#

# **March 16 - 18, 2020**

# Updating **YFT** catch estimates, 2000 - 2019, for stratification selected for YFT External Review in December 2019; not re-running 1975-1999 (because expect no changes in these old data). Running 2019 separately from 2000 - 2018 because data for 2019 are from "frozen", wheras data for 2000-2018 are latest (and bestest; i.e., from non-frozen data base).

# Note: all data extracted on March 15, 2020.

# Also to note: since set-up for this stratification was done previously (i.e., for External Review), am not running that code here; to see set-up, look at previous notes and commands file.

# Working in an empty R workspace

attach("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData",pos=2)

get.VB.output.new.V2.f("Unloading2000-2018.txt","CAE-LatLon2000-2018.txt","LengthMM2000-2018.txt","LengthFreq2000-2018.txt",2000,2018)

# first renamed most input files to match names format of 2000-2018 files; did not renames CAE file

get.VB.output.new.V2.f("Unloading2019-2019.txt","CAE-LatLon-Annual2019.txt","LengthMM2019-2019.txt","LengthFreq2019-2019.txt",2019,2019)

well.estimates.2000<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2000,],lfmm.20002018)

well.estimates.2001<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2001,],lfmm.20002018)

well.estimates.2002<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2002,],lfmm.20002018)

well.estimates.2003<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2003,],lfmm.20002018)

well.estimates.2004<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2004,],lfmm.20002018)

well.estimates.2005<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2005,],lfmm.20002018)

well.estimates.2006<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2006,],lfmm.20002018)

well.estimates.2007<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2007,],lfmm.20002018)

well.estimates.2008<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2008,],lfmm.20002018)

well.estimates.2009<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2009,],lfmm.20002018)

well.estimates.2010<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2010,],lfmm.20002018)

well.estimates.2011<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2011,],lfmm.20002018)

well.estimates.2012<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2012,],lfmm.20002018)

well.estimates.2013<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2013,],lfmm.20002018)

well.estimates.2014<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2014,],lfmm.20002018)

well.estimates.2015<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2015,],lfmm.20002018)

well.estimates.2016<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2016,],lfmm.20002018)

well.estimates.2017<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2017,],lfmm.20002018)

well.estimates.2018<-well.estimates.f(lfgrpd.20002018[lfgrpd.20002018$year.firstset==2018,],lfmm.20002018)

well.estimates.2019<-well.estimates.f(lfgrpd.20192019[lfgrpd.20192019$year.firstset==2019,],lfmm.20192019)

save.image("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/base files\_2000-2019\_for SAC 2020.RData")

#

# Running YFT DEL

# working in a new empty work space:

# MAKE SURE THAT CREATE.STRAT.FLG.F AND CREATE.FISHERY.FLG.F HAVE CORRECT STRATA ACTIVE

load("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData")

fix(create.strat.flg.f)

fix(create.fishery.flg.f)

save.image("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData")

# Then in a NEW, empty workspace:

attach("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData",pos=2)

attach("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/base files\_2000-2019\_for SAC 2020.RData",pos=3)

cae.stratflg.20002018<-create.strat.flg.f(cae.20002018$latc5,cae.20002018$lonc5,is.lwrght=F,cae.20002018$month,cae.20002018$setype,cae.20002018$class)

lfgrpd.stratflg.20002018<-create.strat.flg.f(lfgrpd.20002018$lat.5deg,lfgrpd.20002018$lon.5deg,is.lwrght=T,floor(lfgrpd.20002018$moda/100),lfgrpd.20002018$setype,lfgrpd.20002018$class)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2000,2,well.estimates.2000,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2000<-fishery.estimates.f(stratum.estimates.2000.withsamps,stratum.estimates.2000.NOsamps,2000)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2001,2,well.estimates.2001,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2001<-fishery.estimates.f(stratum.estimates.2001.withsamps,stratum.estimates.2001.NOsamps,2001)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2002,2,well.estimates.2002,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2002<-fishery.estimates.f(stratum.estimates.2002.withsamps,stratum.estimates.2002.NOsamps,2002)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2003,2,well.estimates.2003,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2003<-fishery.estimates.f(stratum.estimates.2003.withsamps,stratum.estimates.2003.NOsamps,2003)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2004,2,well.estimates.2004,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2004<-fishery.estimates.f(stratum.estimates.2004.withsamps,stratum.estimates.2004.NOsamps,2004)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2005,2,well.estimates.2005,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2005<-fishery.estimates.f(stratum.estimates.2005.withsamps,stratum.estimates.2005.NOsamps,2005)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2006,2,well.estimates.2006,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2006<-fishery.estimates.f(stratum.estimates.2006.withsamps,stratum.estimates.2006.NOsamps,2006)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2007,2,well.estimates.2007,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2007<-fishery.estimates.f(stratum.estimates.2007.withsamps,stratum.estimates.2007.NOsamps,2007)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2008,2,well.estimates.2008,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2008<-fishery.estimates.f(stratum.estimates.2008.withsamps,stratum.estimates.2008.NOsamps,2008)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2009,2,well.estimates.2009,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2009<-fishery.estimates.f(stratum.estimates.2009.withsamps,stratum.estimates.2009.NOsamps,2009)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2010,2,well.estimates.2010,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2010<-fishery.estimates.f(stratum.estimates.2010.withsamps,stratum.estimates.2010.NOsamps,2010)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2011,2,well.estimates.2011,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2011<-fishery.estimates.f(stratum.estimates.2011.withsamps,stratum.estimates.2011.NOsamps,2011)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2012,2,well.estimates.2012,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2012<-fishery.estimates.f(stratum.estimates.2012.withsamps,stratum.estimates.2012.NOsamps,2012)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2013,2,well.estimates.2013,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2013<-fishery.estimates.f(stratum.estimates.2013.withsamps,stratum.estimates.2013.NOsamps,2013)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2014,2,well.estimates.2014,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2014<-fishery.estimates.f(stratum.estimates.2014.withsamps,stratum.estimates.2014.NOsamps,2014)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2015,2,well.estimates.2015,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2015<-fishery.estimates.f(stratum.estimates.2015.withsamps,stratum.estimates.2015.NOsamps,2015)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2016,2,well.estimates.2016,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2016<-fishery.estimates.f(stratum.estimates.2016.withsamps,stratum.estimates.2016.NOsamps,2016)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2017,2,well.estimates.2017,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2017<-fishery.estimates.f(stratum.estimates.2017.withsamps,stratum.estimates.2017.NOsamps,2017)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2018,2,well.estimates.2018,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2018<-fishery.estimates.f(stratum.estimates.2018.withsamps,stratum.estimates.2018.NOsamps,2018)

cae.stratflg.20192019<-create.strat.flg.f(cae.20192019$latc5,cae.20192019$lonc5,is.lwrght=F,cae.20192019$month,cae.20192019$setype,cae.20192019$class)

lfgrpd.stratflg.20192019<-create.strat.flg.f(lfgrpd.20192019$lat.5deg,lfgrpd.20192019$lon.5deg,is.lwrght=T,floor(lfgrpd.20192019$moda/100),lfgrpd.20192019$setype,lfgrpd.20192019$class)

get.catch.estimates.V2.f(cae.20192019,cae.stratflg.20192019,total.unlds.20192019,lfgrpd.20192019,lfgrpd.stratflg.20192019,lfmm.20192019,2019,2,well.estimates.2019,area.substitution.mat.YFT.DEL.2019ExtRev)

fishery.estimates.2019<-fishery.estimates.f(stratum.estimates.2019.withsamps,stratum.estimates.2019.NOsamps,2019)

save.image("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/full files\_YFT\_DEL\_2000-2019\_for SAC 2020.RData")

save(list=objects(pat="fishery.estimates"),file="/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/YFT\_DEL for SAC 2020\_fishery estimates only\_2000-2019.RData")

#

# Running YFT UNA

# working in a new empty work space:

# MAKE SURE THAT CREATE.STRAT.FLG.F AND CREATE.FISHERY.FLG.F HAVE CORRECT STRATA ACTIVE

load("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData")

fix(create.strat.flg.f)

fix(create.fishery.flg.f)

save.image("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData")

# Then in a NEW, empty workspace:

attach("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData",pos=2)

attach("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/base files\_2000-2019\_for SAC 2020.RData",pos=3)

cae.stratflg.20002018<-create.strat.flg.f(cae.20002018$latc5,cae.20002018$lonc5,is.lwrght=F,cae.20002018$month,cae.20002018$setype,cae.20002018$class)

lfgrpd.stratflg.20002018<-create.strat.flg.f(lfgrpd.20002018$lat.5deg,lfgrpd.20002018$lon.5deg,is.lwrght=T,floor(lfgrpd.20002018$moda/100),lfgrpd.20002018$setype,lfgrpd.20002018$class)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2000,2,well.estimates.2000,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2000<-fishery.estimates.f(stratum.estimates.2000.withsamps,stratum.estimates.2000.NOsamps,2000)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2001,2,well.estimates.2001,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2001<-fishery.estimates.f(stratum.estimates.2001.withsamps,stratum.estimates.2001.NOsamps,2001)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2002,2,well.estimates.2002,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2002<-fishery.estimates.f(stratum.estimates.2002.withsamps,stratum.estimates.2002.NOsamps,2002)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2003,2,well.estimates.2003,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2003<-fishery.estimates.f(stratum.estimates.2003.withsamps,stratum.estimates.2003.NOsamps,2003)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2004,2,well.estimates.2004,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2004<-fishery.estimates.f(stratum.estimates.2004.withsamps,stratum.estimates.2004.NOsamps,2004)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2005,2,well.estimates.2005,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2005<-fishery.estimates.f(stratum.estimates.2005.withsamps,stratum.estimates.2005.NOsamps,2005)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2006,2,well.estimates.2006,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2006<-fishery.estimates.f(stratum.estimates.2006.withsamps,stratum.estimates.2006.NOsamps,2006)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2007,2,well.estimates.2007,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2007<-fishery.estimates.f(stratum.estimates.2007.withsamps,stratum.estimates.2007.NOsamps,2007)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2008,2,well.estimates.2008,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2008<-fishery.estimates.f(stratum.estimates.2008.withsamps,stratum.estimates.2008.NOsamps,2008)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2009,2,well.estimates.2009,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2009<-fishery.estimates.f(stratum.estimates.2009.withsamps,stratum.estimates.2009.NOsamps,2009)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2010,2,well.estimates.2010,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2010<-fishery.estimates.f(stratum.estimates.2010.withsamps,stratum.estimates.2010.NOsamps,2010)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2011,2,well.estimates.2011,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2011<-fishery.estimates.f(stratum.estimates.2011.withsamps,stratum.estimates.2011.NOsamps,2011)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2012,2,well.estimates.2012,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2012<-fishery.estimates.f(stratum.estimates.2012.withsamps,stratum.estimates.2012.NOsamps,2012)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2013,2,well.estimates.2013,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2013<-fishery.estimates.f(stratum.estimates.2013.withsamps,stratum.estimates.2013.NOsamps,2013)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2014,2,well.estimates.2014,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2014<-fishery.estimates.f(stratum.estimates.2014.withsamps,stratum.estimates.2014.NOsamps,2014)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2015,2,well.estimates.2015,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2015<-fishery.estimates.f(stratum.estimates.2015.withsamps,stratum.estimates.2015.NOsamps,2015)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2016,2,well.estimates.2016,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2016<-fishery.estimates.f(stratum.estimates.2016.withsamps,stratum.estimates.2016.NOsamps,2016)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2017,2,well.estimates.2017,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2017<-fishery.estimates.f(stratum.estimates.2017.withsamps,stratum.estimates.2017.NOsamps,2017)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2018,2,well.estimates.2018,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2018<-fishery.estimates.f(stratum.estimates.2018.withsamps,stratum.estimates.2018.NOsamps,2018)

cae.stratflg.20192019<-create.strat.flg.f(cae.20192019$latc5,cae.20192019$lonc5,is.lwrght=F,cae.20192019$month,cae.20192019$setype,cae.20192019$class)

lfgrpd.stratflg.20192019<-create.strat.flg.f(lfgrpd.20192019$lat.5deg,lfgrpd.20192019$lon.5deg,is.lwrght=T,floor(lfgrpd.20192019$moda/100),lfgrpd.20192019$setype,lfgrpd.20192019$class)

get.catch.estimates.V2.f(cae.20192019,cae.stratflg.20192019,total.unlds.20192019,lfgrpd.20192019,lfgrpd.stratflg.20192019,lfmm.20192019,2019,2,well.estimates.2019,area.substitution.mat.YFT.UNA.2019ExtRev)

fishery.estimates.2019<-fishery.estimates.f(stratum.estimates.2019.withsamps,stratum.estimates.2019.NOsamps,2019)

save.image("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/full files\_YFT\_UNA\_2000-2019\_for SAC 2020.RData")

save(list=objects(pat="fishery.estimates"),file="/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/YFT\_UNA for SAC 2020\_fishery estimates only\_2000-2019.RData")

#

# Running YFT OBJ

# working in a new empty work space:

# MAKE SURE THAT CREATE.STRAT.FLG.F AND CREATE.FISHERY.FLG.F HAVE CORRECT STRATA ACTIVE

load("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData")

fix(create.strat.flg.f)

fix(create.fishery.flg.f)

save.image("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData")

# Then in a NEW, empty workspace:

attach("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData",pos=2)

attach("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/base files\_2000-2019\_for SAC 2020.RData",pos=3)

cae.stratflg.20002018<-create.strat.flg.f(cae.20002018$latc5,cae.20002018$lonc5,is.lwrght=F,cae.20002018$month,cae.20002018$setype,cae.20002018$class)

lfgrpd.stratflg.20002018<-create.strat.flg.f(lfgrpd.20002018$lat.5deg,lfgrpd.20002018$lon.5deg,is.lwrght=T,floor(lfgrpd.20002018$moda/100),lfgrpd.20002018$setype,lfgrpd.20002018$class)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2000,2,well.estimates.2000,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2000<-fishery.estimates.f(stratum.estimates.2000.withsamps,stratum.estimates.2000.NOsamps,2000)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2001,2,well.estimates.2001,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2001<-fishery.estimates.f(stratum.estimates.2001.withsamps,stratum.estimates.2001.NOsamps,2001)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2002,2,well.estimates.2002,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2002<-fishery.estimates.f(stratum.estimates.2002.withsamps,stratum.estimates.2002.NOsamps,2002)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2003,2,well.estimates.2003,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2003<-fishery.estimates.f(stratum.estimates.2003.withsamps,stratum.estimates.2003.NOsamps,2003)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2004,2,well.estimates.2004,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2004<-fishery.estimates.f(stratum.estimates.2004.withsamps,stratum.estimates.2004.NOsamps,2004)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2005,2,well.estimates.2005,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2005<-fishery.estimates.f(stratum.estimates.2005.withsamps,stratum.estimates.2005.NOsamps,2005)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2006,2,well.estimates.2006,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2006<-fishery.estimates.f(stratum.estimates.2006.withsamps,stratum.estimates.2006.NOsamps,2006)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2007,2,well.estimates.2007,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2007<-fishery.estimates.f(stratum.estimates.2007.withsamps,stratum.estimates.2007.NOsamps,2007)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2008,2,well.estimates.2008,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2008<-fishery.estimates.f(stratum.estimates.2008.withsamps,stratum.estimates.2008.NOsamps,2008)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2009,2,well.estimates.2009,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2009<-fishery.estimates.f(stratum.estimates.2009.withsamps,stratum.estimates.2009.NOsamps,2009)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2010,2,well.estimates.2010,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2010<-fishery.estimates.f(stratum.estimates.2010.withsamps,stratum.estimates.2010.NOsamps,2010)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2011,2,well.estimates.2011,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2011<-fishery.estimates.f(stratum.estimates.2011.withsamps,stratum.estimates.2011.NOsamps,2011)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2012,2,well.estimates.2012,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2012<-fishery.estimates.f(stratum.estimates.2012.withsamps,stratum.estimates.2012.NOsamps,2012)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2013,2,well.estimates.2013,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2013<-fishery.estimates.f(stratum.estimates.2013.withsamps,stratum.estimates.2013.NOsamps,2013)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2014,2,well.estimates.2014,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2014<-fishery.estimates.f(stratum.estimates.2014.withsamps,stratum.estimates.2014.NOsamps,2014)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2015,2,well.estimates.2015,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2015<-fishery.estimates.f(stratum.estimates.2015.withsamps,stratum.estimates.2015.NOsamps,2015)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2016,2,well.estimates.2016,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2016<-fishery.estimates.f(stratum.estimates.2016.withsamps,stratum.estimates.2016.NOsamps,2016)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2017,2,well.estimates.2017,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2017<-fishery.estimates.f(stratum.estimates.2017.withsamps,stratum.estimates.2017.NOsamps,2017)

get.catch.estimates.V2.f(cae.20002018,cae.stratflg.20002018,total.unlds.20002018,lfgrpd.20002018,lfgrpd.stratflg.20002018,lfmm.20002018,2018,2,well.estimates.2018,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2018<-fishery.estimates.f(stratum.estimates.2018.withsamps,stratum.estimates.2018.NOsamps,2018)

cae.stratflg.20192019<-create.strat.flg.f(cae.20192019$latc5,cae.20192019$lonc5,is.lwrght=F,cae.20192019$month,cae.20192019$setype,cae.20192019$class)

lfgrpd.stratflg.20192019<-create.strat.flg.f(lfgrpd.20192019$lat.5deg,lfgrpd.20192019$lon.5deg,is.lwrght=T,floor(lfgrpd.20192019$moda/100),lfgrpd.20192019$setype,lfgrpd.20192019$class)

get.catch.estimates.V2.f(cae.20192019,cae.stratflg.20192019,total.unlds.20192019,lfgrpd.20192019,lfgrpd.stratflg.20192019,lfmm.20192019,2019,2,well.estimates.2019,area.substitution.mat.YFT.OBJ.2019ExtRev)

fishery.estimates.2019<-fishery.estimates.f(stratum.estimates.2019.withsamps,stratum.estimates.2019.NOsamps,2019)

save.image("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/full files\_YFT\_OBJ\_2000-2019\_for SAC 2020.RData")

save(list=objects(pat="fishery.estimates"),file="/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/YFT\_OBJ for SAC 2020\_fishery estimates only\_2000-2019.RData")

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# --------------------------------------------------------------------------------------

# Format catch and size comps output for YFT only

attach("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/spp comp\_R functions.RData",pos=2)

attach("C:[\\Users\\clennert\\Documents\\R\\poststratification\\CL](file:///\\Users\\clennert\\Documents\\R\\poststratification\\CL) programs\_stock assessment[\\spp](file:///\\spp) comp programs\_from 2000[\\current\_estimates\\full](file:///\\current_estimates\\full) files\_YFT\_DEL\_2000-2019\_for SAC 2020.RData",pos=3)

yft.DPcatch.20002018<-format.catch.output.f(2000,2018,"DP",4,c("A1","A2","A3","A4","A5","A6","A7"))

yft.DPcomps.20002018<-format.sizecomps.output.f(2000,2018,"DP",2)

yft.DPcatch.20192019<-format.catch.output.f(2019,2019,"DP",4,c("A1","A2","A3","A4","A5","A6","A7"))

yft.DPcomps.20192019<-format.sizecomps.output.f(2019,2019,"DP",2)

yft.DPcatch.20002019<-rbind(yft.DPcatch.20002018,yft.DPcatch.20192019)

yft.DPcomps.20002019<-rbind(yft.DPcomps.20002018,yft.DPcomps.20192019)

detach(pos=3)

attach("C:[\\Users\\clennert\\Documents\\R\\poststratification\\CL](file:///\\Users\\clennert\\Documents\\R\\poststratification\\CL) programs\_stock assessment[\\spp](file:///\\spp) comp programs\_from 2000[\\current\_estimates\\full](file:///\\current_estimates\\full) files\_YFT\_UNA\_2000-2019\_for SAC 2020.RData",pos=3)

yft.UNcatch.20002018<-format.catch.output.f(2000,2018,"UN",4,c("A1","A2","A3","A4"))

yft.UNcomps.20002018<-format.sizecomps.output.f(2000,2018,"UN",2)

yft.UNcatch.20192019<-format.catch.output.f(2019,2019,"UN",4,c("A1","A2","A3","A4"))

yft.UNcomps.20192019<-format.sizecomps.output.f(2019,2019,"UN",2)

yft.UNcatch.20002019<-rbind(yft.UNcatch.20002018,yft.UNcatch.20192019)

yft.UNcomps.20002019<-rbind(yft.UNcomps.20002018,yft.UNcomps.20192019)

detach(pos=3)

attach("C:[\\Users\\clennert\\Documents\\R\\poststratification\\CL](file:///\\Users\\clennert\\Documents\\R\\poststratification\\CL) programs\_stock assessment[\\spp](file:///\\spp) comp programs\_from 2000[\\current\_estimates\\full](file:///\\current_estimates\\full) files\_YFT\_OBJ\_2000-2019\_for SAC 2020.RData",pos=3)

yft.FOcatch.20002018<-format.catch.output.f(2000,2018,"FO",4,c("A1","A2","A3","A4","A5"))

yft.FOcomps.20002018<-format.sizecomps.output.f(2000,2018,"FO",2)

yft.FOcatch.20192019<-format.catch.output.f(2019,2019,"FO",4,c("A1","A2","A3","A4","A5"))

yft.FOcomps.20192019<-format.sizecomps.output.f(2019,2019,"FO",2)

yft.FOcatch.20002019<-rbind(yft.FOcatch.20002018,yft.FOcatch.20192019)

yft.FOcomps.20002019<-rbind(yft.FOcomps.20002018,yft.FOcomps.20192019)

save.image("/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/YFT\_formatted\_2000-2019\_for SAC 2020.RData")

#

# ------------------------

# putting formatted output for 1975-1999 and 2000-2017 together

load("C:[\\Users\\clennert\\Documents\\R\\poststratification\\CL](file:///\\Users\\clennert\\Documents\\R\\poststratification\\CL) programs\_stock assessment[\\single](file:///\\single) spp programs\_PS\_1975-1999[\\current\_estimates\\YFT\_formatted\_1975-1999\_for](file:///\\current_estimates\\YFT_formatted_1975-1999_for) SAC 2020.RData")

load("C:[\\Users\\clennert\\Documents\\R\\poststratification\\CL](file:///\\Users\\clennert\\Documents\\R\\poststratification\\CL) programs\_stock assessment[\\spp](file:///\\spp) comp programs\_from 2000[\\current\_estimates\\YFT\_formatted\_2000-2019\_for](file:///\\current_estimates\\YFT_formatted_2000-2019_for) SAC 2020.RData")

yft.DPcatch<-rbind(yft.DPcatch.19751999,yft.DPcatch.20002019)

yft.DPcomps<-rbind(yft.DPcomps.19751999,yft.DPcomps.20002019)

yft.UNcatch<-rbind(yft.UNcatch.19751999,yft.UNcatch.20002019)

yft.UNcomps<-rbind(yft.UNcomps.19751999,yft.UNcomps.20002019)

yft.FOcatch<-rbind(yft.FOcatch.19751999,yft.FOcatch.20002019)

yft.FOcomps<-rbind(yft.FOcomps.19751999,yft.FOcomps.20002019)

#

##

#

write.csv(yft.DPcatch,file="/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/YFT\_DOLPHIN CATCH\_FORMATTED\_1975-2019\_for SAC 2020.csv")

write.csv(yft.DPcomps,file="/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/YFT\_DOLPHIN COMPS\_FORMATTED\_1975-2019\_for SAC 2020.csv")

write.csv(yft.UNcatch,file="/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/YFT\_UNASSOCIATED CATCH\_FORMATTED\_1975-2019\_for SAC 2020.csv")

write.csv(yft.UNcomps,file="/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/YFT\_UNASSOCIATED COMPS\_FORMATTED\_1975-2019\_for SAC 2020.csv")

write.csv(yft.FOcatch,file="/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/YFT\_FLOATING-OBJECT CATCH\_FORMATTED\_1975-2019\_for SAC 2020.csv")

write.csv(yft.FOcomps,file="/Users/clennert/Documents/R/poststratification/CL programs\_stock assessment/spp comp programs\_from 2000/current\_estimates/YFT\_FLOATING-OBJECT COMPS\_FORMATTED\_1975-2019\_for SAC 2020.csv")

save.image("C:\\Users\\clennert\\Documents\\R\\poststratification[\\CL](file:///\\CL) programs\_stock assessment[\\spp](file:///\\spp) comp programs\_from 2000[\\current\_estimates\\YFT\_formatted\_1975-2019\_for](file:///\\current_estimates\\YFT_formatted_1975-2019_for) SAC 2020\_R version of CSV.RData")