

# Housing; recreational areas and bathing facilities; disaster sanitation module 4 ...

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Running head: BHS 414 Module 4 - Case BHS 414- Housing; Recreational Areas and Bathing Facilities; Disaster Sanitation Module 4- Case Cultural Identity

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Write a 2 - 3 page essay that addresses the following questions:

1. You are an environmental health inspector asked to investigate problems at a local low-income and poorly maintained apartment complex. There is lead-based paint peeling from the walls. Summarize the health hazards associated with lead and mold in this particular setting, and describe what may be done to control these two public health problems. Keep in mind the limitations and challenges a low-income community may face, living in poorly maintained housing. Be sure to support your position with evidence from literature.
2. One of your goals is to protect the health of swimmers at a local recreational pool. Discuss two methods that have been used to treat swimming pool water, ozonation and chlorination. Then, identify the method or combination of methods that would provide the best protection to swimmers and the public health.

Introduction

This paper discusses the hazards that low-income people living under conditions of poor sanitation face due to exposure to mold and lead painting. It gives possible solutions to these problems while taking into account the income level of the population. This paper also discusses treatment of swimming pools by chlorination and ozonation as methods of treating

swimming pool water.

#### Hazards of Lead and Mold

Studies show that mold growth and dankness are related with respiratory wellbeing. However, health threats in relation to exact levels of molds are not yet known (Jacob, Ritz, Gehring, Koch, Bischof, Wichmann, & Heinrich, 2002). The people living in the low-income apartment complexes are at risk of allergies and fungal diseases among a myriad of other health complications (Ocean monitoring program: FAQ, 2007). Jacob et al. examined the consequences of enclosed mold and allergic sensitization in children. They realized “ mold spore count for Cladosporium and Aspergillus were associated with increased risk of allergic sensitization” (2002). Therefore, living in proximity to mold leads to extremely high chances of conducting respiratory ailments. It also leads to displaying signs of conjunctivitis because of breathing in air contaminated with mold spores from interior surfaces. Continued exposure to air contaminants also puts these people at peril of acquiring atopic indications of all other widespread, inhaled allergens apart from molds. Jacob et al. cite that kids who inhabit the same abode from their time of birth depict most symptoms of sensitization to allergens (2002). Lead-based paints contain lead, which is a potential carcinogen. The peeling paint poses a significant hazard to the people as it releases chemical components of the paint to the air.

These people can improve their living conditions in several ways by finding feasible solutions to these problems. One way would be to pull down the whole, lead-based wall painting and replace it with lead-free paints. There are many affordable lead-free paints in the market that these people can

utilize. The community can pull up their efforts and get a contractor with knowledge in this area. The county of Santa Barbara reports that no partner authorities have received financial support under the Lead Paint Removal program (2007). Therefore, it is up to the population to toil together to solve this predicament.

#### Treatment of Swimming Pool Water

Swimming is a fun and a great way of exercising. However, for people to reap the maximum benefit of swimming, stringent actions ought to be taken to guarantee that the pool water is safe. Such measures involve treating the water to avert water-borne diseases. Several methods of treating pool water exist including chlorination, bromination, and ozonation (Swimming Pools and Spas, n. d.).

Chlorination involves adding chlorine to the swimming pool water. Chlorine may take a powder form (65% Calcium hypochlorite) or a solution form. The chlorine dosage depends on the volume of the pool in gallons, turnover flow rate (6 hours), and the location of the pool (whether it is indoors or outdoors). Chlorination uses pumps to feed the chemical into the pool water in predetermined quantities. Overall, powdered chlorine dosages require more quantities of the chemical than solution dosages. In addition, indoor pools require little amounts of chlorine as compared to outdoor pools.

Chlorination in large pools requires pH regulation feeders to monitor the pH of water by robotically upholding the pH between 7.2 and 7.6 (n. d.).

Ozonation is utilized as an enhancement to chlorination and requires less than 0.10 p.p.m (parts per million) of ozone near the water surface and the generating machine. The system operates in such a way that ozone

concentrations higher than the stated dose trigger perceptible and visible alarms.

A combination of chlorination and ozonation would provide the best protection to swimmers. This is because both techniques would ensure that, at no given time, the water conditions are conducive for the growth of germs of any kind.

#### References

- Jacob, B., Ritz, B., Gehring, U., Koch, A. Bischof, W., Wichmann, H. E., & Heinrich, J. (2002). Indoor exposure to molds and allergic sensitization. *Environmental Health Perspectives* 110: pp. 647-653. Retrieved on Oct. 26, 2012 from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1240910/>.
- Ocean monitoring program: FAQ (2007). Santa Barbara County Environmental Health Services. Retrieved on Oct. 26, 2012 from <http://www.sbcphd.org/ehs/OceanFAQ.htm>.
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