge of a pollutant to an impaired waterbody

Staff Guidance: Greater weight is given if the discharged pollutant is the same as the pollutant causing impairment. However, an organism or species in an impaired waterbody could already be stressed by whatever pollutant is causing the waterbody to be impaired. Another pollutant could add to this stress. For example, a waterbody with a turbidity problem could have low egg survival rates so fewer fish are produced. In this circumstance, if another discharge causes pH to decline, e.g., the remaining fish eggs could be further stressed or killed, even though these stressors are different pollutants.

Criterion 5: Health Effects from Potential Wastewater Treatment Process Failure

- 3 points for an APDES individual permit (IP)
- 3 points for all facilities discharging to fresh water
- 2 points for a state IP
- 2 points for an APDES general permit (GP) authorization
- 1 point for a state GP authorization

Staff Guidance: Note that wastewater discharges to fresh water receive points twice in the inspection ranking model because of the freshwater environment – once in Criterion 2 and again in Criterion 5. Double ranking reflects the high potential risk to nearby drinking water posed by wastewater discharges.

Criterion 6: Failure to submit Discharge Monitoring Reports

- 1 point for failure to submit each DMR (since last inspection)

Staff Guidance: This criterion is important and without a cap because failure to submit required DMRs is a permit violation. High-risk discharges have additional monitoring requirements with more frequent monitoring and shorter reporting periods, so they accumulate points faster for failure to submit DMRs. Lower risk discharges have less frequent reporting and accumulate points at a slower rate.

Criterion 7: Major vs. Minor facility categorization

- 1 point for a facility designated as a major discharger
- 0 points for a facility designated a minor discharger

Staff Guidance: A *non-domestic major* discharger is a facility mutually defined by the Department and EPA as a major discharger based on the APDES Permit Rating Worksheet that is the same as EPA's NPDES Permit Rating Worksheet, plus any additional dischargers that, in the opinion of the Department or EPA, have a high potential for violation of water quality standards.

A *domestic major* discharger is a facility mutually defined by the Department and EPA as a major discharger based on a design treatment plant flow of at least 1.0 MGD, an approved Pretreatment Program, a high potential for violation of water quality standards, or poses a potential or actual threat to human health or the environment.

Criterion 8: Post-Inspection Compliance

- 8 points if permittee has not met and maintained the requirements in the Department's inspection report or compliance letter, the permittee has not sent a required follow-up letter to the Department, or the follow-up letter submitted by the permittee indicates 0% compliance with requirements specified in the Department's inspection report
- 4 points if < 50 % of the Department's inspection report or compliance letter requirements have been met and maintained by the permittee
- 2 point if > 50 % but < 100 % of the Department's inspection report or compliance letter requirements have been met and maintained by the permittee
- - 4 points if 100% of the Department's inspection report or compliance letter requirements have been met and maintained by the permittee

Staff Guidance: Criteria 6, 7, and 8 address compliance sequentially. Criteria 6 and 7 focus on poor compliance behavior; whereas, Criterion 8 rewards a "good actor" by reducing the facility's overall scoring.

When considering the level of compliance effort by the permittee, staff should consider several factors:

- Difference between legally required corrective action and recommended actions, as specified in the inspection report
- Level of treatment technology needed to take a corrective action

- Amount of effort, time, and cost involved in taking a corrective action (e.g., are local or state funds needed for a major facility investment?)
- Level of operator knowledge and training needed to take a corrective action
- Weather and seasonal conditions during the required corrective action
- Amount of time needed to take the corrective action (i.e., different actions may have different deadlines)
- Any continuing human health or environmental impacts from noncompliance

FACILITY INSPECTION RANKING MODEL SCORE SHEET

Criterion 1: Time since last inspection		Criterion Points
How many years since the last inspection?	1 point for every year since last inspection Cap at 8	
Criterion 2: Receiving Environment		Criterion Points
Does the facility discharge to fresh water and / or wetlands?	Yes = 3 points No = 0 points	
Does the facility discharge subsurface or uplands within 1 mile of drinking water wells?	Yes = 3 points No = 0 points	
Does the facility discharge to marine waters?	Yes = 2 points No = 0 points	
Does the facility discharge to subsurface and / or uplands greater than 1 mile from a drinking water well?	Yes = 1 point No = 0 points	
Criterion 3: Cumulative Effects from Other Discharges		Criterion Points
Are there multiple permitted discharges within 1 mile?	Yes = 1 point No = 0 points	
Criterion 4: Impaired Water Body		Criterion Points
Is the receiving waterbody listed as impaired?	Yes = 1 points No = 0 points	
Does the discharge include a pollutant for which the waterbody is listed?	Yes = 2 point No = 0 points	

Criterion 5: Health Effects from Potential Wastewater Treatment Process Failure		Criterion Points
Does the facility have an APDES IP?	Yes = 3 points No = 0 points	
Does the facility discharge to fresh water?	Yes = 3 points No = 0 points	
Does the facility have a state IP?	Yes = 2 points No = 0 points	
Does the facility have an APDES GP authorization?	Yes = 2 points No = 0 points	
Does the facility have a state GP authorization?	Yes = 1 point No = 0 points	
Criterion 6: Failure to submit Discharge Monitoring Reports		Criterion Points
Has the facility submitted all the required DMRs?	Yes = 0 points No = 1 point for failure to submit each DMR since last inspection. No cap.	
Criterion 7: Facility Classification		Criterion Points
Is facility classified as a major discharger?	Yes = 1 points No = 0 points	
Criterion 8: Post-Inspection Compliance		Criterion Points
Has permittee met and maintained the requirements in the Department's inspection report? or Has the permittee sent a required follow-up letter to the Department?	Note: This is a 3-part criterion with a maximum total score of 8 points.	

<p style="text-align: center;">or</p> <p>Has the follow-up letter submitted by the permittee indicated 0% compliance with requirements specified in the Department's inspection report?</p>	<p>Yes = 8 points No = 0 points</p>	
<p>Has the permittee implemented < 50 % of the Department's inspection report requirements and have they been maintained by the permittee?</p>	<p>Yes = 4 points</p>	
<p>Has the permittee implemented > 50 % but < 100 % of the Department's inspection report requirements and have they been maintained by the permittee?</p>	<p>Yes = 2 point</p>	
<p>Has the permittee implemented 100% of the Department's inspection report requirements and have they been maintained by the permittee?</p>	<p>Yes = - 4 points</p>	