

Publication**Active biomonitoring with brown trout and rainbow trout in diluted sewage plant effluents****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 3707668**Author(s)** Schmidt, H.; Bernet, D.; Wahli, T.; Meier, W.; Burkhardt-Holm, P.**Author(s) at UniBasel** [Holm, Patricia](#) ;**Year** 1999**Title** Active biomonitoring with brown trout and rainbow trout in diluted sewage plant effluents**Journal** Journal of Fish Biology**Volume** 54**Number** 3**Pages / Article-Number** 585-596**Keywords** pollution; waste water; biomarker; trout; histopathology; parasitology

Brown trout *Salmo trutta* populations of numerous Swiss rivers are declining. Sewage plant effluents are discussed as a possible cause. To investigate the influence of sewage plant effluents, brown trout as well as rainbow trout *Oncorhynchus mykiss* were exposed to 10% diluted waste water over a period of 12 months. The effects were compared to those on trout kept in commercial tap water. The mortality rate was low and no pathogenic bacteria or viruses were recorded in exposed and tap-water animals. Parasitological examination revealed a mild infestation with *Gryodactylus* sp. in all groups. Macroscopically and histologically, only minor changes in gills, skin, and kidney of exposed animals were found when compared to fish kept in tap water. Degenerative and inflammatory reactions in the liver of exposed animals were the most prominent findings. Several brown trout caught in the River Langete showed marked proliferative, degenerative and inflammatory lesions of gills, liver, and kidney. The results do not suggest that waste-water effects would explain the decrease of fish populations. However, it is conceivable that the effluents in combination with other factors in the river enhance the development of changes. (C) 1999 The Fisheries Society of the British Isles.

Publisher Wiley**ISSN/ISBN** 0022-1112 ; 1095-8649**edoc-URL** <http://edoc.unibas.ch/52980/>**Full Text on edoc** No;**Digital Object Identifier DOI** 10.1111/j.1095-8649.1999.tb00637.x**ISI-Number** WOS:000079016600009**Document type (ISI)** Article