

Calculating Riparian Human Influence

These calculations refer to 1 field method, Primary Transects – Human Influence

TransectID (e.g. A0, or A5)

ChannelNum (0,1,2,...)

DirectionObserved (Left Bank = LB or Right Bank = RB)

HumanInfluenceType (13 types: Buildings, Landfill/trash, Logging, Mining, Park/Lawn, ...)

- 1) Determine **NumberOfHumanInfluencePlots** - Count the number of plots for human influence. If there are no side channels, this will normally be 22. It will be greater when a side channel flows across primary transects.
- 2) Calculate **Proximity-Weighted Presence** in each plot for each a human **HumanInfluenceType**. Look at the **InfluenceProximity** code that was recorded in the field and apply the appropriate proximity weight factor as follows:

Influence Proximity	Proximity description	Weight
0	Absent	0
1	Beyond plot but within 30m of bankfull margin	0.667
2	Within plot	1
3	On the bank or in the bankfull channel	1.5

Sum the weights for all plots in the site within a **HumanInfluenceType** and divide by **NumberOfHumanInfluencePlots**

- 3) Calculate **percent of site** that has human influences on the bank. Count the plots with the given **HumanInfluenceType** scoring 3, divide by **NumberOfHumanInfluencePlots**, then multiply by 100.
- 4) Calculate **percent of site** that has human influences within the plot or closer. Count the plots with the given **HumanInfluenceType** scoring 2 or 3, divide by **NumberOfHumanInfluencePlots**, then multiply by 100.

Metric	SourceFile	Operation
NumberOfHumanInfluencePlots	TransectWithHumanInfluence	Count of the number of riparian plots observed within the site. This is normally 22 (11 transects and 2 banks) if no side channels are present in the site
PWP_Buidings	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =Buildings/NumberOfHumanInfluencePlots
PWP_LandfillOrTrash	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =LandfillOrTrash/NumberOfHumanInfluencePlots
PWP_Logging	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =Logging/NumberOfHumanInfluencePlots
PWP_Mining	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =Mining/NumberOfHumanInfluencePlots
PWP_ParkOrLawn	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =ParkOrLawn/NumberOfHumanInfluencePlots
PWP_PastureRangeHayfield	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =PastureRangeHayfield/NumberOfHumanInfluencePlots
PWP_PavedroadRailroad	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =PavedroadRailroad/NumberOfHumanInfluencePlots
PWP_UnpavedroadMotortrail	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =UnpavedroadMotortrail/NumberOfHumanInfluencePlots
PWP_HumanFootpath	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =HumanFootpath/NumberOfHumanInfluencePlots
PWP_ClearingOrLot	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =ClearingOrLot/NumberOfHumanInfluencePlots
PWP_PipesInOrOut	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =PipesInOrOut/NumberOfHumanInfluencePlots
PWP_RowCrops	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =RowCrops/NumberOfHumanInfluencePlots
PWP_WallDikeRevetment	TransectWithHumanInfluence	Sum of weights where HumanInfluenceType =WallDikeRevetment/NumberOfHumanInfluencePlots
PWP_AllDisturbanceTypes	TransectWithHumanInfluence	Find the highest weight for each plot, sum weights for all plots across the site and divide by NumberOfHumanInfluencePlots
PWP_Agricultural	TransectWithHumanInfluence	Find the highest weight for agricultural influences (HumanInfluenceType = RowCrops Or HumanInfluenceType = PastureRangeHayfield) in each plot, sum weights for all plots across the site and divide by NumberOfHumanInfluencePlots
PctSiteBank_AllDisturbanceTypes	TransectWithHumanInfluence	Count the plots with any HumanInfluenceType scoring 3 then divide by

PctSiteBank_Agricultural	TransectWithHumanInfluence	Count the plots with agricultural HumanInfluenceType scoring 3 then divide by
PctSiteClose_AllDisturbanceTypes	TransectWithHumanInfluence	Count the plots with any HumanInfluenceType scoring 2 or 3 then divide by
PctSiteClose_Agricultural	TransectWithHumanInfluence	Count the plots with agricultural HumanInfluenceType scoring 2 or 3 then divide by