# Grasse River Superfund Site
# Community Involvement Plan for Remedial Design and Remedial Action

Massena, New York
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Photo: Sediment Core Collection

# Chapter 1: Introduction

In April 2013 the U.S. Environmental Protection Agency (EPA) selected a cleanup plan for the Grasse River ***Superfund*** site in Massena, New York. As the EPA works on the details of the design and implementation of the cleanup, the Agency is committed to involving the public and keeping the community informed about cleanup activities and how these activities may impact them. In keeping with that commitment, this ***Community Involvement Plan (CIP)*** has been developed to facilitate two-way dialogue between the communities affected by the Grasse River Superfund site in Massena, New York, and the EPA to encourage ***community involvement*** in site activities. Specifically, the CIP provides an overview of the outreach tools and techniques that the EPA uses to share information and to inform and involve the public during the cleanup process. It is based on a series of community interviews with residents, tribal leaders, elected officials, agency representatives, and other ***stakeholders*** in the Massena and Akwesasne communities, combined with feedback received during the multi-year site investigation process and during the ***public comment period*** on the EPA's proposed cleanup plan.

The CIP's purpose is to serve as a roadmap for the EPA in providing opportunities for public information and input during the cleanup of the Grasse River Superfund site. The CIP is an evolving document and will be updated or revised as needed to ensure that opportunities for public participation continue throughout the cleanup process.

***Words in Bold Italics are defined in Appendix 9**

## Goals

The goals for this Community Involvement Plan for the Grasse River Superfund site include:

- Providing the Massena and Akwesasne communities with timely and understandable information about the cleanup in a manner that is considerate of their preference and culture;
- Facilitating opportunities for public input and ensuring public needs and concerns are considered in the process;
- Keeping interested parties informed of work progress; and,
- Respecting and considering community input and feedback on the EPA's process as it is being carried out.

## Community Involvement at Superfund Sites

The EPA recognizes the benefits that an engaged public brings to the Superfund cleanup process. The Agency is committed to providing opportunities for public participation so that the people whose lives have been impacted by hazardous waste sites, and the EPA's actions to clean them up, have a say in what happens in their community.

The EPA's guidance for Community Involvement at Superfund Sites is available via the Web at http://www.epa.gov/superfund/community/cag/pdfs/ci_handbook.pdf.

Photo: 2006 Activated Carbon Pilot Study

# Chapter 2: The Grasse River Superfund Site

## Site History

Alcoa Inc. has owned and operated an aluminum product manufacturing facility in the town of Massena, New York, since 1903. From the 1950s until the mid-1970s, the facility now known as Alcoa West released wastes from its production and fabrication activities, including ***polychlorinated biphenyls (PCBs)***, onto the facility property and into the Grasse River through ***outfalls***. As a result, ***sediment*** in the waters near the facility and approximately seven miles downstream have been contaminated (see Figure 1). In 1989, the EPA issued a ***Unilateral Administrative Order*** that required Alcoa to investigate the extent of ***contamination*** in an approximately eight-mile stretch of the lower Grasse River. Since then, Alcoa has been working cooperatively with the EPA to evaluate cleanup options, and to design and implement a cleanup plan to be selected by the EPA.

In 1995, as part of a ***Non-Time Critical Removal Action***, Alcoa dredged about 3,000 cubic yards of highly contaminated sediment from an area near an outfall at the Alcoa facility. Since that time a number of pilot tests have been conducted by Alcoa to evaluate cleanup options for the site. In 2001, Alcoa tested a variety of materials to be used as a cap over the contaminated sediment and a variety of methods of placing cap material over the sediment. This testing took place in a seven-acre area of the Grasse River. At that time Alcoa developed some recommended options for ***dredging*** and ***capping***; however, subsequent monitoring in 2003 showed that a portion of the cap placed during the 2001 study, along with some underlying river sediment, had eroded due to a severe "***ice jam***" event. As a result, the EPA directed Alcoa to re-evaluate cleanup options for the site to account for scouring caused by severe ice jam events. Alcoa then evaluated pilot-scale dredging, armored capping and thin-layer capping. In addition, the company evaluated an innovative technology involving the addition of activated carbon to river sediment and also looked at other ways to prevent scouring due to severe ice jam events in the lower Grasse River.

### Superfund

The Superfund program operates on the principle that polluters should pay for cleanups, rather than passing the cost to taxpayers. The EPA searches for parties responsible for the contamination and holds them accountable for the costs of investigations and cleanups.

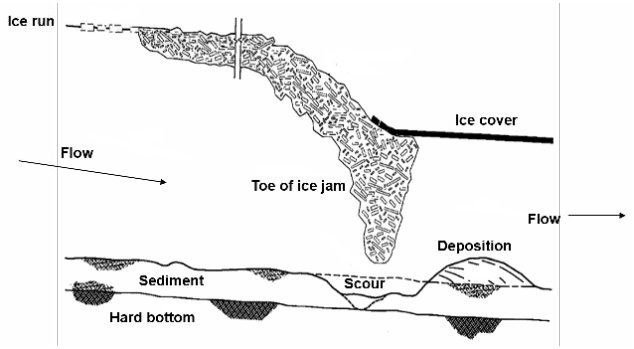
The results of the studies were used to develop a proposed cleanup plan that was released to the public in September 2012 and presented to the community in November 2012. The plan identified the EPA's preferred ***remedy*** and other options that were considered for cleaning up the Grasse River Superfund site. The EPA selected the cleanup remedy in April 2013 after reviewing and considering all comments received during a 63-day public comment period and after consultation with the New York State Department of Environmental Conservation and the Saint Regis Mohawk Tribe.

The cleanup of the contamination at the Alcoa West facility property was completed in 2001 by Alcoa under a Consent Order from the New York State Department of Environmental Conservation.

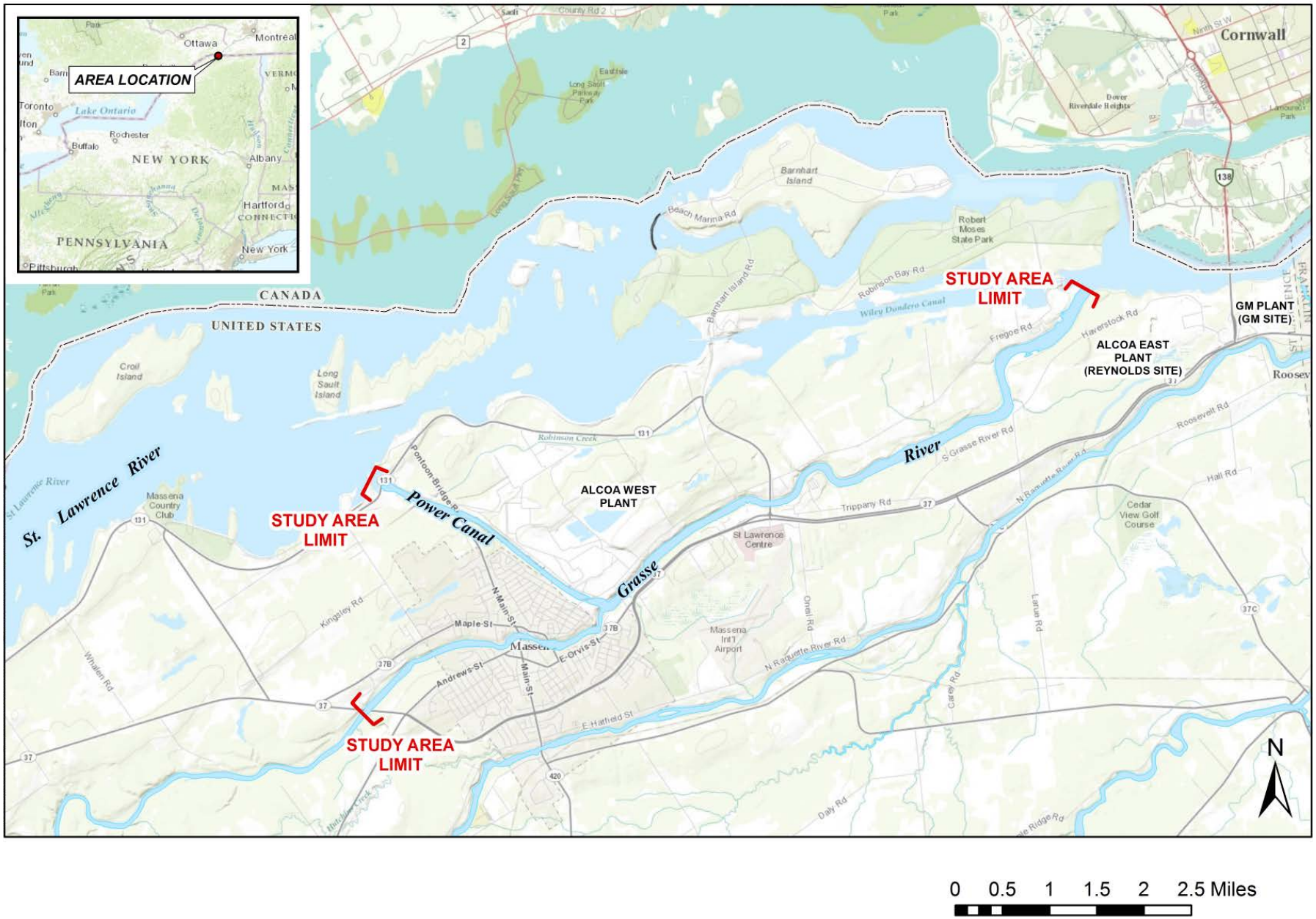
Figure 2 shows the cleanup process timeline for the Grasse River.

### What is ice jam/ice scour?

An ice jam is an accumulation of ice in the river channel that causes an ice jam toe to form, creating a very high water flow rate and turbulence under the ice jam toe. The higher water flow rates are created by the same amount of water being pushed through a smaller portion of the river channel. The high water flow rate and turbulence under the ice jam toe can result in localized scour along the river bottom sediment and redistribution of sediment (see figure below).



## Figure 1: Map of Study Area



## The Cleanup: Objectives and Next Steps

### EPA Remedial Action Objectives:

The cleanup goals are to protect human health and the environment by meeting the following objectives:

- Reduce the cancer risks and non-cancer health hazards for people eating fish from the Grasse River by reducing the concentration of PCBs in fish;
- Reduce the risks to ecological receptors (plants and animals) by reducing the concentration of PCBs in fish;
- Minimize the current and potential future ***bioavailability*** of the PCBs in sediment;
- Protect the ***ecosystem*** of the lower Grasse River; and
- Minimize the long-term transport of PCBs from the lower Grasse River to the St. Lawrence River.

**The EPA uses the following nine *evaluation criteria* when analyzing cleanup alternatives:**

- Overall protection of human health and the environment;
- Compliance with applicable or relevant and appropriate requirements (ARARs);
- Long-term effectiveness and performance;
- Reduction of ***toxicity***, mobility, or volume through treatment;
- Short-term effectiveness;
- Implementability;
- Cost;
- State/support agency acceptance; and
- Community acceptance.

### Cleanup Plan:

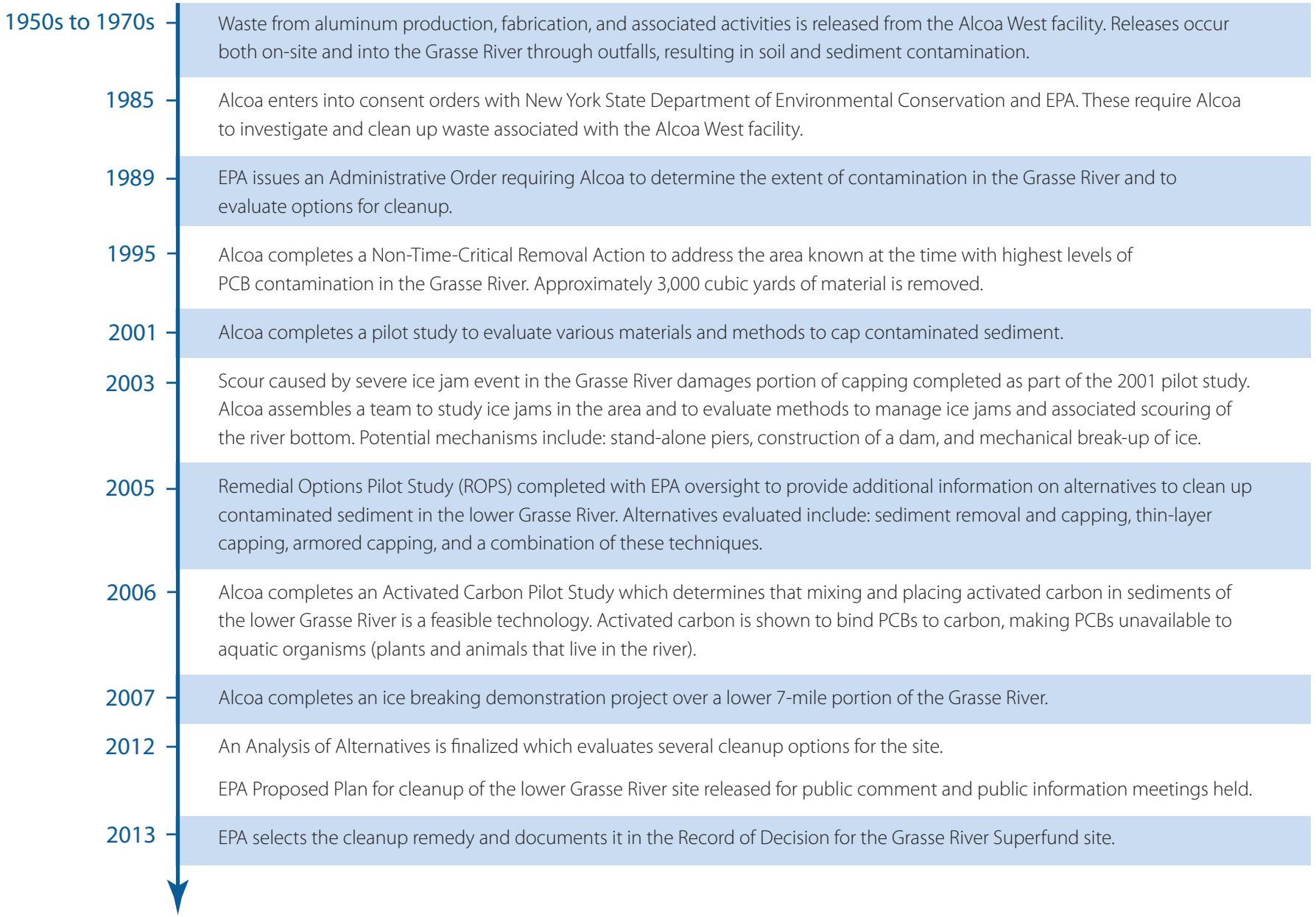
The cleanup plan, as described in the 2013 ***Record of Decision***, requires a combination of dredging/***backfilling*** and capping of contaminated sediment in a 7.2-mile stretch of the river (see Figure 3). The investigation and cleanup of the Grasse River Superfund site is being conducted and paid for by Alcoa Inc. with lead oversight by the EPA and assistance from the New York State Department of Environmental Conservation and the Saint Regis Mohawk Tribe. The selected cleanup remedy includes the following:

- Approximately 109,000 cubic yards of contaminated sediment will be dredged from near-shore areas of the river, which will then be filled in with clean material.
- Dredged sediment will be disposed of at an on-site permitted secure landfill.
- In the river's main channel approximately 59 acres of contaminated sediment will be covered with an armored cap and another approximately 225 acres of contaminated sediment will be capped with a mix of clean sand and topsoil to isolate the contamination from the surrounding environment.
- ***Habitat*** that is impacted by the cleanup will be reconstructed.
- The plan requires long-term monitoring of the capped areas to ensure that the caps remain intact, and monitoring of fish, water and habitat.
- A ***cultural resources*** survey will be conducted prior to the start of in-river work.

### What is Dredging?

Dredging is the removal of material from the bottom of lakes, rivers, harbors, and other bodies of water. Most dredging is done to maintain or deepen navigation channels or porting areas for the safe passage of boats and ships. Dredging contaminated areas such as the Grasse River Superfund site may also be performed for the express purpose of reducing the exposure of marine ***biota*** (plants and animals) and humans to contaminated sediments and/or to prevent the spread of contaminated sediments to other areas. This type of dredging is termed environmental dredging.

**Figure 2: Grasse River Cleanup Progress Timeline**



## Massena/St. Lawrence Region Cleanup Sites

Once an industrial powerhouse, in recent years the St. Lawrence region of New York state has been dealing with the pollution left behind from decades of industrial manufacturing. Two other large manufacturing facilities, the Alcoa Massena-East Plant (formerly Reynolds Metals Company) and the former General Motors (GM) Central Foundry Division plant are located within a two-mile stretch of river east of where the Grasse and St. Lawrence Rivers meet.

PCBs were used in hydraulic fluid and electrical equipment at the Reynolds and GM plant sites beginning in the 1950s. Both the Reynolds and the GM sites have had to undergo an environmental cleanup in order to address contamination in ground water, soil, and sediment.

### Reynolds Metals:

The 1,600-acre Reynolds Metals site is located on the St. Lawrence River, approximately eight miles east of the village of Massena. The facility was constructed in 1958 as an aluminum smelter and is now owned by Alcoa. Through its operation, various types of industrial wastes were disposed of throughout the Reynolds facility. Reynolds also discharged contaminants to the St. Lawrence River through four permitted outfalls. PCBs and polyaromatic hydrocarbons (PAHs) were the primary ***contaminants*** found in the St. Lawrence sediment adjacent to the Reynolds facility prior to the cleanup work.

The contamination at the Reynolds Metals site is being addressed under an EPA-issued Unilateral Administrative Order that requires the ***potentially responsible party*** (Alcoa) to investigate and clean up the site. Under the EPA cleanup decision document, called the Record of Decision (ROD), dredging the St. Lawrence River adjacent to the Reynolds facility was required and has been completed.

More information about the cleanup of the Reynolds Metals site is available at http://www.epa.gov/region2/superfund/npl/reynoldsmetals/.

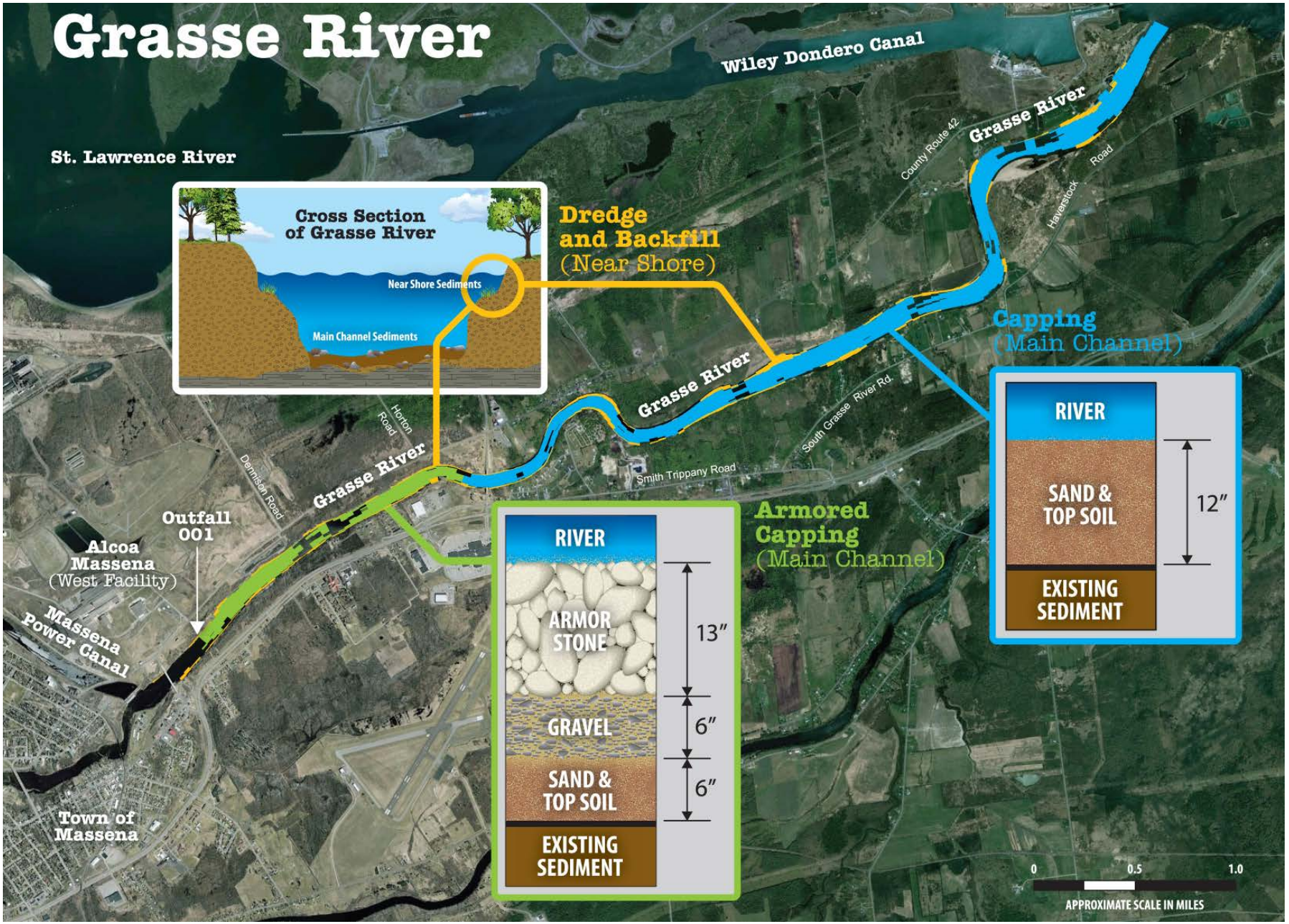
### GM Central Foundry Division:

The EPA added the GM site in Massena, New York to the Superfund ***National Priorities List*** in 1984. The 270-acre site was originally built to produce aluminum cylinder heads for the Chevrolet Corvair. The facility operated as an aluminum diecasting plant from 1959 to May 2009. While in operation, various industrial wastes were generated and disposed on-site. PCBs have been found in the ground water, on- and off-site soils, and sediment in the St. Lawrence and Raquette Rivers, Turtle Cove, and Turtle Creek. Ground water was also found to be contaminated with volatile organic compounds (VOCs).

The GM site is undergoing cleanup under the federal Superfund program. Cleanup actions at the GM site have been taken to address contamination on-site as well as in adjoining waterways.

More information about the cleanup of the GM site is available at http://www.epa.gov/region2/superfund/npl/gmmassena/index.html.

**Figure 3: Selected Cleanup Remedy**



## Next Steps:

Details of the cleanup work will be defined during the estimated three-year design phase of the project, which is currently under way. During this phase, health and safety plans will be developed for the protection of site workers and for the protection of the community. After the design, the in-river work (dredging, backfilling, and capping) is expected to take approximately four years to complete.

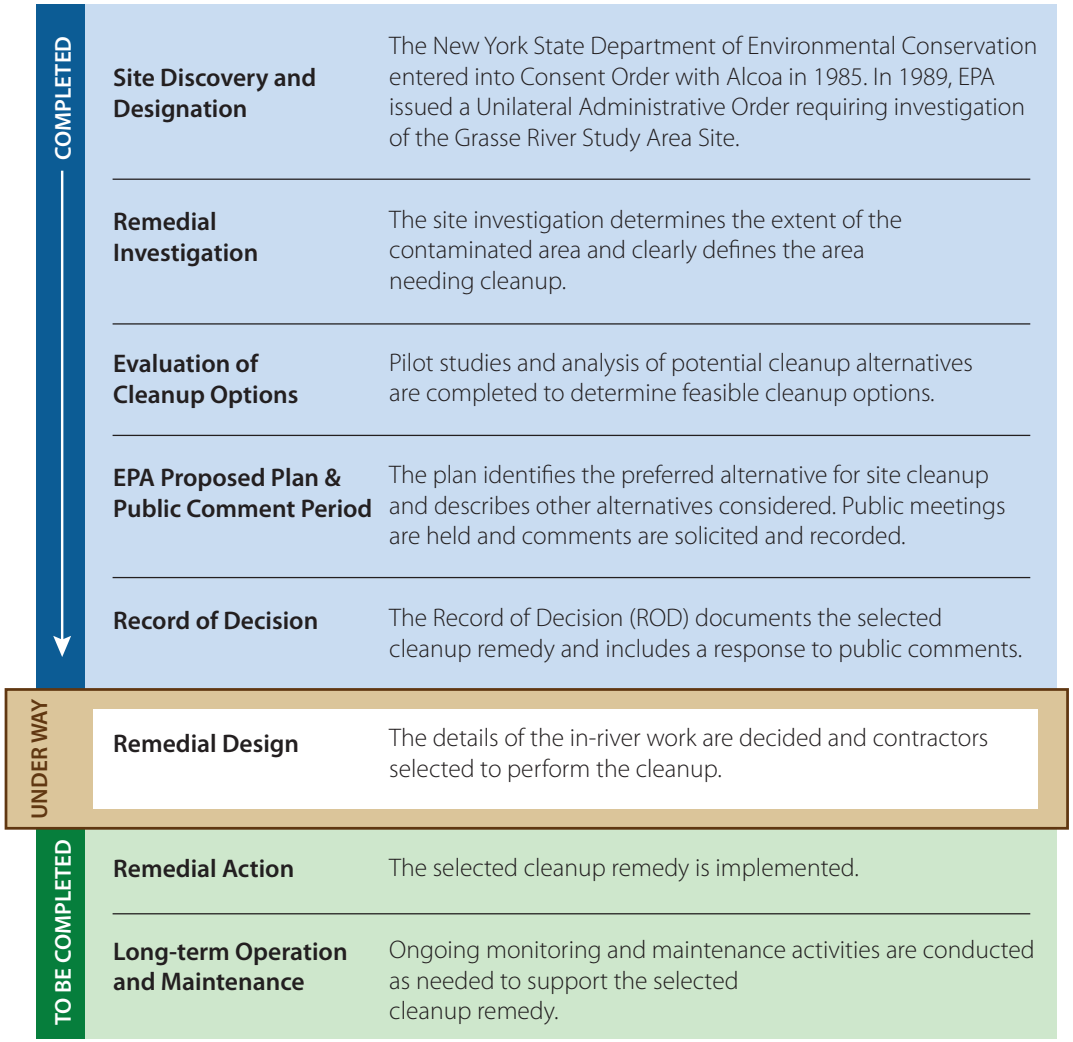
Before work begins, the EPA will consult with the community to share the details of the design and to explain how the work may impact local residents. Aspects of the cleanup work that are expected to be of interest to the community include trucking and transportation routes; work hours; environmental monitoring; river travel restrictions; and potential job opportunities.

Since the cleanup remedy for the site was selected in April 2013, the project has entered a new phase (see Figure 4). The EPA team remains committed to keeping the communities informed and to providing opportunities for community members to become involved in the cleanup process.

**The EPA team will communicate EPA decisions and actions, and the reasons for them, to the community and will follow these guiding principles during the design and cleanup:**

- Maintain honesty and integrity throughout the process;
- Recognize community and indigenous knowledge;
- Encourage active community participation and two-way dialogue; and
- Utilize cross-cultural formats and exchanges.

**Figure 4: The Cleanup Process for the Grasse River Site**



## Primary Contaminant at the Grasse River Superfund Site: PCBs

The contaminants of concern at the Grasse River site are polychlorinated biphenyls (PCBs).

PCBs are a group of chemicals consisting of 209 individual compounds known as congeners. PCBs were sold in mixtures containing dozens of congeners. These commercial mixtures were known in the U.S. as Aroclors.

Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were widely used in many industrial and commercial applications, including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and in many other industrial applications.

The Alcoa West facility started using PCBs in hydraulic oils for their fire-retardant properties in the 1950s after a fatal fire accident at another Alcoa plant.

Although manufacturing of PCBs was banned in 1979, they can still be released into the environment from poorly maintained hazardous waste sites that contain PCBs; leaks or releases from electrical transformers containing PCBs; and disposal of PCB-containing consumer products into landfills not designed to handle hazardous waste. PCBs may also be released into the environment by the burning of some wastes in municipal and industrial incinerators.

At the Grasse River Superfund site, the ongoing source of PCBs currently is the PCB-contaminated sediment in the river.

PCBs are classified by EPA as probable human ***carcinogens*** and are linked to other adverse health effects such as developmental effects, reduced birth weights and reduced ability to fight infection.

More EPA information about PCBs is available at http://www.epa.gov/epawaste/hazard/tsd/pcbs/index.htm.

The Agency for Toxic Substances and Disease Registry (ATSDR) is a federal public health agency of the U.S. Department of Health and Human Services. ATSDR provides information about contaminants found at hazardous waste sites through Toxicological Profiles.

The ATSDR Toxicological Profile for PCBs is available at http://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=142&tid=26 and is also available in Appendix 1.

# Chapter 3: Communities and Resources Affected by the Site

The Grasse River Superfund site is located along the northern boundary of New York state, within the town of Massena and just outside the village of Massena. The site includes approximately 7.2 miles of the lower Grasse River from the intersection of the Massena Power Canal and the Grasse River to the point where the Grasse and St. Lawrence Rivers meet (see Figure 1 on page 5).

The Alcoa West facility is located on the north shore of the lower Grasse River, east of the Power Canal, and is bounded to the north by the St Lawrence River.

Akwesasne, the Mohawk territory of the federally recognized Saint Regis Mohawk Tribe, lies just east of Massena and is located along the St. Lawrence River downstream of the site. Pursuant to the 1796 Treaty with the Seven Nations of Canada, 7 Stat. 55, the Saint Regis Mohawk Tribe also recognizes ancestral land on both banks of the lower Grasse River* (known as the Indian Meadows) as well as land located along the St. Lawrence River downstream of the site.

Primary land uses in the vicinity of the lower Grasse River, including the Indian Meadows and the town of Massena, include residential, agricultural, industrial, recreational, and tribal activities. Recreational activities in the lower Grasse River include fishing, boating, and water sports. During the winter months community members have reported that the river is used recreationally for snowmobiling. Grasse River water is used for domestic purposes (watering lawns and gardens) and agriculture (irrigating crops) but is not currently used as a public water supply. There are no commercial transportation uses of the river.

## Massena

The town of Massena was one of the first four municipalities formed within St. Lawrence County, which was founded in 1802. Known as the "Settlement in the Tall Pines," many of the first settlers were attracted by the area's numerous interconnected waterways and timber resources. During the 1800s, sulfur mineral springs located on the Raquette River, known for their "curative" properties, drew visitors and settlers to the area and became the basis of the local economy. In 1902 construction of the Massena Power Canal which connected the St. Lawrence River above the Long Sault Rapids to the Grasse River was completed, and included a hydroelectric dam that brought an abundant supply of electricity to the region. In 1903, following construction of the dam, the predecessor of Alcoa, the Pittsburgh Reduction Company, came to Massena and began producing aluminum. Power generation from the Power Canal stopped when construction of the St. Lawrence Seaway and Franklin D. Roosevelt (FDR) Power Project were completed in 1958 by what is now the New York Power Authority. The St. Lawrence Seaway includes the Eisenhower Locks, which allow vessels to reach the Great Lakes via the St. Lawrence River. The low-cost electricity from the FDR project brought two new industries to Massena, the Reynolds Metals Company – another aluminum producer, and General Motors – an automobile parts manufacturer. By the mid-twentieth century, Massena had become the industrial center of the region.

In recent decades Massena has seen a shift in its manufacturing-based economy. The General Motors plant closed its auto parts production plant in 2008 and is currently undergoing demolition and a large-scale environmental cleanup (see page 8). However, today Alcoa remains one of the largest private

Photo: Town of Massena, New York

** The land on both banks of the lower Grasse River is currently privately owned by a number of different property owners.*

employers north of Syracuse, employing approximately 775 people**. What was once Alcoa's Massena Smelter and Reynolds Metals' St. Lawrence Reduction Plant were organized as one facility (the Alcoa Massena West Plant and the Alcoa Massena East Plant) when the two companies merged in 2000.

In recent years the region has seen growth in the education, health care, government, and retail sectors. The region is also working on building its transportation infrastructure to help drive economic growth in the region.

In 2010, a public-private partnership called "FISHCAP" was formed; spearheaded by the St. Lawrence County Chamber of Commerce. The intent was to promote St. Lawrence County as the preeminent fishing destination – "the fishing capital of the world." According to the Chamber, FISHCAP was created to promote sport fishing as an economic driver for the region.

## Census Data

According to the 2010 U.S. Census, the town of Massena has a population of 12,883 and covers an area of 56.14 square miles. The population of the town has declined approximately 1.8% from a population of 13,121 in the year 2000. Median household income in the town is $41,215, and the unemployment rate is 9.4%. As of 2011, the primary employment categories in the town were educational services and health care and social assistance (27.6%); retail trade (18.1%); arts, entertainment, and recreation and accommodation and food services (10.6%). The manufacturing industry accounts for only 7.0% of the employed population's jobs.

The village of Massena is located within the town and had a population of 10,936 in 2010 and covered an area of 4.52 square miles (Figure 5). The population of the village of Massena has declined 2.4% over the last decade; the population in 2000 was 11,209. Median household income in the village of Massena is $40,978 and the unemployment rate is 8.7%. As of 2011, the primary employment categories in the village were educational services, health care and social assistance (27%); professional, scientific, management, administrative and waste management services (10.9%); and retail trade (10.6%). Like the town, manufacturing accounts for only a minor proportion of the employed population's jobs (6.0%).

According to the 2010 U.S. Census, a higher percentage of persons identify themselves as Native American and Alaska Native in the town and village of Massena than in the state of New York as a whole. Across New York state 0.6% of the population identifies itself as Native American and Alaska Native, whereas in the town of Massena 4.1% of the population identifies itself as Native American and Alaska Native. Additional demographic data on the town and village of Massena is presented in Figure 5.

### Figure 5: Massena Community Profile

*The town of Massena is located in St. Lawrence County, New York, near the Canadian border. The village of Massena is entirely within the town of Massena. The village government consists of a mayor and the town government consists of a town supervisor and a town council. According to the 2010 U.S. Census:*

| | Village | Town |
|---|---|---|
| Population 2010 | 10,936 | 12,883 |
| Hispanic<br>compared to a New York average of 17.6% | 1.9% | 1.8% |
| White<br>compared to a New York average of 65.7% | 93.4% | 92.4% |
| Black or African American<br>compared to a New York average of 15.9% | 0.6% | 0.6% |
| American Indian and Alaska Native<br>compared to a New York average of 0.6% | 2.9% | 4.1% |
| Asian<br>compared to a New York average of 7.3% | 1% | 0.8% |
| Median Household Income<br>compared to a New York average of $56,951 | $40,978 | $41,215 |
| Persons Below Poverty Level<br>compared to a New York average of 14.5% | 16.9% | 17.2% |

** Data as of August 1, 2014.*

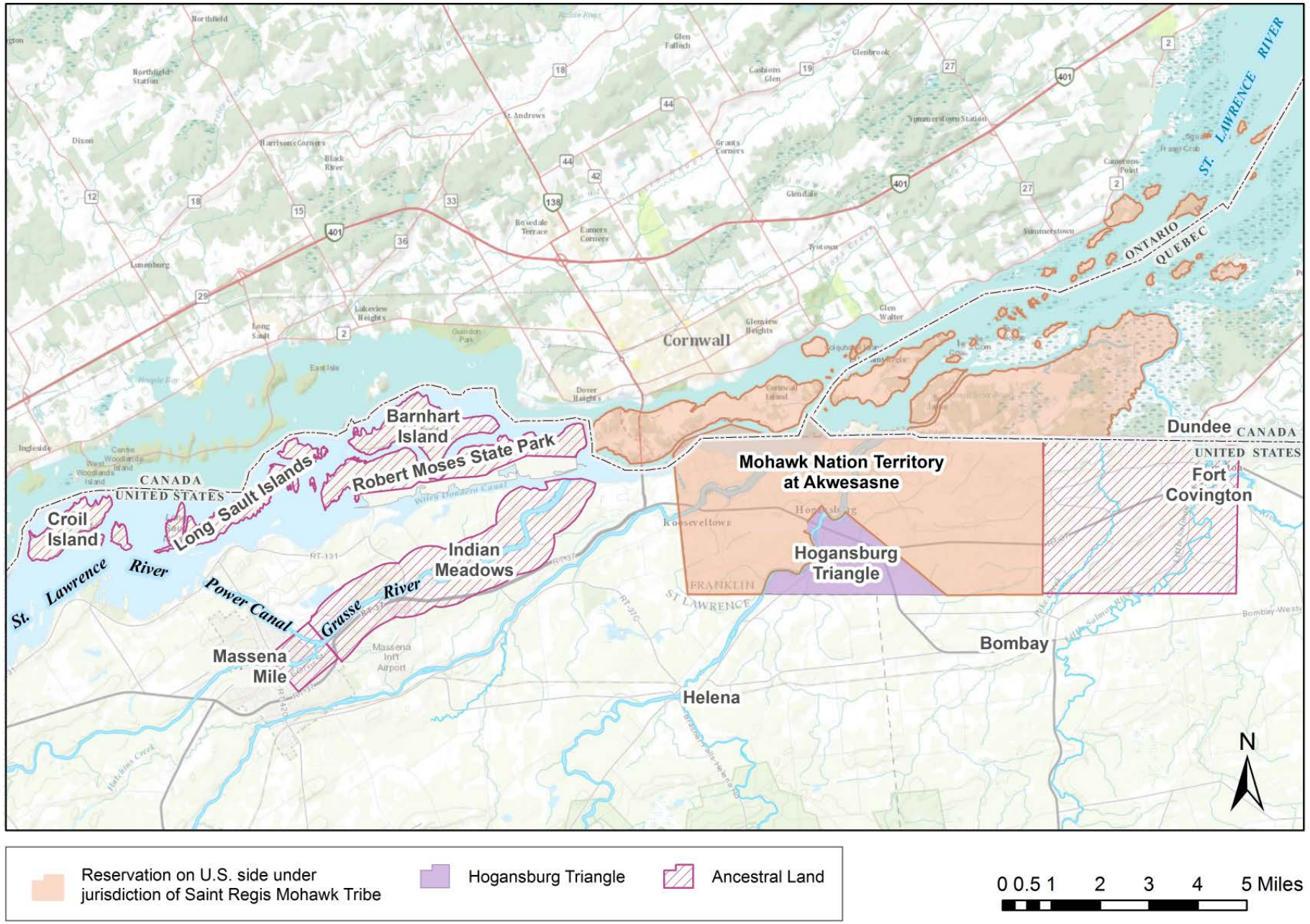
## The Mohawk Nation at Akwesasne

The Kanienkehaka, or Mohawks, as they are known in English, are traditionally the keepers of the Eastern Door of the Iroquois Confederacy, also known as the Haudenosaunee Confederacy or the Six Nations Confederacy. The Mohawks constitute one of six nations within the Iroquois Confederacy. The others are the Oneidas, Senecas, Cayugas, Onondagas, and the Tuscaroras. The Mohawk original homeland was a section of the middle Mohawk Valley of New York state, extending from Schoharie Creek upriver to East Canada Creek. Their hunting territories extended north into the Adirondack Mountains and south almost to Oneonta (Saint Regis Mohawk Tribe, Tribal Brochure. 2003). In 1796, the Seven Nations of Canada, which included Mohawks living in Saint Regis, signed a treaty with New York state that established the Saint Regis Mohawk Tribe Reservation, known as the Mohawk Nation at Akwesasne. The reservation contains land in both New York state and the Canadian provinces of Ontario and Quebec (see Figure 6). The portion of the reservation within New York state consists of about 14,000 acres in Franklin and St. Lawrence counties, just east of Massena, New York. The reservation is located at the confluence of four rivers – the Saint Regis River, the Raquette River, the Grasse River, and the St. Lawrence River.

The U.S. portion of Akwesasne is governed by an elected Tribal Council, which is comprised of three chiefs, three sub-chiefs, and a tribal clerk. The Council interacts with New York state and federal governments on a government-to-government level. The Saint Regis Mohawk Tribe administers environmental, social, policing, economic, health, and educational programs, as well as policies, laws, and regulations.

Photo: Cornwall, Canada, Saint Regis Mohawk Tribe Reservation, and St. Lawrence River

**Figure 6: Akwesasne Territory Map**



## Land Use

The Saint Regis Mohawk Tribe recognizes ancestral land on both banks of the lower Grasse River (known as the Indian Meadows) as well as land located along the St. Lawrence River downstream of the site (see Figure 6).

Traditionally the Mohawks relied on the area's abundant natural resources to support their subsistence lifestyle and cultural practices, which included hunting, fishing, farming, trapping, and gathering. The Mohawk name associated with the Grasse River is Nikentsiake, meaning "full of large fishes." Tribal members had fished and hunted the lower Grasse River and harvested sweet grass and other medicinal plants for traditional practices from the Indian Meadows. The Grasse River also served as the primary transportation route to Massena.

As the area became increasingly industrialized in the early part of the 20th century, the land-based, subsistence economy of the Mohawks became increasingly integrated with wage-labor employment. In recent decades, the local shift from a manufacturing-based economy to a service-based economy has resulted in the growth of gaming, retail businesses, and light manufacturing on the reservation.

In 2009 the Saint Regis Mohawk Tribe released a study of the Economic Impact of the Saint Regis Mohawk Tribe 2008. Between 2003 and 2008, employment increased from 956 to 1,336, establishing the Saint Regis Mohawk Tribe as the third largest employer in Franklin and St. Lawrence counties and the fifth largest employer in the North Country. The Saint Regis Mohawk Tribe also has a revenue sharing agreement with the state of New York for the casinos and bingo facilities that it operates. The revenue shared with New York from these facilities grew to $13 million in 2008 from $4.7 million in 2005. In 2008, approximately $3.3 million of the revenue went to Franklin and St. Lawrence counties.

## Census Data

According to the 2010 U.S. Census, Akwesasne, New York (zip code 13655), has a population of 3,512 and covers an area of 22.5 square miles. The population of the portion of the reservation in New York state has increased approximately 37.2% from a population of 2,558 in the year 2000. The racial makeup of the reservation is 92.7% American Indian or Alaska Native, 4.4% white, and 0.1% black or African American. The median household income in Akwesasne is $39,620, and the unemployment rate is 7.5%. The primary employment categories in the town are educational services and health care and social assistance (29.4%); arts, entertainment, recreation, accommodation and food services (17.8%); construction (10.8%); and public administration (10.5%). The predominant language is English; however, Kanienkeha (Mohawk) is the official language and about 30 percent of the community still speaks the Mohawk language.

### High-Speed Internet Comes to Akwesasne

Broadband, or high-speed internet service, has recently become available in Akwesasne as a result of a $10.5 million grant that was awarded to the Saint Regis Mohawk Tribe under the 2009 American Reinvestment and Recovery Act, which provided funding to expand service to rural communities. Akwesasne is the first to bring fiber-optic technology to the area, which is expected to spur additional economic development, employment, and educational opportunities.

## Grasse River Fish Consumption Advisories

The Grasse River supports a variety of fish and wildlife species and serves as a travel corridor between the upper river (upstream from Massena) and the St. Lawrence River. The state of New York has designated the Grasse River as a Significant Coastal Fish and Wildlife Habitat that supports cool and warm water fish populations, including muskellunge, smallmouth bass, northern pike, walleye, bullhead, yellow perch, and lake sturgeon.

However, a fish consumption ***advisory***, issued initially in 1990 and updated annually by the New York State Department of Health, currently indicates that no species of fish from the lower Grasse River (i.e., the mouth of the Grasse River to the Power Canal) should be eaten because of PCBs in the fish. The recommendation for the Massena Power Canal is to eat no more than one meal per month of smallmouth bass for men over 15 years and women over 50 years, but for children under the age of 15 years and women up to age 50 years, the advice is eat none.

The contamination of fish in the St. Lawrence River basin has had a significant impact on the Mohawk way of life. Traditionally, both the practice of fishing and fish consumption played a central role in Mohawk culture and identity. However, due to observed changes in the environment and fish advisories that have been in place since the 1990s, few members of the Saint Regis Mohawk Tribe continue to catch and eat locally caught fish due to the potential risks. Tribal members have noted the negative impact that this has had on the Akwesasne community, both nutritionally and culturally, and have stressed the importance of reducing contaminant levels in fish so that the culturally significant practice of fishing can be reintroduced to young Mohawks.

The Saint Regis Mohawk Tribe, with grant funding from the EPA and in collaboration with the New York State Department of Environmental Conservation and the New York State Department of Health, is working to collect fish contamination data and prepare fish consumption advisories based on community feedback that will inform Akwesasne residents about which fish and wildlife species are safe to eat and that will provide other helpful information to help families make informed choices about eating local fish.

### Links for More Information:

New York State Department of Health, HEALTH ADVICE ON EATING FISH YOU CATCH, St. Lawrence Valley Region, 2013
http://www.health.ny.gov/publications/2769.pdf

AKWESASNE FAMILY GUIDE TO EATING LOCALLY CAUGHT FISH, November 2012
In November 2012 the Saint Regis Mohawk Tribe released a new fish advisory to the community for review.
http://www.srmtenv.org/index.php?spec=waterresources/2013/11/2013-Fish-Advisories

FISH CONSUMPTION AND ENVIRONMENTAL JUSTICE, November 2002
A report developed from the National Environmental Justice Advisory Council meeting of December 3-6, 2001. The National Environmental Justice Advisory Council is a federal advisory committee to the U.S. Environmental Protection Agency.
http://www.epa.gov/compliance/ej/resources/publications/nejac/fish-consump-report_1102.pdf

# Chapter 4: The Community Involvement Action Plan

The Community Involvement Action Plan identifies the tools that will be used by the EPA to promote greater public participation and awareness during the design and implementation of the cleanup. Many of these tools are commonly used by the EPA at Superfund sites to actively engage the public and have been selected based on the identified community needs in the Grasse River Superfund site-area based on the recommendations of various stakeholders during a series of community interviews, as well as feedback received during the multi-year site investigation process and during the public comment period on the EPA's proposed cleanup plan.

Community interviews are an important component of the plan and provide EPA staff with essential historical perspective and insight into the issues that are most important to the people impacted by Superfund cleanups. During interviews with local residents, elected officials, tribal leaders, and other interested parties, the EPA gathers a list of issues and questions the community is concerned about so that they can be considered during the cleanup process.

### The Grasse River Community Involvement Action Plan Focuses on the Following Audiences:

- River residents in the project area;
- Other stakeholders, including community organizations, businesses, recreational users, and neighboring property owners who are interested in or affected by the site;
- Elected and administrative officials of local, state, federal, and tribal agencies serving the site community; and
- Members of the public who have a general interest in the site and who are interested in staying informed about project activities

In summer/fall 2013, after the public comment period on the proposed cleanup plan and the EPA's final decision on the cleanup, the EPA conducted a series of interviews with Massena elected officials and Saint Regis Mohawk Tribe leaders. The EPA also prepared a questionnaire that was distributed to the members of the "Community Advisory Panel" (described in the Action Plan below). The EPA asked the interviewees to identify the ways that they would like to receive information and how they would like to provide input during the design and "construction" phase of the project, when in-river work is under way. This included a discussion of how the EPA can reach the largest number of people in the community who are interested in becoming involved in discussions about the cleanup of the site.

Most of the people the EPA spoke with were very knowledgeable about the history of the site and the work that has already been conducted by Alcoa due to the lengthy investigation and demonstration project process and the previous communications on these topics, including the well-attended informational meetings that have been hosted by the EPA. The sentiment was often shared that those who have wanted to be informed about the cleanup are, and that adequate information about the Superfund cleanup process has been made available. However, as we embark upon the next phase of the cleanup, the EPA wants to ensure that current and projected community needs have been considered and included as part of the Community Involvement Action Plan.

Photo: Community Advisory Panel Meeting

## The Action Plan

### 1. Fact Sheets and Flyers

Fact sheets are the EPA's principal method of providing site-related information to the community. They are short (two to four page) documents, written in non-technical language, that often summarize larger, technical documents or provide an update on project status or individual elements of the cleanup. They include EPA contact information and refer people to the Internet and library for more technical information. They may also serve to inform the community about upcoming EPA-sponsored meetings or events.

During meetings with the Saint Regis Mohawk Tribe, tribal leaders indicated that too much information too often would not be useful and that general information about the cleanup should be shared with the community on an as-needed basis or when milestones occur in the project.

The EPA will create fact sheets as events dictate or in response to community requests for specific kinds of information. Fact sheets will be posted on the EPA Grasse River Web page (http://www.epa.gov/region2/superfund/npl/aluminumcompany/) and may be distributed to the project mailing list, sent electronically by e-mail, or made available at ***public meetings***.

Flyers or other posting notifications may also be used to share important project information and work details with recreational users of the river and tourists once work is under way.

### Points of Contact

Whenever the EPA begins work on a site, it identifies at least one point of contact for community questions, issues, or concerns. The two principal points of contact for the Grasse River Superfund site are listed below.

**Young Chang**
***Remedial Project Manager (RPM)***
EPA Region 2
290 Broadway
New York, NY 10007
Phone: (212) 637-4253
E-mail: chang.young@epa.gov

**Larisa Romanowski**
***Community Involvement Coordinator (CIC)***
EPA Region 2
Hudson River Field Office
421 Lower Main Street
Hudson Falls, NY 12839
Phone: (518) 747-4389
Toll free: 866-615-6490
E-mail: romanowski.larisa@epa.gov

Photo: 2005 Remedial Options Pilot Study – Armor Stone Placement

## 2. Public Meetings and Public Information Sessions

The EPA holds public meetings at various milestones and at the request of the community. The public meetings are organized to convey site information via presentations and discussions and to answer questions from community members. Each meeting will be structured to fit its purpose by using different formats (e.g., town hall meetings, open houses, informal roundtables, PowerPoint presentations, etc.).

The EPA held a set of ***public information sessions*** and public meetings in November 2012 on the proposed cleanup plan for the Grasse River site. Information sessions are an informal opportunity for EPA staff to engage with participants one-on-one to provide information and answer questions. Public meetings are typically structured more formally with a presentation and may include transcription by a court reporter to capture comments from the public. The public meetings on the ***Proposed Plan*** for the Grasse River site were transcribed, and the meeting transcripts were included as part of the April 2013 Record of Decision.

Now that the design of the project is under way, the EPA will schedule the next public meeting before in-river work begins to share the details of the design and in-river work. The EPA will coordinate with local elected officials and Saint Regis Mohawk Tribe leaders prior to scheduling meetings and will try to select dates that do not interfere with U.S. or Saint Regis Mohawk Tribe holidays or other community events. For example, Tuesday evenings are not a good night to hold meetings in Akwesasne because Radio Bingo, a popular pastime for community residents, is held every Tuesday evening on CKON.

Members of the Saint Regis Mohawk Tribe have also expressed an interest in keeping the scope of meetings limited and focused. Rather than covering a wide range of topics and cleanup details, meetings should focus on topics that are of greatest interest to the community, such as safety and jobs.

In addition to the formally structured meetings that will outline project plans and details, when in-river work gets under way, the EPA plans to hold regularly scheduled open-house style public information sessions that will provide an informal opportunity for community members to speak with project team members one-on-one and to receive answers to any questions that they have.

## 3. Coordination with the Saint Regis Mohawk Tribe, Local Government and Other Agencies

The EPA will coordinate with local government and Saint Regis Mohawk Tribe leaders to keep them informed of project activities and issues that may impact their constituencies. The EPA will continue its close working relationship with the staff of the New York State Department of Environmental Conservation, New York State Department of Health, National Oceanic and Atmospheric Administration, and Saint Regis Mohawk Tribe members who are part of the Grasse River site technical team. The EPA will keep an open line of communication with local officials, Saint Regis Mohawk Tribe leaders, and agency staff via meetings and regular dialogue to obtain feedback on their concerns. Communication with these representatives will continue through the remainder of the project.

## 4. Websites and Social Media

The EPA has created a Web page specifically for this site. The Web page includes electronic copies of the EPA's technical documents and fact sheets. The EPA will update the Web page on a regular basis with the most recent project presentations and informational materials. Notice of all public meetings, forums, and availability sessions and announcements related to the project will be posted online. At the request of the Saint Regis Mohawk Tribe, the EPA also created a Web page that provides an overview and includes links to the three Massena-area cleanup sites.

EPA – Grasse River Superfund site:
http://www.epa.gov/region2/superfund/npl/aluminumcompany/

EPA - St. Lawrence Region Cleanup Sites:
http://www.epa.gov/region02/superfund/npl/stlawrence/index.html

Alcoa also has a website dedicated to the Grasse River site that has included detailed project information, technical documents, community updates, presentations, and environmental monitoring information.

Alcoa's Grasse River website: http://www.thegrasseriver.com/index.html

The EPA will use social media tools such as Twitter to share important project developments and details about upcoming public meetings.

## 5. Information Repository and Administrative Record

When the EPA formally proposed a plan for cleanup in 2012, it collected every document that was used or relied upon to develop and analyze the proposed action. This collection of technical documents is called the ***administrative record*** and is available in the ***information repository***. The following information repositories have been established for the Grasse River site:

**Massena Public Library**
41 Glenn Street, Massena, NY 13662
315-769-9914
Hours: Mon and Fri, 9:30 a.m. - 5:00 p.m.;
Tues - Thurs, 9:00 a.m. - 8:30 p.m.; Sat and Sun, closed

**Saint Regis Mohawk Tribe – Environment Division**
449 Frogtown Road
Akwesasne, NY 13655
By Appointment: 518-358-5937

**Akwesasne Library**
321 State Route 37
Akwesasne, NY 13655
518-358-2240

**USEPA-Region 2**
Superfund Records Center
290 Broadway, 18th Floor
New York, NY 10007-1866
212-637-4308
Hours: Mon - Fri, 9:00 a.m. - 5:00 p.m.

## 6. Mailing List

The EPA maintains a mailing list for the Grasse River site. The list includes project-area river residents and local, state, federal and Saint Regis Mohawk Tribe officials representing the site community, and the former members of the Community Advisory Panel. Methods for increasing the mailing list have included sign-up sheets at public meetings. The list will be used to distribute fact sheets, community updates, meeting notices, or other project-related information.

To be added or deleted from the mailing list or to update a mailing address, contact Larisa Romanowski (contact information is in Appendix 6).

## 7. E-mail Group

The EPA maintains an e-mail list for electronic distribution of fact sheets, community updates, and meeting notices. To be added or deleted from the e-mail list, contact Larisa Romanowski (contact information is in Appendix 6).

## 8. Public Notices, News Releases, and Media Contacts

Public notices will be developed and submitted to local newspapers and radio stations to announce public meetings and other community involvement opportunities.

News releases and other types of information distribution to the media help the EPA to reach a large audience quickly and to reinforce and distribute information further. Media stories help explain technical information and track sequences of events for the public.

The EPA provides updates and information to key local newspapers and radio and television stations and encourages them to further distribute this information on a regular basis. Common methods of providing information to the media include the distribution of press releases on developing issues related to the project, individual interviews with project staff, or statements made by EPA representatives during public meetings. The EPA will also send meeting information to the Saint Regis Mohawk Tribe for possible inclusion in the Kawenni:ios newsletter. Media contacts are listed in Appendix 6.

### 9. Maps and Visual Aids

To communicate complex issues simply and effectively, maps, photographs, and other visual aids will be used at public meetings, in fact sheets, and on the Grasse River Superfund site Web page. These aids may be used to assist in communicating information regarding project work areas, processes, and technologies related to the cleanup.

### 10. Door-to-Door Notifications

When the EPA and/or Alcoa is working in the field or in the river, it may provide notices or solicit feedback from residents and businesses through door-to-door notifications.

### 11. School/Educational Outreach

The EPA will make project information available to interested schools to assist them in developing educational projects related to the Grasse River site. Educators and students can call the Grasse River site Community Involvement Coordinator for information or to request a visit to their school from an EPA representative (contact information is in Appendix 6).

### 12. Community Events

The EPA may attend or provide materials for community events such as fairs, festivals, and boating activities to distribute information and answer questions.

### 13. Informal Briefings and Presentations to Groups

EPA staff will be available to meet with local officials, stakeholder organizations, community or business leaders, and media representatives to provide briefings on site progress or provide information about upcoming site activities that may generate interest or questions. The EPA will make every effort to accommodate these requests, based on Agency staff availability.

### 14. Technical Assistance Services for Communities (TASC)

TASC is an EPA program intended to provide independent and credible educational and technical assistance to communities affected by hazardous waste contamination. The goal of this program is to help communities better understand and become involved in the cleanup process for hazardous waste sites. Assistance is provided by independent, outside technical experts from private companies and universities who are part of a network of experts the EPA has contracted with to provide technical assistance services.

TASC services may include:

#### Information Assistance

Increasing community understanding about technical issues by developing and disseminating information.

#### Community Education

Delivering community training workshops, symposiums, or conferences related to environmental problems.

#### Technical Expertise

Providing independent, non-advocacy consultation and assistance services to enable communities to engage in environmental planning and decision-making processes.

#### Technical Assistance Needs Evaluation and Plan Development

Working with community members to assess their technical assistance needs.

### Superfund Job Training Initiative (SuperJTI)

Providing SuperJTI job training in communities affected by nearby Superfund sites.

Communities are encouraged to work with others in their community to coordinate requests with the EPA. Requests are evaluated against a number of criteria to determine if technical assistance can be provided. More information on the TASC program is available at http://www.epa.gov/superfund/community/tasc/.

Specific requests should be sent to Larisa Romanowski, Community Involvement Coordinator (contact information is in Appendix 6).

The Saint Regis Mohawk Tribe's Environmental Division requested TASC support in 2013. Since that time, TASC support has been awarded and a TASC technical assistance specialist has communicated with members of the Environmental Division to gather technical assistance requests. At the time of this writing the TASC contractor is coordinating with the Saint Regis Mohawk Tribe Alcoa Superfund Oversight Specialist to develop a work plan to carry out their requests.

### Superfund Job Training Initiative (SuperJTI)

SuperJTI is a job readiness program that provides training and employment opportunities for people living in communities affected by Superfund sites.

Many of these areas are Environmental Justice (EJ) communities – historically under-represented minority and low-income neighborhoods and areas burdened with significant environmental challenges. Through initiatives like the SuperJTI program, EPA maintains an ongoing commitment to ensure environmental justice for all people, regardless of race, color, national origin or income.

EPA's goal is to help these communities develop job opportunities that remain long after a Superfund site has been cleaned up.

More information about SuperJTI is available at **http://www.epa.gov/superfund/community/sfjti/**.

## 15. Community Advisory Group (CAG)/Community Advisory Panel (CAP)

***Community Advisory Groups*** are formed at some Superfund cleanup sites to facilitate and foster communication between the diverse interests in the community and the EPA. A CAG is a self-forming, voluntary group whose primary purpose is to serve as a forum for the exchange of information and to create dialogue between the Agency and the community so that concerns and viewpoints can inform the decision-making process at a site.

In 2001 Alcoa spearheaded an effort to create a Community Advisory Panel (CAP) at the Grasse River Superfund site, in coordination with the EPA, which would serve essentially the same function as a CAG. An independent third-party facilitator was hired by the company to help create the group and facilitate the group's meetings, which were held from one to eight times per year for the past 12 years, as project activities dictated. To form the group, the facilitation team reached out to a cross-section of community members, including representatives from local government, local business, public education, health care, labor, environmental groups and the Saint Regis Mohawk Tribe to encourage their voluntary participation in the advisory panel. The panel consisted of 20 members from the communities of Massena, Louisville, and Akwesasne. CAP group members were asked to remain with the group until the EPA formalized its recommendations for the cleanup of the site. In October 2013, after the final decision had been made on the cleanup, the EPA met with the CAP group for the last time and outlined plans for communicating with community-area residents in the future that would be based, in large part, on the Community Involvement Action Plan outlined in this CIP. Over the course of about 29 meetings during the last 12 years, the CAP played a valuable role in representing community viewpoints with the Agency and has helped guide and inform the EPA's decision-making process at the site.

More information about the Grasse River CAP is available on Alcoa's Grasse River website: http://www.thegrasseriver.com/CAP.html.

For more information about CAGs at EPA Superfund sites visit http://www.epa.gov/superfund/community/cag/.

## Alcoa's Community Involvement Activities

Prior to EPA's final cleanup decision for the Grasse River site, Alcoa worked cooperatively with the EPA to inform the community about the pilot studies and demonstration projects that were necessary to fully investigate the contamination and potential cleanup options for the site. Alcoa's efforts to inform the community have included:

- Periodic community updates on major activities related to the project.
- Participation in a number of EPA-sponsored public availability sessions and public meetings to discuss the project.
- Convening of a Community Advisory Panel in 2001, representing a broad cross-section of community members, to provide a forum for discussion and feedback on the cleanup of the site (see Community Advisory Panel discussion above).
- An Alcoa website dedicated to the Grasse River cleanup project that includes a site summary, historical information, technical documents, presentations, community updates, CAP group information and meeting minutes, project contact information, and details about upcoming meetings or community events related to the cleanup: http://www.thegrasseriver.com.

Prior to the start of in-river work, Alcoa will prepare a ***Community Health and Safety Plan*** that will describe key health and safety personnel and will include detailed health and safety plans for protecting and informing the surrounding community when work is under way. Alcoa plans to continue to maintain their website, participate in EPA-sponsored public meetings, and prepare informational materials as requested by the Agency during the design and performance of the cleanup.

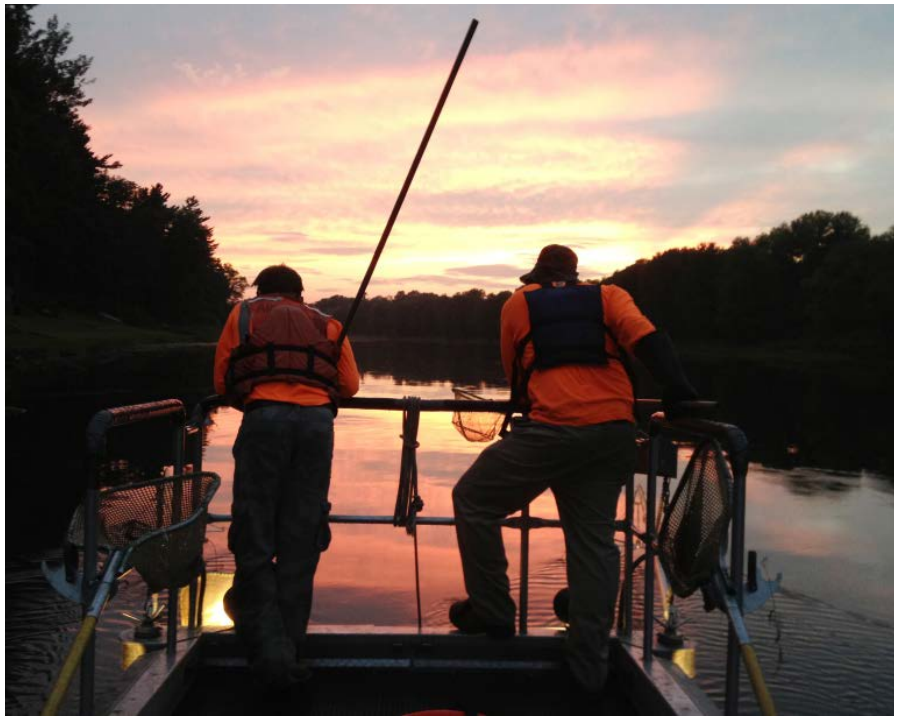


Photo: Fish Sampling

### Table 1: Tools for Sharing and Receiving Information

| Tool | EPA's Role | Community's Role (Massena and Akwesasne) | St. Regis Mohawk Tribe: Alcoa Superfund Oversight Specialist's Role |
|---|---|---|---|
| **POINTS OF CONTACT** | During regular federal government operating hours, one of the EPA contacts should be able to return your call or respond to e-mail within 24 to 48 business hours. If we are out of the office, we will update our outgoing voicemail and e-mail message to let you know when you can expect us to return your call or e-mail, and who you can reach out to in our absence. EPA contacts are listed in Appendix 6. | If you see something that concerns you or that you have a question about, please call the EPA *Community Involvement Coordinator*, Larisa Romanowski, or EPA *Remedial Project Manager*, Young Chang (contact information is in Appendix 6).<br>For emergencies and other sudden threats to public health, such as<br>• Oil and/or chemical spills,<br>• Radiation emergencies, and<br>• Biological discharges<br>call the EPA National Response Center at 1-800-424-8801. | The Saint Regis Mohawk Tribe's *Alcoa Superfund Oversight Specialist*, Jessica Tarbell, is available to answer questions and address concerns related to the cleanup (contact information is in Appendix 6). |
| **FACT SHEETS** | The EPA will develop a fact sheet about the final design. Other fact sheets about specific aspects of the cleanup will be developed as deemed necessary and by request of the community. | If there is a topic you would like to learn more about, please let us know. | The *Alcoa Superfund Oversight Specialist* should also identify topics of interest to the community that may be summarized in a fact sheet. |
| **WEBSITE** | The EPA will post on the web:<br>• New fact sheets<br>• Final technical documents<br>• Meeting announcements | If there is something you'd like to see on the website, please let the EPA *Community Involvement Coordinator* know. | The *Alcoa Superfund Oversight Specialist* will suggest items for posting on the website. |
| **INFORMATION REPOSITORY** | The EPA will update the information repositories listed in Appendix 7 with copies (either electronic or paper) of major site documents, fact sheets, and other relevant items as they are finalized. | If you would like to learn more about the status of the information repository or want to comment on accessibility of the repository or the type/amount of information kept in the repository, please contact the EPA *Community Involvement Coordinator*. | |

| Tool | EPA's Role | Community's Role (Massena and Akwesasne) | St. Regis Mohawk Tribe: Alcoa Superfund Oversight Specialist's Role |
|---|---|---|---|
| **COMMUNITY MEETINGS** | The EPA will host a community meeting at the following points in the process:<br>• Final design completion<br>• Pre-dredging/capping<br><br>The EPA will announce community meetings via:<br>• Newspaper (*Massena Daily Courier Observer, Indian Time*)<br>• EPA's website<br>• Postcard (when possible)<br>• E-mail distribution list<br><br>During in-river work, the EPA will also host informal open-house style information sessions in Massena and Akwesasne. | If you would like to have the EPA host a community meeting in addition to the ones listed, please let the EPA know.<br><br>If you would like to get the word out about community meetings and/or have suggestions for methods of announcing the meetings, please let the EPA know. | The *Alcoa Superfund Oversight Specialist* will pass along community/Tribal Council/ Administration requests for a community meeting to the EPA *Remedial Project Manager* or *Community Involvement Coordinator*.<br><br>The *Alcoa Superfund Oversight Specialist* will assist the EPA in finding an appropriate time and location for the meetings to be held at Akwesasne and will help publish them. |
| **POSTCARDS** | Given enough lead time (three weeks), the EPA will send out a postcard to announce community meetings to river residents in the project area. | | |
| **TECHNICAL ASSISTANCE SERVICES FOR COMMUNITIES (TASC)** | The EPA has received a request for TASC assistance from the Saint Regis Mohawk Tribe, and TASC services have been awarded. | Community members who would like more information about TASC or who would like to request TASC assistance should contact the EPA *Community Involvement Coordinator*. | The *Alcoa Superfund Oversight Specialist* is working with the EPA's TASC contractor to identify their technical assistance needs and carry out specific projects under the TASC program. |
| **ELECTED OFFICIAL UPDATES** | The EPA will keep local, state, and federal elected officials informed about project activities and will schedule meetings as needed to discuss the work. Press releases will also be shared with local, state, and federal representatives. | | |
| **TRIBAL COUNCIL UPDATES** | The EPA will ask the Saint Regis Mohawk Tribe's *Alcoa Superfund Oversight Specialist* to set up a briefing with the Council if we have some information we'd like to share or if there is a request for a briefing of the Tribal Council. The EPA will request consultation with the Tribe in accordance with our consultation policy. | If there is a topic you think EPA and the Tribal Council should discuss, please inform both the Saint Regis Mohawk Tribe *Alcoa Superfund Oversight Specialist* and EPA. | The *Alcoa Superfund Oversight Specialist* provides regular updates on technical issues to the Tribal Council and will brief the Council on site-related activities. |

| Tool | EPA's Role | Community's Role (Massena and Akwesasne) | St. Regis Mohawk Tribe: Alcoa Superfund Oversight Specialist's Role |
|---|---|---|---|
| **MAILING LIST** | The EPA will maintain a mailing list that includes river residents in the project area, elected officials, the former Community Advisory Panel members, and government, state, and Saint Regis Mohawk Tribe leaders. The EPA will maintain an e-mail list for electronic distribution of fact sheets, meeting notices, and periodic site updates. | If you would like to be added to the e-mail distribution list, please contact the *EPA Community Involvement Coordinator*. | |
| **PRESS RELEASES** | The EPA will provide a press release to local area media, including the *Massena Daily Courier Observer* and *Indian Time* after the final cleanup design is complete, prior to the start of work. Other press releases will be prepared as needed during project milestones. | | |
| **PRESENTATIONS** | Upon request and dependent on the available resources, the EPA will provide a presentation on site-related topics such as:<br>• The design and cleanup process<br>• Monitoring and sampling techniques<br>• Potential health and environmental risks | You may request a presentation from the EPA for your group, class, or institution. | The *Alcoa Superfund Oversight Specialist* will pass along community requests for presentations to the EPA *Remedial Project Manager*. |
| **FISH ADVISORY INFORMATION AND OUTREACH** | The EPA has provided grant funding to support a collaborative effort between the Saint Regis Mohawk Tribe, the New York State Department of Environmental Conservation and the New York State Department of Health to update fish contaminant data, create the Saint Regis Mohawk Tribe's fish consumption advisories, and conduct community outreach related to the fish consumption advisories. | The community will help identify opportunities for this type of outreach. | The *Alcoa Superfund Oversight Specialist* will pass along updates on the fish consumption advisories to the EPA *Remedial Project Manager*. |

| Tool | EPA's Role | Community's Role (Massena and Akwesasne) | St. Regis Mohawk Tribe: Alcoa Superfund Oversight Specialist's Role |
|---|---|---|---|
| **JOBS** | The EPA will assist with sharing information with the community regarding job opportunities associated with the project. The EPA has initiated discussions with Alcoa regarding the potential for the Superfund Job Training Initiative (SuperJTI) at the site. For more general information on SuperJTI visit http://epa.gov/superfund/community/sfjti/. | | The *Alcoa Superfund Oversight Specialist* will pass along community interest and requests for Super JTI to the EPA. |
| **VISIBLE SIGNS AND NOTICES AROUND THE SITE** | The EPA, or Alcoa with EPA oversight, will post information about:<br>• Site access<br>• Hazards<br>• Warnings | If you identify an area where you think a sign should be, please let the EPA know. | The *Alcoa Superfund Oversight Specialist* will work with the EPA *Remedial Project Manager* to identify areas where a sign may be needed. |
| **HEALTH AND SAFETY INFORMATION** | Information pertaining to health and safety during the in-river work will be shared with the community during scheduled community meetings and included in informational materials created for the site. Anticipated topics of interest include:<br>• Trucking and transportation routes<br>• Work hours<br>• Worker protection<br>• Community safeguards<br>• Environmental monitoring<br>• Emergency response<br>• Any river travel restrictions | The community will help identify topics of interest. | The *Alcoa Superfund Oversight Specialist* should also identify topics of interest to the community. |

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

# POLYCHLORINATED BIPHENYLS

Division of Toxicology ToxFAQs™ February 2001

**This fact sheet answers the most frequently asked health questions (FAQs) about polychlorinated biphenyls. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.**

**HIGHLIGHTS: Polychlorinated biphenyls (PCBs) are a mixture of individual chemicals which are no longer produced in the United States, but are still found in the environment. Health effects that have been associated with exposure to PCBs include acne-like skin conditions in adults and neurobehavioral and immunological changes in children. PCBs are known to cause cancer in animals. PCBs have been found in at least 500 of the 1,598 National Priorities List sites identified by the Environmental Protection Agency (EPA).**

## What are polychlorinated biphenyls?

Polychlorinated biphenyls are mixtures of up to 209 individual chlorinated compounds (known as congeners). There are no known natural sources of PCBs. PCBs are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor in air. PCBs have no known smell or taste. Many commercial PCB mixtures are known in the U.S. by the trade name Aroclor.

PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they don't burn easily and are good insulators. The manufacture of PCBs was stopped in the U.S. in 1977 because of evidence they build up in the environment and can cause harmful health effects. Products made before 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors, and old microscope and hydraulic oils.

## What happens to PCBs when they enter the environment?

❑ PCBs entered the air, water, and soil during their manufacture, use, and disposal; from accidental spills and leaks during their transport; and from leaks or fires in products containing PCBs.

❑ PCBs can still be released to the environment from hazardous waste sites; illegal or improper disposal of industrial wastes and consumer products; leaks from old electrical transformers containing PCBs; and burning of some wastes in incinerators.

❑ PCBs do not readily break down in the environment and thus may remain there for very long periods of time. PCBs can travel long distances in the air and be deposited in areas far away from where they were released. In water, a small amount of PCBs may remain dissolved, but most stick to organic particles and bottom sediments. PCBs also bind strongly to soil.

❑ PCBs are taken up by small organisms and fish in water. They are also taken up by other animals that eat these aquatic animals as food. PCBs accumulate in fish and marine mammals, reaching levels that may be many thousands of times higher than in water.

## How might I be exposed to PCBs?

❑ Using old fluorescent lighting fixtures and electrical devices and appliances, such as television sets and refrigerators, that were made 30 or more years ago. These items may leak small amounts of PCBs into the air when they get hot during operation, and could be a source of skin exposure.

❑ Eating contaminated food. The main dietary sources of PCBs are fish (especially sportfish caught in contaminated lakes or rivers), meat, and dairy products.

❑ Breathing air near hazardous waste sites and drinking contaminated well water.

❑ In the workplace during repair and maintenance of PCB transformers; accidents, fires or spills involving transformers, fluorescent lights, and other old electrical devices; and disposal of PCB materials.

## How can PCBs affect my health?

The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects. Most of the studies of health effects of PCBs in the general population examined children of mothers who were exposed to PCBs.

Animals that ate food containing large amounts of PCBs for short periods of time had mild liver damage and some died. Animals that ate smaller amounts of PCBs in food over several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach, and thyroid gland injuries. Other effects

of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. PCBs are not known to cause birth defects.

**How likely are PCBs to cause cancer?**

Few studies of workers indicate that PCBs were associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. Rats that ate food containing high levels of PCBs for two years developed liver cancer. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. The EPA and the International Agency for Research on Cancer (IARC) have determined that PCBs are probably carcinogenic to humans.

**How can PCBs affect children?**

Women who were exposed to relatively high levels of PCBs in the workplace or ate large amounts of fish contaminated with PCBs had babies that weighed slightly less than babies from women who did not have these exposures. Babies born to women who ate PCB-contaminated fish also showed abnormal responses in tests of infant behavior. Some of these behaviors, such as problems with motor skills and a decrease in short-term memory, lasted for several years. Other studies suggest that the immune system was affected in children born to and nursed by mothers exposed to increased levels of PCBs. There are no reports of structural birth defects caused by exposure to PCBs or of health effects of PCBs in older children. The most likely way infants will be exposed to PCBs is from breast milk. Transplacental transfers of PCBs were also reported In most cases, the benefits of breast-feeding outweigh any risks from exposure to PCBs in mother's milk.

**How can families reduce the risk of exposure to PCBs?**

❑ You and your children may be exposed to PCBs by eating fish or wildlife caught from contaminated locations. Certain states, Native American tribes, and U.S. territories have issued advisories to warn people about PCB-contaminated fish and fish-eating wildlife. You can reduce your family's exposure to PCBs by obeying these advisories.

❑ Children should be told not play with old appliances, electrical equipment, or transformers, since they may contain PCBs.

❑ Children should be discouraged from playing in the dirt near hazardous waste sites and in areas where there was a transformer fire. Children should also be discouraged from eating dirt and putting dirty hands, toys or other objects in their mouths, and should wash hands frequently.

❑ If you are exposed to PCBs in the workplace it is possible to carry them home on your clothes, body, or tools. If this is the case, you should shower and change clothing before leaving work, and your work clothes should be kept separate from other clothes and laundered separately.

**Is there a medical test to show whether I've been exposed to PCBs?**

Tests exist to measure levels of PCBs in your blood, body fat, and breast milk, but these are not routinely conducted. Most people normally have low levels of PCBs in their body because nearly everyone has been environmentally exposed to PCBs. The tests can show if your PCB levels are elevated, which would indicate past exposure to above-normal levels of PCBs, but cannot determine when or how long you were exposed or whether you will develop health effects.

**Has the federal government made recommendations to protect human health?**

The EPA has set a limit of 0.0005 milligrams of PCBs per liter of drinking water (0.0005 mg/L). Discharges, spills or accidental releases of 1 pound or more of PCBs into the environment must be reported to the EPA. The Food and Drug Administration (FDA) requires that infant foods, eggs, milk and other dairy products, fish and shellfish, poultry and red meat contain no more than 0.2-3 parts of PCBs per million parts (0.2-3 ppm) of food. Many states have established fish and wildlife consumption advisories for PCBs.

**References**

Agency for Toxic Substances and Disease Registry (ATSDR). 2000. Toxicological profile for polychlorinated biphenyls (PCBs). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

**Where can I get more information?** For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs™ Internet address is http://www.atsdr.cdc.gov/toxfaq.html . ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

# Appendix 2: Overview of the Federal Superfund Program and Process

The National Priorities List (NPL) is a list of the most serious sites identified for long-term cleanup. The Grasse River Superfund site is not on the NPL but is being investigated and remediated as an enforcement-led ***remedial action*** that follows the same investigation and cleanup remedy selection requirements as sites on the NPL.

## Superfund Cleanup Program Overview

There are two basic types of responses (removal and remedial actions) that EPA uses to manage polluted sites:

***Removal Actions*** are used to handle emergency oil spills or chemical releases and short-term responses.

Emergency actions are taken to eliminate *immediate* risks and ensure public safety. Examples of such emergencies are chemical releases at a fixed location or during transportation. The EPA may respond to help state and local authorities deal with these emergencies quickly. The 1995 Non-Time Critical Removal Action at the Grasse River site is an example of a removal action.

***Remedial Actions*** are used to handle complex sites needing a long-term response. Remedial actions manage releases that do not pose an urgent threat to public health or the environment and do not require immediate action.

### Polluter Pays

The EPA is committed to ensuring that those who are responsible for hazardous waste sites take the lead in cleanup, when appropriate, throughout the Superfund cleanup process.

Remedial actions involve complex and highly contaminated sites that often require several years to study the problem, develop a permanent solution, and clean up the hazardous waste. These are the sites that most people think of when they hear about the Superfund program. The cleanup of the Grasse River site is a remedial action.

The following provides a general listing of the many steps in the remedial cleanup process, from the initial investigations through the removal of the site from the NPL or, in the case of the Grasse River site, the completion of cleanup activities.

For the Grasse River site, the EPA issued an Administrative Order to Alcoa in September 1989, calling for the investigation of the Alcoa Study Area to determine the nature and extent of contamination. Under the Order, Alcoa is also required to pay for and conduct the cleanup work selected by the EPA in the final decision document called the Record of Decision (April 2013).

As of June 2014, the site is currently in the ***Remedial Design*** phase of the Superfund process.

## What is the Purpose of the Superfund Enforcement Process?

The ***Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)*** provides a broad range of enforcement authorities that the EPA can use to meet the goals of the Superfund program. Under these authorities the EPA can:

- Investigate a Potentially Responsible Party's (PRP) property;
- Order PRPs to clean up sites;
- Negotiate settlements with PRPs to fund or perform site cleanup; and
- Pursue legal action in court against PRPs who refuse to perform or pay for the cleanup.

Information about Superfund's liability structure can be found on the web at: http://www2.epa.gov/enforcement/superfund-liability.

General information about the Superfund enforcement process, enforcement authorities, and enforcement tools is available in the fact sheet *The Superfund Enforcement Process: How it Works:* http://www2.epa.gov/sites/production/files/2013-10/documents/fs-howitworks-rpt.pdf.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, and EPA regulations require that specific community involvement activities must occur at certain points throughout the Superfund process. These required activities are described on the EPA Web page; The Superfund Process. In addition to these required activities, the EPA does much more to involve the public, such as offering independent technical assistance through the Technical Assistance Services for Communities (TASC) program and evaluating opportunities for communities to participate in the Superfund Job Training Initiative (Super JTI). Many of the various outreach techniques the EPA uses are described in detail in the Superfund Community Involvement Toolkit and in the Community Involvement Action Plan section of this CIP.

### Links for More Information:

**The Superfund Process:**
http://www.epa.gov/superfund/community/process.htm

**Technical Assistance Services for Communities (TASC):**
http://www.epa.gov/superfund/community/tasc/index.htm

**Superfund Community Involvement Toolkit:**
http://www.epa.gov/superfund/community/toolkit.htm

### 1. Site Discovery

The Superfund process begins with the discovery of a site. There are different ways that the EPA becomes aware of the need to consider a site for cleanup. Sometimes the notification comes from the general public, sometimes from a state that has been working on the site for some time, and sometimes other sources, such as the media, bring the site to the EPA's attention.

### 2. Preliminary Assessment/Site Investigation (PA/SI)

Following site discovery, the EPA reviews any existing information, including prior sampling results, in a step called the Preliminary Assessment. This is followed by various activities such as a site visit or additional sampling, which are called the Site Investigation. Together these are called the Preliminary Assessment/Site Investigation or PA/SI.

### 3. National Priorities List (NPL) Process

If the information warrants it, the EPA then goes through the NPL site-listing process, which requires an analysis of the types of known or suspected contaminants and their locations near to people or in the environment, to determine the potential for harm. The analysis document, the NPL Scoring Package, becomes the basis for approaching a state's governor to request the state's agreement for proposing that the site be added to the NPL.

In some cases, the EPA executes all or part of the Superfund cleanup process on a site that is not listed on the NPL. The Alcoa Grasse River site is one such non-NPL site where the remedial cleanup process is being followed.

### *4. Remedial Investigation (RI)*

Following NPL listing, the EPA designs a thorough investigation of the site, characterizing both the extent of contamination (the area affected and to what limits), and the types and concentrations of contaminants. This usually involves air, soil, sediment, surface water and/or ground water sampling and often multiple sampling events that can take several years. The Grasse River site RI report is called the *Comprehensive Characterization of the Lower Grasse River.*

The EPA also establishes an information repository at or near the site where all correspondence, reports, and documents pertaining to the site cleanup decision will be stored and available to community members. The repositories for the Grasse River site are listed in Appendix 7.

During the RI and ***Feasibility Study*** phase, the EPA establishes an administrative record file for the site to be maintained in the information repository(ies). The Agency issues a public notice through the local media to notify the community about the administrative record file. As the cleanup process moves forward, the EPA will add to the administrative record file all the documents that EPA considered or relied upon in making the eventual cleanup decision, as well as relevant documents on technologies that were considered, including there that were ultimately rejected. The administrative record file also contains information about opportunities for public comment and participation during the cleanup remedy selection process and the EPA's responses to significant comments submitted during the public comment period.

### 5. Feasibility Study (FS)

Once the contamination has been identified and the extent has been well-defined, the EPA develops a list of possible ways to address it. The tools, techniques, and process are organized into alternatives, often with multiple elements, that are evaluated using a number of criteria, including protectiveness of human health and the environment, ease of implementation, cost, and time to reach cleanup goals. Sometimes certain elements are tested at a smaller scale in the laboratory or in the field. These are called treatability studies, pilot tests, and demonstration projects. Their results help the EPA decide which alternatives should be considered and offered to the public for their comments. The FS for the Grasse River site is called the Analysis of Alternatives and is available in the information repositories. The RI and FS are often referred to in combination as the RI/FS because they are often part of the same scope of work.

### 6. Proposed Plan

Based on results of the Feasibility Study, the EPA develops a Proposed Plan for cleaning up the site. The Proposed Plan summarizes the RI/FS and identifies one preferred alternative that the EPA thinks balances all considerations. The Proposed Plan process includes a minimum 30-day public comment period. The Agency issues a public notice through the local media to notify the community so interested members of the public can comment on the Proposed Plan. In addition, the Agency holds a public meeting to discuss the Proposed Plan. The Proposed Plan is posted online and made available at the information repository(ies).

For the Grasse River site, notification of the Proposed Plan comment period and public meetings was also sent to those on the EPA's postal mailing list and e-mail list and was advertised through public notices in the newspaper. Information sessions and public meetings were held in Massena and Akwesasne in November 2012.

### 7. Record of Decision (ROD)

The ROD explains which cleanup alternatives will be used at the site. It contains information on site history, a description of the site, site characteristics, community participation, enforcement activities, past and present activities, ***contaminated media***, the contaminants present, a description of the response actions to be taken, and the remedy selected for cleanup. The development of the ROD also includes consideration of how the site could be used following the cleanup.

When the EPA makes a final decision about which alternative will be used to clean up the site, it also creates a document that explains how it has addressed the public comments that were received on the Proposed Plan. This document is called a ***Responsiveness Summary***, and it is a part of the ROD.

The EPA issues a public notice through the local media to notify the community when the ROD has been signed and is available to the public. The ROD is part of the administrative record and is posted online and available at the information repository.

### 8. Remedial Design (RD)

The RD is the development of design with engineering drawings and specifications for a site cleanup. A fact sheet is typically distributed after the design work is complete. At the Grasse River site, the EPA will provide a public briefing about the final design before cleanup work begins as part of the Remedial Action (RA).

### 9. Remedial Action (RA)

The RA is the actual building of treatment facilities, removal of waste piles, containment of contamination, implementation of institutional controls, and any other cleanup activities selected in the ROD. This phase includes testing and certifying any facilities that are put into operation.

Throughout this phase, the EPA will keep community members advised about the progress of the cleanup using the outreach tools outlined in the Action Plan section of this Community Involvement Plan.

The RA is followed by an Operation and Maintenance (O&M) phase. During this phase the cleanup remedy is maintained to ensure that it remains protective of human health and the environment. For example, the O&M phase of the Grasse River cleanup remedy will include monitoring and, if needed, repair of caps to ensure that they continue to contain the contaminated sediments.

### 10. Five-Year Review

This is an analysis prepared every five years to determine if site cleanup remedies remain protective of human health and the environment. At sites where contaminants remain on-site after construction (such as at the Grasse River site, where capping is a component of the remedy), the statutory trigger for the first Five-Year Review is five years from the date of the construction mobilization – the start of in-river work. Prior to the Five-Year Review process beginning, the community is notified and asked to provide any information it has about the operations of the as-built remedy or any issues and concerns that have arisen regarding the cleanup. When the Five-Year Review report is complete, the EPA will announce that the review is complete and that the report and summary are available at the information repository and online for the public to review.

### 11. Delisting

For sites on the NPL, when all site cleanup has been completed and all cleanup goals have been achieved, the EPA publishes a notice of its intention to delete the site from the NPL in the Federal Register and notifies the community of its availability for comment. The EPA then accepts comments from the public on the information presented in the notice and issues a Responsiveness Summary to formally respond to public comments received. If, after the formal comment period, the site still qualifies for deletion, the EPA publishes a formal deletion notice in the Federal Register and places a final deletion report in the information repository(ies) for the site.

For non-NPL remedial sites such as Grasse River, the EPA will prepare, and release for public comment, a fact sheet that outlines the completion of the cleanup. The EPA will respond to significant comments in a Responsiveness Summary before determining that the cleanup is complete.

## Other Cleanup Steps

Two other potential steps in the site's cleanup process might occur.

### 1. Interim Actions

An interim action is any short-term, temporary, or preliminary construction or activity that addresses contamination before a final cleanup decision is made. The 1995 Non-Time Critical Removal Action at the Grasse River site is an example of an interim action.

### 2. ROD Amendment/Explanation of Significant Differences (ESD)

If new information arises that could affect the implementation of the cleanup remedy or prompt reevaluation of that remedy after the ROD is signed, then the EPA may need to change the remedy through a ROD Amendment (for a fundamental change) or issue an ESD, depending on the nature and extent of the changes. For a ROD Amendment, the process is the same as the one leading up to the ROD, where the public is notified, a public meeting is held, and comments from the public are solicited and compiled in the Responsiveness Summary of the ROD Amendment. However for an ESD where the remedy fundamentally remains the same, but there is/are significant change(s) that needs to be identified to the public, the public is notified of the ESD and a public meeting is usually not held.

# Appendix 3: Past Community Involvement for the Grasse River Superfund Site

## Past Community Involvement Activities:

During the study and decision phase, EPA staff met and spoke with members of the community, both formally and informally, to discuss the work and to address any questions or concerns. A summary of past community involvement activities is listed below. The 2013 Record of Decision includes a summary of the input received during the public comment period on the proposed cleanup plan for the site and the EPA's responses.

- November 1988: The EPA conducted a workshop in the Massena area on the various technologies available to clean up PCB-contaminated soils, sludge, and ground water.
- May 1994: The EPA held a public meeting in Massena and a public availability session in Akwesasne to discuss the EPA's proposal for a Non-Time Critical Removal Action near Outfall 001 to remove PCB-contaminated sediment.
- April 2001: The first meeting of the Community Advisory Panel (CAP) was held in April 2001. The CAP was formed to provide a forum for exchange of information and for public input during the Superfund cleanup process. A third-party facilitator helped form the CAP group, which included representatives from local government, business, public education, health care, labor, and the Saint Regis Mohawk Tribe. Between 2001 and 2013 about 29 CAP meetings were held.

Photo: 2005 Remedial Options Pilot Study

- 2001-2007: When pilot studies or demonstration projects were proposed as part of the investigation and evaluation of cleanup options for the site, the EPA held public information sessions and public meetings in both Massena and Akwesasne. From 2001 to 2007, eight public informational meetings were held to discuss the 2001 Capping ***Pilot Study***, 2005 Remedial Options Pilot Study, 2006 Activated Carbon Pilot Study, and 2007 Ice Breaking Demonstration Project. Meetings have been held at the St. Lawrence Centre Mall, Massena Public Library, Massena Town Hall, the Saint Regis Mohawk Administration Building, and the Saint Regis Mohawk School.
- Several community update fact sheets developed over the years were posted on Alcoa's Grasse River project website and distributed by mail to approximately 10,000 addresses that included Massena and surrounding areas as well as Saint Regis Mohawk Tribe residents in Akwesasne and Cornwall.
  - March 2008: Lower Grasse River Project Status Update and Grasse River: Working Toward Our Goal... One Step at a Time
  - January 2007: Lower Grasse River Ice Breaking Demonstration Project
  - March 2007: Lower Grasse River Ice Breaking Demonstration Project
  - September 2006: Activated Carbon Pilot Study, Grasse River Study Area
  - September 2006: Superfund Program Update for the Grasse River Study Area
  - March 2006: Remedial Options Pilot Study (ROPS) Program Community Update
  - April 2005: Superfund Program Update for the Grasse River Study Area
  - April 2005: Community Health and Safety for the Grasse River Remedial Options Pilot Study
  - June 2004: Superfund Program Update for the Grasse River Study Area
  - January 2002: Superfund Program Grasse River Update
  - June 2001: Superfund Program Update for the Grasse River Study Area

## Proposed Plan and Administrative Record:

September 28, 2012: The Proposed Plan for the site was released to the public for comment. The EPA initially provided a 45-day public comment period on the Proposed Plan, which was scheduled to run through November 15, 2012. The comment period was subsequently extended until November 29, 2012. The Proposed Plan and a complete copy of the administrative record were placed in the Information Repositories at the Massena Public Library in Massena and at the Akwesasne Library and the Saint Regis Mohawk Tribe Environment Division Office in Akwesasne. A copy was also made available at the Superfund Records Center in the EPA Region 2 New York City office. The notice of availability of the Proposed Plan and administrative record and announcement of the public comment period and public meetings was published in *Indian Time*, the *Massena Daily Courier Observer*, and the *Watertown Daily Times*. Public information sessions and public meetings on the Proposed Plan were held in Massena on November 14, 2012 and in Akwesasne on November 15, 2012. The EPA's responses to comments received during the public comment period are included in the Responsiveness Summary, which is part of the Record of Decision.

April 2013: Final cleanup plan (Record of Decision) for the site was issued.

Photo: Lower Grasse River

## Community Perspectives on the Cleanup

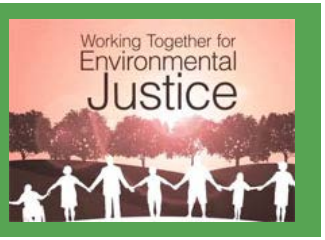
Historically there has been a high level of community interest in the Grasse River Superfund site and significant speculation about what the final cleanup decision would mean for the local communities and the environment. While some community members believe that the dredging and capping remedy selected by the EPA is appropriate, others have expressed concerns about how the cost of the cleanup could impact jobs and the local economy. Some others have asserted that the river's health is continuing to improve – that the river is cleaning itself – and that the risks of dredging outweigh the benefits. Still others feel that more extensive dredging is necessary and key to the long-term health of the river and to restore its traditional uses and eliminate risks to those who use its resources. The feedback received during the public comment period and the EPA's responses are included in the Responsiveness Summary section of the 2013 Record of Decision.

Questions, concerns, and issues relating to the Grasse River Superfund site have fallen into several categories:

- Cleanup: methods, effectiveness, adequacy
- Ice jam scour: concerns and implications
- The Mohawks cultural relationship with land and resources: significance of tribal fish consumption and cultural and nutritional impacts on the Saint Regis Mohawk Tribe community
- Environmental justice (EJ) considerations during decision making and performance of the cleanup
- Water quality impacts and resuspension
- Fish consumption advisory: creation of new tribal advisory and need for additional river signage
- Economic implications of the cleanup decision: industry impacts and potential job creation
- Health concerns: cancer risk, impacts on EJ community, identified need for additional outreach and education
- Length of Superfund cleanup process
- Old Power Canal Dam considerations
- How the community will be kept informed during the cleanup process

# Appendix 4: Environmental Justice

The EPA defines environmental justice as *the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.*




Ensuring environmental justice means not only protecting human health and the environment for everyone but also making sure that all people are treated fairly and are given the opportunity to participate meaningfully in the development, implementation, and enforcement of environmental laws, regulations, and policies.

The Mohawk Nation at Akwesasne has been disproportionately burdened by the environmental and health impacts of pollution in river systems near Akwesasne, including the Grasse River, caused by nearby industrial facilities.

Historically and culturally, Akwesasne is a subsistence fishing/high fish consumption community, and the Agency has identified Akwesasne as a Community with Environmental Justice Concerns.

Environmental justice considerations not only recognize the burden of industrial pollution from historical practices but the potential impacts of the cleanup itself. The following issues will be taken into consideration when making decisions about the cleanup with a particular focus on reducing or eliminating impacts:

- Health and safety issues including truck routing patterns and hours of operation;
- Air impacts, including cumulative health risks and burdens
- Waste containment and transport;
- Resuspension/water impacts;
- Fish impacts;
- Subsistence practices;
- Cultural traditions and river uses; and
- Historical and cultural/archaeological resources.

Prior to the start of in-river work, Alcoa will prepare a Community Health and Safety Plan that will be reviewed by EPA, which will outline the specific measures that will be taken to protect river communities during the in-river work. The Community Health and Safety Plan will include key health and safety personnel and will describe how local emergency responders and the community will be contacted in case of an emergency. Additionally, the report will outline measures that will be implemented to ensure local residents, communities, and water supplies are protected, including the prevention of potential hazards and any monitoring and reporting requirements. The Community Health and Safety Plan will discuss how Alcoa will keep the community informed about project activities, status, and schedule, and how the public can request project information or register a complaint when work is under way. During the preparation of this document the EPA will ensure that the issues outlined above are taken into consideration during the cleanup design and during preparation of the Community Health and Safety Plan.

**EPA Policy on Environmental Justice for Tribes and Indigenous Peoples**
http://www.epa.gov/tribal/consultation/pdf/policy-on-ej-for-tribes-and-ips-working-draft.pdf

The local communities have been engaged in the process thus far, and continued communication and coordination will be essential. For the remainder of the project the EPA will strive to conduct outreach that is culturally relevant, targeted, and that will create a space for exchange and discussion to achieve the best cleanup outcome possible. Outreach will make an effort to engage the full diversity of individuals who live, work, and recreate in the Grasse River. The specific ways that the EPA will coordinate with the Saint Regis Mohawk Tribe via the *Alcoa Superfund Oversight Specialist* is outlined in the Action Plan section of this Community Involvement Plan.

Additional resources that are available to address environmental justice issues include:

- Outreach and technical support programs such as Technical Assistance Services for Communities (TASC).
- The EPA's Environmental Justice Small Grants Program, which supports and empowers communities working on solutions to local environmental and public health issues. In 2013 the U.S. Environmental Protection Agency awarded $30,000 to the Saint Regis Mohawk Tribe to help fund an outreach program that will educate the tribal community on ways to reduce exposure to substances in the indoor environment that can trigger asthma attacks. Environmental Justice Small Grants were also awarded to the Saint Regis Mohawk Tribe in 2001 and 2002.
- Training, such as the Superfund Jobs Training Initiative (SuperJTI), which provides no-cost environmental job training to residents of impacted communities.

### 20th Anniversary of Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The year 2014 marks an important milestone for the EPA as we commemorate the 20th anniversary of President Clinton's issuance of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. In the years leading up to this milestone, the EPA developed Plan EJ 2014 as a roadmap to help EPA integrate environmental justice into the Agency's programs, policies, and activities. In developing the plan, the EPA consulted and coordinated with federally recognized tribes to solicit their input. The EPA has issued a report on the Agency's progress in meeting the goals of Plan EJ 2014 which discusses the accomplishments, lessons learned, challenges, and next steps for continuing the Agency's efforts to make environmental justice an integral part of every decision.

- 2014 Plan EJ 2014 Progress Report

## Environmental Justice Considerations during the Selection of the Grasse River Cleanup

From an environmental justice perspective, the focus of the Grasse River cleanup is reducing health risks from fish consumption and minimizing impacts on cultural and recreational uses of the river, while at the same time avoiding or minimizing the use of institutional controls e.g., fish consumption advisories, over the long-term.

None of the cleanup alternatives that EPA evaluated would reduce contamination enough to make all fish safe to eat in unlimited amounts at the end of the cleanup, but in developing appropriate cleanup options for the site the Akwesasne community's designation as a Community with Environmental Justice Concerns was considered and incorporated into the cleanup goals that were set for the project to protect the Mohawk community. Because the EPA recognized that Akwesasne is a subsistence fishing/high fish consumption community, the EPA used a higher fish ingestion rate to calculate risks to Mohawks from eating PCB-contaminated fish (an ingestion rate of 142 grams/day vs. 31.9 grams/day for non- Mohawk adults). Using this Mohawk-specific fish ingestion rate, the EPA set a cleanup goal of 0.01 milligrams per kilogram (mg/kg) PCBs in fish. This goal is designed to be protective of the Mohawk community that consumes fish from the Grasse River, and the EPA will not deem the site cleanup to be complete until this goal is achieved.

Although the EPA used a higher fish consumption rate to calculate risks to the Mohawk community and to set a cleanup goal, institutional controls, such as fish consumption advisories, will continue to play a role in managing long-term risks. However, when institutional controls are necessary they should take into account the way communities use the waterway. For example, fish consumption advisories should be developed together with the affected communities and should be culturally relevant. The Saint Regis Mohawk Tribe, in coordination with the New York State Department of Health and the New York State Department of Environmental Conservation, with grant funding from the EPA, has prepared draft advisories based on input from the Akwesasne community that will help ensure that the culturally significant practice of fishing can continue and that community members are educated about which fish species are safe to eat, and in what amounts, until the advisories can be relaxed or lifted. A comprehensive fish-monitoring program that will be in place during and after the cleanup to inform health advisories over the long- term will be a critical data-sharing tool.

The EPA's decision to require either dredging or capping of lower Grasse River sediment at PCB levels that are lower than the levels originally proposed by the EPA in 2003 is an example of how discussions with the Saint Regis Mohawk Tribe, as well as the state of New York, influenced the EPA's final cleanup decision. Following the 2003 ice jam event, the EPA re-evaluated two aspects of the 2003 Proposed Plan (which the EPA had at that time proposed but did not proceed with). First, the EPA lowered the action level that would trigger dredging from 25 mg/kg in surface sediment to 1 mg/kg in near shore sediment, and lowered the action level that would trigger capping from 5 mg/kg to 1 mg/kg in main channel surface sediment. The EPA also revised the 2003 Proposed Plan's definition of surface sediment from the top 3" to the top 6" in the main channel and the top 12" in the near shore, which increased the areas and sediment volumes that would be subject to cleanup.

## 2013 Natural Resources Damages Settlements

Helping to restore the important relationship between the environment and Mohawk culture, society, and economy was a significant facet of the settlement in *United States, State of New York and Saint Regis Mohawk Tribe v. Alcoa Inc. and Reynolds Metals Co. (N.D. N.Y.)*, a case brought under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to recover damages for injuries to natural resources. The Natural Resource Trustees – the Saint Regis Mohawk Tribe, Department of the Interior (U.S. Fish and Wildlife Service), National Oceanic and Atmospheric Administration (NOAA), and state of New York – determined that hazardous substances were released for decades by three industries: two aluminum producers, Alcoa Inc. (Alcoa West) and Reynolds Metals Inc. (now Alcoa East), and the former General Motors (GM) Central Foundry plant located adjacent to the Saint Regis Mohawk Tribe Reservation in Massena, New York. These hazardous substances adversely impacted natural resources within the surrounding environment and contaminated the Mohawk community of Akwesasne, degrading natural resources used for traditional cultural practices.

The $18.5 million from this settlement was combined with $1.8 million in restoration funds from the 2011 GM bankruptcy settlement to provide about $20.3 million for restoring injured natural and cultural resources and lost human uses of natural resources such as recreational fishing. From this amount, the Tribe will receive about $8.4 million to support traditional cultural practices, including an apprenticeship program to promote Mohawk language and traditional teachings. A portion of the funds will also support cultural institutions, including youth outdoor education programs and horticultural programs for medicine, healing, and nutrition. More than $10 million from the GM and Alcoa settlements will be spent on ***ecological restoration*** projects, including restoration or enhancement of wetlands, streambanks, native grasslands, bird nesting and roosting habitat, fish habitat and fish passage, and acquisition of unique habitat under threat of development.

These projects may also benefit cultural practices that depend on these restored natural resources. Finally, Alcoa will spend approximately $2 million to develop and upgrade two boat launches on the Raquette River and construct three new launches on the Grasse River to improve fishing and boating access to rivers in the Massena area.

From the United States Department of Justice, 2013 IMPLEMENTATION PROGRESS REPORT ON ENVIRONMENTAL JUSTICE:
http://www.justice.gov/ej/docs/env_enforcement-2427806-v2-ej_doj_annual_report_fy2013.pdf

# Appendix 5: Tribal Consultation

The EPA's policy is to consult on a government-to-government basis with federally recognized tribal governments when EPA actions and decisions may affect tribal interests. Consultation is a process of meaningful communication and coordination between EPA and tribal officials prior to EPA taking actions or implementing decisions that may affect tribes. As a process, consultation includes several methods of interaction that may occur at different levels.

Consultation should occur early enough to allow tribes the opportunity to provide meaningful input that can be considered before the EPA decides whether, how, or when to act on the matter under consideration. As proposals and options are developed, consultation and coordination should be continued to ensure that the overall range of options and decisions is shared and deliberated by all concerned parties, including additions or amendments that occur later in the process.

Region 2 has an Indigenous Environmental Affairs Coordinator, Grant Jonathan, who is a member of the Tuscarora Nation. Grant acts as liaison to all eight tribal nations in Region 2, assists with regional consultation matters, and manages General Assistance Program grants. The Region 2 Indian Program is located in the Office of the Regional Administrator, Office of Strategic Programs.

**EPA Policy on Consultation and Coordination with Indian Tribes**
http://www.epa.gov/tp/consultation/consult-policy.htm

Tribal consultation activities to date:

- The EPA has consulted with the Saint Regis Mohawk Tribe at key points during the investigation, analysis of alternatives, and cleanup selection phases. The EPA will continue its consultation with the Saint Regis Mohawk Tribe throughout the cleanup process.
- The EPA *Remedial Project Manager* for the site has worked closely with and coordinates with the Saint Regis Mohawk Tribe Environment Division and the designated *Alcoa Superfund Oversight Specialist*. The current EPA *Remedial Project Manager*, Young Chang, and the former Saint Regis Mohawk Tribe *Alcoa Superfund Oversight Specialist*, Jacob Terrance, had previously worked closely together on every phase of the cleanup process. As of July 2014, Jessica Tarbell has assumed the role of *Alcoa Superfund Oversight Specialist* for the Saint Regis Mohawk Tribe.
- As has been done in the past, all technical documents, such as plans, reports and related correspondence will be provided to Jessica for review prior to being finalized. Jessica will coordinate document review and serve as a point of contact for the EPA on day-to-day communications and as the overall Saint Regis Mohawk Tribe representative for the project. The EPA will rely on Jessica to relay information to other Saint Regis Mohawk Tribe officials and leadership.
- The EPA *Remedial Project Manager* and *Community Involvement Coordinator* coordinate as needed with the EPA's Indigenous Environmental Affairs Coordinator, Grant Jonathan, with project managers for other sites that affect the Saint Regis Mohawk Tribe, and with other EPA staff managing grants to the Saint Regis Mohawk Tribe.
- EPA Region 2 hosts an annual Indian Nation Leaders Meeting that includes Region 2 senior management. Discussions typically include specific environmental issues of each of the participating Indian nations as well as environmental protection of the Indian nation lands and development of the Indian nations' environmental capacity.

The EPA will continue to consult with the Saint Regis Mohawk Tribe on a government-to-government basis and will closely coordinate with them throughout the design and implementation of the Grasse River cleanup.

## Cooperative Agreements and Grants

In March 1989, EPA Region 2 signed a ***Cooperative Agreement*** with the Saint Regis Mohawk Tribe to assist in the development of its environmental program and to affirm the government-to-government relationship. Under the agreement, the Saint Regis Mohawk Tribe provides support agency assistance to EPA with respect to the Grasse River site. The Saint Regis Mohawk Tribe also received a core grant from EPA in which the EPA provides funding for non-site-specific activities such as training, development of non-site-specific plans and procedures, and the acquisition of equipment and supplies.

In addition to funding related to the Grasse River site, the EPA also has entered into support agency cooperative agreements with the Saint Regis Mohawk Tribe for the nearby Reynolds Metals Co. and General Motors Central Foundry Division Superfund sites.

The EPA has provided grants to the Saint Regis Mohawk Tribe relating to a number of other environmental issues affecting Akwesasne and the surrounding area. These grants include:

**The Great Lakes Restoration Initiative (GLRI) grant for the St. Lawrence River, Massena, New York Area of Concern (AOC):**
This project will monitor furbearers, turtles, and birds and conduct tissue analysis of wildlife to assist decision-makers considering restrictions on wildlife consumption.

**The Great Lakes Restoration Initiative grant for St. Lawrence River sturgeon restoration**
This project will enhance efforts to restore Lake Sturgeon in the St. Lawrence River, Massena, New York, Area of Concern, by investigating suitable spawning habitat, water quality, and causes of reproductive failure.

**Grants relating to public water systems, *brownfields*, air quality, and solid waste.**

**Grant to implement a clean air intervention project intended to reduce exposure to indoor asthma triggers.**

The EPA has also provided grant funding to the New York State Department of Environmental Conservation and the New York State Department of Health for collaborative work with the Saint Regis Mohawk Tribe to collect updated fish contaminant data to update fish advisories for state and tribal waters and to communicate the risks and benefits of consuming fish from the St. Lawrence River Basin.

For more information about the proposed Saint Regis Mohawk Tribe fish consumption advisories that have been developed under this grant, visit:
http://www.srmtenv.org/index.php?spec=waterresources/2013/11/2013-Fish-Advisories.

# Appendix 6: Key Contacts

## EPA

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## New York State Department of Health

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## Potentially Responsible Party (Alcoa)

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## Saint Regis Mohawk Tribe - Environment Division

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## Village of Massena

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## St. Lawrence County Legislators

Tony Arquiett
*County Legislator, District 13*
1174 State Highway 37C
Helena, NY 13649
315-705-4935

## St. Lawrence County Administrator

Karen St. Hilaire
*County Administrator*
48 Court Street
Canton, NY 13617
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## State Representatives

Joe Griffo *(2007-2015)*
*Senator, 47th District*
944 Legislative Office Building
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518-455-3334
griffo@senate.state.ny.us

Addie Jenne Russell *(2009-2015)*
*Assemblywoman, 116th District*
325 Legislative Office Building
Albany, NY 12247
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RussellA@assemby.state.ny.us

## U.S. House of Representatives

William Owens *(2013-2015)*
*Congressman, 21st District*
2366 Rayburn House Office Building
Washington, D.C. 20510
202-225-4611

## U.S. Senators

Charles Schumer *(1999 – 2016)*
*Senator*
313 Hart Senate Office Building
Washington, D.C. 20510
202-224-6542

Kirsten Gillibrand (*2009 – 2018)*
*Senator*
478 Russell Senate Office Building
Washington, D.C. 20510
202-224-4451

## Media Contacts

### Massena

#### Radio:

**1340 WMSA**
P.O. Box 210
2155 St. Hwy 420
Massena, NY 13662
315-769-3333
news@1340wmsa.com

**North County Public Radio**
St. Lawrence University
Canton, NY 13617
518-891-7774
radio@ncpr.org

#### Television:

**Time Warner Cable News**
815 Erie Blvd. East
Syracuse, NY 13210
315-234-1010
yournews@ynn.com

**WWNY**
120 Arcade St.
Watertown, NY 13601
315-788-3800

**WPTZ**
New York Office
5 Television Drive
Plattsburgh, NY 12901
518.561.5555
802.655.0027

#### Newspapers:

**Daily Courier-Observer**
P.O. Box 300
1 Harrowgate Commons
Massena, NY 13662
315-769-2451

**Watertown Daily Times**
260 Washington Street
Watertown, NY 13601
315-782-1000
news@wdt.net

**North County NOW**
19 Depot St.
Potsdam
315-265-1000
news@northcountrynow.com

### Akwesasne

#### Radio:

**CKON 97.3**
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518-358-3426
ckonfm@yahoo.com

#### Newspaper:

**Indian Time**
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Akwesasne, NY 13655
518-358-9531
info@indiantime.net

**Saint Regis Mohawk Tribe:**
Kawenni:ios newsletter

# Appendix 7: Information Repositories and Web Sites

### Massena Public Library
41 Glenn Street, Massena, NY 13662
315-769-9914
Hours: Mon and Fri, 9:30 am - 5:00 pm;
Tues - Thurs, 9:00 am - 8:30 pm; Sat and Sun, closed

### Saint Regis Mohawk Tribe – Environment Division
449 Frogtown Road
Akwesasne, NY 13655
By Appointment: 518-358-5937

### Akwesasne Library
321 State Route 37
Akwesasne, NY 13655
518-358-2240

### USEPA-Region 2
Superfund Records Center
290 Broadway, 18th Floor
New York, NY 10007-1866
212-637-4308
Hours: Mon - Fri, 9:00 A.M. - 5:00 P.M.

EPA Region 2, Grasse River Superfund site Web page:
http://www.epa.gov/region2/superfund/npl/aluminumcompany/

Alcoa Grasse River project website:
http://www.thegrasseriver.com/

Photo: Capping Pilot Study - Cap Material Placement

## Appendix 8: Acronyms and Abbreviations

| | |
|---|---|
| **AOC** | Area of Concern |
| **ARAR** | Applicable or Relevant and Appropriate Requirements |
| **ATSDR** | Agency for Toxic Substances and Disease Registry |
| **CAG** | Community Advisory Group |
| **CAP** | Community Advisory Panel |
| **CERCLA** | Community Environmental Response, Compensation, and Liability Act |
| **CIC** | Community Involvement Coordinator |
| **CIP** | Community Involvement Plan |
| **EJ** | Environmental Justice |
| **EPA** | Environmental Protection Agency or Agency |
| **ESO** | Explanation of Significant Differences |
| **FDR** | Franklin D. Roosevelt |
| **FS** | Feasibility Study |
| **GLRI** | Great Lakes Restoration Initiative |
| **GM** | General Motors |
| **mg/kg** | Milligrams per kilogram |
| **NCP** | National Contingency Plan |
| **NOAA** | National Oceanic and Atmospheric Administration |
| **NPL** | National Priorities List |
| **O&M** | Operations and Maintenance |
| **PA/SI** | Preliminary Assessment/Site Investigation |
| **PAHs** | Polyaromatic Hydrocarbons |
| **PCBs** | Polychlorinated Biphenyls |
| **PRP** | Potentially Responsible Parties |
| **RA** | Remedial Action |
| **RD** | Remedial Design |
| **RI/FS** | Remedial Investigation/Feasibility Study |
| **ROD** | Record of Decision |
| **ROPS** | Remedial Options Pilot Study |
| **RPM** | Remedial Project Manager |
| **SARA** | Superfund Amendments and Reauthorization Act |
| **SuperJTI** | Superfund Job Training Initiative |
| **TASC** | Technical Assistance Services for Communities |
| **VOC** | Volatile Organic Compound |

# Appendix 9: Glossary

**Administrative Record** – All documents that the EPA considered or relied on in selecting the response action at a Superfund site, culminating in the record of decision for remedial action or an action memorandum for removal actions.

**Advisory** – State-generated health warning regarding the consumption of contaminated animals (e.g., fish, waterfowl). These advisories include advice on how to reduce exposures to chemical contaminants in fish and game by avoiding or reducing consumption and by the use of filleting/trimming and cooking techniques to further reduce contaminant levels. In New York State, these advisories are issued by the New York State Department of Health.

**Backfilling** - The filling in again of a place from which the rock or ore has been removed. In environmental dredging, this material is clean sediment in order to keep the original contour of the riverbed intact.

**Bioavailability** – The degree to which a material in environmental media can be assimilated by an organism.

**Biota** – All living organisms (plants and animals) in a given area.

**Brownfields** – Abandoned, idled, or under-used industrial and commercial properties where expansion or redevelopment is complicated by real or perceived environmental contamination.

**Capping** – A technology to address contaminated sediment which places clean sand or gravel over the contaminated sediment to isolate the contaminants from the surrounding environment.

**Carcinogen** – A chemical or physical agent capable of causing cancer.

**Community Advisory Group (CAG)** – A committee, task force, or board comprised of citizens affected by a hazardous waste site. CAGs provide a public forum for community members to present and discuss their needs and concerns about the decision-making process at sites affecting them.

**Community Health and Safety Plan** – A plan that describes key health and safety personnel including detailed health and safety plans for protecting and informing the surrounding community when work is under way.

**Community Involvement** – The term used by the EPA to identify its process for engaging in dialogue and collaborating with communities affected by Superfund sites. EPA community involvement is founded in the belief that people have a right to know what the Agency is doing in their community and to have a say in it. Its purpose is to give people the opportunity to become involved in the Agency's activities and to help shape the decisions that are made.

**Community Involvement Coordinator (CIC)** – CICs are assigned to specific projects to assist communities in their interaction with the EPA and ensure that technical staff are aware of issues that concern the public in relation to the work the EPA is doing. As liaisons between technical project managers and the community, CICs provide opportunities for two-way communication throughout the life of a project.

**Community Involvement Plan (CIP)** – A CIP is a site- specific strategy to enable meaningful community involvement throughout the Superfund cleanup process. CIPs specify EPA-planned community involvement activities to address community needs, concerns, and expectations that are identified through community interviews and other means.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended** – This law, enacted by Congress on December 11, 1980, created the Superfund program. Specifically, CERCLA (1) established procedures and requirements for the cleanup of uncontrolled or abandoned hazardous waste sites; (2) provided for liability of persons responsible for releases of hazardous substances at these sites; and (3) established a trust fund to provide for cleanup when, for example, no viable responsible parties are available to pay for or perform the work.

**Contaminated media** – Soil, water, air, plants, animals, or any other part of the environment that can contain contaminants.

**Contaminants** – Any physical, chemical, biological, or radiological substance or matter that has an adverse effect on air, water, or soil.

**Contamination** – Introduction into water, air, and soil of microorganisms, chemicals, toxic substances, wastes, or wastewater in a concentration that makes the medium unfit for its next intended use.

**Cooperative Agreement** – An assistance agreement whereby EPA transfers money, property, services or anything else of value to a state, university, or non-profit or not-for-profit organization for the accomplishment of authorized activities or tasks.

**Cultural resources** – Natural or manmade features having cultural or historical significance, such as structures, graves, religious sites, vistas, or bodies of water.

**Dredging** – The removal of material from the bottom of lakes, rivers, harbors and other bodies of water. Most dredging is done to maintain or deepen navigation channels or porting areas for the safe passage of boats and ships. Dredging contaminated areas such as the Grasse River Superfund site may also be performed for the express purpose of reducing the exposure of marine biota (plants and animals) and humans to contaminated sediments and/or to prevent the spread of contaminated sediments to other areas. This type of dredging is termed environmental dredging.

**Ecological restoration** – The process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed.

**Ecosystem** – The sum of all the living plants and animals, their interactions, and the physical components in a particular area.

**Evaluation criteria** – The nine evaluation criteria are as follows: 1) Overall protection of human health and the environment, 2) Compliance with ARARs (applicable or relevant and appropriate standards), 3) Long-term effectiveness and permanence, 4) Reduction of toxicity, mobility or volume, 5) Short-term effectiveness, 6) Implementability, 7) Cost, 8) State acceptance, and 9) Community acceptance.

**Feasibility Study** – Analysis of the practicability of a proposal; e.g., a description and analysis of potential cleanup alternatives for a site such as one on the National Priorities List. The feasibility study usually recommends selection of a cost-effective alternative. It usually starts as soon as the remedial investigation is under way; together, they are commonly referred to as the "RI/FS."

**Habitat** – A place where the physical and biological elements of ecosystems provide a suitable environment including the food, cover, and space resources needed for plant and animal livelihood.

**Ice jam** – An accumulation of ice in the river channel that causes an ice jam toe to form, creating a very high water-flow rate and turbulence under the ice jam toe. The higher water flow rates are created by the same amount of water being pushed through a smaller portion of the river channel. The high water flow rate and turbulence under the ice jam toe can result in localized scour along the river bottom sediment and redistribution of sediment.

**Information repository** – An information repository is a location in a public building that is convenient for local residents, such as a public school, city hall, or library, that contains information about a Superfund site, including technical reports and reference documents.

**National Priorities List** – The EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under Superfund. The list is based primarily on the score a site receives from the Hazard Ranking System. The EPA is required to update the NPL at least once a year. A site must be on the NPL to receive money from the Trust Fund for remedial action.

**Non-Time Critical Removal Action** – Removal actions found to be appropriate based on site evaluation where a planning period of at least six months is available before on-site activities must begin. Because priority risks can be addressed, non-time critical removal actions provide an important method of moving sites more quickly through the Superfund process.

**Outfalls** – An outfall is the discharge point of a waste stream into a body of water such as a river. Alternatively, it may be the outlet of a river, drain, or a sewer where it discharges into a larger body of water such as a lake or the sea.

**Pilot study** – A small-scale experiment or set of observations undertaken to decide how and whether to launch a full-scale project or study.

**Polychlorinated Biphenyls (PCBs)** – A group of toxic, persistent chemicals used in electrical transformers and capacitors for insulating purposes and in gas pipeline systems as lubricant. The sale and new uses of these chemicals, also known as PCBs, were banned by law in 1979.

**Potentially Responsible Party** – Any individual or company--including owners, operators, transporters or generators--potentially responsible for or contributing to a spill or other contamination at a Superfund site. Whenever possible, through administrative and legal actions, the EPA requires PRPs to clean up hazardous sites for which they are responsible.

**Proposed Plan** – A plan for a site cleanup that is available to the public for comment.

**Public information session** – Informal public sessions that often use poster displays and fact sheets and that include EPA personnel and contractors who are available to discuss issues and answer questions. Public information sessions offer the public the opportunity to learn about project-related issues and to interact with the EPA on a one-to-one basis. Public information sessions do not require the use of court reporters and transcripts, although meeting summaries may be issued through community updates.

**Public comment period** – The time allowed for the members of an affected community to express views and concerns regarding an action proposed to be taken by the EPA such as a rulemaking, permit, or Superfund remedy selection.

**Public meeting** – Formal public sessions that are characterized by a presentation to the public followed by a question-and-answer session. Formal public meetings may involve the use of a court reporter and the issuance of transcripts. Formal public meetings are required only for the Proposed Plan and ROD amendments.

**Record of Decision (ROD)** – A public document that explains which cleanup alternative(s) will be used at National Priority List sites.

**Remedial Action** – The actual construction or implementation phase of a Superfund site cleanup that follows remedial design.

**Remedial Design (RD)** – A phase of remedial action that follows the Remedial Investigation/Feasibility Study and includes development of engineering drawings and specifications for a site cleanup.

**Remedial Investigation (RI)** – An in-depth study designed to gather data needed to determine the nature and extent of contamination at a Superfund site, establish site cleanup criteria, identify preliminary alternatives for remedial action, and support technical and cost analyses of alternatives. The remedial investigation is usually done with the feasibility study. Together they are usually referred to as the "RI/FS."

**Remedial Project Manager** – The EPA or state official responsible for overseeing on-site remedial action.

**Remedy** – Long-term action that stops or substantially reduces a release or threat of a release of hazardous substances.

**Removal Action** – Short-term immediate actions that address releases of hazardous substances that require expedited responses.

**Responsiveness Summary** – A summary of oral and/or written public comments received by the EPA during a comment period on key EPA documents and EPA's response to those comments.

**Sediment** – Topsoil, sand, and minerals washed from the land into water, usually after rain or snow melt.

**Stakeholder** – Any organization, governmental entity, or individual that has a stake in or may be affected by the Superfund program.

**Superfund** – The program operated under the legislative authority of CERCLA and Superfund Amendments and Reauthorization Act (SARA) that funds and carries out EPA solid waste emergency and long-term removal and remedial activities. These activities include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions.

**Toxicity** – The degree to which a substance or mixture of substances can harm humans or animals.

**Unilateral Administrative Order** – A legal document issued by the EPA directing a potentially responsible party to perform site cleanup. A Unilateral Administrative Order sets forth the liability of the party for the cleanup, describes actions to be taken, and subjects the recipient to penalties and damages for noncompliance. Unilateral orders may be enforced in court. A Unilateral Administrative Order is EPA's most potent enforcement tool and a powerful settlement incentive. The EPA usually only issues them to parties that are the largest contributors of waste to a site, are financially viable, and against whom there is strong evidence of liability.