Safety Risk Management in VTS Areas

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Safety Risk Management

• Procedures to identify hazards, assess risks, create risk controls, and monitor results

• International Maritime Organization requires ship owners and operators to maintain safety management systems
Coast Guard Operational Risk Management Program

Operational Risk Management

START HERE

Identify Mission Tasks

Identify Hazards

Assess Risk

Evaluate Risk vs. Gain

Identify Options

Execute Decision

Monitor Situation
Coast Guard Operational Risk Management Program

- Three levels of management
  - Time-critical
  - Deliberate
  - Strategic
Ports and Waterways Safety Assessment (PAWSA)

- VTS centers work with local waterway users and stakeholders
- Formal process for collecting expert input to identify risks and evaluate potential mitigations
- Waterway Risk Model developed from qualitative assessments
PAWSA (cont.)

• Established in response to perceived lack of stakeholder input to VTS development during the 1990s

• Used to assess candidate VTS center locations rather than for continuous risk management
Continuous Risk Assessment

• Accident investigations are one method for identifying hazards

• Investigating unexpected events and close calls can identify new hazards
VTS Center Data

• Each VTS center is required to record operational data

• Intended for resource allocation, policy effectiveness, and risk assessment

• Vessel movements, incidents, special handling, interventions, and near-misses
VTS Center Data (cont.)

• Data collection is inconsistent
• Consensus that data are not being used by the VTS program
• Do not support assessments of risk or VTS effectiveness
Geographic Analyses

• Each VTS area has locations of recognized higher risk

• VTS system is not routinely collecting or analyzing geographic information

• Common part of risk assessment in other industries

• Traffic, accident, and waterway data could be compared with population and infrastructure
Proactive Traffic Management

- Directing vessel movements is a last resort to an unsafe situation
- Opportunity for prevention may have been exhausted
- Coast Guard has proactive options that do not rely on VTS watchstander interventions
VTS Special Areas

- Coast Guard can establish specific operating requirements for areas of a waterway to reduce risk
- VTS special area is a regulatory option for additional requirements
- Can be tailored to address unique hazards and demands of a particular location
VTS Special Areas (cont.)

• VTS special areas provide clear and unambiguous procedures for managing traffic in high risk locations

• Continuous risk management program would identify locations for additional measures such as VTS special areas