Young Bay Experimental Forest Metadata Report (YEF)

Juneau, Alaska

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Research Area Information

Young Bay Experimental Forest

Research Area Information

Harvest URL - Option 1

ftp://ftp2.fs.fed.us/incoming/chugtong_r10/young_bay/youngbay_exchange file.csv

Harvest URL -Option 2

ftp://ftp2.fs.fed.us/incoming/chugtong_r10/young_bay/youngbay_exchange file.csv

Site URL

ftp://ftp2.fs.fed.us/incoming/chugtong_r10/young_bay/youngbay_exchange file.csv

Site north bounding coordinate (decimal degree) long:134.6571 lat:58.1624

Site west bounding coordinate (decimal degree) long:134.6906 lat:58.1592

Site south bounding coordinate (decimal degree) long:134.6519 lat:58.1000

Site east bounding coordinate (decimal degree) long:134.5892 lat:58.1083

Site Climate URL

Juneau International airport: http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwDI~StnSrch~StnID~20021885#DIGITAL

Site Watershed URL

ftp://ftp2.fs.fed.us/incoming/chugtong_r10/youngbay/publications

Site Map URL

ftp://ftp2.fs.fed.us/incoming/chugtong_r10/youngbay/watershed_topo

Experimental Design

The Young Bay Experimental Forest was established in 1959 to study small stream hydrology, bedload characteristics, and controlled experiments in fish habitat in artificial stream channels. Originally scheduled for timber harvest, Young Bay, located on Admiralty Island, is now surrounded by Admiralty Island National Monument. Young Bay Experimental Forest is part of the temperate rainforest and is characterized by a cool moist climate. The mean temperature is 6.7degC with an average rainfall of 150 cm annually. The dominant conifers are mature Sitka spruce (Picea sitchensis) and western hemlock (Tsuga heterophylla). Two streams, called East and West Creeks by research personnel, originate in cirques, roughly parallel each other, and empty into Young Bay about 365 m apart. Both streams support pink salmon (Oncorhynchus gorbuscha), chum salmon (Oncorhynchus keta), and Dolly Varden char (Salvelinus malma). Stream gaging stations were installed in both streams in 1958 (intermittent until 1963). In 1966 an artificial stream channel was planned for juvenile fish habitat research.

Publications

Young Bay Experimental Forest is currently not active. No publications since 1974.

Meteorlogical Stations

Juneau Airport #504100

Meteorological Station

Latitude (decimal degrees) 58.3536
Longitude (decimal degrees) 134.5961
Elevation (meters; a.m.s.l.) 6.1
Begin Date..... 19490501
End Date..... Present
Topography

Shoreline and tideflats

Area Description

Juneau International Airport

History

Name of station changed with airport name change, see web site: 504100

Air Temperature

Atmospheric Pressure

Begin Date..... 19580801
End Date..... 19631006
Data Logger Sampling Interval..... 1 day
Summary Interval .....Daily
Instrumentation Description

See Juneau International Airport (504100)

Snow Depth

Watershed

East Watershed

Watershed Spatial Characteristics

North bounding coordinate (decimal degrees) long:134.6571 lat:58.1624
West bounding coordinate (decimal degrees) long:134.6906 lat:58.1592
South bounding coordinate (decimal degrees) long:134.6519 lat:58.1000
East bounding coordinate (decimal degrees) long:134.5892 lat:58.1083
Area (hectares) 2806
Minimum watershed elevation (meters; a.m.s.l) 0.0
Maximum watershed elevation (meters; a.m.s.l) 1167

Watershed Ecological Characteristics

Mean annual precipitation (millimeters) 1500
Channel length (meters) .....16,500 East Creek 31,772 in experimental forest.
Channel length description

Perennial. Length derived from GIS table.

Drainage density (km/km2) 1.13

Watershed Descriptions

Pre-treatment vegetation

80% western hemlock, 20% Sitka spruce

Soil description

Glacial clay

Geology description

A late-Pleistocene glaciated landscape with 1.5 cm rebound for the past ~5,000 years.

Treatment History

The watershed is mature old-growth forest. No new studies were started since 1988.

Succession description

A portion of Young Bay forest is an advanced even-age stand about 120 years old. A severe storm in the 1880's caused a large windthrow. Almost all of the regrowth was western hemlock.

Gauging Stations

East Gauging Station

Hydrologic Gauging Station

Latitude (decimal degrees) 58.1545N

Longitude (decimal degrees) 134.6676W

Elevation (meters; a.m.s.l.) 5

Begin Date..... 19580801

End Date..... 19631006

Watershed Area (hectares) 2806

Associated meteorological station

Juneau International Airport(504100): http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwDI~StnSrch~StnID~20021885#DIGITAL

Photo URL

ftp://ftp2.fs.fed.us/incoming/chugtong_r10/youngbay/

Weir Description

Not Available

Weir Calibration and Modification History

1958: y=.2093LN(x) + .688 OR dsch=EXP((gageht-.688)/.2093) 1959: y=.3534LN(x) + .1085 OR dsch=EXP((gageht-.1085)/.3534) 1960: y=.2585LN(x) +.3932 OR dsch=EXP((gageht-.3932)/.2585) 1961: y=.2585LN(x) +.3932 OR dsch=EXP((gageht-.3932)/.2585) 1962: y=.2585LN(x) +.3932 OR dsch=EXP((gageht-.3932)/.2585) 1963: y=.2585LN(x) +.3932 OR dsch=EXP((gageht-.3932)/.2585)