

TEMPORARY BERTH ASSIGNMENT SUMMARY

The Temporary Berth Assignment (TBA) toolset is a process improvement workflow designed to manage short term berth assignments within the Port of Long Beach (POLB). The application allows real-time entry of the exact location in the Port of Long Beach's enterprise GIS viewer for timeline of the assigned area, contract details, and associated documents. The information can be viewed using a time slider for past, present and future assignments to provide time based availability of spaces and planned activities. This toolset replaces a manual email/spreadsheet based process and did not provide ready access to the information outside of the individuals responsible for manual assignment management.

Port of Long Beach's (POLB's) Tenant Services & Operations Division requested a tracking solution to improve the visibility of Temporary Berth Assignments provided to vessels which are typically not equipped with an automated identification system (AIS).

The Port of Long Beach's Information Management Division (IM) was asked to extend the existing functionality of its GIS web viewer by developing layers in GIS to display Temporary Berth Assignments and provide input to render the information on the map display. Initially designed for tracking "as is" berth assignments, the tool functions as a planning dashboard for Tenant Services staff to visualize current and future ships at berth as well as attach critical business details for insurance and finance purposes. The functionality improves the overall visibility of the vessel's size, contacts, insurance documents, where they are reserved, and when they are meant to be occupied.

The solution leverages an existing modern GIS HTML5 hosted platform which allows users to interact with live vessel feeds, weekly satellite imagery on desktop, tablets, or mobile devices further extending the value of hosting information resources in a GIS platform for operational use. The previous effort was performed manually by individuals assigned to the task in offline mode and with limited visibility.

The overall cost of the application's development effort came in higher than originally planned at \$37,000 due in part to evolving requirements, user experience, and detailed report generation to complement the editing interface provided to staff. The project was initially budgeted to deliver a solution within an 80-hour project plan with a bare bones interface to get the clients "off the ground" and in a production ready mode within a few weeks for \$28,700. In recognition of a wider utility for other potential permit workflows, additional off the shelf widgets and functions were incorporated into the framework to extend the functionality and provide a better user experience for the data stewards responsible for curating the information.

The technology improvements demonstrated how workflows can be modified to adopt approval steps, escalation, and potentially other similar usecases where the efforts require a "where is it" value in both space and time giving Operations Staff the ability to manage the temporary berthing more effectively in a single workflow approach.

Port of Long Beach's Information Management Division's Business Applications team ensured the necessary steps were taken to:

- a) Identify requirements needed and track items as necessary for enhancements by meeting with Tenant Services' project team;
- b) Ensured application security, established appropriate rights, and tools were available for viewing output;
- c) Tested abilities summarized above and provided detailed testing scripts for evaluation against modified applications;
- d) Pre-release: User Acceptance Testing (UAT) by Tenant Services and Engineering Design in designated development and then staging environments;

e) Post release: Execute Test Plan (TBD).

The Port of Long Beach's Information Management Division is constantly looking for new innovations in technology to enhance data flow for port operations; technologies to improve the safety and productivity of cargo and container handling; methods to improve traffic flow and improve truck turnaround time entering and leaving a terminal

The Port of Long Beach appreciates the opportunity to present the Temporary Berth Assignments application for consideration of the 2020 AAPA IT Award. The Temporary Berth Assignments application is a major step for Ports who have actively pursued leveraging GIS tools and resources in support of operational GIS initiatives. While it is understood that all ports have had worthy accomplishments over the past year, we believe that the Temporary Berth Assignments application is an exceptionally strong candidate for this year's award.

PORT DESCRIPTION

The Port of Long Beach is the Port of Choice – the premier U.S. gateway for trans-Pacific trade and a trailblazer in innovative goods movement, safety, environmental stewardship and sustainability.

As the second-busiest container seaport in the United States, the Port handles trade valued at more than \$170 billion annually and supports 2.6 million trade-related jobs across the nation, including more than 575,000 in Southern California.

In an intensely competitive industry, the Port of Long Beach distinguishes itself for top-notch customer service and operational excellence, and in 2019 industry leaders named it "The Best West Coast Seaport in North America."

Founded in 1911 with a single municipal dock at the mouth of the Los Angeles River, the Port today encompasses 3,200 acres with 35 miles of waterfront, 10 piers, 80 berths and 66 gantry cranes. In 2019, the Port handled 7.6 million container units, the second best year in its history.

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Port of
LONG BEACH

THE PORT OF CHOICE

Information Management
IM: Innovative Technology

**American Association of Port Authorities
2020 Application for Information Technology Award**

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1. INTRODUCTION - HIGHLIGHTS

The Temporary Berth Assignment (TBA) toolset is a process improvement workflow designed to manage short term berth assignments within the Port of Long Beach (POLB). The application allows real-time entry of the exact location in the Port of Long Beach’s enterprise GIS viewer for timeline of the assigned area, contract details, and associated documents. The information can be viewed using a time slider for past, present and future assignments to provide time based availability of spaces and planned activities. This toolset replaces a manual email/spreadsheet based process and did not provide ready access to the information outside of the individuals responsible for manual assignment management.

The Information Management Division is constantly looking for new innovations in technology to enhance data flow for port operations and the movement of goods into and out of the Port of Long Beach complex.

The Port of Long Beach appreciates the opportunity to present the Terminal Berth Assignment toolset for consideration of the 2020 AAPA IT Award. While it is understood that all ports have had worthy accomplishments over the past year, we believe that the Pilot Slips application is an exceptionally strong candidate for this year's award.

2. GOALS AND OBJECTIVES / BUSINESS PROBLEMS

The Tenant Services & Operations Division required a supplemental representation of ship locations which are occupying berths for an agreed upon time frame on existing berths. This effort will provide a placeholder method for representing a planned occupation of a given berth segment. The previous effort was performed manually by individuals assigned to the task in offline mode and with limited visibility.

3. DISCUSSION

3.1 BACKGROUND & PROJECT DESCRIPTION

The Tenant Services & Operations Division required an editing solution to improve the visibility and tracking of Temporary Berth Assignments within Port Atlas. The TemporaryBerthAssignment feature class will represent an interim step in developing a future permit workflow for effective organization within the application.

3.2 OBJECTIVES AND METHODOLOGY

The Port of Long Beach's Information Management Division (IM) was asked to extend the existing functionality of its GIS web viewer by developing layers in GIS to display Temporary Berth

Assignments and provide input to render the information on the map display. Initially designed for tracking “as is” berth assignments, the tool functions as a planning dashboard for Tenant Services staff to visualize current and future ships at berth as well as attach critical business details for insurance and finance purposes.

The functionality improves the overall visibility of the vessel's size, contacts, insurance documents, where they are reserved, and when they are meant to be occupied.

The solution leverages an existing modern GIS HTML5 hosted platform which allows users to interact with live vessel feeds, weekly satellite imagery on desktop, tablets, or mobile devices further extending the value of hosting information resources in a GIS platform for operational use.

3.3 PLATFORM SPECIFICATIONS (HARDWARE AND SOFTWARE)

Application is live: [HTTPS:// PORTATLAS.POLB.COM](https://portatlas.polb.com)

3.4 PROJECT COSTS

Approximately \$37,000

3.5 PERFORMANCE MEASURES

Port of Long Beach's Information Management Division's Business Applications team ensured the necessary steps were taken to:

- a) Identify requirements needed and track items as necessary for enhancements by meeting with Tenant Services' project team;
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4. CONCLUSION

The Port's Information Management Division developed a dataset layer in GIS to display areas within the port where Temporary Berth Assignments (TBA's) can be entered and tracked. Implement an editing interface to be used as a planning tool for Tenant Services staff for visualizing ships at berth and provide business details to the existing ships that have an existing assignment. The proposed feature will be processed and posted using a manually edited workflow within Port Atlas to create geometry and apply attribution relevant to the permitted assignment.