

Proposal of Blue and Green Infrastructure for the Jaguaré Stream Watershed, São Paulo, Brazil

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Abstract : The blue-green infrastructure in recent years has been pointed out as a possibility to increase the environmental quality of watersheds. The regulation ecosystem services brought by these areas are many, such as the improvement of the air quality of the air, water, soil, microclimate, besides helping to control the peak flows and to promote the quality of life of the population. This study proposes a blue-green infrastructure scenario for the Jaguaré watershed, located in the western zone of the São Paulo city in Brazil. Based on the proposed scenario, it was verified the impact of the adoption of the blue and green infrastructure in the control of the peak flow of the basin, the benefits for the avifauna that are also reflected in the flora and finally, the quantification of the regulation ecosystem services brought by the adoption of the scenario proposed. A survey of existing green areas and potential areas for expansion and connection of these areas to form a network in the watershed was carried out. Based on this proposed new network of green areas, the peak flow for the proposed scenario was calculated with the help of software, ABC6. Finally, a survey of the ecosystem services contemplated in the proposed scenario was made. It was possible to conclude that the blue and green infrastructure would provide several regulation ecosystem services for the watershed, such as the control of the peak flow, the connection frame between the forest fragments that promoted the environmental enrichment of these fragments, improvement of the microclimate and the provision of leisure areas for the population.

Keywords : green and blue infrastructure, sustainable drainage, urban waters, ecosystem services

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