NOAA Contractor Partnership

How NOAA Uses Private Industry to Support Nautical Charting

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NOAA is responsible for providing accurate nautical charts for the U.S.Exclusive Economic Zone. NOAA has designated 43,000 square nautical miles of this area as 'in critical need of modern surveys.' Using only NOAA hydrographic survey vessels, it would take 40 years to survey just these critical areas. In an effort to more quickly reduce the backlog, NOAA turned to contracting. This article describes the NOAA process of awarding a contract. The process begins with an announcement in the Commerce Business Daily. A Source Evaluation Board then reviews the submissions and scores the firms based on qualifications- based selection procedures. At least three of the highest ranking firms are interviewed by telephone, then the Board makes the final ranking of the firms and presents recommendations to the Source Selection Official. The successful partnership between NOAA and private industry has helped increase hydrographic survey production in support of nautical charting.

Introduction

In the United States, the National Oceanic and Atmospheric Administration (NOAA) has a statutory mandate to provide charts and related information for the safe navigation of marine commerce, and to provide basic data for engineering and scientific purposes, and for other commercial and industrial needs. This mandate extends to the more than 3 million square nautical miles of ocean that comprise the U.S. Exclusive Economic Zone (EEZ).

Critical Need for Modern Surveys

To meet this mandate, NOAA publishes a suite of about 1000 nautical charts that cover the EEZ. However, about half of the soundings depicted on the charts are from survey data acquired before 1940 using lead lines. Some areas, particularly in Alaska, have never been adequately surveyed. In 1993 NOAA took a hard look at the mounting backlog of surveys and at the available in-house resources. Two actions resulted: (1) the prioritising of surveys needs, and (2) the decision to contract with private industry for surveying services to supplement the capacity of NOAA's in-house resources.

Prioritising of Survey Needs

NOAA prioritised areas as 'in critical need of modern surveys,' as 'navigationally significant', and as 'other.' An area is designated as critical based on the ade-

quacy of the nautical charts and prior surveys, volume of passenger traffic, volume and type of cargo, and the area's proximity to fisheries and marine resources. About 43,000 square nautical miles of coastal waters, primarily in coastal shipping lanes and major U.S. ports and their approaches, comprise the critical areas These critical areas are the focus of NOAA's modern surveying efforts. In addition to the critical areas, NOAA identified 491,000 square nautical miles as navigationally significant. Such areas will eventually need to be surveyed using modern technology.

NOAA Hydrographic Vessels

To address this backlog of critical survey needs, NOAA has three hydrographic survey ships: RAINIER, WHITING, and RUDE. Each of these vessels is over 30-years old. Excellent maintenance has allowed for continued use of these vessels. RAINIER is 70.4 m in length and carries six survey launches; four are capable of performing surveys using shallow water multibeam systems and two are outfitted with single beam echo sounders. RAINIER is typically deployed to Alaska for 200 days each year. WHITING is 49.7m in length and carries two survey launches equipped with single beam echo sounders. This vessel is also equipped with digital high speed, high resolution side scan sonar and is typically deployed along the U.S. Atlantic coast for about 200 days each year. RUDE is also deployed along the Atlantic coast for 180 days each year. This 27.4m vessel is equipped with a shallow water multibeam system, a single beam echo sounder, and tows digital side scan sonar.

NOAA In-house Production

On average, the three NOAA ships survey a total of 1,100 square nautical miles each year. At this rate, it would take NOAA over 40 years to survey just the critical areas. Expanding in-house capabilities is not an option due to budget constraints and language contained in the current congressional appropriation document that limits NOAA's fleet modernisation activities. Therefore, in an effort to more quickly reduce the backlog, NOAA turned to contracting.

The First Contract

NOAA awarded its first contract for hydrographic surveying services in 1994 to Science Applications International Corporation (SAIC). The contract was awarded based on 'best value' to the Government. SAIC surveyed a 65 square nautical mile area from Hells Gate in the East River eastward into Long Island Sound and in Vineyard Sound. The contract required full bottom coverage using shallow water multibeam and 200% coverage using side scan sonar. While the effort was successful, the contract was a valuable learning experience for both the contractor and NOAA. Based on what it learned from the process, NOAA refined its statement of work and technical specifications for future contracts.

Qualification Based Selection

Since 1998, all increases in appropriations for hydrographic surveying have been earmarked for contracting. The U.S. Congress also mandated that contractors be selected based on qualifications, not price. These qualifications-based selection (QBS) procedures can be traced to the 1972 Brooks Architect-Engineer Act, in which Congress declared it to be the policy of the Federal Government to publicly announce all requirements for architectural and engineering services on the basis of demonstrated competence and qualifications for the type of professional services required. The law goes on to define architectural and engineering services to include 'professional services of and architectural or engineering nature, as well as incidental services that members of those professions and those in their employ may

logically and justifiably perform.' In 1989, Public Law 100-565 greatly extended that definition to include surveying. The procedures for making qualifications-based selections are prescribed in the Federal Acquisition Regulations (FAR), Part 36.6 — Architect-Engineer Services.

Commerce Business Daily

NOAA announces contracting opportunities in the Commerce Business Daily (CBD), which is available on the Internet at http://cbdnet.acccess.gpo.gov/. This publication contains announcements of contracting opportunities, of sources sought, and a listing of U.S. Federal contracts awarded.

CBD Announcement

A NOAA announcement of a contracting opportunity for hydrographic surveying and related support services contains:

- A description of the work to be performed under the contract and location
- A list of the major skills and technical competence required
- The performance period (e.g. for three years from date of award)
- The expected value of the contract (e.g. $4 million per year)
- The type of contract (e.g. indefinite delivery type contract)
- The selection criteria (from FAR part 36.602-1)
- The deadline for responding (a date and time at least 30 calendar days after the announcement appears in the CBD)
- The Contracting Officer's name and telephone number
- The program representative's name, phone number and address
- Instructions for submitting qualification questionnaires

The information published in the CBD announcement is critical to the selection process.

Source Evaluation Board Members

During the 30 days in which interested contractors have to respond, the Source Selection Official appoints an ad hoc Source Evaluation Board (SEB)(FAR 36.60202) and a chairperson. The SEB members, collectively, have experience in all phases of the work to be performed under the contract. The chairperson convenes the initial SEB meeting a few days after the closing date. The Contracting Officer and the chairperson review with the Board the function of the SEB (FAR Part 36.602-3), procedures, schedule, selection criteria, and reporting requirements.

Selection Criteria

FAR Part 36.602-1(a) lists the selection criteria an agency may use when evaluating potential contractors. NOAA is required to evaluate each potential contractor in terms of its –

1 Professional qualifications necessary for satisfactory performance of required services
2 Specialised experience and technical competence in the type of work required
3 Capacity to accomplish the work in the required time
4 Past performance on contracts with Government agencies and private industry in terms of cost control, quality of work, and compliance with performance schedules
5 Location in general geographical area of the project and knowledge of the locality of the project provided, that application of this criterion leaves an appropriate number of firms, given the nature and size of the project

6 Acceptability under other appropriate evaluation criteria. On contracts that are not set-aside for performance by small businesses, the SEB evaluates the extent to which a large business prime contractor uses small business sub-contractors

The synopsis in the CBD will state if these criteria are listed in order of descending weight or if the criteria have equal weight.

Source Evaluation Board Activity

The chairperson sets the schedule for the SEB, usually allowing two workdays per submission for the board members to read the qualification questionnaires before reconvening the Board. Board members, working on their own, read and analyse each submission. After each Board member has had sufficient time to read each submission, the chairperson reconvenes the Board. During this meeting, the SEB discusses each contractor's qualifications, rates the firms against the evaluation criteria, comes to consensus, and develops interview questions for at least the three most highly qualified firms (also known as the 'short list'). After interviewing the short listed firms, the SEB prepares a report to the Source Selection Official recommending, in order of preference, at least three firms that the SEB considers to be the most highly qualified to perform the required services. This report contains enough information for the Source Selection Official to make an informed selection.

Source Selection Official

The Source Selection Official reviews the report and has three options: (1) accept the SEB's recommendations, (2) reorder the short list with justification, or (3) return the list to the SEB for further consideration. The Source Selection Official cannot add firms to the selection report. The final selection is then forwarded to the contracting officer. Unless otherwise specified by the Source Selection Official, the final selection authorizes the contracting officer to commence negotiations, beginning with the most preferred firm in the final selection. The contracting officer notifies all firms of the selection and extends an invitation for a debriefing to the unsuccessful firms.

Final Negotiations

At this point in the process the contracting officer sends the selected contractor a Request For Proposals (RFP), which includes technical specifications and a detailed statement of work to be performed under the first task order. The contractor is usually given 45 days to provide its business and technical proposals. The contracting officer and a team of NOAA employees who have experience performing the required work, resolve any technical issues in the proposal and negotiate a fair and reasonable price. This entire process, from the time the synopsis is published in the CBD until a contract is awarded, takes about ten months. Once a contract is in place and the contractor is working on the first task order, NOAA generally awards subsequent task orders in less than two weeks.

Task Orders

NOAA's contracts are Indefinite Delivery type contracts with negotiated firm fixed price task orders. The contract award includes the award of the first task order. Contracts can have an ordering period of one to five years. NOAA limits task orders to one fair sheet area for new contractors and multiple fair sheet areas for contractors with prior NOAA experience. Subsequent task order awards depend on available funds and a contractor's performance. NOAA awards two types of task orders. The first type of task order is for basic hydrographic coverage, that is the routine survey work. The second type is for resolving items deemed hazardous to surface navigation found during the first.

Advantages of Qualification Based Selection

NOAA has found the QBS process to be much more effective than bidding or traditional contracts. First, the QBS process is faster because NOAA negotiates with only the most highly qualified firm. Second, representatives from the program office are involved in negotiating both price and technical issues. Under traditional contracting, the U.S. Government negotiates with all firms that respond to an RFP. Price and technical issues are often negotiated separately; the contracting officer negotiates price together with input from the program office regarding technical issues. Third, contractors rarely 'low-ball' a bid to get the contract. They are not competing on the basis of price. Fourth, the process is less confrontational and more of a partnering between NOAA and the contractors.

Technical Specifications

NOAA's technical specifications may be viewed on the Internet at http://chartmaker.ncd.noaa.gov/ocs/text/hsd-O.html. Many of the contractors have found the scope and specifications of the work to be different from the majority of the work they perform. During negotiations and performance of task orders, NOAA encourages contractors to be innovative, to find better or more cost effective ways of performing the work without compromising data quality or survey coverage.

Past Contracts

NOAA awarded task orders totaling over US$ 8.9 million in 1998, over US$ 20.3 million in 1999, and will award US$ 16.3 million in task orders in 2000. These task orders were issued against contracts held by C & C Technologies, Inc.; SAIC; and John E. Chance and Associates for surveying services in the Gulf of Mexico, Terra Surveys LLC and Racal Pelagos, Inc. in Alaska, David Evans and Associates, Inc. in California, and Ocean Surveys, Inc. along the U.S. Atlantic coast south of Virginia. The ordering period for the three contracts in the Gulf of Mexico has expired, as has the period for Terra Surveys LLC.

Future Contracts

NOAA is currently negotiating a 3-year, US$ 3 million per year indefinite delivery contract with SAIC for work along the U.S. Atlantic coast north of Virginia. Source selection for two new contracts in Alaska is nearing completion, with award expected in late spring. The first is set aside for performance by a small business and will be a 3-year, US$ 2 million per year contract. The second will be a 4-year, US$ 10 million dollar per year contract.

Contracting Officer's Technical Representative

The contractors and NOAA's Contracting Officer's Technical Representatives (COTRs) view the contracting arrangement as a partnership. COTRs are employees from NOAA's Hydrographic Surveys Division who have extensive experience in various aspects of the work being performed. These employees ride the contractors' vessels to perform a quality assurance function, offer suggestions to the contractor for meeting the specifications, and help the contractor perform the work more efficiently. The contractors are excellent hydrographic surveyors, but many do not have a mariner's perspective. The COTRs try to provide this mariner's perspective to the contractors while discussing potential obstructions, which need to be investigated further.

Partnering

Based on contractor suggestions, NOAA reduced coverage requirements on contracts in the Gulf of

Mexico. The statement of work originally called for complete bottom coverage using shallow water multibeam plus covering the areas twice using side scan sonar. Since the survey was characterized by gently sloping sandy bottom with some man-made features (pipelines, drilling platforms, well heads, wrecks, etc.), the requirement for full multibeam coverage was eased to coverage acquired based on the line spacing needed to provide the side scan coverage. Also, based on the results NOAA achieved using the digital high speed, high-resolution side scan sonar, SAIC and C & C Technologies, Inc. bought similar units and used them during their contracts.

Contractor Comments

Our contractors have found that working with NOAA was 'a positive experience,' and that NOAA is 'a fair and understanding client.' The contractors appreciate the knowledge of marine operations and multibeam technology for nautical charting that NOAA personnel bring to the table. Another contractor stated, "It is refreshing to have a client establish a sound Statement of Work which provides detailed technical requirements to ensure data integrity, yet provide flexibility on how to best accomplish the task."

Working Together

Most of our contractors have found the scope and specifications of the work to be different from the majority of the work they perform. NOAA provided guidance that helped ease the learning curve. NOAA's technical staff worked constructively with the contractors to ensure they met contractual requirements while achieving the highest quality product. Contractors have found that NOAA's "familiarity with both the location and technical requirements of the work has been essential in defining the level-of-effort and approach, as well as in negotiating and conducting the survey operations" The contractors have been "impressed with the competence and thoroughness of NOAA personnel involved in contract oversight and review of deliverables." "NOAA's team of technical and contracting personnel have been effective in seeing that [the contractor] is paid promptly for services rendered."

Successful Teamwork

Similarly, NOAA has found the contractors to be very professional and capable of producing high quality surveys. They are an essential element in NOAA's plan to reduce the critical survey backlog. Their employees are very knowledgeable, conscientious, and hard working. The contractors have shown a genuine interest in working with NOAA as partners, rather than adversaries. Working together, NOAA and private industry are increasing hydrographic production and improving the accuracy of nautical charts for the maritime community.

Biographies

Captain Samuel P. De Bow, Jr., has been a commissioned officer for 22 years with the National Oceanic and Atmospheric Administration (NOAA). He graduated from Drexel University in 1976 with a B.S. in Commerce and Engineering.He later received a M.S. in Hydrographic Sciences from the Naval Postgraduate School in Monterey, CA in 1985. During his career he has conducted hydrographic surveys throughout the coastal waters of the US, including Alaska. Captain De Bow is currently the Chief of the Hydrographic Surveys Division, Office of Coast Survey, within the National Ocean Service of NOAA. In that capacity, he is the Source Selection Official for all NOAA contracts for Hydrographic Services.

C. Brian Greenawalt manages NOAA's contracts for hydrographic surveying services. A retired NOAA Corps officer with over 20 years active duty, he served in NOAA's various mapping, charting, and geodesy

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Jeffrey Ferguson supports NOAA's contracts for hydrographic surveying services. A former NOAA Corps officer with over 12 years active duty, he served in NOAA's various mapping, charting and geodesy programs. He has a Bachelor of Science degree in Aerospace Engineering from the University of Colorado at Boulder. He is currently a Program Analyst in the Data Acquisition and Control Branch, Hydrographic Surveys Division, Office of Coast Survey, within the National Ocean Service of NOAA.