<p><strong>NOAA Office:</strong>IOOS </p>   
<p><strong>Duration of Use Case:</strong>Ongoing </p>  
<p><strong>Link to Case:</strong>https://www.elsevier.com/books/preparing-a-workforce-for-the-new-blue-economy/hotaling/978-0-12-821431-2 </p>  
<p><strong>Geographic Location:</strong> Columbia River in Portland, OR </p>  
<p><strong>Is the Use Case Published?</strong>No </p>  
<p><strong>Primary Use:</strong>>Commerical Shipping, Operations </p  
<p><strong>Which Marine Industries Benefit from the case:</strong>Marine transportation of freight and people </p>  
<p><strong>Case Benefits:</strong>On the Columbia River, Precision Marine Navigation data, including observations and models of ocean, river, and hydrological conditions, allow ships to precisely know the current and forecast water levels. These data provide grain shippers the knowledge of exactly how much grain they can load in their cargo ships for export allowing them to maximize their cargo while minimizing hazards. Grain shippers need to keep in mind both underhull clearance and the distance between the water level and bridges. The more grain they can fit on each ship, the more money they make. </p>  
<p><strong>Description:</strong>The shipping industry currently accounts for around 3% of global carbon emissions, but due to anticipated growth in this sector, some projections see that number increasing to 17% by 2050. NOAA data and improved decision support powered by a New Blue Economy, however, can improve marine transportation efficiency and reduce carbon emissions simultaneously. One such effort already underway at NOAA is our Precision Marine Navigation program, which integrates NOAA’s weather, oceanographic, and bathymetric datasets, to be a one stop-shop for marine navigation data users. When a vessel transits from one place to another anywhere around the globe, accurate and real-time knowledge about waves, currents, and weather events allows for smart decision making and maximizing cargo load.</p>