



## **2009 Opacity (Air) Monitoring of Commercial Passenger Vessels**

### **Opacity Monitoring**

All marine vessels must comply with the air emission standard found at 18 ACC 50.070 while they operate in Alaska waters. The standard requires that visible emissions (opacity) from vessel smoke stacks be no greater than 20% opacity for three minutes while docked or anchored. There are limited exemptions while maneuvering to/from anchor or port.

Staff in the Alaska Department of Environmental Conservation (ADEC) Commercial Passenger Vessel Environmental Compliance (CPVEC) Program (a.k.a. Cruise Ship Program) and an ADEC contractor monitor the visible emissions (opacity) from cruise ship and ferry vessel smoke stacks each season. CPVEC staff and the contractor performed over 280 opacity readings during 2009. Observations were conducted in Juneau, Ketchikan, Skagway, Seward, and Whittier. The independent contractor immediately reports any reading that may be a potential violation to ADEC. ADEC staff and contractors are trained and certified to measure the level of visible emissions (opacity) from vessel stacks according to EPA-approved protocols (Method 9).

In 2002, ADEC joined forces with the U.S. Forest Service to enable monitoring of cruise ship emissions in Tracy Arm, a popular fjord 30 miles south of Juneau. In 2009 Forest Service Kayak Rangers monitored cruise ship emissions while patrolling Tracy and Endicott Arms.

### **Enforcement**

For the 2009 cruise ship season, ADEC issued 3 Notice of Violations (NOV). The cruise ships that received NOVs are:

- Coral Princess (Princess Cruises)
- Amsterdam (Holland America)
- Ryndam (Holland America)

The number of NOVs that ADEC has issued for cruise ship opacity is listed in Figure 1 on the next page.

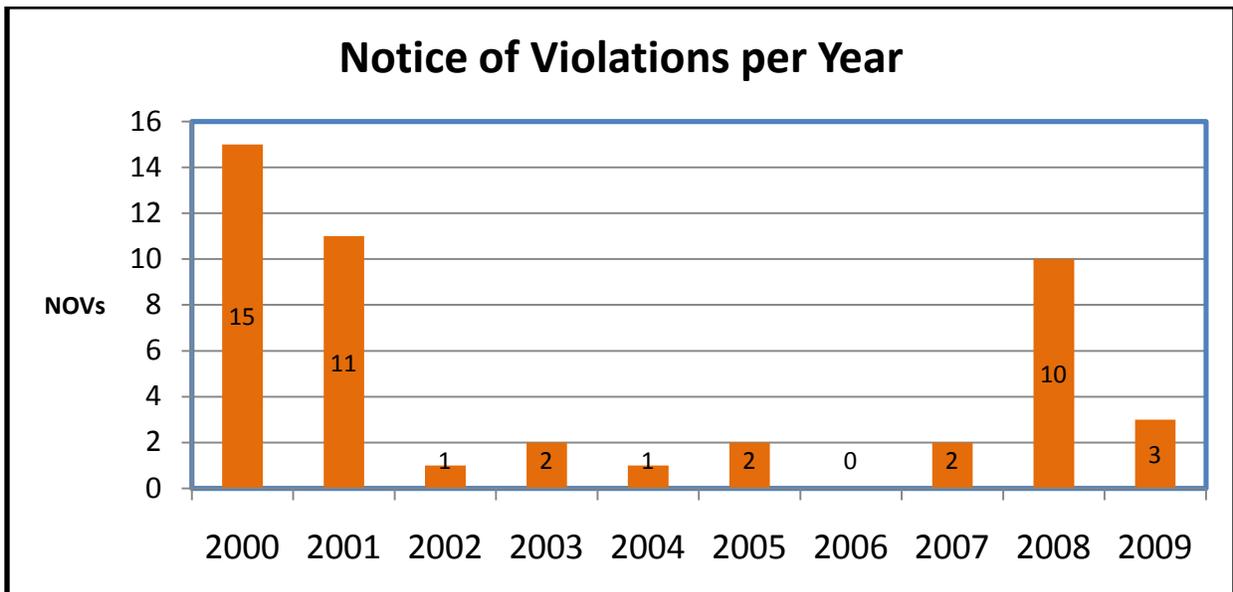


Figure 1

### Public Complaints

Over the past several years, the ADEC Cruise Ship Program has received public complaints about cruise ship smokestack visible emissions (Figure 2). Staff responds to these public complaints by doing opacity readings in accordance with EPA approved protocols (Method 9). There were 54 complaints (only includes those providing detailed information) received by ADEC in 2009. Many complaints did not mention a particular vessel, but were concerning the overall air quality in Juneau.

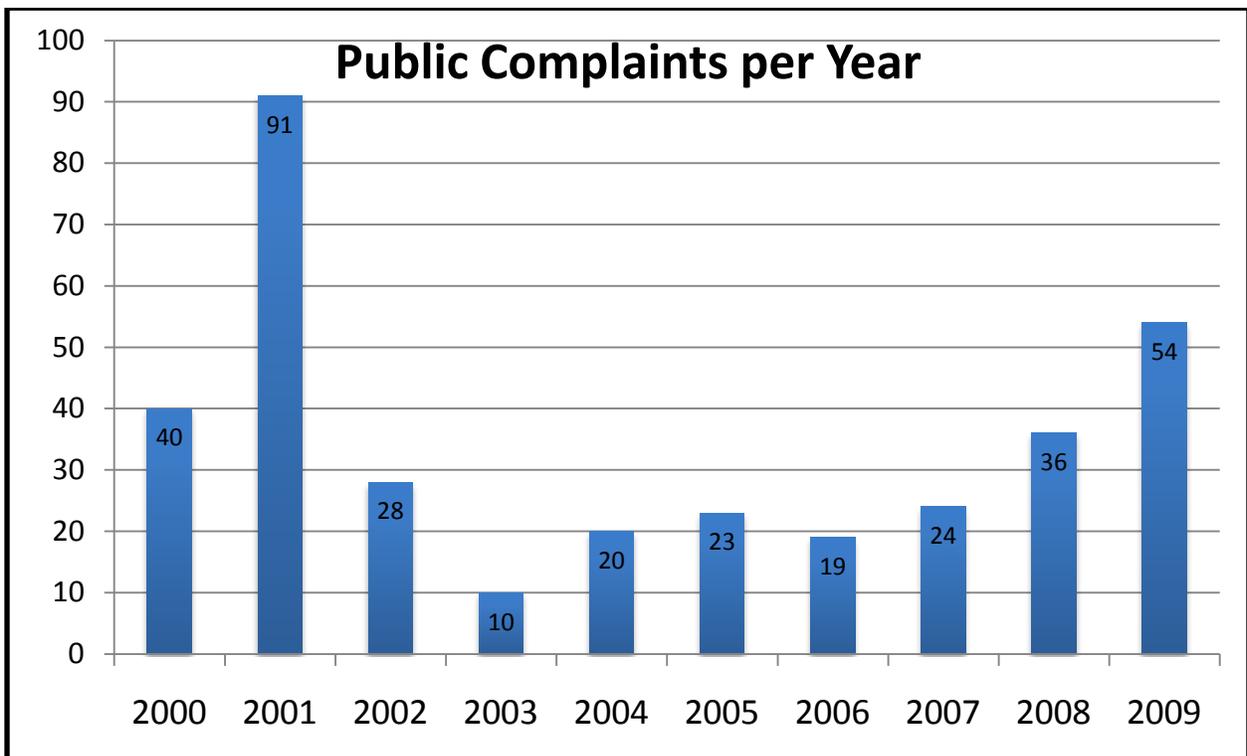


Figure 2