Calculating Fish Cover by Type

These calculations refer to 1 field method, Transect with Fish Cover

TransectID (e.g. A0, or A5)

ChannelNum (0,1,2,…)

CoverType (10 types: Artificial Structures, Boulders, Brush Woody Debris <30 cm, Bryophytes, Filamentous Algae, Large Woody Debris > 30 cm, Live Trees or Roots, Macrophytes, Overhanging Veg .5m from water, Undercut Banks).

FishCoverCode (0 is 0%, 1 is 1-10%, 2 is 11-40%, 3 is 41-75%; 4 is 76-100%).

1) At each TransectID x ChannelNum, use the FishCoverCode to assign a FishCoverPercent value for each CoverType. Replace the codes as follows:

FishCoverCode	FishCoverPercent
0	0
1	5
2	25
3	57.5
4	87.5

2) Count the number of plots with fish cover observations. Call this NumberOFishCoverPlots. There are normally 11 for sites without side channels.

3) Calculate the **site mean site percent fish cover** for each CoverType. This is done by summing across all plots then dividing by NumberOFishCoverPlots. The metric names will be abbreviated this way: Site Mean Fish Cover = XFC_

4) Calculate the **proportion of site with fish cover** (any amount) for each CoverType. Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots. The metric names will be abbreviated this way: Proportion of site with fish cover (any amount) = PFC_

Metric	SourceFile	Operation
NumberOfFishCoverPlots	TransectWithFish Cover	Count of the number of fish cover plots observed within the site. This is normally 11 if no side channels are present in the site
XFC_ArticficialStructures	TransectWithFish Cover	Sum FishCoverPercent(for CoverType = artificial structures) and divide by NumberofFishCoverPlots
XFC_Boulders	TransectWithFish Cover	Sum FishCoverPercent (for CoverType =boulders) and divide by NumberofFishCoverPlots
XFC_Brush	TransectWithFish Cover	Sum FishCoverPercent (for CoverType =brush) `and divide by NumberofFishCoverPlots
XFC_Bryophytes	TransectWithFish Cover	Sum FishCoverPercent (for CoverType =bryophytes) and divide by NumberofFishCoverPlots
XFC_Macrophytes	TransectWithFish Cover	Sum FishCoverPercent (for CoverType =macrophytes) and divide by NumberofFishCoverPlots
XFC_FilamentousAlgae	TransectWithFish Cover	Sum FishCoverPercent (for CoverType = filamentous algae) and divide by NumberofFishCoverPlots
XFC_OverhangingVegetation	TransectWithFish Cover	Sum FishCoverPercent (for CoverType = overhanging vegetation) and divide by NumberofFishCoverPlots
XFC_LiveTreesOrRoots	TransectWithFish Cover	Sum FishCoverPercent (for CoverType =live trees or roots) and divide by NumberofFishCoverPlots
XFC_LargeWoodyDebris	TransectWithFish Cover	Sum FishCoverPercent (for CoverType =large woody debris) and divide by NumberofFishCoverPlots
XFC_UndercutBanks	TransectWithFish Cover	Sum FishCoverPercent (for CoverType =undercut banks) and divide by NumberofFishCoverPlots
XFC_AllTypesExceptAquaVeg	TransectWithFish Cover	∑ (XFC_ArticficialStructures+ XFC_Boulders+ XFC_Brush+ XFC_OverhangingVegetation+ XFC_LiveTreesOrRoots+ XFC_FishCoverLargeWoodyDebris+ XFC_UndercutBanks)
XFC_NaturalTypes	TransectWithFish Cover	∑ (XFC_Boulders+ XFC_Brush+ XFC_OverhangingVegetation+ XFC_LiveTreesOrRoots+ XFC_LargeWoodyDebris+ XFC_UndercutBanks)
XFC_BigTypes	TransectWithFish Cover	∑ (XFC_ArticficialStructures+XFC_Boulders+ XFC_LiveTreesOrRoots+ XFC_LargeWoodyDebris+ XFC_UndercutBanks)
PFC_ArticficialStructures	TransectWithFish Cover	Where CoverType = artificial structures Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots.

PFC_Boulders	TransectWithFish Cover	Where CoverType = boulders Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots.
PFC_Brush	TransectWithFish Cover	Where CoverType = brush Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots.
PFC_Bryophytes	TransectWithFish Cover	Where CoverType = bryophytes Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots.
PFC_Macrophytes	TransectWithFish Cover	Where CoverType = macrophytes Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots.
PFC_FilamentousAlgae	TransectWithFish Cover	Where CoverType = filamentous algae Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots.
PFC_OverhangingVegetation	TransectWithFish Cover	Where CoverType = overhanging vegetation Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots.
PFC_LiveTreesOrRoots	TransectWithFish Cover	Where CoverType = live trees or roots Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots.
PFC_LargeWoodyDebris	TransectWithFish Cover	Where CoverType = large woody debris Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots.
PFC_UndercutBanks	TransectWithFish Cover	Where CoverType = undercut banks Count the number of plots where FishCoverPercent > 0. Divide by NumberOFishCoverPlots.
PFC_AllTypesExceptAquaVeg	TransectWithFish Cover	Count the number of plots where FishCoverPercent > 0 (Where CoverType = articficial structures or boulders or Brush or overhanging vegetation or livetrees/roots or large woody debris or undercutBanks) Divide by NumberOFishCoverPlots.

PFC_NaturalTypes	TransectWithFish Cover	Count the number of plots where FishCoverPercent > 0 (Where CoverType = boulders or brush or overhanging vegetation or livetrees/roots or large woody debris or undercutBanks) Divide by NumberOFFishCoverPlots
PFC_BigTypes	TransectWithFish Cover	Count the number of plots where FishCoverPercent > 0 (Where CoverType = articficial structures or boulders or Brush or overhanging vegetation or livetrees/roots or large woody debris or undercutBanks) Divide by NumberOFFishCoverPlots