# NHE Non-Point Source Pollution Webinar Lesson Teacher Overview

## Can the town's eyesore become an asset?

*This webinar was held on 4/14/26 but can be used by others.*

*Note: The town and information are fictional. Any similarities between "Granite Cliffs" and a real NH town are coincidental.*

*Many thanks to Bob Varney, Normandeau Associates, for his advice on the topic.*

**Lesson Objectives:**

Students will enact a model NPS pollution session to prepare for a town meeting.
Student groups will work with varied groups of people (via role-play identities) with different goals and values.
The goal is to agree upon and communicate the best NPS pollution site management and Land Reuse Soil (LRS) decisions to best represent the town of Granite Cliff, NH.

**Webinar Components:**

- Suggest ways to decrease the nonpoint source pollutants, and in turn their impacts, to the former Grouse Field Factory (GFF) site.
- Establish any regulations or site standards that have been adopted to limit nonpoint source pollution to the site.
- Develop LRS strategy options for the vacant former factory site, giving pros and cons
- Devise a method to inform your community of the results of this study.

**Webinar Outline**

**Part One - Welcome and introduction of the activity's main components- (*3 minutes)***

- Overview of the webinar components
- Introduction to breakout rooms, time restraints, and goals

**Part Two - Breakout Rooms (35 minutes)**

- Students will be randomly assigned to break out rooms with the same identity.
- Students should have prepared by having read the pre-sent attachments.
- **Goal 1 (*5 minutes)*:**
  ***Be sure everyone understands the following:***
  - Your group's assigned identity/role.
    - Does anyone have questions about their tasks and roles?

- Everyone should have read through the GFF parcel information on the imaginary town of Granite Cliff, NH.
    - Does anyone have questions about the old GF factory site?
- Discuss the group's discussion parameters
    - Time limit per speaker?
    - Handling differing opinions?
    - How will the group remind someone who strays from their assigned identity?
    - How to ensure that everyone who wants to speak can?
    - Other?

***Reminder***- throughout the webinar, your group will work within their assigned identity!

- **Goal 2 – *(5 minutes)*** *– Discuss the town parcel LRS information*
    - **Prompt 1:** What are the weaknesses and strengths of this site?
- **Goal 3 – (7 *minutes)*** *- Benefits of Productive Reuse.*
    - ***Prompt 2:*** *Given the site's information and your town's needs, discuss the following:*
        - Vacant land in town – *Can the former GFF site be put into productive reuse?*
        - Benefits- jobs, activities, cleaner area, redevelopment, etc.
        - Develop supporting evidence and reasons for claims
- ***Goal 4 – (8 minutes):*** *Lessen Impact of NPS Pollution to the old factory site*
    - ***Prompt 3:*** Suggest ways to decrease the nonpoint source pollutants, and in turn their impacts, to the site.
        - Testing and Mediation required
        - Partnerships and Funding ideas
            - Public, State, and Federal funding and grants
            - Private funds
    - **Prompt 4:** Establish any regulations or site standards that have been adopted to limit nonpoint source pollution to the site.
- **Goal 5 – (10 minutes):** *Old GF Factory Site Land Reuse Options for Granite Cliffs*
    - **Prompt 5:** Develop LRS strategy options for the old factory site with pros and cons
        - Support your options with evidence

**Part Three - Overall group discussion/debate (35 minutes)**

- **Group sharing (8 minutes):** *Each group has 2 minutes to share their group's land reuse strategy idea for the old factory site with supporting evidence.*

- **Goal 6: (15 minutes):** *Consensus*
    - **Prompt 6:** The overall group should come to a consensus on the main weaknesses and strengths of the town's old factory site.
    - **Prompt 7:** The overall group should come to a consensus on the site's impacts of threats.

- **Prompt 8:** The overall group should come to a consensus on the best site management strategy Land Reuse options for the town of Granite Cliff.

- **Goal 7: (5 minutes):** *Town Policies*
  - **Prompt 9:** Decide on the town policies needed to enact the LRS management strategies for the Granite Cliffs old factory site.

**Goal 8: (5 minutes):** *Town Communication* and Action

- **Prompt 10:** Decide on steps the committee will carry out to ensure that the process and LRS management strategy decisions are understood by the community of Granite Cliffs.

- **Wrap up. (2 min)**

**Part Four - Post Webinar Reflections**

*(To be done by each school, **AFTER** the webinar)*

- **Goal 9:** The ultimate lesson goal was to find the best compromise within a variety of groups with diverse opinions, motives, and values.
  - **Reflection prompt 1**: What are some key takeaways from this activity?
  - **Reflection prompt 2**: What was hard to negotiate?
    - What did everyone agree upon? What allowed this to happen?
    - Where was there tension between different groups?
    - How did you personally compromise? How do you feel about compromising?
  - **Reflection prompt 3**: Do you feel that this activity realistically reflects how NH town groups interact and work together?

**2026 NPS Pollution Challenge Learning Objectives:**

*Those in **bold type** relate to the webinar. Highlights offer additional connections and clarifications.*

1. **Define nonpoint source pollution with real world examples from urban and rural settings.** (in regard to the factory site)
2. Explain what is meant by a "watershed" and describe watershed ecology. (Not a direct question but connects to student analysis.)
3. Describe nutrient (carbon, nitrogen, and phosphorus) cycles and how changes in these cycles impact nonpoint source pollution.
4. **Recognize the major sources of nonpoint source pollution in surface waters**. (and land)
5. Compare the effects of land use types (suburban, urban, rural) on nutrient loading to water bodies. (Not a direct question but may connect to student analysis.)
6. **Describe local and state regulations that address nonpoint source pollution.**
7. Identify methods used to assess and quantify nonpoint source pollution in a watershed. (Not a direct question but may connect to student analysis.)
8. Recognize best management practices and stormwater control measures to control nonpoint source pollution. (Not a direct question but may connect to student analysis.)

9. **Identify examples of community-based solutions to nonpoint source pollution.**
10. **Construct a plan to mitigate nonpoint source pollution in a specific body of water** (site)
11. **Demonstrate a plan to share results with your community through various types of outreach.**

**Role-play Identities** *(see separate sheet for details)*

Government worker 1 – Federal

Government worker 2 – State Representative (NHDES)

Government worker 3 - Local/municipal town official (Town manager)

Non-government organization (NGO) worker

Industry Worker - Private Company (Developer)

Community member 1 – Environmentalist, homeowner, hiker

Community member 2 - Rural wanting more access

Community member 3 – Rural undecided town member

***2026 student signups = 13, therefore only 4 IDs/groups were used.***