turbidity of water. The turbidity of surface water obtained from study area was unpredictable for some stations as shown in Figure 6. The turbidity recorded for station 4 for lake S4L2 was greater as it occupies the nearest affected area from crushing unit. The highest value of turbidity was recorded for Lake S3L2 which indicates the impact of two crushing units.

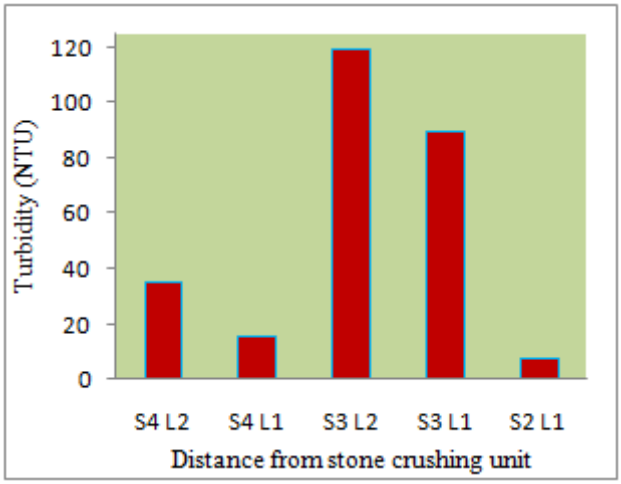

Figure 6: Turbidity vs distance from stone crushing unit

The electrical conductivity of ground water samples is found to be reduced as the distance of sources of ground water increased from crushing unit. It is shown in Figure 7 below. The electrical conductivity depends on concentration of dissolved ion present in water. S3W1 is highly influenced by dustfall which contain different metals. Higher the percentage of ion present in water, higher is the value of electrical conductivity. But when the percentage of such ions increases beyond the limit, their charges cancel each other and again electrical conductivity fall down as it was found in case of sample S3W1.

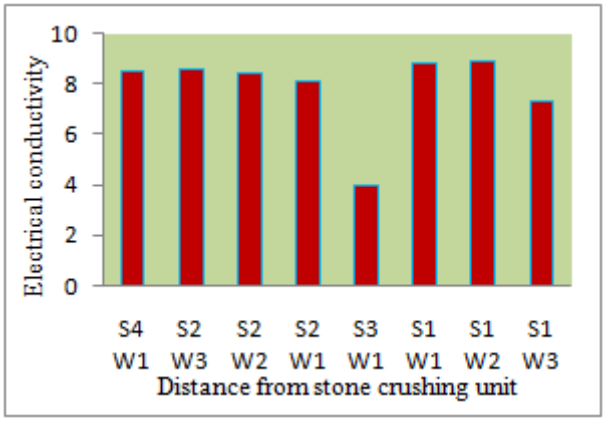

Figure 7: Electrical conductivity vs. distance from stone crushing unit

The electrical conductivity of surface water of Lake S4L1 had shown the highest value as the lake is being recharge by percolated water. It is a source of ground water with salts hence the conductivity found to be more. Higher percentage of dustfall over Lake S4L2 and Lake S3L1 decreased the percentage free ions and hence the conductivity is less. The electrical conductivity had distinctly low reading as the distance of sources of surface water increased from crushing unit which is reflected in Fig 8.

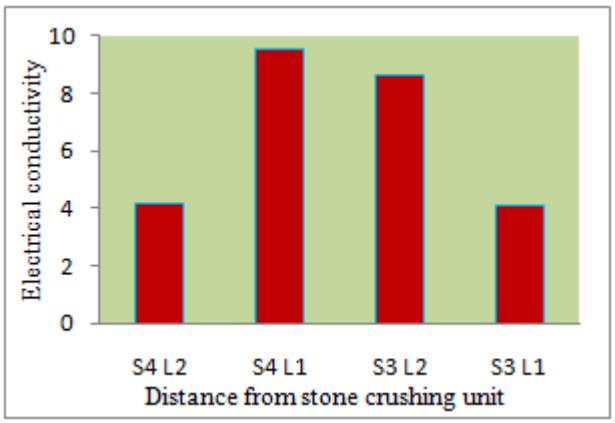

Figure 8: Electrical conductivity vs. distance from stone crushing unit

Total Alkalinity of groundwater sources was found within HDL as shown in Figure 9.

Figure 9: Total alkalinity vs. distance from stone crushing unit

Total Alkalinity of surface water sources within the study area decreases suddenly for S4L1 as the water is collected from a source originating in water percolation. Total alkalinity again increases for Lake S3L1 and Lake S3L2 as it has been impacted by two adjoining stone crushing zones.

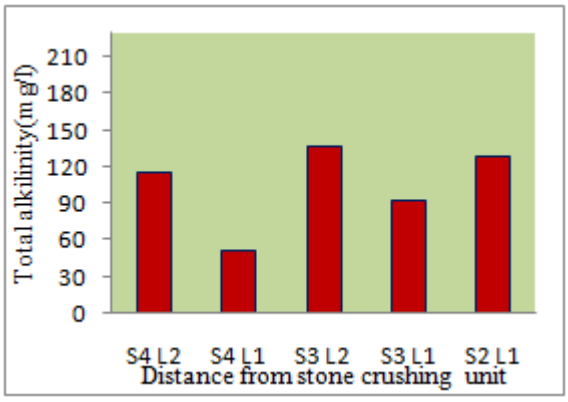

Figure 10: Total alkalinity vs. distance from stone crushing unit

The total hardness recorded for ground water decreased as distance of ground water source increases from stone crushing unit up to S2W1. The hardness test classified all the ground water samples as hard water as the value of total hardness exceeded standard limits. Total hardness obtained for S1W1 was observed to be a highest value of hardness as shown in Figure 11.

The higher percentage of total hardness of Lake S4L2 proved the impact of dustfall on sources of surface water. The value of total hardness of Lake S4L1 is less as usual as it is a source of fresh ground water. The hardness recorded for Lake S3L1 crossed HDL and hence it is known as a source of very hard water present within the effect of two stone crushing zone. The impact of dustfall on hardness of surface water is shown in Figure 12.

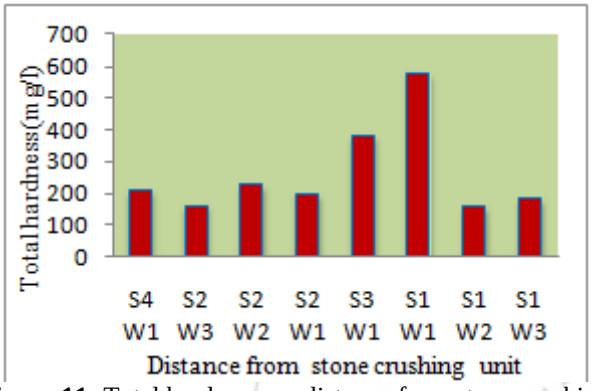

Figure 11: Total hardness vs. distance from stone crushing unit

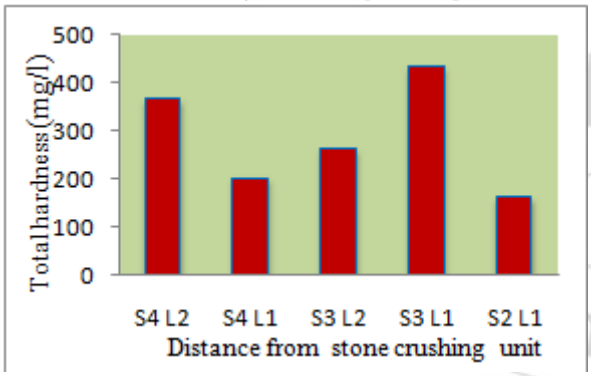

Figure 12: Total hardness vs. distance from stone crushing unit

5. Conclusion

The water quality loss is said to be deviations of water parameters from it standard limits.

1. pH of sources of water was recorded more than the standard limits (WHO recommended 6-8.5) .
2. Turbidity of Station 3 was found to be 119 NTU for lake water which is much more than HDL (5NTU).
3. Electrical conductivity of all study stations were more than MPL.
4. The studied water samples from all lakes were found to be hard as Hardness crossed HDL.

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