

TOMMY TRENT'S

ABC'S
OF THE
SEAWAY



PRESENTED BY

**The St. Lawrence Seaway
Management Corporation**

SEAWAY TERMS

BACKHAUL - THE RETURN TRIP OF A VESSEL WITH A DIFFERENT CARGO.

BULK CARGO - GOODS LIKE WHEAT, COAL OR OIL, THAT MUST BE SHOVELLED, SCOOPED, PUMPED OR BLOWN INTO THE SHIP.

CHANNEL - THE COURSE, MARKED BY BUOYS, A SHIP FOLLOWS TO OPEN WATERS.

DEAD TIME - THE TIME PERIOD BETWEEN THE EXIT OF ONE VESSEL FROM A LOCK AND THE ENTRY OF ANOTHER.

DOWNBOUND - TOWARD THE ATLANTIC OCEAN

DUMP - LOWER THE LEVEL OF WATER IN THE LOCK.

LOCK - AN ENCLOSURE WITH GATES AT EITHER END FOR LIFTING OR LOWERING VESSELS FROM ONE LEVEL TO ANOTHER.

SHIP ARRESTERS - STEEL ROPES TO PROTECT SHIPS FROM HITTING THE LOCK GATES.

ST. LAWRENCE SEAWAY - THE WATERWAY FROM MONTREAL TO LAKE ERIE INCLUDING THE WELAND CANAL.

TRANSIT - MOVEMENT OF A VESSEL THROUGH THE SEAWAY.

TURNING BACK - EMPTYING OR FILLING A LOCK FOR A WAITING VESSEL GOING IN THE SAME DIRECTION.

UPBOUND - FROM THE ATLANTIC OCEAN.

UPPER LAKES - THE FOUR GREAT LAKES ABOVE LAKE ONTARIO.



INTRODUCTION

AHOY!

THIS LITTLE BOOK IS ABOUT THE TALLEST WATER STAIRCASE WEST OF CHINA! ITS 15 STEPS, THE LOCKS, RAISE SHIPS FROM THE ST. LAWRENCE RIVER, AT MONTREAL, UP TO LAKE ERIE, A TOTAL OF 168 M (552 FT).

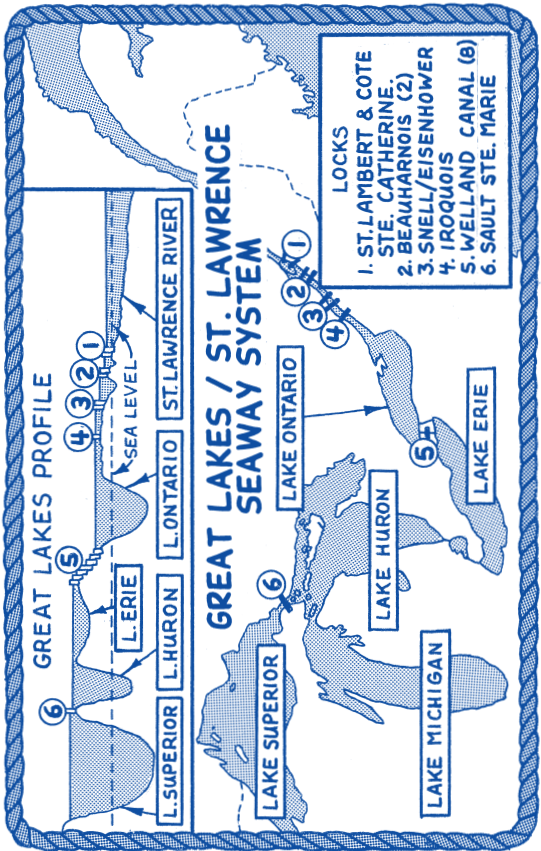
BECOME A SEAWAY EXPERT! LEARN ABOUT THE WATERWAY, ITS LOCKS AND BRIDGES, HOW THEY WORK, SEE THE VARIOUS TYPES OF VESSELS THAT SAIL THE SEAWAY AND THE CARGO THEY CARRY. MY DOGS TEDDY AND CRUZER LOVE THE SEAWAY AND SO WILL YOU. I'M SURE!

Tommy

YOUR NAME HERE

© NORM TUFFORD





THE ST. LAWRENCE SEAWAY

THE SEAWAY EXTENDS FROM MONTREAL TO LAKE ERIE AND IT INCLUDES THE WELAND CANAL. ITS SERIES OF LOCKS, CANALS AND CHANNELS LINKS THE ATLANTIC OCEAN AND ST. LAWRENCE RIVER TO LAKE ONTARIO AND THE FOUR UPPER GREAT LAKES.

THIS MOST IMPORTANT WATER ROUTE OPENED TO NAVIGATION IN 1959. MORE THAN TWO BILLION TONNES OF CARGO HAVE PASSED THROUGH THE SEAWAY SO FAR. OUR COLD WINTERS FORCE THE SEAWAY TO CLOSE BETWEEN LATE DECEMBER AND LATE MARCH. THIS IS THE TIME SEAWAY WORKERS DEVOTE TO MAINTENANCE AND NECESSARY REPAIRS TO ENSURE SMOOTH SAILING DURING THE BUSY SEASON. NEW TECHNOLOGY IS HELPING TO KEEP THE SEAWAY OPEN LONGER EACH YEAR.

LOCKS OF THE SEAWAY

ALL OF THE 15 LOCKS HAVE THE FOLLOWING DIMENSIONS:

USABLE LENGTH- 233.5 METRES (766 FEET)

USABLE WIDTH- 24.4 METRES (80 FEET)

WATER DEPTH- 9.1 METRES (30 FEET)

THEY ALLOW SHIPS OF 225.5 M (740 FT) IN LENGTH AND 23.8 M (78 FT) IN WIDTH (OR "BEAM") TO USE THE SEAWAY.

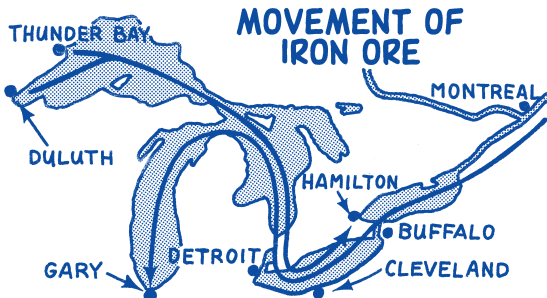
SEAWAY CARGOES

OVER 90% OF SEAWAY TRAFFIC IS MADE UP OF **BULK CARGOES** SUCH AS WHEAT AND OTHER GRAINS, IRON ORE, COAL, CHEMICALS AND OIL. **MANUFACTURED GOODS** OF ALL KINDS, SOME OF WHICH ARE SHIPPED IN CONTAINERS, MAKE UP THE REST OF THE SEAWAY CARGOES. SHIPS FROM ALL THE **GREAT TRADING NATIONS** OF THE WORLD CALL AT SEAWAY PORTS IN CANADA AND IN THE UNITED STATES.



MOVEMENT OF GRAIN

THE PROVINCES OF MANITOBA AND SASKATCHEWAN SUPPLY MOST OF THE CANADIAN **GRAIN EXPORTS** THROUGH THE SEAWAY. THEY INCLUDE WHEAT, BARLEY CORN, FLAXSEED, OATS AND RYE. THIS GRAIN IS SHIPPED THROUGH THE PORT OF **THUNDER BAY**.



LAKERS TAKING GRAIN TO LOWER ST. LAWRENCE PORTS OFTEN CAN LOAD A BACKHAUL SHIPMENT OF QUEBEC IRON ORE FOR THE STEEL MILLS OF THE GREAT LAKES REGION IN CANADA AND THE UNITED STATES. THE SAILORS ON THESE SHIPS ARE EXPERTS AT CLEANING THE CARGO HOLDS BEFORE GRAIN IS AGAIN LOADED ABOARD.

SMALLER QUANTITIES OF IRON ORE ARE ALSO SHIPPED TO HAMILTON FROM THE UNITED STATES THROUGH THE PORT OF DULUTH, ON LAKE SUPERIOR.



SHIPS THAT CARRY THE BULK CARGOES

TRADITIONALLY, MOST OF THE SHIPS SAILING THE SEAWAY HAVE BEEN **BULK CARGO CARRIERS** AND OVER THE YEARS THEY HAVE DEVELOPED THEIR OWN **UNIQUE DESIGNS**.



BY THE 1860'S, **BARKENTINES** AND **SCHOONERS** CARRIED MOST OF THE BULK CARGO SUCH AS LUMBER AND COAL.



NEXT, CAME THE WHALEBACK STEAMER, COMMONLY CALLED A "PIG BOAT" BECAUSE OF ITS SNOUT-LIKE BOW. THIS UNIQUE DESIGN WAS SUPPOSED TO OFFER **MINIMAL RESISTANCE** TO WIND AND WAVES.



BY 1918, 182 M (600 FT) FREIGHTERS WERE THE LARGEST SHIPS ON THE GREAT LAKES AND BECAME THE **STANDARD** FOR ALL THE GREAT LAKES FLEETS FOR THE NEXT 35 YEARS.

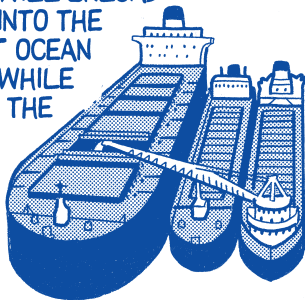


TODAY FREIGHTER SIZE HAS REACHED A MAXIMUM OF 225.5 M (740 FT), AND MANY OF THEM CARRY LARGE SELF-UNLOADING EQUIPMENT ON THEIR DECKS.



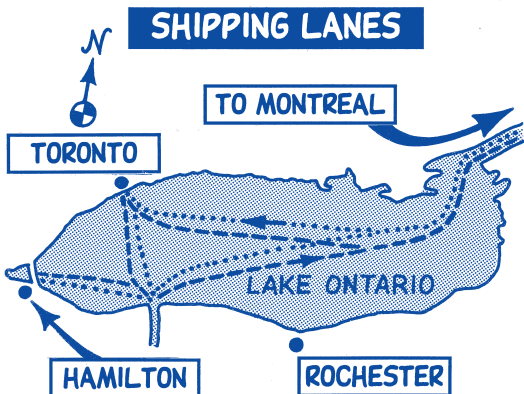
ALTHOUGH THE SEAWAY LOCKS ARE HUGE, THERE ARE SOME SPECIALIZED SHIPS ON THE UPPER GREAT LAKES THAT ARE JUST TOO BIG TO TRAVEL THROUGH THE SEAWAY. THESE SUPERLAKERS ARE OVER 304 M (1000 FT) IN LENGTH.

SOMETIMES WHEN A LARGE CARGO HAS TO BE SHIPPED ACROSS THE OCEAN, LAKE CARRIERS WILL UNLOAD THEIR CARGOES INTO THE HOLDS OF GIANT OCEAN BULK CARRIERS WHILE THEY ANCHOR IN THE MOUTH OF THE ST. LAWRENCE RIVER.



SEAWAY NAVIGATION

TO KEEP THE SEAWAY AS SAFE AND EFFICIENT AS POSSIBLE, THE SEAWAY AUTHORITIES HAVE DEVELOPED A SOPHISTICATED TRAFFIC CONTROL SYSTEM.



LEGEND:

UPBOUND COURSE

DOWNBOUND COURSE - - - - -

TO AVOID COLLISIONS, ALL SHIPS TRAVEL IN UPBOUND OR DOWNBOUND SHIPPING LANES.

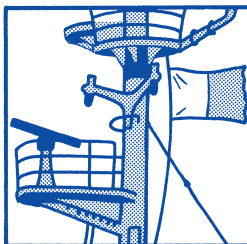
SEAWAY PILOTS



JUST AS AIRPLANES NEED PILOTS TO NAVIGATE THEM THROUGH THE SKIES, **SHIP PILOTS** ARE NEEDED TO GUIDE THE LARGE OCEAN FREIGHTERS THROUGH THE SEAWAY.



OFTEN THE PILOT IS BROUGHT TO THE SHIP BY A **PILOT BOAT**. ONCE ON BOARD, THE PILOT BECOMES THE **SHIP'S NAVIGATOR**.

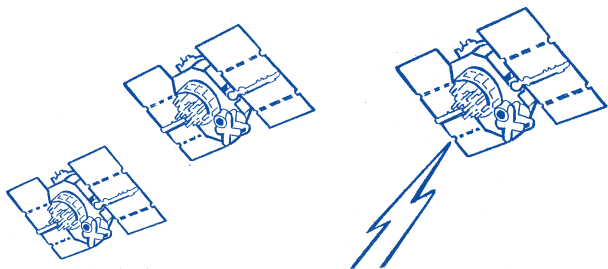


AN EASY WAY TO TELL IF A SHIP HAS A PILOT ON BOARD, IS TO LOOK FOR THE **WHITE AND RED PILOT FLAG**.

AUTOMATIC IDENTIFICATION SYSTEM (AIS)

IN 2003, NAVIGATION ON THE SEAWAY ENTERED A NEW AGE. EVERY COMMERCIAL SHIP NOW CARRIES A **SPECIAL TRANSPONDER** THAT SENDS ITS NAME, SPEED AND LOCATION TO THE SEAWAY **TRAFFIC CONTROL CENTRES** AND TO ALL OTHER SHIPS NEAR IT. COMPUTERS ABOARD SHIP AND AT TRAFFIC CONTROL CENTRES SHOW THIS INFORMATION ON A **VIRTUAL SEAWAY MAP**, SO THAT EVERYONE CAN SEE WHERE ALL THE SHIPS ARE LOCATED.

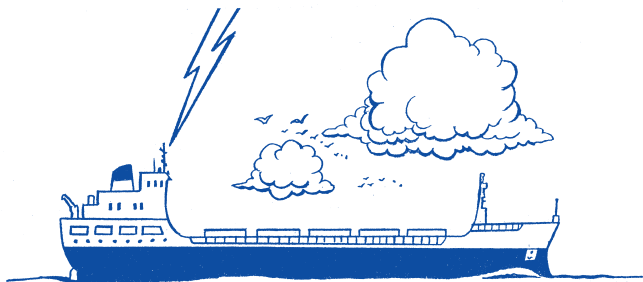




THE SYSTEM WORKS THROUGH RADIO SIGNALS AND COMPUTERS AND IS LINKED TO THE DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS) SATELLITE TECHNOLOGY.

AIS HELPS AVOID COLLISIONS IN BAD WEATHER, AND HELPS MANAGE TRAFFIC SO THERE IS LESS WAITING TIME AT THE LOCKS.

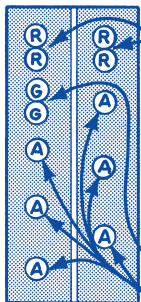
TRAFFIC CONTROLLERS CAN ALSO USE IT TO SEND SAFETY ALERTS AND INFORMATION ABOUT WINDS, CURRENTS AND ICE IN THE CHANNEL OUT TO SHIPS.



LOCK SIGNAL LIGHT PANELS



TO MAKE SURE SHIPS MOVE THROUGH THE SEAWAY AS EFFICIENTLY AS POSSIBLE, **SIGNAL LIGHT PANELS** AT THE END OF EACH LOCK DESCRIBE WHAT STAGE OF READINESS THE LOCK IS IN. BY CAREFULLY WATCHING THESE LIGHTS, THE **SHIP'S MASTER** CAN TIME THE ARRIVAL OF HIS VESSEL AT THE LOCK WITH A **MINIMUM AMOUNT OF DELAY**.



MONTREAL - LAKE ONTARIO SECTION RED LIGHTS:

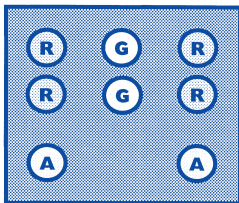
FIXED RED - LOCK IS OCCUPIED.
FLASHING TOGETHER - LOCK IS EITHER OCCUPIED BY ONE VESSEL OR LOCK IS "TURNING BACK" * FOR YOU.
FLASHING ALTERNATELY - LOCK IS OCCUPIED BY MORE THAN ONE VESSEL.

FIXED GREEN - LOCK IS READY.

AMBER LIGHTS - THESE LIGHTS INDICATE THE AMOUNT OF TIME LEFT BEFORE THE

LOCK IS READY FOR THE SHIP TO ENTER. THEY GO OUT IN SEQUENCE STARTING FROM THE TOP WITH EACH LIGHT REPRESENTING A 2 MINUTE INTERVAL WHILE A FLASHING LIGHT INDICATES ONE MINUTE.

* SEE "SEAWAY TERMS".



WELLAND CANAL LOCKS 1 TO 7

ON THE WELLAND CANAL, THE LIGHT PANELS ARE DIFFERENT. **ONLY 2 AMBER LIGHTS ARE USED, AND THE SEQUENCE CHANGES EVERY 2 MINUTES.**

AT 10 MIN. - BEFORE THE LOCK OPENS
 - 2 STEADY AMBER LIGHTS.

AT 7 MIN. - 1 STEADY, 1 FLASHING AMBER LIGHT.

AT 5 MIN. - 1 STEADY AMBER LIGHT.

AT 2 MIN. - 1 FLASHING AMBER LIGHT.

WHEN **BOTH AMBER** LIGHTS GO OUT, THE GREEN LIGHTS COME ON AND THE SHIP MAY ENTER THE LOCK.

MOORING HAND SIGNALS



STOP



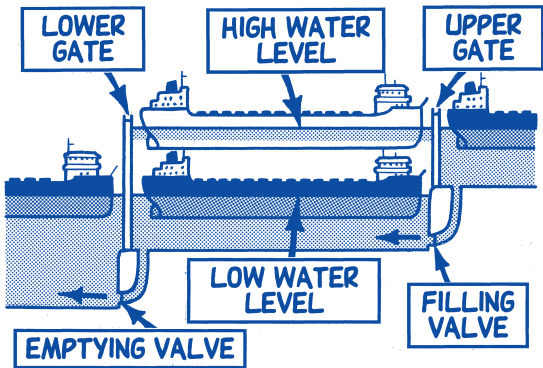
EMERGENCY
STOP



HEAVE

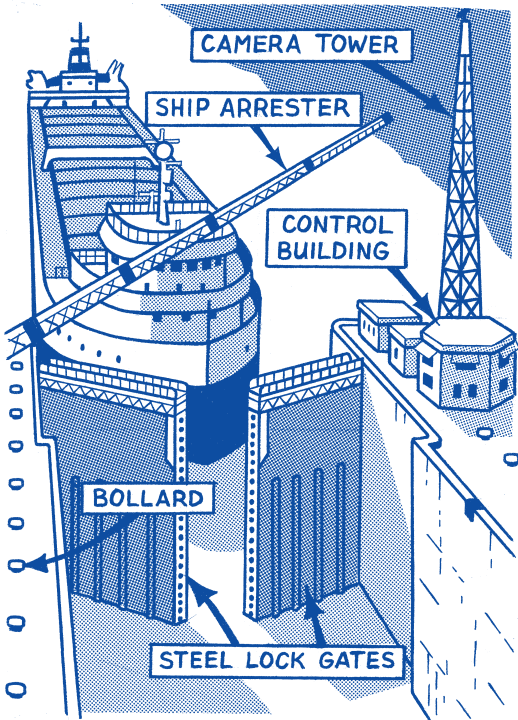
LOCK OPERATION

A SEAWAY LOCK IS A WATERTIGHT CHAMBER WITH GATES AT EITHER END THAT ALLOWS A VESSEL TO BE LIFTED OR LOWERED FROM ONE LEVEL TO ANOTHER.



SEAWAY ENGINEERS DESIGNED THE LOCKS TO TAKE ADVANTAGE OF THE LAW OF GRAVITY TO FILL AND EMPTY EACH LOCK. TO RAISE A SHIP, THE UPSTREAM LOCK VALVES ARE OPENED AND WATER FLOWS IN. TO LOWER A VESSEL, THE DOWNSTREAM VALVES ARE OPENED AND THE WATER FLOWS OUT.

LOCK FEATURES

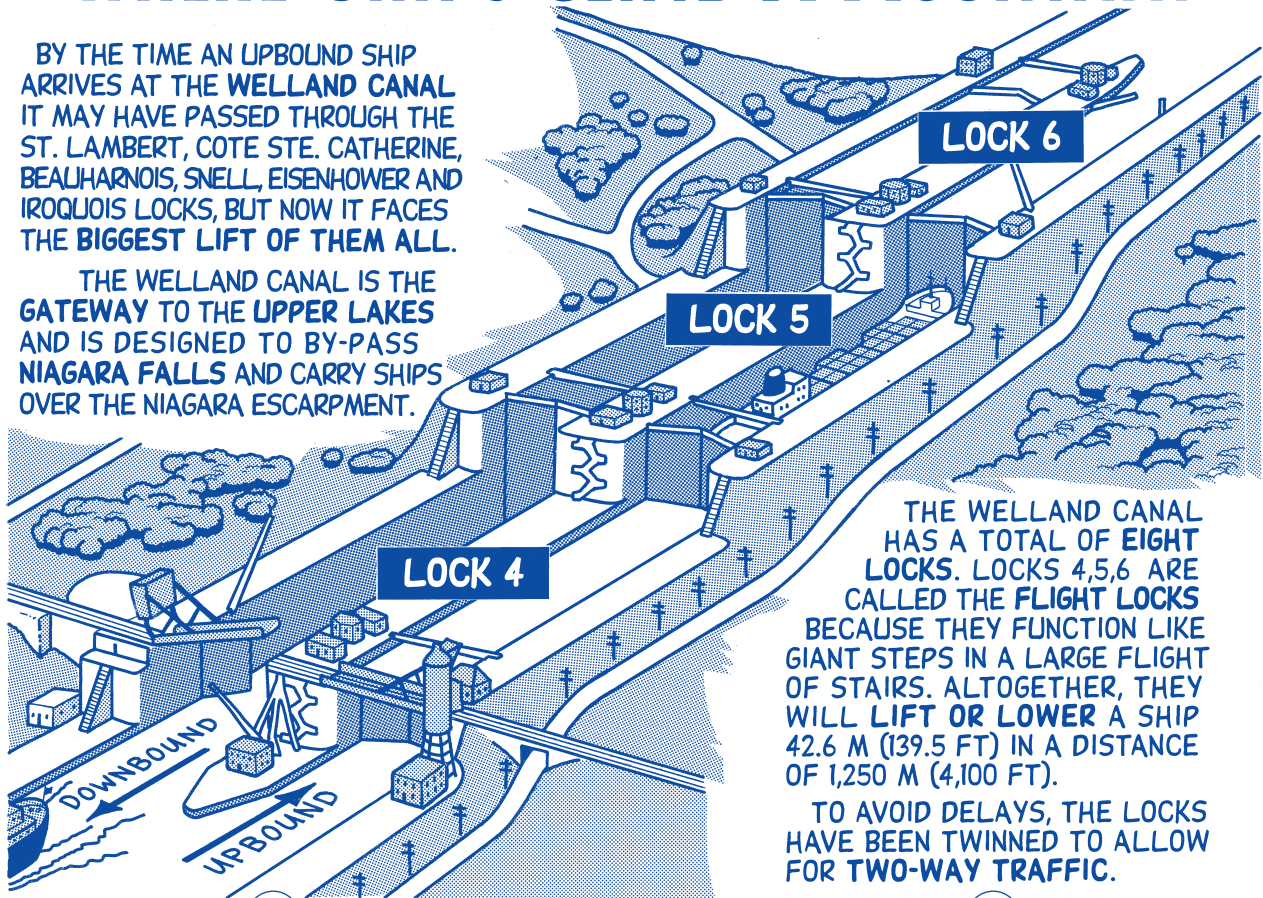


EACH LOCK HOLDS AROUND 91 MILLION LITRES (21 MILLION GALLONS) OF WATER AND TAKES APPROXIMATELY TEN MINUTES TO EMPTY OR FILL.

WHERE SHIPS CLIMB A MOUNTAIN

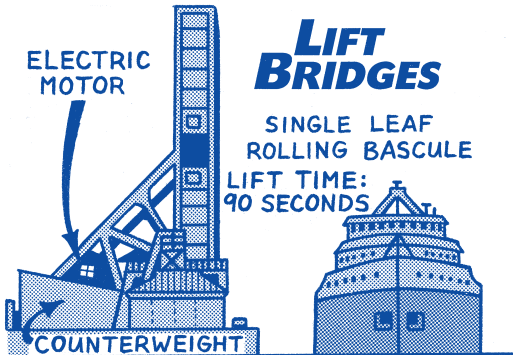
BY THE TIME AN UPBOUND SHIP ARRIVES AT THE WELLAND CANAL IT MAY HAVE PASSED THROUGH THE ST. LAMBERT, COTE STE. CATHERINE, BEAUHARNOIS, SNELL, EISENHOWER AND IROQUOIS LOCKS, BUT NOW IT FACES THE BIGGEST LIFT OF THEM ALL.

THE WELLAND CANAL IS THE GATEWAY TO THE UPPER LAKES AND IS DESIGNED TO BY-PASS NIAGARA FALLS AND CARRY SHIPS OVER THE NIAGARA ESCARPMENT.



THE WELLAND CANAL HAS A TOTAL OF EIGHT LOCKS. LOCKS 4,5,6 ARE CALLED THE FLIGHT LOCKS BECAUSE THEY FUNCTION LIKE GIANT STEPS IN A LARGE FLIGHT OF STAIRS. ALTOGETHER, THEY WILL LIFT OR LOWER A SHIP 42.6 M (139.5 FT) IN A DISTANCE OF 1,250 M (4,100 FT).

TO AVOID DELAYS, THE LOCKS HAVE BEEN TWINNED TO ALLOW FOR TWO-WAY TRAFFIC.



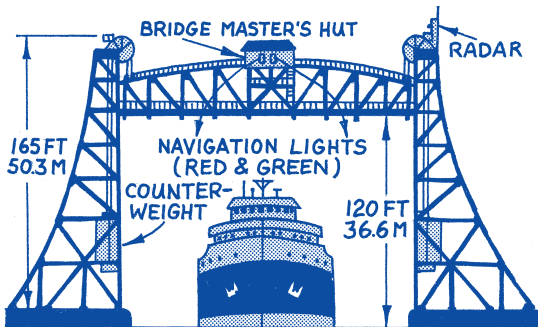
THE MODERN BASCULE BRIDGE IS A DIRECT DESCENDANT OF THE MEDIEVAL DRAW-BRIDGE.

BUILT TO HANDLE SHORT CANAL CROSSINGS, THE SECRET OF THE BASCULE IS IN THE COUNTERWEIGHT WHICH **BALANCES** THE DRAW SPAN SO EFFECTIVELY THAT ONLY A **MODEST AMOUNT** OF POWER IS NEEDED TO RAISE IT.

ONE SPECIAL PROBLEM ASSOCIATED WITH THE ROLLING LIFT BASCULE IS THE **EXTRA STRESS** CREATED ON THE BRIDGE WHEN IT IS RAISED **VERTICALLY**. TO OVERCOME THIS PROBLEM, **SPECIAL BRACING** IS GIVEN TO THE BRIDGE AND THE ROADWAY TO PROVIDE **EXTRA STRENGTH**.

BRIDGE SIGNAL LIGHT SYSTEM

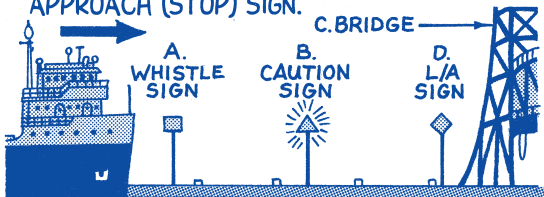
EACH CANAL BRIDGE IS EQUIPPED WITH **NAVIGATION SIGNAL LIGHTS** WHILE ALONG THE CANAL BANK ARE SIGNS INFORMING THE SHIP'S MASTER OF THE **READINESS OF THE BRIDGE**.



BRIDGE RAISING PROCEDURE

AS THE SHIP'S STEM APPROACHES THE WHISTLE SIGN (A) THE CAUTION SIGN (B) SHOULD START FLASHING INDICATING THE BRIDGEMASTER HAS SEEN THE SHIP AND HAS STARTED RAISING THE BRIDGE (C). AS THE BRIDGE RISES, ITS RED NAVIGATION LIGHTS START TO FLASH. WHEN THE SHIP STARTS TO PASS THE CAUTION SIGN, THE BRIDGE SHOULD BE FULLY UP AND ITS GREEN NAVIGATION LIGHTS ON.

IF THE GREEN LIGHT IS NOT DISPLAYED, THE SHIP'S MASTER MUST NOT PASS THE LIMIT OF APPROACH (STOP) SIGN.



SEAWAY COMMUNICATIONS

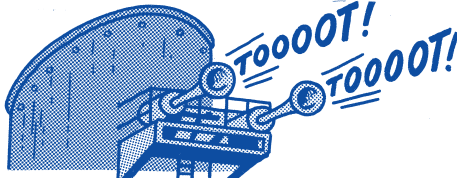
IT IS ESSENTIAL FOR SHIPS TRAVELLING THROUGH THE SEAWAY SYSTEM TO MAINTAIN **RADIO COMMUNICATIONS** WITH THE VARIOUS SEAWAY STATIONS AT ALL TIMES. THIS CONSTANT COMMUNICATION ENABLES THE **SEAWAY PERSONNEL** TO MAINTAIN A SAFE AND EFFICIENT TRAFFIC CONTROL SYSTEM.

RADIO

ASSIGNED FREQUENCIES:





- 📻 **156.8 MHZ (CHANNEL 16) DISTRESS AND CALLING**
- 📻 **156.7 MHZ (CHANNEL 14) WORKING (CANADIAN EXCLUDING LAKES ONTARIO AND ERIE).**
- 📻 **156.65 MHZ (CHANNEL 13) WORKING U.S.A. STATIONS.**
- 📻 **156.55 MHZ (CHANNEL 11) WORKING CANADIAN SECTOR 3 LAKES ONTARIO AND ERIE.**

WHISTLE BLASTS



- 1 SHORT - CAST OFF ALL LINES.**
- 2 SHORT - SHIP READY TO SECURE.**
- 1 LONG & 2 SHORT - MASTER SALLUTE**
- 5 SHORT QUICK BLASTS - DANGER.**
- 1 LONG EVERY 2 MINUTES - VESSEL
MOVING IN FOG.**

FLAG SIGNALS

1.  — DANGER/CARRYING
EXPLOSIVES.
— COLOR: **RED**
2.  — MAN OVERBOARD
— COLORS: **RED/YELLOW**
3.  — VESSEL READY FOR
DEPARTURE
— COLORS: **BLUE/WHITE**
4.  — SHIP UNDERGOING SPEED
TRIALS
— COLORS: **WHITE/BLUE**

SHIP SPOTTING



SOMETIMES A SHIP IS TOO FAR AWAY FOR YOU TO SEE IT CLEARLY AND ALL YOU CAN SEE IS ITS **SILHOUETTE**.

HOWEVER, IF YOU KNOW WHAT TO LOOK FOR, A SILHOUETTE CAN BE **VERY REVEALING**.

LAKER



- ★ **SIZE** : 600 - 740 FT (183 - 225.5 M)
- ★ **SPOTTING CHARACTERISTICS**
 - STRAIGHT BOW, FLAT DECK
 - WHEELHOUSE FORWARD.

SELF-UNLOADING LAKER



- ★ **SIZE** : 600 - 740 FT (183 - 225.5 M)
- ★ **SPOTTING CHARACTERISTICS**
 - STRAIGHT BOW, LARGE UNLOADING BOOM ON DECK.

DEEP SEA FREIGHTER



- ★ **SIZE AND CARGO VARY.**
- ★ **SPOTTING CHARACTERISTICS**
 - RAKED BOW, NUMEROUS CARGO DERRICKS.

OCEAN BULK FREIGHTER



- ★ **SIZE : 740 FT (225.5 M)**
- ★ **SPOTTING CHARACTERISTICS**
 - BULBOUS BOW, FLAT DECK,
 - WHEELHOUSE AFT.

TANKER



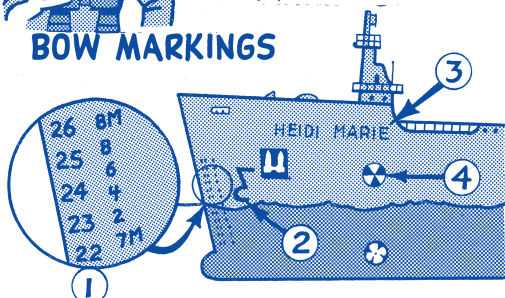
- ★ **SIZE : 400 - 500 FT (122 - 153 M)**
- ★ **SPOTTING CHARACTERISTICS**
 - RAKED BOW, WALKWAY ALONG ROUNDED DECK.

SHIP MARKINGS



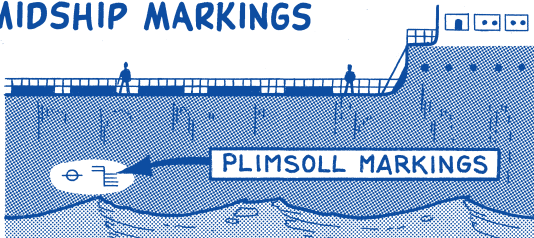
"IF YOU GET A CHANCE TO SEE A SEAWAY VESSEL UP CLOSE YOU WILL NOTICE EACH SHIP HAS A VARIETY OF MARKINGS."

BOW MARKINGS



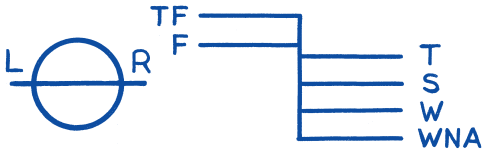
1. **DRAUGHT MARKS** - INDICATES SHIP'S DEPTH IN WATER. MEASURED IN FEET OR METRES.
2. **BULBOUS BOW** - INDICATES SHIP HAS A LARGE TEARDROP SHAPE EXTENDING FORWARD OF THE STEM.
3. **SHIP'S NAME** - LAW REQUIRES A SHIP'S NAME BE DISPLAYED AT THE BOW AND AT THE STERN.
4. **BOW THRUSTER** - INDICATES A REVERSIBLE PROPELLER NEAR THE BOW THAT FORCES WATER TO ONE SIDE OR THE OTHER.

MIDSHIP MARKINGS



NAMED AFTER SAMUEL PLIMSOLL THIS MARK, DRAWN ON BOTH PORT AND STARBOARD SIDES INDICATES THE MAXIMUM DEPTH A VESSEL CAN BE SAFELY LOADED IN ALL WEATHER CONDITIONS.

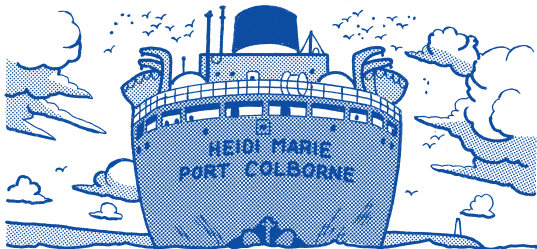
EXAMPLE



LEGEND

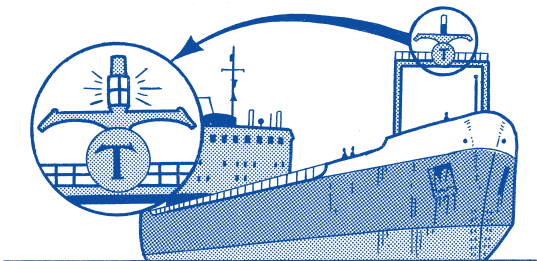
- LR - LLOYD'S REGISTRY
- TF - TROPICAL FRESH WATER
- F - FRESH WATER
- T - TROPICAL
- S - SUMMER
- W - WINTER
- WNA - WINTER NORTH ATLANTIC

STERN MARKINGS



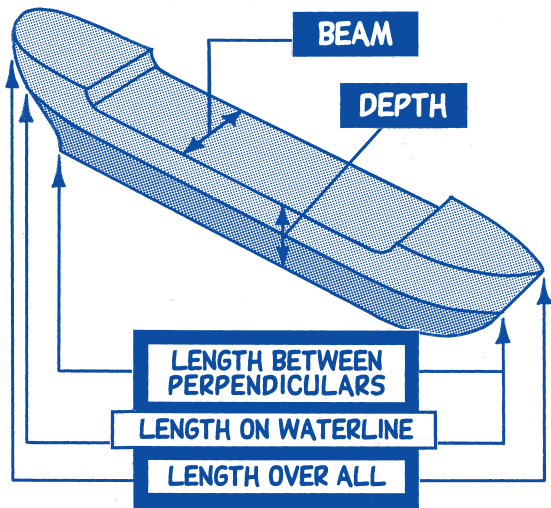
THE SHIP'S NAME MUST BE PAINTED ON THE STERN AND BELOW THE NAME, IS THE SHIP'S PORT OF REGISTRY.

MASTHEAD MARKINGS & LIGHT

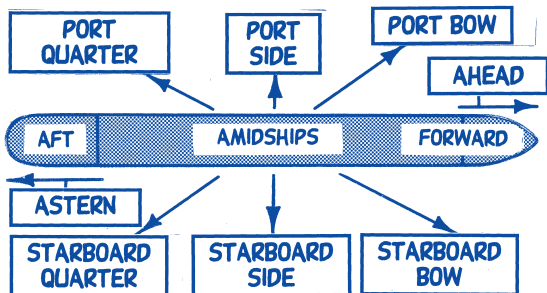


OFTEN YOU WILL SEE A GREAT LAKES VESSEL WITH A LARGE LETTER AND A LIGHT AT THE TOP OF THE FOREMAST. THIS IS A WHISTLE LIGHT WHICH COMES ON EVERY TIME THE WHISTLE BLOWS. IT SERVES AS AN EXTRA SAFETY DEVICE AND THE CAPITAL LETTER REPRESENTS THE SHIP OWNER'S INITIAL.

SHIP MEASUREMENTS



SHIP'S BEARINGS

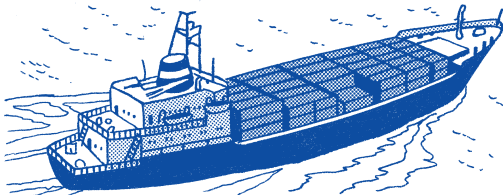
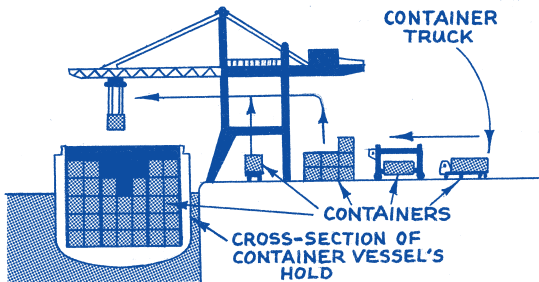


CONTAINERIZATION



"THE MODERN CARGO CONTAINER IS RESPONSIBLE FOR A TOTAL REVOLUTION IN THE WORLD'S CARGO HANDLING METHODS.

THE OLD **BREAK BULK** HANDLING METHOD WITH CARGO NETS AND SLINGS WAS SLOW AND INEFFICIENT- BUT CARGO SHIPPED IN **STANDARDIZED CONTAINERS** MEANS QUICKER TURNAROUND TIMES AND REDUCED DAMAGE AND PILFERAGE."



TODAY MOST CONTAINER SHIPS ARE TOO LARGE TO USE THE SEAWAY, BUT NEW SEAWAY-SIZE CONTAINER SHIPS ARE BEING BUILT IN EUROPE.

**DISTANCES
ARE
IN NAUTICAL
MILES**

DULLUTH	1594	1307	1239	1168	891	843	724	679	631	702	169
THUNDER BAY	1488	1201	1133	1062	785	737	618	572	525	596	CHICAGO
CHICAGO	1513	1226	1158	1087	810	762	643	598	550	WINDSOR	THUNDER BAY
WINDSOR	963	676	608	537	260	212	94	47		TOLEDO	
TOLEDO	957	670	602	531	254	206	83			CLEVELAND	
CLEVELAND	890	603	535	464	187	139				PORT COLBORNE	
PORT COLBORNE	751	464	396	325	48					TORONTO	
TORONTO	729	442	374	303						MONTREAL	
MONTREAL	426	139	71							TROIS-RIVIERES	
TROIS-RIVIERES	355	68								QUEBEC	
QUEBEC	289									SEPT-ILES	

**DISTANCES
BETWEEN POINTS
ON THE GREAT LAKES**

PLEASURE CRAFT

DURING THE SHIPPING SEASON, MORE THAN 2,000 PLEASURE CRAFT OF ALL KINDS PASS THROUGH THE SEAWAY. PLEASURE CRAFT ARE WELCOME, BUT THEY MUST BE AT LEAST 6 M (20 FT) IN LENGTH AND WEIGH OVER 900 KG (ONE TON). THERE ARE SPECIAL DOCKS AND TIE-UP AREAS ALONG THE SEAWAY FOR PLEASURE BOATERS, EQUIPPED WITH TELEPHONES, AND SEAWAY STAFF WILL HELP WITH TIE-UP IN THE LOCK CHAMBERS.

BECAUSE THE SEAWAY WAS MADE FOR LARGE CARGO SHIPS, SMALL PLEASURE CRAFT WILL OFTEN BE ASKED TO WAIT WHILE THE COMMERCIAL VESSELS PASS THROUGH THE LOCKS.



THE MAGIC OF TALL SHIPS



ONCE EVERY TWO OR THREE YEARS, **TALL SHIPS** FROM ALL OVER THE WORLD VISIT THE SEAWAY AND GREAT LAKES. SOME ARE REPLICAS OF **HISTORICAL SAILING SHIPS**, AND SOME ARE **TRAINING SHIPS** THAT OFFER TEENS AGED 13 AND UP AN EXCITING ADVENTURE AS THEY LEARN TO SAIL. THEY TAKE PART IN A SERIES OF RACES, RALLIES, CRUISES, AND FESTIVALS AT VARIOUS PORTS ALONG THE SEAWAY AND GREAT LAKES. YOU CAN **SEE THE SHIPS UP CLOSE** WHEN THEY ARE DOCKED, AND MANY OFFER ON BOARD TOURS.

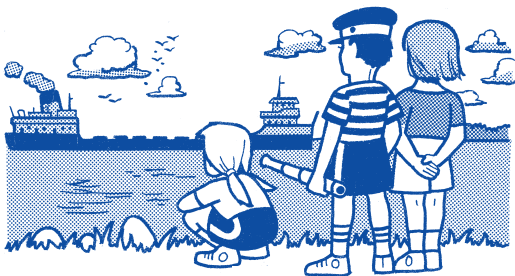
SEAWAY CRUISES

PASSENGER CRUISE LINERS FROM EUROPE ARE COMING THROUGH THE SEAWAY AND EXPLORING THE GREAT LAKES IN GREATER NUMBERS EACH YEAR. MANY **SMALLER LOCAL SHIPS** OFFER CRUISES RANGING FROM AN HOUR OR TWO ON A **PADDLE BOAT** TO SEVERAL DAYS IN LUXURY STATEROOMS FOR TOURISTS WHO WANT TO SEE THE **THOUSAND ISLANDS**, OR ENJOY A FEW LEISURELY DAYS ON THE WATER AS THEY WATCH THE SPECTACULAR SCENERY DRIFT BY.

VISITING THE SEAWAY

THE ST. LAWRENCE SEAWAY IS ONE OF THE 20TH CENTURY'S TOP 10 GREATEST PUBLIC WORKS PROJECTS. IT IS A FINE EXAMPLE OF SUCCESSFUL CO-OPERATION BETWEEN CANADA AND THE UNITED STATES, AND IS JOINTLY MANAGED BY THE CANADIAN ST. LAWRENCE SEAWAY MANAGEMENT CORPORATION AND THE AMERICAN SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION.

IF YOU GET A CHANCE, COME AND VISIT THE SEAWAY. BOTH COUNTRIES HAVE VIEWING AREAS AT ALL THEIR LOCKS. THERE ARE PICNIC GROUNDS AT IROQUOIS, AND SPECIAL HIGH VIEWING PLATFORMS NEXT TO THE EISENHOWER LOCK AND AT LOCK 3 IN THE WELLAND CANAL. AT LOCK 3 ON THE WELLAND CANAL, THERE IS AN INTERESTING MUSEUM TOO.



HAVE FUN & STAY SAFE

WHEN YOU'RE ON OR NEAR THE SEAWAY, KEEP IN MIND THAT THIS IS REALLY A **HIGHWAY FOR LARGE SHIPS**. PAY ATTENTION TO THE WARNING SIGNS. ON LAND, PLEASE STAY WHERE PUBLIC ACCESS IS ALLOWED, AND REMEMBER THAT YOU CAN'T SWIM OR GO FISHING IN SEAWAY WATERS.

LARGE SHIPS PASS THROUGH EVERY DAY, AND **HUGE AMOUNTS OF WATER** ARE SUCKED IN AND PUSHED OUT WHEN LOCKS OPEN AND CLOSE. THERE ARE MANY **UNSEEN DANGERS** IN AND AROUND SEAWAY CHANNELS. WATER LEVELS AND CONDITIONS CAN CHANGE WITHOUT WARNING EVERYWHERE, CREATING SUDDEN SWIFT CURRENTS, UNDERTOWS AND STRONG TURBULENCE.

IF YOU, YOUR FAMILY OR FRIENDS WOULD LIKE TO SEE OUR **SPECIAL VIDEO, "DANGEROUS WATERS OF THE WELAND CANAL,"** CALL YOUR LOCAL SCHOOL BOARD, THE ST. CATHARINES MUSEUM WELAND CANAL CENTRE OR THE ST. LAWRENCE SEAWAY MANAGEMENT CORPORATION.

**THE CANADIAN SEAWAY LOGO IS A
STYLIZED DRAWING OF A SHIP
IN A LOCK CHAMBER**



For more information, write to:

The St. Lawrence Seaway Management Corp.

202 Pitt Street

Cornwall, Ontario

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Phone (613) 932-5170

**Or come visit our Web site at
*www.greatlakes-seaway.com***

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