

**GOVERNOR KEATING'S TAR CREEK TASK FORCE
HEALTH EFFECTS SUBCOMMITTEE
FINAL REPORT
AUGUST 1, 2000**

The Health Effects Sub-Committee has reached several conclusions concerning the nature and extent of health effects and their sources during its review of the situation in Ottawa County and has provided several recommendations to Governor Keating's Tar Creek Task Force. The information is presented in considerable detail in the first two reports submitted to the Task Force; therefore, this report will be used to highlight and summarize previously reported findings. The amount of funding needed for the activities presented in this and previous reports is difficult to predict without further more detailed study. Health related research projects can potentially be funded through federal mechanisms as can some remediation efforts. On-going local efforts, particularly the current yard-removal efforts, blood lead screening, and child developmental testing, require the consistent allocation of state and local funds and should be considered as the most critical items for funding related to health concerns.

1. Exposure to lead represents a serious public health problem in Ottawa County. Studies conducted over the past few years have indicated that as many as 40% of children in some areas have elevated blood lead levels. Although the prevalence of elevated blood lead levels has dropped, it remains well above state and national averages and should be expected to remain so until additional remediation and educational efforts are accomplished.
2. Soil removal efforts by EPA have had a significant impact on reducing the prevalence of elevated blood lead levels and should be supported and continued. In addition, the removal of contaminated residential soils outside of the Superfund site boundaries should be initiated.
3. A number of activities should be put into place, augmented, or further supported to assist on-going efforts to track and reduce blood lead level:
 - a. It is recommended that children in this area be regularly screened for blood lead levels, especially those with identified risk factors. A quantifiable goal is the screening of all children in Ottawa County. (Annual Cost - \$50,000)
 - b. Children should be tracked over time to measure changes in exposure status and to identify health effects. (Annual Cost – \$50,000)
 - c. A unified map of blood lead levels and environmental exposures should be created using GIS technology to better identify areas of greatest concern. (Cost \$25,000 - assuming use of current equipment and software at ODEQ)
 - d. Educational efforts should be coordinated to maximize effectiveness and reduce redundancy. Two distinct educational goals have been identified:
 1. Develop community relevant health education and outreach strategies which will update and inform Ottawa County residents regarding the lead poisoning issues in Tar Creek Superfund Site and adjacent areas. (Annual Cost - \$150,000)

2. Continued monitoring of blood lead levels in Ottawa County children with creation of a multi-purpose database that facilitates tracking, sharing of information, and assisted measurement of community impact. (Annual Cost - \$150,000)

4. A long-term study on health outcomes in children should be initiated to determine the incidence of Ottawa County children with learning disabilities from visual and/or cognitive deficits that present barriers to education. There is strong evidence that adverse health outcomes of this nature are occurring; however, these effects have yet to be quantified. The current Ottawa County Health Department study indicates that 10 of the 12 (83)% of the lead-exposed children tested have some type of learning difficulty as compared to a rate of 2 to 10% in the general population of school age children. This type of evidence would be invaluable in leveraging additional educational and health funding. (Estimated cost – \$500,000).

5. The effects of lead and other metals on adult and adolescent health have not been quantitatively assessed. Given the extent of exposure and strong anecdotal information, it appears likely that other health outcomes (e.g. kidney disease) are occurring (Table 1).

Table 1. Potential Studies of Long-Term Metals Exposure in Ottawa County

Health Effect	Priority	Current status of knowledge/progress	Estimated Cost
Neurological Effects	1	Pilot project at Ottawa Co. Health Dept. indicates learning disabilities in some children	500K
Kidney Disease	2	Proposal submitted by OUHSC to ATSDR; approved but not funded	750K*
Hypertension	3	Anecdotal information; several dialysis clinics in tri-state area	750K*
Hearing Loss	4	Preliminary data being collected by Ottawa County Health Dept.	500K
Cancers	5	Anecdotal information	1-1.2 million
Alzheimer's Disease	6	Suggested by other studies	250K
Parkinson's Disease	7	Suggested by other studies	150K

*hypertension and kidney disease could be conducted simultaneously for a combined cost of 750K

6. The widespread nature of soil and water contamination in Ottawa County demonstrates that wildlife is being exposed to metals on a wide scale. Although this bears obvious significance for the health of biological communities in general, a more specific concern relates to the effects on the health of people who gather and consume wild foods. A study of this nature would cost approximately \$450K.
7. The removal of the remaining mine wastes (chat) will be required as part of the overall remediation effort to reduce metals exposure to acceptable levels. Despite regulatory obfuscation, chat is a hazardous (toxic) material by any health-based definition with a significant potential for damaging public health. The committee recognizes that creative or non-standard solutions may be necessary for the removal of chat to remain as a practical remediation alternative; however, **public health must be the first consideration in any discussion of removal alternatives**. Reduction of risk to the lowest level practically obtainable should be the primary goal of chat removal.
8. Exposure to lead-based paint is a serious problem in some communities given the prevalence of homes with lead-based paint (>75% in some communities) and the physical condition of the paint. Removal of contaminated soils from these properties without remediation of paint sources will be only partially effective in addressing blood lead problems. Current HUD funded paint remediation activities conducted by the Grand Gateway Economic Development Authority should be continued and expanded. A firm estimate of the cost required for paint remediation of all homes within the Superfund area is unavailable but would be in excess of 2 million dollars.