Natural Resources Canada | Ressources naturelles Canada

GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA

NATGAM

This Radioactivity Map of Nova Scotia is one of eight 1:500 000 regional compilation maps that include three measured variables (potassium, equivalent uranium and equivalent thorium) and five derived products (the natural air absorbed dose rate derived from a linear combination of K, eU and eTh, and eU/eTh, eU/K, eTh/K and ternary radiometer map, (Broome et al., 1987)). These maps were produced using digital archives of the National Gamma Ray Spectrometer Program (NGSP) of the Geological Survey of Canada (GSC). The NGSP data were flown by Geological Survey of Canada (GSC) and contracted aircraft, using federal and joint federal-provincial government funding. All data were originally published as 1:50 000 line contour or colour interval maps and stacked profiles, as GSC Open Files or Geophysical Series Maps. These new regional compilations supersede all previous versions of the Radioactivity Maps of Nova Scotia (Ford et al., 1989; Geological Survey of Canada, 1991).

All data were collected using 50 litres of sodium iodide detectors, at a nominal terrain clearance of 120 metres. The province-wide image is compiled from data collected along flight lines spaced at 1000 metre intervals. Areas where a 500 metre line spacing was collected to provide increased spatial resolution of radioactive element signatures are indicated on the province-wide map. Data compiled from the East Kemptville detailed survey are presented at 1:125 000 scale in the inset.

Potassium is measured directly from the 1460 keV gamma ray photons emitted by ^{40}K. Uranium and thorium are determined indirectly from gamma ray photons emitted by daughter products ^{214}Bi and ^{208}Tl, respectively. As equilibrium between daughter and parent isotopes is assumed, gamma ray spectrometric measurements of uranium and thorium are referred to as equivalent uranium (eU) and equivalent thorium (eTh).

Standard energy windows were used to record the gamma ray counts. These are 1370–1570 keV for potassium, 1660–1860 keV for uranium, 2410–2810 keV for thorium and 400–2810 keV for total count radioactivity. Several corrections are applied to the data to remove extraneous background counts, including: system dead time; background activity from cosmic radiation, the aircraft and atmospheric radon decay products; spectral scattering in the ground, air and detectors; deviations of altitude from the planned terrain clearance; temperature and pressure variations.

These maps depict radioactivity emanating from the upper 30 cm of the earth's surface. The data represent average surface concentrations, influenced by varying amounts of outcrop, overburden, vegetation, soil moisture and surface water. As a result, measured concentrations are usually lower than underlying bedrock concentrations. The effects of this surficial contamination are greatest in areas of extensive overburden cover. Nevertheless, the potassium, uranium and thorium concentrations supports mapping of bedrock and surficial geology and mineral exploration, at regional and local scales. More detailed interpretation is possible through the use of the original line data, available from the Geological Survey of Canada.

The radioactive element patterns depicted in this compilation correlate with known geological features in several areas. For example, high eU/eTh ratio values are associated with granitic stocks or parts of larger plutons that intrude metasedimentary rocks of the Meguma Zone of southern Nova Scotia. Ground studies (Ford and O'Reilly, 1985; Ford et al., 1989; Ford et al., 1991; O'Reilly et al., 1988; Ford et al., 1993) have shown that peraluminous two-mica leucomonzogranite, leucogranite and some types of porphyry from leas evolved granodiorite and biotite monzogranite. Further modification of radioactive element patterns, by late- or post-magmatic metasomatism and hydrothermal alteration (albitization) offers valuable guides to exploration for granophile elements.

In another example, high eU/eTh ratios over the East Kemptville tin deposit are associated with elevated concentrations of eU in the East Kemptville leucogranite, which hosts the deposit (Ford and O'Reilly, 1985). Sharp increases in eU and eTh concentrations along the northwest contact of the David Lake Pluton delineate title derived from the Meguma Group bedrock. The diminishing eU/eTh ratio southeast from the contact reflects the peraluminous nature of the pluton, however, diffuse radioactive element patterns result from glacial dispersion of the granitic till southeastward over the Meguma Group bedrock. The diminishing radioelement values southeast from the contact relate to diminishing down-ice concentrations of granitic-derived clasts and matrix material.

Six additional detailed airborne gamma ray spectrometry surveys were flown in Nova Scotia in 1986. The location of these surveys and the East Kemptville detailed survey are shown on the province-wide compilation: A) Granite Lake, B) Gibraltar Hill, C) Liscomb Pluton, D) Big Indian Lake, E) Bird Harbour, F) Tantallon.

The base for this Radioactivity Map of Nova Scotia is at a scale of 1:500 000 in the Universal Transverse Mercator (UTM) projection derived from the Nova Scotia Topographic Database (NSTDB) supplied by Service Nova Scotia & Municipal Relations, with modifications by Earth Sciences Sector Information Division (ESS Info). This base provides geographic accuracy comparable with bases used during geophysical data acquisition. The base for the East Kemptville inset was provided by Geomatics Canada. It is also in a UTM projection with similar geographic accuracy but improved topographic detail.

The Radiation Geophysics Section acknowledges Drs. A.G. Darnley, K.A. Richardson, Q. Bristow and R.L. Grasty for their contributions to program development and technical leadership.

REFERENCES

Broome, J., Carson, J.M., Grant, J.A., and Ford, K.L.
1987: A modified ternary radioelement mapping technique and its application to the South Coast of Newfoundland, Geological Survey of Canada, Paper 87-1A.

Ford, K.L.
1993: Radioelement mapping of parts of the Musquodoboit Batholith and Liscomb complex, Meguma Zone of Nova Scotia: *in* Mineral Deposit Studies in Nova Scotia Vol 2 (ed. A.L. Sangster), Geological Survey of Canada, Paper 91-9a, p. 71–111.

Ford, K.L., Carson, J.M., Grant, J.A., and Holman, P.B.
1989: Radioactivity Maps of Nova Scotia; Geological Survey of Canada, Map 35006G, Scale 1:500 000.

Ford, K.L., MacDonald, M.A., Finck, P.W., Boner, F.J., Ham, L.J., Horne, R.J., Corey, M.C., and Greene, R.M.
1989: Airborne gamma ray spectrometry, and bedrock and surficial geology of the Davis Lake Pluton; *in* Mines and Minerals Report of Activities 1989, Part A, Report 89-3, Nova Scotia Dept. of Mines and Energy.

Ford, K.L. and O'Reilly, G.A.
1985: Airborne gamma-ray spectrometric surveys as an indicator of granophile element specialization and associated mineral deposits in the granitic rocks of the Meguma Zone of Nova Scotia, Canada, p. 113–133; *in* High Heat Production (HHP) Granites, Hydrothermal Circulation and Ore Genesis, The Institution of Mining and Metallurgy, London, England, 560 p.

Geological Survey of Canada
1991: Radioactivity Maps of Nova Scotia, Geological Survey of Canada Open File 2375, Scale 1:2 000 000.

O'Reilly, G.A., Corey, M.C., and Ford, K.L.
1988: Gamma-ray spectrometry in bedrock mapping and mineral exploration: Case studies from granitic rocks within the Meguma Zone, Nova Scotia; *in* Maritime Sediments and Atlantic Geology 24, p. 47–65.

This product includes map data derived from the Nova Scotia Topographic Database (NSTDB) and is Crown copyright © 2003, Province of Nova Scotia. Used by permission of Service Nova Scotia & Municipal Relations License #A1281. All rights reserved.

Digital base for inset at the scale of 1:125 000 from data compiled by Geomatics Canada, modified by ESS

Geophysical compilation by J.M. Carson, P.B. Holman, K.L. Ford, J.A. Grant, and R.B.K. Shives

Digital cartography by J.A.Y. Pratt, Earth Sciences Sector Information Division (ESS Info)

This map was produced from processes in conformance with the Cartographic Services Section Quality Management System, Ottawa, registered to the Quality System ISO 9001: 2000 standards

Any revisions known to the user would be welcomed by the Geological Survey of Canada

INDEX MAP

GULF OF ST LAWRENCE

NORTHUMBERLAND STRAIT

BAY OF FUNDY

ATLANTIC OCEAN

Minas Channel

Minas Basin

Cobequid Bay

George Bay

Bras d'Or Lake

Chedabucto Bay

Canso

Digby

St. Mary Bay

YARMOUTH

SHELBURNE

LUNENBURG

LIVERPOOL

Caledonia

BRIDGEWATER

SPRINGHILL

AMHERST

PICTOU

STELLARTON

NEW GLASGOW

ANTIGONISH

SYDNEY MINES

NEW WATERFORD

NORTH SYDNEY

GLACE BAY

SYDNEY

WESTVILLE

TRURO

CHESTER

SHERBROOKE

MONCTON

SACKVILLE

A

B

C

D

E

F

East Kemptville

Kemptville

Tusket

Yarmouth

Forest

Lake

Pubnico

Pubnico Point

Pubnico Harbour

Cape St. Mary

Cape Fourchu

Overton

Port La Tour

Abuptic Point

Abuptic

Mountain

Wedgeport

Hebert

Quinan

Plymouth

Carleton

Argyle

Tusket Wedge

Tusket Islands

Tusket River

Eel Brook

Eel Brook Lake

Bunker Cove

Bunker Cove Point

Bunker Cove Harbour

Bunker Cove Lake

Bunker Cove Brook

Bunker Cove Mountain

Bunker Cove Road

Bunker Cove Trail

Bunker Cove Trailhead

Bunker Cove Trailhead Road

Bunker Cove Trailhead Parking

Bunker Cove Trailhead Picnic Area

Bunker Cove Trailhead Campground

Bunker Cove Trailhead Boat Launch

Bunker Cove Trailhead Boat Launch Road

Bunker Cove Trailhead Boat Launch Parking

Bunker Cove Trailhead Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Road

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Boat Launch Campground

Bunker Cove Trailhead Boat Launch

Bunker Cove Trailhead Boat Launch Road

Bunker Cove Trailhead Boat Launch Parking

Bunker Cove Trailhead Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Campground

Bunker Cove Trailhead Boat Launch

Bunker Cove Trailhead Boat Launch Road

Bunker Cove Trailhead Boat Launch Parking

Bunker Cove Trailhead Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Campground

Bunker Cove Trailhead Boat Launch

Bunker Cove Trailhead Boat Launch Road

Bunker Cove Trailhead Boat Launch Parking

Bunker Cove Trailhead Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Campground

Bunker Cove Trailhead Boat Launch

Bunker Cove Trailhead Boat Launch Road

Bunker Cove Trailhead Boat Launch Parking

Bunker Cove Trailhead Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Campground

Bunker Cove Trailhead Boat Launch

Bunker Cove Trailhead Boat Launch Road

Bunker Cove Trailhead Boat Launch Parking

Bunker Cove Trailhead Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Campground

Bunker Cove Trailhead Boat Launch

Bunker Cove Trailhead Boat Launch Road

Bunker Cove Trailhead Boat Launch Parking

Bunker Cove Trailhead Boat Launch Picnic Area

Bunker Cove Trailhead Boat Launch Campground

Bunker Cove Trailhead Boat Launch

Bunker Cove Trailhead Boat Launch Road

Bunker Cove Trailhead Boat Launch Parking

Bunker Cove Trailhead Boat Launch Boat Launch Boat Launch Boat Launch Boat