**Abstract** – Changes in diet of *Laetacara araguaiae* Ottoni and Costa (2009) were evaluated in the Sucuriú River (Upper Paraná basin, Brazil) in an area with a small hydroelectric power plant, both before and after the formation of the reservoir, in order to answer: did the construction of the reservoir affected the diet of this species? The results showed a greater alteration of diet composition in the upstream section of the reservoir. It was observed that before the formation of the reservoir and the first year after, the individuals from upstream section formed a group characterized by an insectivorous diet. With the dam construction and habitat alteration we observed that aquatic plant material, sediment, and algae predominated in the diet. These results demonstrate the opportunistic feeding habit of *L. araguaiae* and contribute to the understanding of how the impoundment of rivers can influence the trophic dynamics of the ichthyofauna.

**Keywords:** aquatic ecology, environmental impacts, *Laetacara araguaiae*, reservoir, Upper Paraná River, Brazil.