

*Onondaga Lake Educational Unit*

# **ESF in the High School**



## ***Onondaga Lake Educational Unit Supplemental Curriculum Materials for Secondary Teachers and Students in Science, Social Studies, English, and Technology***

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## **Instructor Overview**

The Onondaga Lake Educational Unit is a series of lessons designed to investigate issues related to Onondaga Lake. The lessons are interdisciplinary and have been correlated to the New York State Standards for Math, Science and Technology, and Social Studies; the lessons meet the needs of both teachers and students. Collaboration between teachers can show students that the issues overlap many subject areas.

The impact of humans on their environment is easy to observe in the case of Onondaga Lake. The health of this important resource is severely compromised and this series of lessons investigates the many variables involved in returning it to a healthier state. The lessons may be presented in any order or used individually to emphasize topics of interest to the class.

The Onondaga Lake Educational Unit is intended to illustrate how humans can impact an environment and the issues involved in correcting problems created by this impact.

## **Onondaga Lake Educational Unit**

### **Instructor Overview**

#### **Course Objective:**

The ESF Environmental Science Educational Units provide high school teachers with student-centered, interdisciplinary lessons that cover the New York State Standards for Math, Science, and Technology, and Social Studies. The Onondaga Lake Unit focuses on the complex issue of how humans impact ecological systems such as Onondaga Lake.

#### **Student Objectives:**

- Outline the major events in the history of Onondaga Lake.
- Identify the parties involved in the events of Onondaga Lake.
- Determine the sources of pollution that impacted Onondaga lake.
- Outline the major land uses of the area around Onondaga Lake.
- Identify the impacts, both positive and negative, each form of land use had on the Onondaga Lake area.
- Determine which effects were short term and which effects were long term or may still be occurring.
- Differentiate between point and non-point pollution sources for the Onondaga Lake ecosystem.
- Identify the different types of pollution and delineate the various input sources of Onondaga Lake pollution.
- Determine the possible scenarios for a cleanup plan Onondaga Lake.
- Identify the components of an ecosystem.
- Describe the ecosystems that surround Onondaga Lake.
- Identify which ecosystems have been heavily impacted by human populations.
- Identify which plants and animals are part of each ecosystem.
- Describe a watershed and cite specific examples from the Onondaga Lake watershed to illustrate these concepts.
- Identify the delineation of the Onondaga Lake watershed and drainage basin.
- Classify various land use practices located within Onondaga County.
- Determine the possible impacts of certain land practices on water quality.
- Predict future implications of land use practices in the overall ecological integrity of the Onondaga Lake watershed.
- Identify the various political players associated with the Onondaga Lake cleanup process.
- Develop a better understanding of the political complexity of the cleanup issue.

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- Contrast the differing political beliefs surrounding the lake cleanup process as part of a simulated hearing.
- Identify economic factors that drew attention to Onondaga Lake.
- Identify factors that allowed for industrial, commercial, and recreational development to occur.
- Identify economic reasons that contributed to human polluting of Onondaga Lake.
- Determine the amount of resources spent studying a plan to reclaim Onondaga Lake.
- Determine how much a plan to clean the lake might cost.
- Identify the levels of government associated with Onondaga Lake legislation.
- Identify the historical development of laws impacting the Onondaga Lake.
- Determine the impacts of current legislation surrounding Onondaga Lake.
- Predict future implications of legislative issues in regards to the Onondaga Lake cleanup process.
- Define what should happen to Onondaga Lake from your perspective.
- Present the perspective of a particular group with a stake in any plan for Onondaga Lake.
- Define some of the pros and cons of any plan to be implemented.
- Use a consensus process to come to an agreement on what should be done with the lake.

**Series of Lessons:**

**Lesson 1: History of Onondaga Lake**

What events took place over the past 250 years that changed Onondaga Lake? Students investigate some of the major events that impacted the lake from the time of colonial settlers and Native Americans until present day.

**Lesson 2: Land Use of Onondaga Lake**

How did different groups impact the lake throughout history? Students investigate the many uses of the lake and surrounding resources, guided by questions that assure they gather pertinent information.

**Lesson 3: Past and Present Sources of Pollution**

What are the various pollutants added to Onondaga Lake over the last 100 years? Students investigate the pollutants that impacted the lake, where they came from, and their affects on the lake ecosystem. **The State of Onondaga Lake**, a publication from the Onondaga Lake Partnership, is included in Lesson 3.

**Lesson 4: Ecosystems of Onondaga Lake**

What plants and animals live in and around Onondaga Lake? Students investigate the flora and fauna that live around the lake using a website maintained by **The Living Schoolbook** through Syracuse University, as well as a site map that delineates the different types of habitats surrounding the lake.

**Lesson 5: Onondaga Lake Real-Time Data Via the Internet**

What is the current water temperature on Onondaga Lake? Students investigate the conditions of Onondaga Lake by monitoring a website that posts information collected by a special buoy. The website provides a great deal of information about the physical aspects of the lake and creates a greater understanding of the systems at work in the lake.

**Lesson 6: The Onondaga Lake Watershed**

There are a number of different tributaries that enter Onondaga Lake – what does each contribute to the lake? Students investigate the tributaries and determine the various land uses that contributions to Onondaga Lake. Once the students investigate a particular tributary, they can check the water quality on the **Project Watershed Website**, which provides historical water quality data generated by monitoring the various tributaries of the Onondaga Lake watershed.

**Lesson 7: Political Aspects of Onondaga Lake**

Who should decide what happens to Onondaga Lake? Many groups are interested in Onondaga Lake and are represented by a politician or spokesperson who tries to express the view of the group that he/she represents. Students research a particular viewpoint and express that view by writing a position paper and speaking during a public hearing.

**Lesson 8: Economic Aspects of Onondaga Lake**

Who should pay for the Onondaga Lake cleanup? Students consider the economic factors involved in making such decisions.

**Lesson 9: Legislative Issues Dealing With Onondaga Lake**

What laws protect Onondaga Lake? How did a lack of legislation allow some events to impact Onondaga Lake? What laws should be put into place to protect Onondaga Lake for the future?

Students look at some of the laws that protect Onondaga Lake and are asked to propose legislation, which might protect the lake for future generations.

**Lesson 10: Future Land Use of Onondaga Lake – A Decision Making Activity**

What should happen to Onondaga Lake and who should pay for it? Students assume the role of an interest group with a stake in the welfare of Onondaga Lake. The lesson becomes a debate on what should be done to clean up Onondaga Lake and who should be responsible for the financial costs associated with the plan.

## Correlating the Onondaga Lake Watershed Educational Unit to the New York State Learning Standards for MST, Social Studies and English at the Commencement level

	L e s s o n s									
MST Standards	1	2	3	4	5	6	7	8	9	10
<b>MST Standard 1 Analysis, inquiry, and Design</b>	1	2	3	4	5	6	7	8	9	10
<b>Mathematical Analysis</b>	1	2	3	4	5	6	7	8	9	10
<b>Key idea 1</b>					*	*				
<b>Key Idea 2</b>					*	*				
<b>Key Idea 3</b>					*	*				
<b>Scientific Inquiry</b>	1	2	3	4	5	6	7	8	9	10
<b>Key idea 1</b>					*	*				
<b>Key idea 2</b>					*	*				
<b>Key idea 3</b>					*	*				
<b>Engineering Design</b>	1	2	3	4	5	6	7	8	9	10
<b>Key idea 1</b>										
<b>MST Standard 2 Information Systems</b>	1	2	3	4	5	6	7	8	9	10
<b>Key idea 1</b>	*	*	*	*	*	*	*	*	*	*
<b>Key idea 2</b>										
<b>Key idea 3</b>										
<b>Standard 3 Mathematics</b>	1	2	3	4	5	6	7	8	9	10
<b>Key idea 1</b>					*	*				
<b>Key idea 2</b>										
<b>Key idea 3</b>										
<b>Key idea 4</b>						*				
<b>Key idea 5</b>					*	*				
<b>Key idea 6</b>										
<b>Key idea 7</b>										
<b>Standard 4 Physical Setting</b>	1	2	3	4	5	6	7	8	9	10
<b>Key idea 1</b>										
<b>Key idea 2</b>				*						
<b>Key idea 3</b>										
<b>Key idea 4</b>										
<b>Key idea 5</b>										

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<b>Standard 4 Living Environment</b>	1	2	3	4	5	6	7	8	9	10
Key idea 1				*						
Key idea 2										
Key idea 3										
Key idea 4										
Key idea 5				*						
Key idea 6		*		*	*	*				
Key idea 7	*	*	*	*	*	*	*	*	*	*
<b>Standard 5 Technology</b>	1	2	3	4	5	6	7	8	9	10
Key idea 1										
Key idea 2										*
Key idea 3										
Key idea 4										
Key idea 5										
Key idea 6										*
Key idea 7										
<b>Standard 6- Interconnected- ness: Common themes</b>	1	2	3	4	5	6	7	8	9	10
Key idea 1						*				
Key idea 2						*				
Key idea 3										
Key idea 4										
Key idea 5						*				
Key idea 6										
<b>Standard 7- Interdisciplinary Problem Solving</b>	1	2	3	4	5	6	7	8	9	10
Key idea 1										*
Key idea 2										*
<b>Skills and Strategies for Interdisciplinary Problem Solving</b>	1	2	3	4	5	6	7	8	9	10
Working Effectively										*
Gathering and Processing Information										*
Generating and Analyzing Ideas										*
Common Themes										*
Realizing Ideas										*
Presenting Results										*

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Learning Standards for Social Studies	1	2	3	4	5	6	7	8	9	10
<b>Standard 1 History of U.S. and New York State</b>	1	2	3	4	5	6	7	8	9	10
Key idea 1	*	*	*							*
Key idea 2	*	*	*				*	*	*	*
Key idea 3	*	*	*				*	*	*	*
Key idea 4	*	*	*					*	*	*
<b>Standard 2 World History</b>	1	2	3	4	5	6	7	8	9	10
Key idea 1										
Key idea 2										
Key idea 3										
Key idea 4										
<b>Standard 3 Geography</b>	1	2	3	4	5	6	7	8	9	10
Key idea 1				*	*	*				
Key idea 2						*				
<b>Standard 4 Economics</b>	1	2	3	4	5	6	7	8	9	10
Key idea 1								*		*
Key idea 2								*		*
<b>Standard 5 Civics Citizenship and government</b>	1	2	3	4	5	6	7	8	9	10
Key idea 1	*	*					*		*	*
Key idea 2	*	*					*		*	*
Key idea 3	*	*					*		*	*
Key idea 4	*	*					*		*	*

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Learning Standards For English	1	2	3	4	5	6	7	8	9	10
<b>Standard 1 Information &amp; understanding</b>	1	2	3	4	5	6	7	8	9	10
<b>Key idea 1</b>	*	*	*	*	*	*	*	*	*	*
<b>Key idea 2</b>	*	*	*	*	*	*	*	*	*	*
<b>Standard 2 Literary response and expression</b>	1	2	3	4	5	6	7	8	9	10
<b>Key idea 1</b>										
<b>Key idea 2</b>										
<b>Standard 3 Critical analysis and evaluation</b>	1	2	3	4	5	6	7	8	9	10
<b>Key idea 1</b>	*	*	*	*	*	*	*	*	*	*
<b>Key idea 2</b>	*	*	*	*	*	*	*	*	*	*
<b>Standard 4 Social interaction</b>	1	2	3	4	5	6	7	8	9	10
<b>Key idea 1</b>	*	*	*	*	*	*	*	*	*	*
<b>Key idea 2</b>	*	*	*	*	*	*	*	*	*	*

## **Teacher Guide: Lesson 1 Timeline for Onondaga Lake**

### **Lesson Description:**

Students will identify the major historical/biological/industrial events that occurred in the history of Onondaga Lake.

**Concepts Introduced:** cause and effect, land use, point and non-point pollution sources

**Process Skills Emphasized:** analyzing data, interpreting information

**Technology Used:** Use of the Internet is optional.

### **MST Standards:**

Standard 4 Living Environment - Performance Indicators 6.3 and 7

Standard 6 Interconnectedness - Patterns of Change

### **Social Studies Standards:**

Standard 1 - History of New York State

### **Learning Outcomes:**

Students will:

- outline the major events that occurred in the history of Onondaga Lake.
- identify the parties involved in the events of Onondaga Lake.
- determine the sources of pollution that impact Onondaga Lake.

### **Time Requirement:**

Lesson 1 requires at least one class period to read and interpret the timeline and complete the questions. Students may need additional analysis time to complete the assignment - either another class period or as a homework assignment. One or two additional class periods could be used to construct a timeline for the classroom that shows the key events in the history of Onondaga Lake.

### **Instructional Strategies:**

Lesson 1 introduces students to many factors that have impacted Onondaga Lake. Students will review a timeline of the events related to Onondaga Lake and answer the questions included in the student guide. Students will gain a good background as to the parties involved in the pollution, the types of pollution that occurred, and the parties involved in the reclamation efforts; they should also begin to understand the complexity of the problems that have plagued Onondaga Lake.

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**Assessment:**

- 1.) Students should be able to outline, either in written or verbal form, the major sources of pollution for Onondaga Lake, who caused this pollution, and what groups participated in the reclamation efforts.
- 2.) Students should be able to give opinions as to what changes in the past might have prevented the lake from getting to its present condition.

**Extensions/Options:**

- 1.) Ask students to determine the significant events in the history of Onondaga Lake and to use this data to construct a classroom timeline. Form groups and devote classroom time to the project.
- 2.) Ask students to research recent events significant to the continued dilemma of Onondaga Lake and add them to the timeline.
- 3.) Ask students to use water quality data to determine events that caused an impact in the lake's water quality.

**Key Terms:** combined sewer overflow

**Prerequisite Knowledge:**

Students should be able to identify Onondaga Lake on a map.

**Equipment Needed:**

map of New York State, Internet access if necessary

**References:**

Hennigan, Robert D. America's Dirtiest Lake. Clearwaters magazine ,Winter 1989-90.

The State of Onondaga Lake. Onondaga Lake Partnership, Syracuse, New York. 2001.

**Handouts:** Onondaga Lake timelines

**Websites:**

<http://www.onlakepartners.org/index.cfm>

## **Student Guide: Lesson 1 Timeline for Onondaga Lake**

### **Introduction:**

Onondaga Lake is located adjacent to the city of Syracuse in central New York State. It is an excellent example of how an urban area can impact a natural area and the affects that humans can have on an ecosystem. Onondaga Lake has been described as the most polluted lake in the United States and has been studied for years to try to correct the problem.

This lesson will give you an idea of the history of Onondaga Lake - the types of pollution that have been a problem, the pollution that continues to plague the lake, the various parties that have been responsible for the pollution, and the agencies and groups that have worked to find solutions. When you have completed this lesson, you will have a better idea of how Onondaga Lake came to its current state.

### **Learning Outcomes:**

When you finish this lesson, you will be able to:

- outline the major events that have occurred in the history of Onondaga Lake.
- identify the parties involved in the events of Onondaga Lake.
- determine the sources of pollution that have impacted Onondaga Lake.

**Skills Required:** analyzing data, interpreting information

**New Terms:** combined sewer overflow

### **Quest:**

You are being given an exciting opportunity to analyze Onondaga Lake, an excellent example of how an urban system impacts an aquatic environment. Your quest is to determine some of the human impacts that have affected Onondaga Lake, the parties that were involved, and the events that have helped to shape the history of Onondaga Lake.

**Materials:** Onondaga Lake timeline and questions

### **Procedure:**

Carefully read the information given in the timeline and answer the questions that correspond to the information.

### **Extensions:**

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1.) Your instructor may ask you to make a classroom timeline showing the major events in the history of Onondaga Lake.

2.) Your instructor may ask you to research recent events in the history of the lake and determine what should be added to your timeline.

**Assessment:**

1.) You should be able to outline, either in written or verbal form, the major sources of pollution for Onondaga Lake, who caused this pollution, and what groups participated in the reclamation efforts.

2.) You should be able to give an opinion as to what changes in the past might have prevented the lake from getting to its present condition.

**Handouts:** Timeline, timeline questions.

**Timeline Questions**

- 1.) What are three historical uses of the land in and around Onondaga Lake?
  
- 2.) Who were the first inhabitants of the Onondaga Lake area?
  
- 3.) When, in your opinion, did human populations begin to pollute Onondaga Lake?
  
- 4.) What activities have been banned in the history of Onondaga Lake? Why should these activities have been banned?
  
- 5.) Using the timeline, what were some of the pollutants that cause problems for Onondaga Lake? Where did these pollutants come from?
  
- 6.) What events occurred that were positive for the restoration of Onondaga Lake? When did these events take place? How were they positive?
  
- 7.) What are some of the parties involved in polluting the lake?
  
- 8.) What parties were/are involved in the restoration of the lake?
  
- 9.) What government agencies have been involved with Onondaga Lake? What role did they play in the history of the lake?
  
- 10.) What was the first industrial development near Onondaga Lake? When did this industry peak?

11.) What later industrial developments were near the lake?

12.) What were three products obtained from the lake?

13.) What types of recreational activities took place on or around Onondaga Lake? Which activities are still allowed?

14.) What are CSOs? What do they put into Onondaga Lake?

15.) What is METRO? When was it proposed? When was it completed? What type of treatment does it currently offer?

16.) Who brought a lawsuit against Allied-Signal for pollution violations?

17.) What major piece of US legislation allowed for this lawsuit?

18.) Who convened the Onondaga Lake Management Conference? What legislation provided for the conference? What did they produce?

19.) What recent development has taken place near Onondaga Lake? Who is responsible for this development?

20.) What sources of pollution are no longer a problem for Onondaga Lake? Which sources of pollution are still an issue?

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21.) What current/future land use projects are currently underway or under review?

22.) What is the ACJ? Why is it important?

### Timeline for Onondaga Lake

12,000 years ago – Glacial Lake Iroquois covers the area from Rome to Rochester in Central New York. Salt deposits form when the lake evaporates.

1654 - Father Simon LeMoyne, French Jesuit Missionary, meets the Onondaga Indians and finds salt springs on the shore of Onondaga Lake.

1656 - Saint Marie De Gannentaha Mission Station is established by missionaries on the shore of Onondaga Lake.

1783 - Revolutionary War ends. Land grants open up Central New York to European settlement.

1793 - Commercial salt production begins on the lakeshore. Salt is used as a food preservative.

1804 - Salt production reaches 100,000 bushels per year.

1822 - Lake elevation lowered by canal commissioners. The draining of wetlands at the southern end of lake ended the threat of malaria and allowed urban settlement.

1825 - Erie Canal completed.

1848 - Syracuse is incorporated as a city.

1862 - Salt production peaks at 9 million bushels per year.

1872 - Lake View Point Hotel opens on the west shore of the lake, opposite the fairgrounds.

1878 - Road is built to provide access to the west side of the lake.

1880 - Onondaga Lake is a popular resort area. The west shore of the lake has many hotels, parks, and bathing beaches. Swimming, boating, and fishing are common activities during the summer season.

1881 - Solvay Process Company formed.

1884 - The Solvay Process Company (later to become Allied-Signal Corporation) begins production of soda ash.

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1890 - Other major industries start - steel (Crucible Steel), machinery, pottery (Syracuse China).

1896 - Combined sewers built in the City of Syracuse. Sewage and rainwater flow directly into Onondaga Creek and Harbor Brook, which flow in turn directly into Onondaga Lake.

1897 - Onondaga Lake whitefish, known as a delicacy across the country and served at all hotels on the lake, disappears from Onondaga Lake.

1901 - Ice harvesting from the lake is prohibited for health reasons.

1907 - NY State Attorney General threatens legal action if Solvay Process Company does not stop dumping waste residual into the lake. The company agrees to dump the material on shore. A section of the shoreline is bulkheaded and material is dumped behind bulkheads.

Early 20th Century - As the population of Onondaga County and the City of Syracuse grows, large volumes of untreated sanitary sewage and storm water are discharged directly into Onondaga Lake. This is known as Combined Sewer Overflows (CSOs).

1918 - The Solvay Process Company begins production of organic chemicals.

Late 1910's to Early 1920's - The thriving resort industry around the Onondaga Lake shoreline has completely collapsed due largely to the combination of combined sewer overflows and industrial pollution of the land and water.

1925 - The City of Syracuse begins the removal of settleable solids from sewage (primary sewage treatment).

1940 - Swimming is banned in Onondaga Lake due to health considerations (clarity of the water is less than 4 feet).

1946 - Allied-Signal begins production of the mercury cell process. Mercury wastes are discharged directly into Onondaga lake.

1952 - The Metropolitan Sewage Treatment Plant is proposed.

1953 - Allied deeds 400 acres of shoreline to New York State for state fair parking lots and highway purposes. This is the area where soda ash waste was dumped.

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1960 - Construction of the Onondaga County Metropolitan Sewage Treatment (METRO) Plant is completed.

1970 - Fishing is banned in Onondaga Lake. Due to discovery of mercury in the lake's fish, the US Attorney General sues Allied-Signal to stop mercury dumping. The amount of mercury discharged into the lake is calculated to be 22 pounds per day. The Justice Department announces that Allied has agreed to limit mercury discharge from two plants to eight ounces per day.

1971 - Onondaga County bans high phosphorous laundry detergents.

1972 - The Clean Water Act is passed by Congress which mandates a fishable/recreational quality of water.

1972 - New York State is required to classify all waterways as to their "best use" by the Clean Water Act. Onondaga Lake is classified as a B (recreational use) and C (fish propagation and secondary recreation) waterway.

1973 - New York State bans phosphorous in laundry detergents.

1975 - Crucible Steel puts new wastewater treatment and recycling plant into operation.

1976 - Mercury production facilities sold by Allied to Lyndon Chemicals and Plastics Co. Inc. (LCP).

1977 - Allied-Signal closes their chlorinated benzene plant and Willis Avenue chloralkali plant.

1979 - METRO is upgraded to secondary and tertiary treatment of sewage.

1986 - Allied-Signal closes soda ash manufacturing operations.

1986 - Catch and release fishing is reinstated at Onondaga Lake. Fishermen are warned not to eat the fish that they catch.

1987 - Interceptor sewer best management practices project is completed. Combined sewer overflows are reduced by 90%. Onondaga Lake Advisory Committee adopts "Salmon 2000" as its goal for lake restoration.

1988 - LCP Corp. cited for mercury releases, fined \$625,000. LCP plant closes.

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1988 - Under the Clean Water Act of 1972, if lakes and rivers aren't fishable and swimmable by this date, they will be the subject of court action to accomplish this goal.

1988 - Atlantic States Legal Foundation (ASLF), the US Attorney General and the NYS Department of Environmental Conservation file a complaint against Allied-Signal Corporation for pollution violations and resource damage.

1988 - The City of Syracuse and the Pyramid Companies announce a major lakeshore development plan designed to transform the southern end of the lake into a major commercial and residential area.

1989 - The lawsuit brought by ASLF and NY State against Onondaga County is settled, requiring the county to 1.) increase capacities of two major pumping stations; 2.) improve phosphorous removal at METRO; 3.) fund various studies and models; 4.) evaluate various alternatives for improving the METRO plant. This settlement is known as the Amended Consent Judgment.

1990 - The Onondaga Lake Management Conference is convened in Syracuse by US Senator Daniel Patrick Moynihan. The Conference was established under the Great Lakes Programs Act of 1990.

1990 - Carousel Center, a 1.4 million square-foot retail center, opens on the southern shore of Onondaga Lake. The mall is owned by the Pyramid Companies.

1991 - The Onondaga Lake Management Conference receives \$1.25 million in federal funds for lake research and remediation projects. The Conference uncovers a layer of organic chemicals and hydrocarbons on the lake bottom near Allied tar beds at the southwest basin of the lake. Pump stations at Liverpool and Ley Creek are completed to eliminate raw sewage overflows to the lake. Otisco Bridge collapses due to a new mud boil.

1992 - US Army Corps. of Engineers completes the *Onondaga Lake Water Quality Technical Report* outlining possible lake remediation alternatives. Solutions include a pipeline around the lake to the Seneca River, improving the METRO plant, and dredging or covering the contaminated lake bottom.

1992- The Onondaga Lake Management Conference funds a major study of mud boil effluents and potential remediation solutions. Mud discharges to Onondaga Lake averages 30 tons per day.

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1993 - The Onondaga Lake Management Conference completes Onondaga Lake: A Plan for Action and Onondaga Lake: A Plan for Action, Responsiveness Survey are completed.

1994 - Onondaga Lake is placed on the National Priorities List by the US EPA, thereby designating the lake as a Superfund site.

1995 – The Onondaga Lake Management Conference completes mud boil remediation projects to reduce flow of sediment into Onondaga Creek. Onondaga Lake is added to the Federal Superfund National Priority List.

1996 – Allied Signal, Inc continues Remedial Investigation and Feasibility Study of Onondaga Lake.

1997 – The State of New York, Atlantic States Legal Foundation and Onondaga County reach an agreement (known as the **Amended Consent Judgment**) on wastewater treatment plant improvements and a schedule to attain compliance with the CleanWater Act.

1998 – The Federal Judge signs the Amended Consent Judgment (ACJ) as described above. The ACJ is a multi-year program with projects extending until 2012.

1999 – The New York State Health Department lifts the ban on eating certain species of fish (bass, white perch and catfish) from Onondaga Lake. The ban remains in effect for walleye. Consumption of fish should be limited to one fish per month. Women of childbearing age and children under 15 should not eat any fish from Onondaga Lake.

- AlliedSignal Inc. merges with Honeywell, Inc. and becomes Honeywell International, Inc.

- The Onondaga Lake Management Conference becomes the Onondaga Lake Partnership (OLP) after Congressman James T. Walsh initiates the Water Resource Development Act of 1999.

Plans are in place for additional sewage treatment plants to decrease the amount of sewage released into the lake by CSO's. Plans are also being made for an improved waterfront area that would once again bring tourism and recreation to Onondaga Lake.