

**Environmental Justice Working Group  
Disparate Impacts Subgroup Report  
Final October 2, 2009**

**I. Issue Statement**

The Disparate Impacts Subgroup is charged with developing a method for identifying the circumstances that will trigger the need to consider or apply Environmental Justice (EJ) principles in Department of Environmental Quality (DEQ) activities. The subgroup will also identify underlying principles which will assist other state departments in developing their own policies and plans to address disparate impacts and EJ.

**II. Assumptions and Context**

The subgroup's charge is integral to the overall state EJ plan because the criteria established by the subgroup will trigger subsequent EJ implementation activities.

The subgroup adheres to the principles of EJ by developing criteria that indicate disproportionately high and adverse health effects on minority and low-income populations exist. If indicators identify a likely potential for disparate impacts to exist, EJ activities should be implemented.

According to the U.S. EPA, two important principles of EJ are assuring no disparate adverse impacts and providing for meaningful public involvement. Therefore, areas where disparate adverse impacts are likely to exist must first be identified before an EJ plan may be implemented in those areas. The subgroup recognizes that certain environmental issues, such as global warming, are so large in scope that the methods proposed to trigger EJ activities in this report will not be useful. These issues must be addressed regionally or globally rather than specific to projects and other routine activities of the DEQ.

For these recommendations to be adopted and successfully implemented, environmental justice advocates as well as the business community must accept them. While the subgroup is not recommending that the state EJ plan contain a clear legal definition of disparate impacts, it is desirable to provide a clear guideline for identifying and addressing potential EJ cases. Areas where disparate adverse impacts are likely to exist must be identified if agencies are to prioritize EJ activities.

**III. Relevant Models and Experience**

The subgroup researched alternative means of defining disparate impacts and concluded that the definition of disparate impacts is dependent on context. For example, the subgroup reviewed definitions used by the federal and state Department of Transportation (DOT). Specifically, the subgroup assessed definitions for "adverse effects" as well as "disproportionately high and adverse effect on minority and low-income populations" (see Appendix). While these definitions are useful for the DOT, it was believed that DEQ would be better served by utilizing definitions and principles employed by U.S. EPA. EPA provided guidelines for determining disparate impacts in its *Revised Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case*.

Further, the team also evaluated “legal” definitions for disparate impacts and related terms. However, legal remedies to mitigate disparate adverse impacts in the context of EJ have been largely unsuccessful. Therefore, pursuing a strict “legal” definition of disparate impact is not recommended for the purpose of developing a state EJ plan. Rather, the subgroup seeks to identify conditions that indicate disparate impacts exist that will in turn trigger EJ activities.

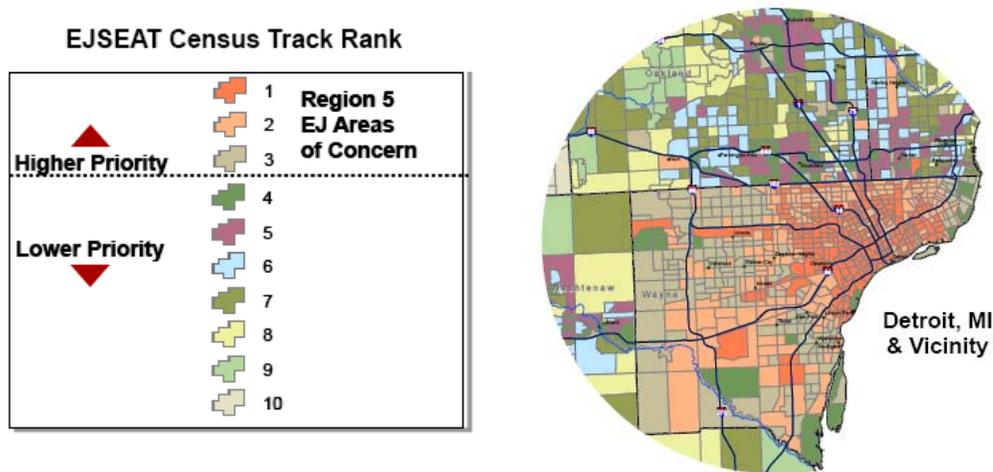
The key conditions from EPA’s *Revised Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case* include the following:

“If the low-income population or minority population percentage is greater than twice the State percentages, the case should be identified and addressed as a potential EJ case. The assessor should then follow the enforcement, permitting and community involvement protocols, as appropriate. If the low-income population or minority population percentage is less than twice but greater than the State percentages and if there are community-identified EJ issues, the case should be identified and addressed as a potential EJ case and the protocol followed as indicated above. If the low-income population or minority population percentage is equal to or less than the State percentages, the case should not be considered an EJ case. For all scenarios, the assessor should document their decision.”

In determining whether an area may be a potential EJ case, Region 5 examines the demographic characteristics of census blocks within 1.0 mile of the site of concern.

The subgroup believed the above definition was a useful trigger for EJ activities in many circumstances if coupled with known environmental data or projects which could potentially result in disparate impacts. Further, there are many other indicators of potential disparate impacts. In addition to the EPA Region 5 Interim guidelines, the subgroup also evaluated the *Environmental Justice Strategic Enforcement Assessment Tool* (EJSEAT) which is a composite trigger method using a number of these additional indicators.

The EPA uses the EJSEAT method as a standard screening approach to identify “potential EJ areas of concern”. The EJSEAT is also used by the EPA Office of Enforcement and Compliance Assurance to consistently identify areas with potentially disproportionately high and adverse environmental and public health burdens. EJSEAT uses 18 select federally-recognized or managed databases and a simple algorithm to identify such areas. EJSEAT data sets are divided into the following four indicator categories to calculate EJSEAT priority rankings: 1) environmental; 2) human health; 3) compliance; and 4) social demographics. The various data sets form “layers” used to develop composite maps such as the following for the Detroit area:



All of these areas identified as a level 1, 2 or 3 “potential EJ area of concern” in the EJSEAT map of Detroit also meet the demographic guidelines provided by EPA for situations where disparate impacts are likely to exist per its *Revised Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case*.

EJSEAT relies almost exclusively on data pertaining to air pollution burdens derived from the National Air Toxics Assessment (NATA). EJSEAT is currently being reviewed by the National Environmental Justice Advisory Council, which is likely to make recommendations to EPA for substantially improving EJSEAT. As a result, EJSEAT will likely change in the future as refinements are made and the DEQ should be easily able to adopt them.

#### **IV. Recommendation**

The subgroup recommends the following approach to identify potential EJ areas of concern and to “trigger” implementing EJ principles in DEQ activities:

- a) When a proposed project or activity is located in a potential EJ case area as defined by *Revised Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case*, or, is located within 1.0 mile\* of a level 1, 2 or 3 potential EJ areas of concern as identified by EPA’s EJSEAT Method,

\*All census tracts partially or entirely captured by a 1.0 mile radius from the proposed project or activity will be considered within the 1.0 mile distance.

and:

- b) The project type and size criteria are met. While the spirit of EJ should be considered in all state agency actions, the Disparate Impacts Subgroup recognizes that EJ principles can not be employed for every project and activity. Therefore, the DEQ, along with other agencies, should prioritize projects in geographic areas of concern by identifying projects that are likely to have a disparate adverse impact. While evaluating these projects in low-income and/or minority-based communities, the agencies should also consider the constraints

on economic development such that the regulatory burdens do not make Michigan an undesirable place to do business.

The aforementioned criteria will be evaluated by each agency in the state. In addition, each agency shall provide specific examples of the types of projects that would meet the threshold standards provided above. For example, the DEQ shall consider whether the proposed project or activity is of the following type and size:

1. National Pollutant Discharge Elimination System (NPDES) permits under the federal Clean Water Act with discharge at or above 50,000 gallons per day;
2. Air Permits to Install (PTIs) that require a public comment period. These include permits classified as "major" by the Clean Air Act and permits that include limits which restrict the facility's potential to emit at 90% or more of the major source thresholds;
3. Waste permits – landfills, disposal and recycling facilities;
4. Mining permits;
5. Large Confined Animal Feeding Operation permits;
6. Prioritizing monitoring, inspections, enforcement, remediation and compliance assistance activities.
7. Other projects and activities identified by the department as a significant community concern or identified pursuant to the EJ Work Group petition process.

The subgroup recognizes that if this trigger system is accepted by the Workgroup, more detailed explanation regarding what constitutes these type and size designations will be required. It is believed that this detailed information is best maintained in a "living document" that will be used as guidance for agency staff. For example, the DEQ plans to prepare an EJ Handbook for this purpose.

The subgroup further recommends that the EJ Work Group pursue refining the indicators that are currently available in the EJSEAT screening tool. EJSEAT is intended by the EPA to be applied to all 50 states. This poses a constraint on EPA because not all the data that would be desirable for an EJ screening tool are available for all 50 states. The state of Michigan is not constrained by the data limitations that exist in other states. The subgroup discussed the desirability of including health data and a broader range of pollution data than are currently available in EJSEAT. For example, it would be desirable to include information about such health conditions as asthma rates, cancer rates, lead poisoning, and others at the census tract or zip code area levels and incorporate them into EJSEAT. It would also be desirable to include information about a broader range of environmental burdens, such as soil and water contamination.

## **V. Alternatives**

As discussed previously, pursuing a strict legal definition of disparate impacts was considered and rejected. The subgroup also considered and rejected employing DOT definitions for the DEQ EJ implementation plan. Further, the subgroup compared definitions and elements of EJ programs in several other states. For example, California's approach was to fund demonstration projects and highlight success stories

rather than develop a definition-based program. Pennsylvania and New Mexico employ a trigger system similar to the recommendation of the subgroup. However, these states do not include the additional trigger which considers EJSEAT.

In addition to identifying existing data that may be useful in enhancing EJSEAT as discussed in the previous section, it was discussed that future efforts should also include conducting new research that apply the latest technologies to generate additional data useful in identifying and remedying EJ issues in areas of concern in the state. Although discussed, it was determined that time and resource constraints limit an effort by the DEQ to identify such data at this time.

#### **VI. Comment Information**

Please provide comments regarding this report to subgroup co-chairs Donele Wilkins ([dwdwej@aol.com](mailto:dwdwej@aol.com)) and Bryce Feighner ([feighnerb@michigan.gov](mailto:feighnerb@michigan.gov)).

## Appendix – Key Terms

The Disparate Impacts Subgroup concluded that it was not beneficial to define key terms such as “disparate impact” for purposes of triggering EJ activities in the DEQ. However, it is beneficial to have a working understanding of these key terms. Hence, the following is provided:

**Disparate impact** - In the context of environmental justice, a disparate impact is an impact that is disproportionately higher upon a protected group. This inequality of impact does not, in itself, indicate that the impact is adverse. Impacts can be disparate, but not adverse. Although some think of the term “disparate impact” as conveying that the impact is not only disproportionate but also is adverse, that concept creates more difficulties in describing and understanding environmental justice concerns. Better clarity and understanding is achieved by keeping separate the concepts of “disparate” and “adverse”.

The MDEQ Environmental Justice Workgroup recommendations report of 1999 provided the following definition and discussion:

*“The Disparate Impact Area Subgroup believes that the term “disparate impact” generally refers to an incongruous or uneven impact on the community. This is consistent with the definition in Webster’s Ninth New Collegiate Dictionary, which defines “disparate” as “different” and “distinct”. In the context of Title VI and environmental permitting, the subgroup believes that “disparate impact” refers to “a finding of any adverse impact on protected groups (under Title VI)” as demonstrated by a comparison of the demographics in the impact area versus the statewide demographics.*

*Some members of the subgroup recognize that the above definition of “disparate impact” may be contrary to common perceptions of the term’s meaning. It may be fair to say that a more common understanding of “disparate” in the context of Title VI and emission permitting is that the term refers to an unusually high occurrence or predominance of pollution in an area, such that an additional increment of pollution results in a greater increment of public health risk than it would in areas with less pre-existing pollution. Under that general definition, there would arise a need to develop an appropriate methodology so that the degree of disparity can be characterized and applied in a regulatory program.”*

The EPA Region 5 (1998) *Interim Guidelines for Identifying and Addressing a Potential Environmental Justice Case*, provided guidance for classifying EJ concerns based upon demographics without an analysis of risk or disproportionate impacts. They noted that a methodology for assessing disproportionate effects is still evolving; to date, there was no proven methodology for conducting that type of assessment.

The EPA (2000) *Draft Revised Guidance for Investigating Title VI Administrative Complaints Challenging Permits (Draft Revised Investigation Guidance)* addressed “adverse” and “disparate” as separate issues. They defined disparity (disparate impact) as: “a measurement of a degree of difference between population groups for the purpose of making a finding under Title VI. Disparities may be measured in terms of the respective composition (demographics) of the groups, and in terms of the respective potential level of exposure, risk, or other measure of adverse impact.”

**Adverse impact** - This is a very contentious and value-laden term. Therefore, rather than attempt to derive a single definition, the following discussion is provided.

The EPA defines an adverse effect as, “A biochemical change, functional impairment, or pathological lesion that affects the performance of the whole organism’s ability to respond to an additional challenge.” However, in the arena of toxicology, risk assessment and risk management, there are many cases where the adversity of effects may be equivocal. For example, most would agree that a lead exposure which is associated with a reduction of several IQ points in a child is an adverse impact. However, a lead exposure which results in a reduction of less than one IQ point may be of debatable clinical significance among scientists. And regardless of that debate, that impact may be clearly unacceptable to the affected public. There may be widely differing opinions about whether or not other “non-toxicity” types of impacts that a facility may have upon impacted communities should be regarded as “adverse”. For example, the negative impacts that a facility may have on traffic, noise, lighting, aesthetics, or odors which do not rise to the level of being unlawful, may be regarded by some as non-adverse, while others would find them clearly objectionable and would not want them excluded from any consideration in an environmental justice context.

The MDEQ Environmental Justice Workgroup recommendations report of 1999 includes a more regulatory-focused approach to this issue, providing the following definition and discussion:

*“An “adverse impact” is defined to mean “any activity, process, operation or release, that causes or results in an exposure of people or the environment to pollutants in violation of public health-based environmental statutes, rules, or regulations.”*

*“Although not verbatim, this definition seems to be consistent with the Select Steel decision. Several members of the Disparate Impact Area Subgroup recognize that in certain circumstances a risk assessment under existing environmental rules and regulations may appropriately rely on public health benchmarks that do not necessarily correlate to an environmental standard.”*

The EPA (2004) Toolkit for Assessing Potential Allegations of Environmental Justice provided a much broader definition of “adverse effect or impact”, including not only illnesses and environmental contamination but also impacts on aesthetic values, community cohesion, traffic, displacement of people, disruption of services, etc.

The EPA Region 5 (1998) *Interim Guidelines for Identifying and Addressing A Potential Environmental Justice Case*, advised consideration of whether there are human health effects, measured in risks and rates, and whether they are significant or above generally accepted norms. They stated that adverse health effects may include bodily impairment, infirmity, illness, or death. They also advised consideration of whether there are significant environmental effects, involving an impact to the natural or physical environment, which may include ecological, cultural, human health, economic, or social impacts. In the discussion of the environmental stresses which may contribute to disproportionate effects, they recommended including for consideration (to the extent feasible) factors that are unlikely to pose a human health risk but which may affect the community, including odors, noise, increased vehicular traffic, and decreased property values.

The EPA (2000) *Draft Revised Guidance for Investigating Title VI Administrative Complaints Challenging Permits* (Draft Revised Investigation Guidance) defined adverse impact as: “a negative impact that is determined by EPA to be significant based on comparisons with benchmarks of significance. These benchmarks may be based on law, policy, or science.”

**Cumulative impact** - The primary point of the concept of “cumulative impact” is that background (or, pre-existing) conditions are important. At the most simplistic level, this means that a pre-existing level of exposure can be very relevant to the assessment of the significance of a proposed incremental exposure. The EPA, in the Food Quality Protection Act, visualized this concept as a “risk cup”: a given increment added to the cup can have a differing significance depending on if the cup is near empty or nearly full. At a more complex level, “cumulative impact” refers to the potential presence of many environmental stressors or health conditions in a community, which may be accounted for when an additional facility impact is considered in an EJ context.

The EPA Region 5 (1998) *Interim Guidelines for Identifying and Addressing A Potential Environmental Justice Case*, defined cumulative effects (or cumulative exposures) as “the total effects from exposure to one or more chemical, biological, physical or radiological agents across environmental media (e.g., air, water, soil) from single or multiple sources.”

The EPA (2000) *Draft Revised Guidance for Investigating Title VI Administrative Complaints Challenging Permits* (Draft Revised Investigation Guidance) defined cumulative exposure as: “total exposure to multiple environmental stressors (e.g., chemicals), including exposures originating from multiple sources, and traveling via multiple pathways over a period of time.” Cumulative impact was defined as: “the harmful health or other effects resulting from cumulative exposure.”

The Michigan Department of Transportation (DOT) utilizes the following definitions which appear in the US DOT Order on Environmental Justice, contained in the Federal Register on April 15, 1997:

**“Adverse effects:** means the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of DOT programs, policies, or activities.”

**“Disproportionately high and adverse effect on minority and low-income populations:** means an adverse effect that: (1) is predominately borne by a minority population and/or a low-income population, or (2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.”