

Maine Red Tide Disaster Relief Program Final Report

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1. Executive Summary

In the summer of 2005, an unusually prolonged and widespread occurrence of the *Alexandrium* algae responsible for “red tide” shut down much of Maine’s shellfish industry. In response, Congress provided the state of Maine with \$2 million in disaster relief aid. From July 2006 to February 2007, the Maine Red Tide Disaster Relief Program worked with stakeholders to determine and distribute fair compensation for individuals and businesses impacted by the 2005 Red Tide Event.

A total of \$1.6 million was distributed to Maine’s shellfish industry as direct Red Tide Relief, and used to administer the relief program. Payments were made to the following sectors as follows:

<u>Sector</u>	<u>Eligible applications</u>	<u>Total Disbursed</u>	<u>Percentage to each sector</u>
Commercial shellfish harvesters	508	\$1,189,165	76.24%
Mussel harvesters	21	\$85,000	5.44%
Mahogany quahog harvesters	20	\$78,000	5.00%
Primary Buyers	43	\$160,470	10.29%
Aquaculturists	5	\$47,100	3.02%

Independent contractor services for the red tide assistance program totaled \$15,443. An additional \$400,000 was allocated to programs intended to minimize the impact of future red tide occurrences. All direct industry payments were mailed in February and March of 2007.

2. Purpose

Harmful algal blooms, or “red tides” occur occasionally in the Gulf of Maine, as a result of a dramatic increase in the presence of toxic, naturally occurring microscopic plankton. Under certain environmental conditions, these organisms undergo a population explosion, and the toxins they contain are accumulated in filter-feeding shellfish at high enough levels to present a significant danger to human health in the form of Paralytic Shellfish Poisoning (PSP).

Maine Department of Marine Resources (DMR) houses the State’s Marine Biotoxin Monitoring Program. The Marine Biotoxin Monitoring Program uses the standards outlined in the National Shellfish Sanitation Program (NSSP) to monitor levels of PSP and other marine biotoxins in the waters and shellfish of the State of Maine. When toxin is found at levels near or above where human illness may occur, closures to the harvest of shellfish areas are implemented. Shellfish samples are collected statewide between April and October and evaluated at the two PSP laboratories (Boothbay Harbor, in the western portion of the state and Lamoine, in the eastern portion). DMR is not only responsible for monitoring 1,855,841 acres of state waters, covering a convoluted coastline of 7,800 miles, but they are also granted responsibility by agreement with the federal government to manage all waters in Maine as far as the EEZ.

By any measure, the 2005 red tide event in the Gulf of Maine was unusually severe. The first PSP closure for 2005 was instituted in Western Maine on May 4th. This was the first time in at least fifteen years that a PSP closure had occurred so early in the season in Western Maine. In Eastern Maine, the toxin appeared and closures were put in place at least 2 weeks earlier than "normal". The toxin also appeared further inside embayments, and in greater toxicity than had been seen before. In fact, it appeared in places that did not have recorded toxin in more than 30 years of data, and in species that had never recorded toxin over quarantine levels before. The toxin also rose faster than had been seen in previous records.

The PSP closures progressed steadily from west to east. At times, roughly 70% of the harvestable areas for most shellfish species were closed. Although shellfish harvesters may harvest year round, the majority of their livelihood comes during the summer months, which is when they were impacted. As with all self-employed individuals, they did not have access to unemployment insurance to assist them through this significant length of time. In addition to the harvesting sector, other related industries in Maine that were impacted by the event included aquaculturists, and seafood dealers.

Maine conservatively estimated the economic impact of the red tide occurrence to shellfish harvesters, aquaculturists and related businesses was between \$1.6 and \$2.5 million weekly.

Based on the information the State of Maine provided about the impacts at the time of the red tide closures, the Department of Commerce declared commercial fisheries failures in the New England states under section 312(a) of the Magnuson-Stevens Fishery

Conservation and Management Act (MSFCMA). This designation gives the National Marine Fisheries Service the authority to disburse to the States such funds as Congress may appropriate for the purpose.

In the Fiscal Year 2006 supplemental spending bill, Congress provided \$2 million to each of the states of Maine and Massachusetts. In Maine, \$1.6 million was allocated to administer and provide direct aid to industry members impacted by the 2005 red tide event. \$400,000 was allocated to improve Maine's Biotxin Monitoring program in ways that will mitigate, to the degree possible, the impacts of future red tide events on the shellfish industry.

DMR developed an industry aid program to expedite the delivery of funds while ensuring a fair and credible methodology, which had the benefit of industry feedback. The direct aid to industry component of the program was designed to provide qualifying fishermen, dealers, and aquaculturists with payments to address some portion of the economic loss they suffered during 2005. The program was application driven (with provision for appeal), with criteria developed by DMR in consultation with industry and other state agencies. It was recognized that the size of the payments made would depend on the number of eligible applications received, and payments were not expected to fully compensate any individual for their entire economic loss.

3. Approach

Project development

Following submission of the preliminary proposal to the National Marine Fisheries Service in July 2006, DMR held 3 public meetings to solicit industry feedback on potential eligibility criteria. These meetings were held:

- Monday, August 7th, Whiting Community Center, 11 am
- Tuesday, August 8th, Portland Holiday Inn by the Bay, 11 am
- Thursday, August 10th, Ellsworth City Hall Auditorium, 11 am

Industry comments from these meetings, as well as comments received after the meetings occurred, were compiled and given to the independent contractor (Togue Brawn) hired to administer the relief program for DMR. Brawn began working on the project on October 15, 2006. She consulted key industry members (aquaculturists, harvesters, dealers) and DMR employees to develop and further refine potential compensation formulas and eligibility requirements. In early November, basic compensation formulas were approved by the Commissioner and Deputy Commissioner of Marine Resources, and application materials were printed.

Applications were sent to all individuals who held a 2005 commercial shellfish license, 2005 mussel harvesting license, 2005 mahogany quahog harvesting license, 2005 shellfish aquaculture lease or license, or 2005 primary buyer permit. A total of 2113 applications were mailed in November of 2006. The mailing was staggered such that the largest sector (commercial shellfish harvesters) were mailed first, on November 13, 2006. Their applications were required to have been postmarked by December 12, 2006. All other sectors were mailed applications on November 22, 2006, and the submission deadline was December 19, 2006.

2005 License or Lease Holder	Number of Applications Mailed
Commercial Shellfish Harvester	1811
Mussel Harvester	52
Mahogany Quahog Harvester	55
Shellfish Aquaculturist	66
Primary Buyer	129
Total	2113

Because of different licensing and reporting requirements, and differing levels of impact and dependence on affected species, separate compensation formulas were developed for each sector. Each formula was based on: the total amount of disaster relief available; the number of eligible applicants from each sector; the dependence of each sector upon the

resource; the length of time access to the resource was restricted for each sector; the landings data available within each sector; and the geographic flexibility of each sector. With over 1800 potential recipients, the commercial shellfish harvester segment would comprise the bulk of the relief money under any compensation scheme. The following factors influenced the way in which commercial shellfish harvester compensation could be determined:

- In Maine, individual commercial shellfish harvesters do not report their landings. Therefore, the Red Tide Disaster Relief Program had no way of tying an individual's compensation to historic harvesting activity.
- A Maine Commercial Shellfish Harvesting License allows its holder to legally sell shellfish (primarily soft shell clams) in the state of Maine, and to harvest shellfish in towns that do not have a municipal shellfish ordinance.
- Maine municipalities may manage their own shellfish resources. They are assisted, but not managed by, a DMR representative. Towns keep records of who is licensed to harvest within their boundaries, but these records are not standardly shared with DMR. Each town must make at least 10% of their licenses available to non-residents. It was not possible to determine where an applicant was licensed prior to consulting the lists of license holders received from all towns. Because of the number of potential applicants, this process necessarily occurred after applications had been received.

The cover letters that accompanied each commercial shellfish harvester application described a sector specific, basic compensation formula that would then be fine-tuned after all applications had been received.

Project management

Deirdre Gilbert: *Program Manager:* Handled all details of the project from its inception until the hiring of a Program Administrator. Continued throughout the project to provide assistance to the Program Administrator.

Togue Brawn: *Program Administrator:* Administered the program from October 15, 2006 to February 9, 2007. Developed application materials, determined compensation methods, supervised mailings, handled day-to-day correspondence with applicants. Supervised Data Entry Clerk.

Renee Wilson: *Data Entry Clerk:* Worked from November 28 to January 19, 2007 assisted with mailings and data entry from applications, obtained lists of license holders from all towns with municipal programs, used these lists to verify application materials.

Lin Gosselin: *Resource Administrator:* Managed all accounting aspects of the program, approved payment vouchers that generated compensation, worked with accounts payable to accomplish distribution of checks.

4. Findings

A total of 771 applications were submitted to the Red Tide Disaster Relief Program for consideration. In determining compensation, project management agreed with the majority sentiment expressed at the August Public meetings: to the extent practicable, an applicant's disaster relief should be allocated in proportion to the amount of economic loss they suffered as a result of the 2005 Red Tide Event. The compensation amounts awarded to each sector were determined by analyzing the number of applicants from each sector, the relative impact suffered by each sector, and the total amount of relief available. The amount allocated to commercial shellfish harvesters was determined first. All other sectors' allocations were divided from the remaining funds. This was done because commercial shellfish harvesters were by far the most numerous applicants (670 out of 771 total applicants) and commercial shellfish harvesters were determined to have suffered the greatest financial impact of all sectors. They are strongly tied to one area, many of these areas were closed for long periods of time, and the closure occurred during the time in which they traditionally make the bulk of their annual income. The following compensation formulas were developed with this in mind:

- *Commercial Shellfish Harvesters (670 applications submitted):* Because commercial shellfish harvesters do not report annual landings, it was not possible to tie their compensation to historic harvesting activity. They were compensated based on the number of days *the town in which they held a municipal license* was closed due to red tide in 2005. By tying compensation to municipal licenses, the varying geographic impact of the 2005 Red Tide Event could be accounted for (some towns were closed for over 2 months, while others were not closed at all). A daily compensation rate was determined from the number of applicants, the number of days their towns (in which they held a license) were closed, and the total amount of relief designated for commercial shellfish harvesters. This was calculated at \$71.17 per closed day. To determine individual compensation, this base rate was multiplied by the number of days *the town in which an applicant was licensed* was closed during the Red Tide Event. For example, a harvester licensed in Phippsburg, which was closed for 63 days, received exactly 7 times as much as a harvester licensed in Waldoboro, which was closed for 9 days.

Applicants that did not hold a municipal license were given compensation equal to 9 days closure. This compensation was awarded to anyone who was at least 14 years old at the onset of the 2005 Red Tide Event. Only two applicants were under the age of 14 (ages 9 and 11). Because funds were intended to offset loss of income, and 9 and 11 year olds could not reasonably be expected to provide substantial individual or family income, their compensation was limited to a refund of their license fees. The ineligible applications that were submitted were those from applicants who held a municipal license(s) only for a town(s) which was not closed for red tide at all in 2005. *508 commercial shellfish harvesters received \$1,189,165. These payments ranged from \$640.53 (9 days closed) to \$6191.80 (87 days closed). The daily rate was determined by dividing the total amount of commercial shellfish harvester compensation by the total number of*

days for which compensation was awarded (number of diggers multiplied by the number of days their town was closed).

- *Mussel Harvesters (21 applications received):* Mussel harvesters were awarded \$5000 for a 2005 mussel drag license and \$1000 for a 2005 hand harvesting license. These flat amounts were awarded based on the mobile nature of the mussel fishery (it was impossible to tie a vessel to an area with a specific closure length), the fact that mussel harvesters do not report landings (and it was therefore impossible to link the payment to a level of harvesting activity), and the amount of income they were likely to have lost, compared to the amount of relief available to the sector. *21 mussel harvesters received \$85,000.*
- *Mahogany Quahog Harvesters (20 applications received):* Maine Mahogany Quahog Licenses are issued to an individual and tied to a vessel. Mahogany Quahog Landings are reported federally by vessel. Mahogany Quahog License holder compensation was based on the mahogany quahog landings reported for each vessel for which an individual was licensed and reported landings in 2005. Because landings are tied to a vessel, compensation is also tied to a vessel. An applicant was required to be licensed for a vessel for which landings were reported in order to be eligible for compensation.

If a vessel reported more than 2,000 bushels of mahogany quahogs in 2005, it was awarded \$5000. If a vessel reported between 1,000 and 1,999 bushels, it was awarded \$3000 in compensation. If a vessel reported between 100 and 1,000 bushels of mahogany quahogs, it was awarded \$1000. If a vessel reported zero landings in 2005, it was not eligible for compensation.

If an individual held permits for more than one vessel for which they reported landings, they were compensated separately for each vessel. If more than one eligible application for any one licensed vessel was received, that vessel's compensation was split between the applicants. *20 mahogany quahog harvesters received \$78,000.*

- *Primary Buyers (49 applications received):* Primary buyers' 2005 monthly landings reports were used to categorize the size of the applicant's business in affected species. Applicants were assigned 0-6 points for each species (soft-shell clams, blue mussels, oysters, mahogany quahogs). These points were multiplied by the number of days the applicant's *county* was closed to harvesting of that species during the 2005 Red Tide Event. These "affected species scores" were then added for an overall point score, which was used to determine compensation. Higher reported landings and longer closures resulted in higher compensation amounts. A small number of applications were submitted from primary buyers who dealt in such a small amount of shellfish that their applications were determined not be eligible for a relief payment. Applicants' counties, rather than towns, were used because primary buyers tend to source shellfish from their

immediate area, but are not tied to their own town. *43 primary buyers received \$160,470. Payments ranged from \$270 to \$6500.*

- *Aquaculturists (11 applications received):* Aquaculturists were compensated based on the number of days the area in which they held a lease was closed due to red tide for the species grown on their lease site. Additional compensation was made available to aquaculturists who could **document** catastrophic losses as a result of the 2005 Red Tide Event. Two applicants qualified for catastrophic payments. Six applicants were deemed ineligible, as their lease area was not closed at any time for their species of culture. *5 aquaculturists received \$47,100. Payments ranged from \$1000 to \$13,000.*

Standard compensation for any sector was capped at \$6500 per license. This amount was generated by rounding up the largest amount paid to individual clam harvesters. Under the Primary Buyer compensation scheme, several businesses that dealt in very large volume would have received tens of thousands of dollars had compensation not been capped. It was reasoned that dealers of this size were likely able to source product from outside the affected areas. Some applicants were eligible for payments under multiple sectors, but no one applicant could receive more than \$13,000 in total (standard and catastrophic) compensation. This figure was achieved by doubling the standard cap. It was reasoned that no one individual should receive more than twice the standard amount as a way to ensure funds were disbursed as widely as possible. Two aquaculturists received catastrophic compensation, after having provided evidence that a large part of their crop was killed due to the Red Tide Event.

Decision letters were mailed in late January 2007 to inform applicants of their eligibility and compensation amount. Applicants could appeal this decision if they believed the Program had made an error in their compensation determination. This appeals process was not an opportunity to dispute the Program's method of determining compensation. It was in place strictly to allow for clerical errors on the part of the Program. Several errors were noted and corrected during the appeals process.

Award checks were mailed over several weeks, beginning in early February. All payments had been disbursed by the end of March.

If applicants had outstanding debts with the Maine Judicial System, Maine Revenue Services, or the Maine Department of Health and Human Services, their award was applied toward these debts. If the amount of the award was greater than their debt, the applicant received the balance. In addition, if the license under which an applicant applied for relief was under suspension during the 2005 Red Tide Event, they were not eligible for compensation.

Overall, the Red Tide Disaster Relief Program experienced very few problems. Only one issue presented a significant problem: 162 commercial shellfish harvesters who submitted applications were not eligible for compensation because the town in which they were licensed did not experience a red tide closure in 2005. The cover letter that accompanied

all applications, along with all program publicity and correspondence, clearly stated that compensation would be tied to 2005 *red tide* closures. However, some Maine shellfish harvesters label all closures “Red Tide”, despite the actual underlying cause. The coast of Maine experienced widespread flood closures in 2005, and many commercial shellfish harvesters mistakenly believed they would be compensated for these closures. When they were told they were ineligible, most applicants understood the reasons and accepted the decision.

Lessons for future programs

The fact that commercial shellfish harvesters do not report their landings made it impossible to tie compensation directly to historic harvesting activity. If additional disaster relief funding becomes available in the future, the only way that funding could be disbursed in a fashion that is more specific to individual circumstances is if landings data were available.

Finally, as noted, many commercial shellfish harvesters do not distinguish between red tide closures and flood closures. Although the Department clearly states the cause of each closure on all public documents, this information becomes particularly critical for harvesters to understand when disaster relief funding is available.

5. Evaluation

From its inception, the goal of the Red Tide Disaster Relief Project was to distribute the \$2 million received from Congress as fairly as possible (given the data and resources available), in a way that maximized the benefit to Maine's Commercial Shellfish Industry.

This goal was achieved. Industry comments were collected and considered from the onset of the program until the final disbursement of funds. To the extent practicable, direct industry payments were awarded in a way that maximized payments to those who suffered the most economic loss due to the 2005 Red Tide Event. The differential geographic impact of the Red Tide Event, along with the dependence of various sectors upon the resource, was accounted for in the final disbursement of funds. The \$400,000 allocated to Maine's Biotxin Monitoring Program will help to minimize the impact of future red tide events to all of Maine's Commercial Shellfish Industry.

Although a few applicants were disappointed with the way in which the program was executed, they were far outnumbered by those who approved of the program. Almost all complaints came from individuals who believed they should receive compensation for flood closures. Despite being told in advance that compensation would be awarded *only* for Red Tide Closures, some applicants from areas that suffered extensive flood closures were still upset. A small number of complaints came from individuals who failed to submit applications before the deadlines, but instead attempted to submit once they became aware of the size of the awards. Overall, the program was highly successful and well received by Maine's Commercial Shellfish Industry.