

# 8.1 Sources of Pollution

---

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

Total: 9 marks

KEY WORDS point-source 点源 • nonpoint-source 非点源

## Objective

---

Build the skills to answer exam questions on **sources of pollution**.

**You must be able to:**

- distinguish **point-source** 点源 and **nonpoint-source** 非点源 pollution
- give examples of each
- explain why nonpoint pollution is harder to control

## 1 Worked examples

---

Study these first. Each one shows the method for a question type used later — follow the steps and you can do the Practice and Exam-style questions yourself.

### ■ Point vs nonpoint

- **Point source** — pollution from a **single, identifiable** location (a factory pipe, a sewage outfall).
- **Nonpoint source** — pollution from **many spread-out** sources (fertilizer runoff from farms, oil from roads).

### ■ Why nonpoint is harder

**Point** sources are easy to find and regulate. **Nonpoint** sources come from a wide area, so they are hard to trace and control — the main challenge in water pollution today.

### ■ A worked classification

A pipe discharging waste into a river is a **point source**; fertilizer washing off thousands of farm fields is a **nonpoint source**.

### ■ Controlling each

Point: regulate the pipe. Nonpoint: change land-use practices (buffer strips, less fertilizer) across the whole watershed.

## 2 Practice

---

Now apply the methods above.

**2.1** What is a point-source pollutant? [1]

---

**2.2** Give one example of nonpoint-source pollution. [1]

---

**2.3** Why is nonpoint pollution harder to control? [1]

---

## 3 Exam-style questions

---

**3.1** Fertilizer runoff from many farms is an example of [1]

- **A** point-source pollution
  - **B** nonpoint-source pollution
  - **C** air pollution only
  - **D** no pollution
- 

**3.2** A river is polluted by both a factory pipe and farm runoff.

(a) Classify each source. [2]

(b) Explain why the farm runoff is harder to regulate. [2]

**3.3** Suggest one way to reduce nonpoint-source pollution from agriculture. [1]

## Solutions

---

**2.1** Pollution from a single, identifiable location.

**2.2** Any one: farm fertilizer runoff, road/urban runoff.

**2.3** It comes from a wide, spread-out area, so it is hard to trace and control.

**3.1 B** — nonpoint-source pollution.

**3.2** (a) Factory pipe = point source; farm runoff = nonpoint source. (b) The runoff comes from many spread-out fields rather than one pipe, so there is no single source to regulate.

**3.3** Any one: buffer strips, reduced/precise fertilizer, cover crops, no-till.