

## Science Time

### Program Content for March 15, 2017

Read the article 'At crippled West Point plant, sewage-eating bugs in peril on page A1 of the Sunday, March 12, 2017 edition of The Seattle Times.

#### Objective

- I can explain the problem occurring at West Point wastewater treatment plant and the resulting economic and environmental impact.

#### Next Generation Science Standards (NGSS) connection

#### **Disciplinary Core Idea**

- Typically as human populations and per-capita consumption of natural resources increase, so do the negative impacts on Earth unless the activities and technologies involved are engineered otherwise.

#### Pre-reading and Vocabulary: Define each term and then use it in a sentence to demonstrate your understanding.

1. sewage
2. pathogen
3. methane
4. septic

#### Comprehension Questions

1. What has been going on at West Point treatment plant for over a month?
2. Why has the event mentioned above been occurring?
3. How much untreated wastewater was dumped into the sound last month following three days of heavy rain?
4. What circumstances have lessened the environmental impact of untreated wastewater releases?
5. When will the plant be brought back online and how much will repairs cost?
6. What other environmental challenges face the Sound outside of the recent untreated wastewater releases?
7. What role does microbial life play in the proper operation of a wastewater treatment plant?
8. What is a digester?
9. What issues have the digesters at the West Point plant faced in recent months?
10. Why is the digester issue you highlighted in the question above a problem?
11. List at least two (2) solutions that have been attempted to solve the sludge problem?
12. What issues did the recent flood at West Point cause to the operation of the plant?
13. Why do the digesters at the plant need to be repaired first?
14. What form of wastewater treatment *is* taking place at the crippled West Point plant?

#### Prompts and Extensions

1. Go deeper into the problems at West Point treatment plant and its operation. Explore the graphs, photos, and diagrams within the article you just read.
2. Read another [story](#) reported by the Seattle Times about the race to fix West Point wastewater treatment plant.
3. Watch this informational [video](#) about the history and operation of West Point treatment plant.
4. Gain access to a series of news reports about the West Point wastewater treatment plant.

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