Integration of Health & Health Impact Assessments Via Environmental Policy Acts

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- **Appendix 1:** Summary of NEPA/SEPA Legal Provisions Across Jurisdictions 

- **Appendix 2:** NEPA – Case Law Search Terms

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Acknowledgements and Disclaimer

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Please note that information provided in this Report does not constitute legal advice in any jurisdiction. Please consult with your legal counsel for specific legal guidance.

List of Acronyms

The following acronyms are used consistently throughout the Report and endnotes:

APA – Administrative Procedure Act
BLM – Bureau of Land Management
CAA – Clean Air Act
CDC – Centers for Disease Control & Prevention
CEA – Critical Environmental Area
CE – Categorical Exclusion
CEQ – Council on Environmental Quality
DOE – Department of Energy
DOT – Department of Transportation
EA – Environmental Assessment
EIR – Environmental Impact Review
EIS – Environmental Impact Statement
EPA – Environmental Protection Agency
FAA – Federal Aviation Administration
FDA – Food & Drug Administration
FONSI – Finding of No Significant Impact
HIA – Health Impact Assessment
HRA – Health Risk Assessment
ICCTA – Interstate Commerce Commission Termination Act
NEPA – National Environmental Policy Act
OHV – Off Highway Vehicle
RoD – Record of Decision
SEPAs – State Environmental Policy Acts
TEPAs – Tribal Environmental Policy Acts
USCG – United States Coast Guard
USFS – United States Forest Service
Executive Summary

This Report examines opportunities to embed health considerations into environmental reviews required by the National Environmental Policy Act (NEPA)\(^1\) and related state or local equivalent laws in 17 jurisdictions (known collectively as state environmental policy acts (SEPAs)). These laws require various levels of advance, comprehensive environmental reviews for major public (and some private) projects or actions in affected jurisdictions that may significantly impact the human environment, such as building developments, waste removal, energy, mining, and roadway development projects. They apply to a wide swath of federal, state, tribal, and local governmental agencies and often entail conducting extensive assessments designed, in part, to protect human health.

Health impact assessments (HIAs) “bring together scientific data, health expertise, and public input to understand how a proposed plan, policy, program, project, or action could affect the public’s health.”\(^2\) They consider broad influences including social, economic, and environmental changes on human health. In furtherance of environmental laws and policies, HIAs can provide decision-makers with critical information to identify project alternatives or potential mitigation measures, broader effects on the environment and community, and potential overall health impacts.

An understudied area at the intersection of environmental and health policies relates to legal opportunities for the enhanced use of HIAs via NEPA and SEPAs. Despite legal and policy support for considering human health effects within environmental reviews, the use of specific, health-focused tools such as HIAs is piecemeal nationally.

In 2011, the National Research Council emphasized that assessing health effects in environmental reviews under NEPA “is a matter of law and not discretion.”\(^3\) Although no statutory or regulatory laws explicitly require including HIAs during these processes, there are multiple legally-supported paths to incorporate health analyses, especially early on, into reviews pursuant to NEPA and SEPAs. In combination, these paths present extensive opportunities for governmental agencies and private sector entities to integrate the evaluation of health impacts into environmental reviews through HIAs and related approaches.

Relevant laws at the federal, tribal, state, and local levels (in 17 select SEPA jurisdictions) were identified through systematic searches of legal databases (e.g., Westlaw, Lexis). These laws were strategically analyzed to determine opportunities for governmental agencies, public health officials and policymakers, community interest groups, advocacy organizations, and others to infuse health considerations and HIAs within environmental reviews. Key findings include:

- NEPA’s express statutory language promotes efforts that “stimulate the health and welfare of man,” which evinces Congress’ intent, in part, to protect human health.
- The federal Council on Environmental Quality (CEQ), tasked with providing guidance and promulgating NEPA regulations, requires all NEPA projects to identify any health effects caused by direct or indirect impacts on the physical environment, compare the health effects to economic and technical factors, and include data in resulting documents for review.
- Any “major Federal action significantly affecting the quality of the human environment” triggers federal agencies to develop a detailed statement of potential environmental impacts, including detrimental effects to human health.
• NEPA requires federal agencies to assess the present, past, or future cumulative effects of proposals and actions, which may include a review of the potential health impacts.
• Public comment periods occur at various stages of NEPA processes and permit individuals, agencies, and advocacy organizations to raise health considerations, which can be most effective when made early in the process.
• The scoping period, which occurs after a federal agency has decided to provide an Environmental Impact Statement (EIS) for an action or project, allows the agency to consider alternatives and impacts and determine potential health issues.
• Certain environmental projects or actions governed by other federal laws (that essentially make NEPA assessments redundant) may forego an EIS under the “functional equivalence doctrine,” but still include assessments of health impacts.
• Via Executive Order federal agencies must take steps to consider the impact the agencies’ policies and actions on low-income and minority populations, including impacts on human health in strategies to support environmental justice.
• Beyond NEPA, federal agencies often include human health impacts when developing their own agency-specific policies and procedures for conducting environmental reviews.
• At the state and tribal levels, SEPA laws may require related agencies to include risks to human health or safety in pertinent environmental reviews.

Table 1, **Summary of Prospective Paths to Integrate Health Impacts**, below, briefly introduces and summarizes the 10 identified paths (discussed thoroughly in **Part III** of the Report) to integrate health considerations into environmental reviews. The final column of the table highlights the entities (e.g., agencies, public health officials/policymakers, community interest groups, and advocacy organizations) that may be well positioned to explore and utilize these specific paths to infuse health impacts into environmental reviews at various stages.

**Table 1. Summary of Prospective Paths to Integrate Health Impacts**

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<th>Paths</th>
<th>Summary</th>
<th>Best Utilized By:</th>
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| 1. Statutes & Regulations Promoting Health & Safety Considerations | NEPA’s statutory language expresses clear Congressional intent to protect the public’s health and promote measures that avoid unnecessary harm to human health. Most SEPAs also mention human health and safety as targets when discussing adverse impacts of planned significant actions. These laws provide a basis for incorporation of health as an element of NEPA or SEPA required processes. | • Agencies  
• Public health officials/policy makers |
| 2. Significantly Affect Human Environment | NEPA requires that all federal executive agencies produce a detailed statement of environmental impact for “major Federal actions significantly affecting the quality of the human environment.” Certain NEPArated regulations require the examination of the context of an action and the intensity of its impacts to determine whether impacts rise to a significant level, or else face potential legal challenges. Similar requirements of “significance” are found in nearly all SEPAs. Agencies may incorporate health impacts during this stage while assessing whether such issues rise to a threshold level of significance. | • Agencies  
• Public health officials/policy makers  
• Community interest groups  
• Advocacy organizations |
| 3. Allegations of Detrimental Health Impacts | Health considerations may be brought into NEPA processes by direct allegations of a proposed project’s harm to human health under the “significantly affects” language. HIAs may help determine whether a | • Agencies  
• Public health officials/policy makers |
<table>
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<th>Summary</th>
<th>Best Utilized By:</th>
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| project has direct negative health impacts. |                                                                                                                                                                                                     | policymakers  
| 4. Scoping Process    | NEPA (and many SEPA) related regulations require an agency to consider actions, alternatives, and impacts during the scoping process. The scoping process provides an early opportunity to determine whether certain issues may be found to rise to a significant level before an EIS is completed. | • Agencies  
|                       |                                                                                                                                                                                                     | • Community interest groups  
|                       |                                                                                                                                                                                                     | • Advocacy organizations |
| 5. Cumulative Impacts | Cumulative impacts factor prominently into the EIS scoping period by providing an opportunity for health considerations during review of the effects of past, concurrent, or reasonably foreseeable future actions (the “cumulative impact”). | • Agencies |
| 6. Public Involvement | Public notice and comment are vital components of NEPA (and most SEPAs) implementation processes through which health and safety concerns may be raised.                                                                 | • Agencies  
|                       |                                                                                                                                                                                                     | • Public health officials/policymakers  
|                       |                                                                                                                                                                                                     | • Community interest groups  
|                       |                                                                                                                                                                                                     | • Advocacy organizations |
| 7. Proposed Action Alternatives | Agencies must generally provide and consider reasonable alternatives to proposed projects including viable suggestions received through public participation. Many states also require reviews to include alternatives. Health impacts may be considered related to use of safer procedures or products. HIAs can also be useful toward advancing the review process by identifying alternatives addressing health impacts. | • Agencies  
|                       |                                                                                                                                                                                                     | • Public health officials/policymakers  
|                       |                                                                                                                                                                                                     | • Community interest groups  
|                       |                                                                                                                                                                                                     | • Advocacy organizations |
| 8. Functional Equivalence Doctrine | Some projects that normally require an EIS to proceed may forego it in situations where courts have found completion of an EIS essentially redundant. To the extent these “functionally equivalent” laws consider protection of the public’s health, they provide paths to incorporate health impacts into the review process. Some SEPAs require the incorporation of other relevant state agencies’ public health considerations. | • Agencies |
| 9. Policies Promoting Health & Safety Considerations | Federal and state agencies may issue guidance that expands on regulations relevant to the incorporation of health considerations, such as checklists or instructions specifically targeting threats that may pose detrimental health effects.                                                                 | • Agencies  
|                       |                                                                                                                                                                                                     | • Public health officials/policymakers |
| 10. Environmental Justice | Two federal executive orders issued in the 1990s encourage federal actions to address environmental justice among low-income and minority populations. Many SEPAs also require consideration of a range of impacts concerning certain populations, often focused on health. These broaden the inclusion of targeted considerations in NEPA/SEPA processes, with an opportunity to include health impacts that negatively affect these populations. | • Community interest groups  
|                       |                                                                                                                                                                                                     | • Advocacy organizations |
Part I, Project Objectives and Methodology, of this Report summarizes the legal research approach, methodology, and limitations related to the exploration of NEPA and SEPA.s. Part II, Scope of Environmental Policy Acts, provides essential background information on NEPA and SEPA.s. Part III, Key Legal Paths Supporting Assessments of Health Effects and HIAs in Environmental Reviews, describes major research findings enveloped in 10 identified, interrelated paths (described in Table 1, above) for incorporating health considerations into required environmental reviews. A brief conclusion reflects on future opportunities and implications for integrating HIAs into NEPA and SEPA assessments.
I. Project Objectives and Methodology

This project seeks to assess specific federal and state environmental laws and policies supporting the infusion of health considerations and HIAs into NEPA- and SEPA-required environmental reviews of proposed projects and actions. The phrase “environmental review” is used throughout the Report to encompass all types of reviews and assessments under NEPA and SEPA, including Environmental Assessments (EAs) and EISs, among others.

NEPA and SEPA statutes, regulations, and policies provide a strong basis for the incorporation and analysis of health impacts into environmental reviews. However, the laws do not specifically mention or require the use of HIAs, which consider impacts far beyond those that affect the physical environment. Given that environmental reviews are costly and time-intensive, often taking years to complete, governments may be hesitant to broaden the scope of the assessments. This Report acknowledges this reality and seeks opportunities, supported by law and policy, to incorporate health considerations via HIAs and other assessments into environmental reviews improve the public’s health.

The HIA process, highlighted in Figure 1, compiles “scientific data, health expertise, and public input to understand how a proposed plan, policy, program, project, or action could affect the public’s health.” HIAs take a broad approach to health, considering influences from social, economic, and environmental determinants. For example, HIAs might consider the effects of construction of an industrial factory on the physical and mental health of a community, the influence of a new neighborhood design on residents’ well-being, or the impacts of agricultural policies on equitable access to healthy foods. They may propose timely modifications to proposed projects, inform policy conversations, and stimulate recommendations on how best to mitigate and manage harmful health effects and promote and enhance public health benefits. HIAs also evaluate whether specific proposals might uniquely affect certain populations, such as children or older adults. By evaluating prospective benefits, risks, and trade-offs, HIAs equip decision-makers with valuable information to make policy choices in promotion of community health. HIAs are rarely required by law, though some states have mandated their use in certain sectors including transportation and natural resources.

NEPA (discussed thoroughly in Part II) established comprehensive procedures for the review and analysis of federal agency actions that may significantly affect the human environment. At the state and local levels, SEPAs provide similar processes for evaluating certain projects and
actions that may affect the environment. Incorporating health considerations and HIAs into required NEPA and SEPA environmental review processes can provide efficient paths to improved public and environmental health. Their incorporation, however, depends on legal and policy support.

Agencies performing NEPA and SEPA environmental reviews currently utilize different types of health assessments, including occasional HIAs. However, more commonly environmental reviews incorporate Human Health Risk Assessments (HRAs), which are much narrower than HIAs, and analyze health impacts resulting from hazardous substance exposure. Similarly, Life-Cycle Assessments (LCAs) are used to comprehensively evaluate the full range of environmental and health impacts of a product or activity across its life-cycle (e.g., material acquisition, manufacturing, use, and disposal). Unlike HRAs and LCAs, which narrowly focus on specific products or hazards, HIAs consider and analyze a wide-array of factors affecting health.

According to the Environmental Protection Agency (EPA), HIAs benefit the analysis of human health and environmental justice considerations during environmental reviews. To further NEPA goals, HIAs provide decision-makers with information necessary to identify alternatives or potential mitigation measures, broader effects on community members, disproportionate health impacts on specific populations, and potential overall health benefits. Through a memorandum promoting the use of HIAs, EPA reported its intent to develop systematic tools for conducting HIAs in the NEPA process, web-based HIA training, and introduced an HIA best practices guide.

A. Methodology

Prior research has focused on the outcomes of HIAs and their use in specific sectors, such as transportation or housing. Less studied is the legal support for the enhanced use of health impacts and HIAs through reviews required by NEPA/SEPA. For purposes of this Report, “law” generally refers to statutes, regulations, case law, executive orders, and other sources.

This project uncovers and analyzes paths and opportunities for imbedding broader health considerations and HIAs into NEPA and SEPA-required reviews. The goal is to determine how HIAs and related health impacts may “legally fit” with environmental reviews. In a corollary project, ASTHO colleagues conducted a series of 5 case studies in select jurisdictions to assess public health outcomes of timely HIAs in key environmental projects and evaluate the impetus for non-health sector support of HIAs in environmental reviews.

A systematic review of laws at the federal level and among the 17 SEPA jurisdictions (16 states and the District of Columbia (DC)) with NEPA equivalent acts (see Figure 2, below) was conducted using specific search terms and parameters and available legal search engines (e.g., Westlaw, Lexis). Review of these laws is focused on determining the legal authority for how health analyses or HIAs may fit within the environmental review process at relevant stages. Select illustrative research results are organized into tables and discussed in Part III.
Statutory language from NEPA and SEPA s was initially inventoried, reviewed, analyzed, and categorized based on 8 factors documented in Appendix 1: Summary of NEPA/SEPA Legal Provisions Across Jurisdictions. The table analyzes and compares varied statutory construction, language, and application of NEPA and SEPA s; identifies key stakeholders; notes definitions of significant terms; and denotes mentions of human health and safety. SEPA required environmental reviews are limited to only state agency actions in 11 states. SEPA s in the remaining 6 jurisdictions (CA, DC, HI, MA, MN, and NY) apply more broadly to also include private actions where permits or approvals are required. Most SEPA s (14) mention human health, safety, and welfare as a prime focus in addressing adverse impacts of planned significant actions in their statutory language. SEPA s emphasizing health considerations support use of health assessments in the environmental review process.

Related case law, executive orders, and agency specific regulations and procedures were also reviewed, analyzed, and incorporated into the Report. Appendix 2: NEPA–Case Law Search Terms and Appendix 3: NEPA State Equivalents–Case Law Search Terms document raw numbers of judicial cases related to NEPA and SEPA s in relevant jurisdictions based on specific search terms provided. From this research, opportunities to incorporate health considerations and HIAs into environmental reviews were crafted.

Based on these findings and other information generated through additional legal research, specific paths to incorporate health and HIAs into environmental reviews were generated. Laws and policies discussed in Part III illustrate these 10 opportunities to incorporate health impacts into environmental reviews, which may vary based on jurisdiction.

B. Assumptions and Limitations

Research results do not include an exhaustive list of all laws and policies that could entail the use of health considerations and HIAs during the environmental review and assessment process. Rather, they illustrate potential paths to incorporate health impacts into environmental reviews under NEPA and SEPA s based on existing laws and policies. Identified paths may be available only under NEPA or specific SEPA s, and not in all jurisdictions or situations. Although other
jurisdictions outside of the 17 identified in Figure 2 may have other environmental laws and policies, research for this report is limited to jurisdictions with NEPA equivalent acts.

Tabular analyses in Appendix 1 focus solely on the statutory language of NEPA and SEPAs. It does not include assessments of regulations, case law, or any other laws, policies, or procedures that may alter certain provisions. Appendices 2 and 3 provide data concerning the raw numbers of judicial cases related to NEPA and SEPAs in the relevant jurisdiction based on the search terms provided. Specific searches for relevant cases highlighted in this Report may also include additional, precise terms not reported in these Appendices.

II. Scope of Environmental Policy Acts

Varying laws provide opportunities for incorporating analyses of potential adverse public health impacts into environmental reviews. As an indispensable prelude to assessing these varied paths in Part III, the sections below provide a brief overview of NEPA, SEPAs, tribal involvement, and emergency exemptions to legal requirements entailing environmental processes.

A. NEPA

Framed initially by Congress as a fish and wildlife bill, NEPA establishes a comprehensive federal environmental regulatory framework to “... prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man....” It requires all federal agencies to consider environmental impacts during proposed actions or project planning, seeking to balance social, economic, and environmental concerns. NEPA was intended to address “close causal relationships” between changes in the physical environment and their impact. According to the bill’s authors, NEPA aims to prevent damage to the “air, land and water which support life on earth.” Although NEPA does not define “impact,” CEQ, which provides guidance, promulgates regulations, and enforces the Act, requires assessments of direct and indirect impacts of a proposed action, project, or rule that will or may occur as a result of implementation. This includes ecological, aesthetic, historic, cultural, economic, social, and health effects according to CEQ.

NEPA requires a comprehensive environmental review for major federal actions that significantly affect the environment, such as building and roadway developments, waste removal, forestry, mining, and restoration projects. Reviews must be completed early enough that resulting information may be used in the decision-making process for the action or project, and not simply to support prior decisions. NEPA applies to all federal agencies and may apply to any federal agency action, including, among others, (1) executing projects and programs, (2) implementing agency rules, policies, procedures, (3) legislative proposals, and (4) funding. The Act also applies to private entities and individuals seeking permits from federal departments or agencies (e.g., U.S. Army Corps of Engineers, U.S. Department of Fish and Wildlife) or funds (e.g., federally secured loans).

CEQ requires federal agencies to adopt procedures classifying actions and projects appropriately under 3 levels of review:

1. **Categorical exclusion** (CE)—most categories of actions or projects (~95%) are determined by agencies to not have a significant effect on the human environment (e.g., financial, personnel, or facility operations), and are thus automatically excluded from NEPA requirements.
2. **Environmental assessment** (EA)–limited assessments of non-excluded actions or projects are required if the lead agency is unsure if it could have a “significant affect” on the environment. Although EAs are much less detailed than EISs, noted below, they include brief discussions of the project, alternatives, environmental impacts, and those consulted. Other agencies, applicants, and the public may be involved only “to the extent practicable.” If an agency determines based on an EA that an action or project will not significantly affect the environment, it issues a Finding of No Significant Impact (FONSI), concluding the NEPA process. Otherwise, a full EIS must be conducted. EAs are required in ~5% of all actions or projects; only ~1% of the cases necessitate a full EIS.

3. **Environmental impact statement** (EIS)–detailed review and analysis of proposed actions and alternatives are required for major federal actions “significantly affecting the quality of the human environment.” EISs must clearly describe the environmental impact of the proposed action to provide decision-makers with sufficient information to determine whether and how an action should go forward. The level of detail depends on the nature and scope of the proposed action or project, but must include a consideration of “cumulative impacts” (i.e., incremental impacts in light of other past, present, and reasonably foreseeable future actions initially or over time). The process concludes with an Issuance of a Record of Decision (RoD) describing the agency’s decision, proposed alternatives, and mitigation and monitoring plans.

Lead agencies (i.e., federal agencies responsible for conducting a specific environmental review) must consider other tribal, state, or local agencies for “cooperating agency” status. Cooperating agencies are those which have either authority over the jurisdiction where the project will occur or special expertise related to assessing relevant impacts. CEQ highly encourages lead agencies to solicit the participation of potential cooperating agencies to improve decision-making through early disclosure of information, reduction of duplicative efforts, and promotion of inter-agency efficiency.

Consistent with the federal Administrative Procedures Act (APA), NEPA requires procedurally-sound processes, but not specific results. The U.S. Supreme Court has described NEPA as “merely prohibit[ing] uninformed—rather than unwise—agency action.” As a result, courts generally can adjudicate only on the process, and not the substance, of NEPA-related disputes. Judging whether specific assessments are sufficient cannot be used generally to second guess an agency’s decision to act.

Courts may overturn an administrative decision only when an agency has not followed appropriate procedures and taken a “hard look” at the environmental consequences of its proposed action and alternatives. Courts have found that a “hard look” must consider Congressional intent, feature some evidence base, or lead to plausible decisions consistent with agency expertise. In some cases, courts have required detailed investigation of foreseeable direct and indirect impacts and risks of an agency’s action.

As per Figure 3, below, projects or actions that directly or indirectly affect the physical environment resulting in impacts on human health fall under NEPA’s purview. While physical health impacts are often considered, similar assessments of mental or psychological impacts are
largely disputed. In 1983 the U.S. Supreme Court held that there must be a “reasonably close causal relationship between a change in the physical environment and the effect at issue.”49 Adopting a causation test to determine whether an impact falls under NEPA, the Court declared that psychological effects of a particular federal action were too attenuated to be within NEPA’s reach.50 If agencies were required to evaluate psychological effects of every proposed action, the Court reasoned, the cost of acquiring psychiatric expertise would take away resources and attention from assessments of the physical environment.51 While not required every time, psychological effects may be relevant when they correlate to changes in the physical environment.52 Courts have also held that NEPA includes effects on the quality of life for residents of urban communities, such as “noise, traffic, overburdened mass transportation systems, crime, congestion, and even availability of drugs…”53

B. SEPAs

As per Figure 2 and Appendix 1, 17 jurisdictions have passed legislation similar to NEPA, collectively referred to as SEPAs.54 For purposes of this Report, SEPAs may be referred to specifically by the title or acronym of the state’s act (e.g., California’s act is known as “CEQA”) or more generally as the state’s SEPA. As noted in Part II. A., above, CEQA encourages federal agencies to work cooperatively with state and local agencies through joint environmental research, assessments, and hearings.55 Generally a lead federal agency works collaboratively with state or local agencies when NEPA and SEPA both apply.56 If an EIS conducted under NEPA also satisfies SEPA requirements, many jurisdictions encourage relevant lead agencies to rely (at least to some extent) on the federal review.57

Some SEPAs provide specific standards for judicial review (e.g., Washington).58 CEQA grants courts the discretion to determine whether an agency’s final decision is supported by an Environmental Impact Review (EIR).59 Like NEPA, however, most SEPAs do not address judicial standards for review, deferring to state-based APAs to set appropriate standards and parameters.

As per the U.S. Constitution, federal laws may preempt conflicting or inconsistent state and local laws if federal law occupies a relevant field or Congress specifies the preemptory nature of its acts. Preemption may prevent a state or local government from governing in some areas or easing restrictions below the federal “floor.” However, in 1978, the U.S. Supreme Court held that NEPA’s process requirements do not conflict with state statutes.60 Thus, SEPA projects that are also covered by NEPA (because of federal agency involvement or federal funds) may have to meet both acts’ requirements.

There are, however, instances when federal environmental review requirements may preempt state regulatory processes, particularly related to public lands.61 For example, railroad projects subject to the Interstate Commerce Commission Termination Act (ICCTA) may pre-empt SEPA
permit or deny rail carrier transportation, rules, routes, construction, and operation. In 2014, a California state appellate court held that CEQA does not apply to railroad operations because ICCTA pre-empts state regulation of railroads. Even when SEPA provisions are preempted by federal regulation, NEPA may still infuse health impacts into environmental reviews.

C. Tribal

Tribal nations also play a role in the NEPA process, though tribal compliance is not federally mandated. However, where NEPA applies, tribal leaders and members must be given meaningful opportunities to contribute in decision making consistent with Executive Order 13175 (which ensures all federal agencies consider tribal communities while also respecting their sovereignty). The Order requires federal agencies to consult tribal leaders or provide necessary funds before implementing new rules, policies, or guidance that will have tribal implications.

Some federally-recognized tribes have passed tribal environmental policy acts (TEPAs) similar to NEPA’s framework. TEPA models encourage Tribes to adopt environmental policies that incorporate health considerations. A guide produced by the Tulalip Tribes of Washington on NEPA participation, for example, provides tribal policymakers with a comprehensive environmental policy analysis, fusing public health considerations into the framework. Because NEPA emphasizes public involvement and coordination with local government jurisdictions, agencies must properly notify tribal leaders of any changes with substantial direct effects on the relationship of, or powers allocated among, federal government and tribes. Additionally, the 2005 Energy Policy Act provides funding for an intertribal environmental organization similar to EPA, which could provide resources for tribes to develop and carry out TEPAs. The program has not been implemented to date.

D. Emergency Exemptions

In emergencies, agencies may be exempt from NEPA procedural requirements under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). Agencies may also seek an emergency exemption under §1506.11 of CEQ’s regulations where immediate action is necessary. This exemption requires agencies to consult with CEQ to determine alternative arrangements to normal processes, despite potential significant environmental impacts.

CEQ granted 41 alternative arrangements from 1977 to 2008, focused largely on water issues, pesticide spraying, emergency response, and military support. For example, in 1983, CEQ authorized pesticide spraying on Yuma Proving Grounds, Arizona in response to an encephalitis outbreak. In Hawaii, CEQ authorized emergency road construction to protect public safety by preventing expected lava flows from cutting off community access to major routes. Other alternative arrangements include Federal Emergency Management Agency (FEMA) grant programs in New Orleans after Hurricane Katrina allowing for immediate construction of critical physical infrastructure such as hospitals, health care facilities, wastewater treatment plants, police and fire stations, and schools.

What constitutes an “emergency” under NEPA is not defined and courts have rarely been asked to apply the exemption. In 1981, a Michigan federal district court upheld CEQ’s authority to waive NEPA regulatory requirements and approve alternative arrangements under the exemption. Other courts have supported the assertion (without ruling on the exemption) that prompt, immediate, noncompliant NEPA action may be needed to protect the public in emergencies.
Federal agencies may provide their own public health and safety exemptions. Under the Food and Drug Administration (FDA) regulations, whenever full adherence to NEPA may impede immediate actions required to protect health and safety, FDA can consult with CEQ to establish alternative arrangements before or after action is taken. States like Washington may also allow exemptions for SEPA processes under specific emergency circumstances.

### III. Key Legal Paths Supporting Assessments of Health Effects and HIAs in Environmental Reviews

As per Appendix 1, NEPA and SEPAs generally incorporate similar procedures that collectively support including health impacts in environmental reviews through 10 paths illustrated in the sections below. No laws specifically require or prefer the performance of an HIA during environmental review processes. However, legal support exists for their use to infuse health concerns into NEPA and SEPA requirements, or avoid or defend against legal challenges concerning agency assessments or determinations.

Timely use and incorporation of HIAs into these processes (directly or via incorporation by reference to the HIA or other assessment) are consistent with NEPA and SEPA laws focused on protecting health and safety. In general, the earlier that health and safety impacts can be recognized in the process, the greater their potential to be considered, studied, and potentially addressed. Figure 4, below, provides a timeline for the use of the 10 identified paths to incorporate health impacts and HIAs during NEPA and SEPA processes. It also illustrates the interrelatedness of these opportunities as part of a comprehensive strategy to embed health and HIAs in environmental reviews.

**Figure 4: Timeline of Paths in the NEPA Process**

![Timeline of Paths in the NEPA Process](image)
NEPA and SEPA laws provide a foundation for incorporating health & safety considerations into EAs and EISs.

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<th>Statutes &amp; Regulations</th>
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Congress expressed its intent clearly in NEPA to protect human health and avoid unnecessary harms when possible. NEPA’s express purposes include promotion of efforts that “stimulate the health and welfare of man,” and avoid risks to human health and safety in agency action planning. CEQ seeks to promote development of scientific knowledge and technology to reduce effects harmful to human health. It is tasked with developing policies that, among other goals, meet national health requirements. CEQ describes potentially significant impacts as those that directly, indirectly, or cumulatively affect a variety of areas, including health. Health effects of any NEPA project must be identified, compared to economic and technical factors of a project, and included within planning documents for review.

In practice, environmental reviews include an array of factors such as direct and indirect impacts on the environment that may affect health (e.g., water and air quality), the health of affected communities, and project workers. In 2016, for example, FDA conducted an EA on the use of genetically-engineered mosquitos as a control method in Monroe County (Key West), Florida. FDA analyzed multiple environmental and human health impacts including potential allergic reactions, toxic effects, and impacts on diseases transmitted by the mosquito species.

A recent draft EIR/EIS conducted by a California regional agency with the U.S. Department of State assessed the health and safety of construction workers in a conveyance and disinfection project. They analyzed the workers’ risk of exposure to hazardous materials during excavation, renovation, and demolition activities. The EIS noted that implementation of specific mitigation measures, including safety procedures in compliance with federal, state, and local regulations, would reduce the risk of exposure and improve worker safety and health.

Like NEPA, nearly every SEPA mentions health or safety, as noted in Appendix 1. Minnesota’s SEPA focuses on the promotion of human health-oriented efforts. It mandates that agencies conduct or oversee research necessary for human health impact determinations early in the assessment process. Connecticut’s SEPA states that environmental conservation and improvement efforts are aimed at enhancing human health and safety. Its regulations clarify that significant actions under SEPA can include those hazardous to human health or safety.

New York’s State Environmental Quality Review Act (SEQRA) defines “environment” as all physical conditions, including human health, when affected by a planned action. In New York, risks to human health alone may qualify an action as “significant.” In D.C., adverse effects are defined by an action’s propensity to significantly and negatively impact public health or welfare. Actions that may pose risks to public health, including those that use or dispose of health hazardous materials, likely qualify as significant impacts. Any D.C. agency that determines there is a danger to public welfare must disapprove of a project, absent adequate mitigating measures.

Some SEPA regulations require agencies to specify public health considerations. Hawaii’s SEPA rules declare that EIS discussions must include assessments of risk to human health or safety. Massachusetts’ EIRs must describe an action site’s existing environment, including unusual or disproportionate effects on public health that result from an increase in environmental impact,
even if seemingly minute. Under California’s CEQA, EIRs must specifically assess health impacts of projects at or close to schools, housing projects, pesticide programs, auto plant projects, and structural restoration projects.

As demonstrated in Illustration 1, below, HIAs performed in coordination with EIRs can supplement and inform health impact analyses executed via SEPA review processes. California’s Air Toxics “Hot Spots” Program requires an HRA for some sources of toxic pollution emissions beyond designated thresholds. In compliance with the Program, the Hermosa Beach Oil EIR included a table of significant health risks, some of which indicate significant cancer risks for project workers and nearby residents.

Illustration 1 – Hermosa Beach Oil HIA: In 2014, the Hermosa Beach (CA) Oil Production Project HIA was performed in coordination with a CEQA-required EIR. The HIA looked closely at potential impacts of the proposed oil drilling project including damage to air and water quality, noise and light pollution, and community livability. It made predictions of project-related health effects based on EIR findings, scientific literature, and other health-based thresholds. The HIA adopted a framework and timeline similar to the review process, expanding and supplementing the health effects considered in public comments and the resulting draft EIR.

These laws provide a solid basis for incorporating health and safety considerations into environmental reviews. When NEPA and SEPAs identify threshold considerations at specific phases in the process, human health will likely be a required focus. Though HIAs are not required to satisfy these laws, they provide sufficient grounding on health impacts that can support the use of HIAs and other health assessments to fully satisfy the goals and purposes of the acts.

| 2. Significantly Affects Human Environment | Actions that significantly affect the human environment require completion of an EIS and consideration of health impacts or adverse health effects. |

NEPA requires all federal agencies to produce a detailed EIS for “major Federal actions significantly affecting the quality of the human environment.” This key phrase and its relevant regulatory definitions provide meaningful opportunities for integrating health early into NEPA processes.

The term “significantly” is not defined statutorily, but regulations require that such determinations consider the context of an action and the intensity of its impact. This “intensity” prong generally refers to the severity of a project’s impact based on multiple factors, including effects on public health or safety. Additional factors include the controversial nature and uncertainty or risks of a project’s effects on the human environment. Since the presence of any single “intensity” factor may require an EIS in certain circumstances, inclusion of specific health-focused factors can be a powerful incentive to incorporate health into environmental reviews.

Whether a project significantly affects the human environment is a threshold determination. While individuals generally may not challenge the substance of an EA or EIS under NEPA, they can question an agency’s procedural decisions regarding what data to collect or what factors to consider. Failing to adequately consider “intensity” factors prior to issuing a FONSI may expose agencies to litigation. In a 2003 case, Highway J Citizens Group v. Mineta, a group of Wisconsin residents challenged a decision by the U.S. Department of Transportation (DOT), the Federal Highway Administration, and the Wisconsin DOT to move forward with construction of 2
overpasses without conducting a preliminary EIS. The group argued that the project would lead to increased contamination of groundwater stemming from a landfill near the project, flooding local residents’ water supply with arsenic and Trichloroethylene. It claimed that the performed EA had not adequately considered the public health risks required by regulatory “intensity” factors. The court pointed to in-depth and purposeful steps taken to address each factor and accordingly ruled in favor of the Departments. The Departments’ FONSI only survived scrutiny because of the targeted, scientific, and reasoned consideration of health impacts within the EA.

Agencies may stave off litigation and other opposition to FONSIs and other determinations by considering health impacts early, including through an HIA, subject to limitations. Challenges to an EA or EIS will succeed only if health impacts are shown to be specific, reasonably foreseeable, and sufficiently connected to the physical environment impacted by the project.

Health effects must not be alleged without specificity or factual support. For instance, challengers of an EIS conducted by the U.S. Army Corps of Engineers (Corps) failed to identify and allege specific health impacts resulting from the Corps’ discharges into water. Accordingly, a federal appellate court held that the general assertion of adverse human health impacts was inadequate to require performance of an EIS.

States’ “significance” requirements may differ from NEPA, but often contain similar phrasing and regulatory definitions. North Carolina’s SEPA requires a statement of environmental impact for uses of public land “significantly affecting the quality of the environment.” Regulations expand the scope of the phrase to any situation where there is a potential effect on public health. California’s CEQA and accompanying regulations require an EIR for potentially significant environmental effects, including instances where “[t]he environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.” Wisconsin’s Environmental Policy Act (WEPA) directly adopts guidelines for significance set out by CEQ. Some states include all actions which may have a significant impact, a threshold lower than NEPA’s.

Like NEPA and its regulations, state legal requirements have been upheld judicially to require some consideration of health and human environment impacts. However, a number of states’ requirements have been narrowly interpreted to require only an EIS based on limited and well-defined potential effects. To the extent that health impacts are caused by effects to the physical environment, significant impacts on human health alone may require an EIS, which may be supported by the use of an HIA.

### 3. Allegations of Detrimental Health Effects

Allegations of detrimental health effects (with direct impacts on the physical environment) may require NEPA assessments.

Health considerations may be brought into the NEPA process through direct allegations of a proposed project’s harm to human health under the “significant affects” language described above. Groups can challenge a forthcoming project by asserting its imminent, adverse impact on human health. Officials in San Juan, Puerto Rico used this method in July 2016 to challenge plans of the Centers for Disease Control and Prevention (CDC) and Puerto Rican officials to spray the insecticide, Naled, to control the spread of mosquitoes conveying Zika virus.
San Juan requested that the court prevent the aerial spraying due to the officials’ failure to formally consider studies showing potential respiratory complications, nausea, headaches, nervous system damage, skin irritation, and other complications. In the complaint, San Juan officials relied on previous studies investigating the health effects of Naled and other pesticides, as well as statements from the former EPA director. It also notes a local CDC spokesperson’s comments regarding heightened risk of exposure for asthmatics and pregnant women. Based on these adverse effects, San Juan argued that the spraying constituted a major federal action with significant effects on the human environment, which would require an EA and potentially an EIS, prior to commencement. This case illustrates how organizations may challenge an agency’s plans prior to its commencement. Although CDC and Puerto Rico quickly withdrew their plans to spray Naled without further court intervention, this path reveals how health assessments and HIAs may be integrated in a NEPA challenge.

| 4. Scoping Process | Prior to beginning an EIS review, determination of the scope of review provides an opportunity to highlight and incorporate health. |

NEPA’s scoping process occurs once an agency has decided to prepare an EIS for a particular project. The scoping period provides opportunities to determine the range of actions, alternatives, and impacts to be considered, as well as to identify significant issues. CEQ regulations require agencies to consider 3 types of actions, alternatives, and impacts. Litigation often focuses on an agency’s failure to adequately address at least 1 of the 9 required fields shown in Figure 5.

During scoping, CEQ regulations require lead federal agencies to invite affected governmental entities, proponents, and other interested parties to raise questions or provide comments. The public may also assess what aspects of a proposal will have a “significant effect on the human environment.” Issues deemed insignificant are largely dispensed with minimal discussion. Issues previously analyzed may be adequately addressed in the EIS by reference to the prior assessment (aka. incorporation by reference). For example, the Federal Aviation Administration (FAA) might adopt an EIS produced by the Air National Guard that considers all required and relevant issues surrounding the FAA’s related action. In addition, agencies have specific regulations and guidelines regarding the scoping of projects and actions under their purview.

Once significant issues are identified, scoping entails allocation of assignments among cooperating agencies and identification of additional consultation and review requirements, subject to lead agencies’ broad discretion. Because the scoping period occurs after the decision is made to move forward with an EIS, it opens a window to interject health issues through HIAs or other analyses conducted by governmental health agencies and community-based public health organizations. Lead agencies must assess, consider, and respond to all comments made within and

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*Figure 5: Agency Scoping*
after the scoping period. Still, courts may determine the alleged health impacts are outside of the agency’s scoping regulations, guidelines, or subject to other federal laws, as illustrated in Illustration 2, below.

**Illustration 2 – Stacy Branch Mine:** In 2014, a federal court of appeals (6th Circuit) affirmed a lower court determination that the U.S. Army Corps of Engineers properly granted a coal mining company permission to surface mine under several miles of streams within the Stacy Branch mine in western Kentucky. Environmental groups argued that the Corps violated NEPA by limiting the scope of its review, ignoring public health consequences of surface mining generally, when permitting the mine under the Clean Water Act. They alleged that the Corps should have considered the overall health effects of the mining activity. Instead, the court approved the Corps’ limited evaluation of the possible health effects of only the mining activities that directly affected streams under the Corps’ jurisdiction. Environmental groups have sought CEQ guidance to require the Corps (and potentially other agencies) to expand the scope of their environmental reviews.

| 5. Cumulative Impacts | Agencies must consider cumulative impacts of prior and projected future actions, which may expand relevant potential health impacts. |

NEPA requires that agencies analyze the cumulative effects of proposals to ensure all consequences, including health effects, are considered. Consideration of cumulative impacts begins during the initial EA, and continues through scoping and the EIS process. Originally published in 1997, CEQ’s report, *Considering Cumulative Effects Under NEPA*, guides agencies conducting these analyses. CEQ emphasizes identifying and describing a project’s “affected environment” to include communities. The “affected environment” under a cumulative impact analysis is broader than the analysis of impacts on the human environment, focusing on a greater geographical area and timeline. Further, it considers resources and socioeconomic issues resulting from cumulative effects of various “human health hazards” like emissions, water quality degradation, and disruption of community mobility.

Cumulative impacts are defined via regulation as environmental impacts stemming from the aggregated effects of past, concurrent, and reasonably foreseeable future actions undertaken by any actor, as illustrated in Figure 6. Even if such impacts are minor when considered individually, they can result in a “significance” determination when considered collectively, leading to a mandatory EIS. Therefore, EAs must sufficiently consider and discuss the possibility and extent of cumulative impacts of projects that may not appear significant initially. Failure to do so may lead to legal challenges of the sufficiency of a FONSI.

FONSI s can be successfully supported through early inclusion of cumulative health impacts. In a 2015 case, *Coalition for Healthy Ports v. United States Coast Guard (USCG)*, USCG produced an
EA for a proposal to raise the height of the Bayonne Bridge in the Port of New York and New Jersey. The Coalition for Healthy Ports, an association of area labor, community, and business groups, challenged the EA and USCG’s decision not to conduct an EIS for its proposed project. It claimed in part that USCG did not take a “hard look” at the cumulative health risks (as well as environmental justice impacts, discussed below) of the project when added to past impacts. However, USCG survived the challenge due to the EA’s inclusion of “detailed, empirical analyses of long-term construction-related air impacts, induced growth effects, and the potential impacts from hazardous and contaminated materials on pre-existing health conditions in [adjacent] communities.”154 While this analysis might not satisfy more rigorous EIS requirements, the court agreed it fulfilled the level of review required for an EA.155

Most SEPAs require similar cumulative impact analysis.156 The Montana Supreme Court upheld MEPA’s regulatory requirement that EISs describe a project’s impact on the human environment, including cumulative impacts.157 California courts have required a cumulative impact analysis where 2 or more individual impacts, when considered together, may increase environmental impacts.158 Many SEPAs also require that cumulative impacts be considered to determine whether an EIS is necessary.159 Montana requires that an EA evaluates cumulative and secondary impacts to the physical environment and on the affected human population.160 Wisconsin regulations require that the EA include a brief discussion of cumulative impacts resulting from “repeated actions.”161

In City of Buffalo v. New York State Department of Environmental Conservation, a New York appellate court held in 2000 that the agency violated SEQRA by failing to consider the cumulative impacts of a bridge and plaza construction together, and subsequently required it to prepare an EIS.162 While the consideration of cumulative impacts at the EA stage is often less stringent than later in the SEPA process, most states require some degree of analysis of similar foreseeable actions likely to exaggerate impacts of the proposed project. Additionally, where multiple, individual proposals in combination may implicate significant environmental impacts, courts have required agencies to produce a single EIS to analyze possible cumulative effects.163 Significant litigation has stemmed from challenges to agencies’ determination of the geographic scope of cumulative impact analysis, the choice of impacts considered, and the breadth of discussion regarding chosen impacts.164

Health impacts, like other environmental concerns, may be minimal individually, but can become exaggerated by unrelated or future actions. In Salmon River Concerned Citizens v. Robertson (1994), an environmental group based in 3 western states (CA, NV, OR) challenged an EIS for the use of herbicides as part of a U.S. Forest Service (USFS) reforestation program.165 The group raised concerns about the human health impacts of continued exposure to herbicides stemming from the proposed project individually and cumulatively with other herbicide uses.166 The court agreed that cumulative effects of herbicide exposure need to be considered in EAs and EISs. USFS’s EIS survived scrutiny, however, due to its thorough investigation of adverse health effects from cumulative exposures related to their program, including exposure via eating, drinking, and contact with sprayed vegetation. Additionally, USFS acknowledged the necessity for additional health evaluations in the case of future herbicide application proposals.167 As in Salmon River, incorporation of health into cumulative impact considerations may be critical to agencies’ compliance with NEPA.
6. Public Involvement

NEPA/SEPAs require public involvement, presenting opportunities to highlight potential health impacts, alternatives, and mitigation measures.

Throughout NEPA implementation, federal agencies are encouraged to facilitate public involvement at multiple junctures to the fullest extent possible, providing ample opportunities for integration of health considerations. To facilitate public comment and review, CEQ requires EISs to be plainly written in clear language. When possible, prior relevant materials should be incorporated by reference to avoid overly technical or unwieldy documents that stymie meaningful public contribution. Previously or simultaneously performed HIAs may be incorporated by reference into NEPA- and SEPA-required reviews, expanding potential health impacts and informing the public and decision-makers.

NEPA also requires public awareness of mitigation and monitoring efforts to ensure an agency is meeting its goals to reduce the action’s impact. Upon request, progress in carrying out mitigation measures must be disclosed to certain groups. Multiple federal district courts have also held that a supplemental draft EIS must be provided when necessary, particularly when proposed actions are dramatically different from their alternatives.

Community residents and interest groups raising health and safety concerns should do so early in the process to allow agencies adequate time to address comments. As per Illustration 3, below, HIAs and other assessments may inform the public and interested agencies of specific health impacts and mitigation measures to raise during the comment period.

**Illustration 3 – Alaska North Slope**: In 2007, the North Slope Oil Development HIA, the first conducted within the EIS framework, assessed health impacts of oil development on nearby Alaskan Native communities. It determined the project would lead to negative dietary, socioeconomic, and pollution exposure consequences if significant mitigation efforts were not taken. Residents’ expressions of these concerns during public hearings encouraged agencies to balance economic benefits with community needs, resulting in new air-quality monitoring methods and substance abuse education for project workers. Using examples and precedents for public health effect mitigation, the EIS discussed options to avoid the spread of infectious diseases in the workplace and improve conditions for healthy dietary choices.

Issues that are not raised in a timely manner cannot be meaningfully considered by the agency. Public comments must be formally submitted in writing to be included in the EIS. EISs must summarize submitted statements, draw major conclusions, point out controversial issues, and discuss choices made regarding action alternatives. To this end, a comprehensive HIA can provide information responsive to concerns raised by the public thereby facilitating the process and timeline.

Public comments should be specific, solution-oriented, and timely. Suggestions of specific alleged impacts and action alternatives should be offered, rather than mere statements of unsupported opposition. In 2015, the Bureau of Land Management (BLM) proposed a Moab Master Leasing Plan intended for oil, gas, and potash leasing. In response, the National Parks Conservation Association commented that BLM’s draft EIS was deficient in addressing duties to protect specific areas where air pollution requirements are the most restrictive, which are known as Class I areas. The Association recommended that BLM establish requirements to measure and
record impacts to address the human health of those within Class I areas. BLM responded that it was working toward implementing a dust-monitoring system for the planned action site.

A 2005 National Environmental Resolution Advisory Committee Report supported findings that agencies have failed to meaningfully incorporate public comments in decision-making using traditional NEPA practices, in part because agencies prepare NEPA documents defensively to avoid litigation and enhance the probability that a proposed project or rule will be carried out. In response, USFS and the Department of the Interior implemented Iterative NEPA, a method of conducting the environmental review process incrementally, enabling more effective community engagement in the decision-making process. Iterative NEPA provides informal opportunities for interested parties to provide comments on alternatives or mitigation measures and allows for a transparent and collaborative approach to the environmental review process.

Public notice is strictly required in nearly every SEPA jurisdiction. Some jurisdictions (e.g., Georgia and DC) only require public hearings when a minimum threshold of individuals demonstrates interest. Many SEPA.s require that public hearings be held in the same county where the planned action will occur, and may also include neighboring localities. Connecticut and DC require agencies to respond to all comments, whether written or oral. The scope of public comments may include present and future implications of a proposed action.

Heightened public involvement may arise when certain areas or types of resources are affected. New York’s SEQRA provides special procedures, including written public notice and a public hearing, for any action in New York’s critical environmental areas (CEAs). For example, multiple rivers and lakes in Suffolk County are designated CEAs because they protect drinking water supplies and provide public health benefits. Proposed projects involving these bodies of water require more intensive public input in the assessment process.

### 7. Proposed Action Alternatives

Environmental review processes must include alternatives and mitigation measures to proposed projects, providing paths for incorporating health considerations.

As per Figure 7, federal agencies must consider and evaluate 3 types of alternatives to any proposed project with significant effects: (1) no action, (2) other reasonable actions, and (3) mitigation measures. Alternatives can include changing the location or size of a project, altering how an objective is met (e.g., considering other power sources during dam construction), and examining effects if no action were taken. Agencies must:

- include alternatives to proposed actions in all recommendations and or reports on “major federal actions significantly affecting the quality of the human environment” and
- study, investigate, and propose appropriate alternatives to recommended actions where there are conflicts regarding “alternative uses of available resources” more broadly in EA and EIS processes.

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<td>Environmental review processes must include alternatives and mitigation measures to proposed projects, providing paths for incorporating health considerations.</td>
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**Figure 7: Action Alternatives**

Alternatives

- No action alternatives
- Other reasonable actions
- Mitigation measures
Courts have described alternatives as the “heart” and “linchpin” of an EIS. Infusion of reasonable alternatives into NEPA processes allows numerous health impacts to be considered and explored, including through HIAs, as discussed in Illustration 4, below.

Illustration 4 – Greenville, Wisconsin Sewerage: In 2011, the Neenah-Menasha Sewerage Commission Biosolids Storage Facility HIA listed pros and cons of alternatives to the planned sewerage facility, including incineration and landfill disposal. The project proposed construction of a waste storage facility for applying biosolids to farming land. The local community raised concerns about pathogens, toxic chemicals, and potential groundwater contamination. The HIA holistically approached the alternatives, balancing health impacts with economic, administrative, and public values. It determined that alternative methods also posed possible human health risks due to potential air pollution and water contamination that, combined with project costs and waste reuse potential, would be less advantageous methods of storage.

Suggesting reasonable alternatives that may mitigate potential health impacts early in the NEPA process, such as the use of a safer pesticide, may lead agencies to consider them or face legal challenges. Successful challenges often focus on conclusory discussions of alternatives or situations where circumstances changed and an agency failed to reevaluate alternatives.

Many jurisdictions also require strong consideration of alternatives (e.g., Hawaii, Georgia, and Indiana). California’s CEQA provides that EIRs must describe a reasonable range of alternatives, including alternate viable locations for projects and evaluation of comparative merits of alternatives. Jurisdictions requiring assessment of alternatives may allow for the study of additional health impacts via HIAs, which can holistically assess the alternatives and mitigation measures.

| 8. Functional Equivalence | Environmental laws pivotal to NEPA/SEPA assessment processes provide other routes for assessing public health concerns. |

The planning, review, and implementation process of many NEPA-governed projects may include multiple agencies and implicate other federal laws or regulations. Through the narrow court-created “functional equivalence doctrine,” projects that would normally require an EIS to proceed may forego them if other laws also governing the project essentially make an EIS redundant. Courts have limited the doctrine to certain acts administered by EPA, including the Clean Air Act (CAA) (which is now statutorily exempted as explained below), the Resource Conservation and Recovery Act, and the Comprehensive Environmental Response, Compensation, and Liability Act (a.k.a. “Superfund” Act).

EPA’s actions under CAA are exempt from NEPA. However other actions including some research and development projects, construction of facilities, grants and permits, and actions applicable to Clean Water Act are not exempt from NEPA requirements. Where EPA is exempt, it may still conduct voluntary EAs and EISs, particularly to assist other federal agencies or address large-scale cumulative impacts, environmental justice considerations, controversial issues, or impacts on public health. To the extent these (and other) laws consider the protection of the public’s health, they provide a potential route to incorporating specific health impacts into environmental reviews.
Outside of the functional equivalence doctrine, other federal environmental regulations may implicate environmental reviews. The CAA authorizes EPA to review certain proposed actions in accordance with NEPA processes. Section 309 states that EPA must review and comment on the environmental impact of any matter subject to the CAA. This includes proposed laws and federal projects. If any part of the proposed action is unsatisfactory in terms of public health, the determination must be published and referred to CEQ. CAA standards govern many federal agency actions subject to NEPA, effectively preventing acting agencies from withholding or insufficiently gathering public health and safety data.

In 2005, EPA declared a BLM oil and gas exploration and development project environmentally unsatisfactory. It also found the EIS inadequate because the project would have resulted in CAA non-compliance, visibility impairment, and groundwater contamination. Appropriate mitigation measures were developed to improve the standards of the project and reduce adverse impacts. In 2009, another draft EIS conducted by BLM was deemed inadequate because of exposure to asbestos and related public health concerns to recreational off-highway vehicle (OHV) users. The high-risk areas were closed to OHV users as a result. EPA conducted its own assessment of planned actions and publicized its air quality impact determinations.

Some SEPAs require incorporation of relevant state agencies’ considerations or analyses related to health. Washington’s SEPA defers to its Department of Transportation for certain projects requiring greenhouse gas emissions evaluations, including potential human health and safety impact considerations.

| 9. Policies Promoting Health & Safety Considerations | Agency procedures/policies for NEPA/SEPA implementation may focus on specific public health impacts or concerns. |

Federal agencies are required to adopt and implement their own policies and procedures regarding environmental reviews. Federal and state agencies set forth guidance for their own action- or project-planning processes, often focused on when and how to incorporate human health considerations. Though these policies and procedures are not legally binding to the same extent as regulations, however, in a challenge to an agency action, courts may require agencies to follow their own stated procedures and policies.

BLM’s NEPA Handbook states that public health effects must be included in determinations of an action’s significance and environmental effects should be analyzed in relation to human health and safety. In a 2016 EIS for multi-state use of new herbicides, BLM conducted an HRA, quantifying and characterizing risks by estimating potential human exposure as a result of routine use and accidental scenarios involving new herbicides. It found that introduction of the new herbicides posed little to no risk to human health, with potential health impacts likely only resulting from accidental exposures.

USCG’s NEPA instruction manual includes a checklist analysis that assesses likely impacts on human health, such as potential impacts on pedestrian and bicyclist safety, and whether planned actions could facilitate or inhibit access to health services. The U.S. Department of Energy (DOE) has produced numerous NEPA guides detailing, for example, required determinations for conducting transportation projects. In its Transportation Risk Assessment Handbook, DOE underscores the need for assessing human health impacts, including acute, chronic,
cancerous, and non-cancerous risks on current subpopulations and future generations.\textsuperscript{223} It also requires consideration of cumulative human health impacts resulting from long-term and repeated human exposure to radiation.\textsuperscript{224}

State agencies may issue similar guidance that can justify the incorporation of health impacts into environmental reviews, especially for impacted agencies. Washington State’s Department of Ecology provides agencies with an \textit{Environmental Checklist Guidance}.\textsuperscript{225} Its SEPA Handbook\textsuperscript{226} contains a section on environmental health including toxic chemical exposure and known or possible contamination.\textsuperscript{227} Hawaii’s Office of Environmental Quality Control \textit{Guide to the Implementation and Practice of the Hawaii Environmental Policy Act}\textsuperscript{228} includes an EIS checklist that highlights public health threats an agency should consider.\textsuperscript{229} New York’s \textit{Full Environmental Assessment Form}\textsuperscript{230} provides agencies with checklists on various considerations, including a detailed list of potential factors (e.g., proximity of the project to a school or daycare, hospital, or nursing home contributing to human health impacts.\textsuperscript{231}

Other governmental groups assist agencies in assessing health impacts during action planning process. The legislatively-created Bay Area Air Quality Management District action planning guidance lists toxic air contaminants as a potential hazard to human health.\textsuperscript{232} Addressing environmental justice concerns, the document suggests agencies address impacted low income and minority communities by considering alternative locations for proposed projects.\textsuperscript{233} Massachusetts’ Healthy Transportation Compact\textsuperscript{234} is an interagency initiative tasked with improving public health by implementing HIAs in action planning processes and supporting healthy transportation public programs. Through HIAs, the Compact promotes policies that improve bicycle and pedestrian safety, reduce greenhouse gas emissions, and provide improved services for persons with mobility limitations.\textsuperscript{235}

| 10. Environmental Justice | Federal agencies must ensure low-income and minority populations are protected from disproportionately negative environmental health impacts. |

Over the last few decades, many policymakers and advocates have focused on environmental justice, defined as “[t]he fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income” through NEPA processes (and other federal health and environmental laws).\textsuperscript{236} Reducing disproportionate impacts of environmental burdens (e.g., pollution, landfills) on minority and low-income populations is a primary goal.

In 1994, President Bill Clinton mandated via Executive Order that all federal actions address environmental justice in affected low-income and minority populations.\textsuperscript{237} The order (1) required that federal agencies make achieving environmental justice a part of their mission, (2) created an interagency workgroup to provide guidance and coordinate research, and (3) mandated development of agency-specific strategies that encourage public participation and support enforcement of health and environmental laws.\textsuperscript{238} President Clinton issued another executive order aimed at protecting children from environmental safety and health risks in 1997.\textsuperscript{239} As shown in \textbf{Illustration 5}, below,\textsuperscript{240} concerns regarding environmental justice can require broader analysis of actual and perceived health impacts.
While both of these orders support incorporation of health and safety concerns during EAs and EISs under NEPA, their impact is limited because they do not create any rights or responsibilities enforceable against agencies, nor any rights to judicial review, only imposing a duty on federal agencies. Still, select courts have validated claims challenging environmental justice analysis brought under NEPA and APA frameworks. In *Coalition for Healthy Ports v. USCG* (discussed above), the court agreed that USCG took a sufficiently hard look at environmental justice impacts of its bridge construction project. In its EA, USCG closely followed CEQ guidance and thoroughly discussed its analysis of the health effects on affected communities.

SEPAs in Washington, New York, and other jurisdictions also require consideration of a broader range of impacts compared to NEPA. In 2014, Massachusetts’ Governor Deval Patrick issued an Executive Order updating a 2002 policy requiring implementation of new environmental justice policies. Like the federal order, Massachusetts’ policy is aimed at protecting low-income and minority populations from environmental harms, reducing health risks, and encouraging public involvement.

**Conclusion**

NEPA- and SEPA-required environmental reviews present meaningful opportunities to improve the public’s health through the exploration and analyses of a wide array of human health impacts via HIAs. Infusing HIAs within environmental reviews not only furthers human health, but also advances other federal priorities including the promotion of environmental justice. Use and incorporation of HIAs present efficacious means to satisfy legal requirements pursuant to NEPA, SEPAs, and related agency regulations and court decisions.

Despite varied, interrelated routes to incorporate health impacts into environmental processes, legal and practical obstacles remain. Findings from HIAs may greatly facilitate the conducting of environmental reviews, but HIAs are not legally required and must be appropriately timed. Similarly, HRAs and other narrowly focused health assessments required in specific situations may integrate certain health risks into these processes. However, their limited focus may bypass broader health impacts typically considered in an HIA. Environmental reviews can be costly and time- and labor-intensive, often taking years to complete. Limited budgets among federal, state,
tribal, and local governments may diminish calls for additional facets focused on health impacts.

These hurdles are surmountable. Strong legal and policy support for the incorporation of health effects arises from the statutory and regulatory language of NEPA and SEPA's, specific agency policies, and opportunities for consideration of health effects that only HIAs can reveal. Hundreds of existing HIAs funded by the Health Impact Project and others provide a wealth of existing evidence and future models. Collectively, these assessments illustrate significant ways to improve health across a broad range of environmental issues. Many HIAs produced nationally center on projects traditionally under NEPA and SEPA’s purview, including built environment, transportation, natural resources and energy, agriculture, and housing. Incorporating health considerations into environmental reviews may increasingly commence and flow from the introduction and use of HIAs as the premier analytic tool.

The 10 paths identified in this Report provide significant, strategic opportunities to infuse health effects via HIAs into legally-required environmental reviews. They pave the way for agencies, public health officials and policymakers, community interest groups, advocacy organizations, and others to incorporate health considerations throughout all aspects of the environmental review process, but especially in early phases. As noted in Table 1, some entities and groups may be better poised to utilize specific paths in key instances. For example, a governmental agency involved in the environmental review process may raise concerns of potential adverse health effects during the scoping period. Advocacy groups or community interest organizations may be better suited to voice health impact concerns in public hearings, necessitating additional examinations and follow-up by lead or cooperating agencies.

Those challenging environmental reviews may rely on HIAs to buttress demands for change or calls for external judicial review. Agencies involved in the review process may incorporate HIAs by reference, highlighting alternatives for proposed projects that may lead to improved health outcomes. HIAs can also be effective in gaining community support for projects, helping agencies avoid health-related legal objections, and improving public health in fair and equitable ways. Ultimately, increased focus on health impacts fulfills the mission of policymakers to assure healthier and safer communities through cleaner and more livable environments.
Appendix 1: Summary of NEPA/SEPA Legal Provisions Across Jurisdictions

This table examines key facets of NEPA and comparable SEPA laws in 16 states and the District of Columbia (DC). Specific focus is on the scope of these laws and extent to which health and public health concerns are included. Information in the numbered tabular columns is described below:

1. **Application**: Agencies and entities to which these laws apply vary across jurisdictions.
2. **Substantive**: Substantive acts provide additional authority to the overseeing agencies; procedural acts require only a process, rather than a specific result.
3. **Health Emphasis**: Legislative reference to public health/human health may support analysis and inclusion of health impacts within review processes.
4. **Action**: Refers to the kinds of projects that trigger NEPA and SEPA assessments.
5. **“Significant” Action**: Actions must also be deemed “significant” for NEPA processes to be implicated, which varies across jurisdictions.
6. **Exemptions & Exclusions**: Some jurisdictions detail specific types of actions exempted or excluded from an EIS. Others only exclude actions of agencies that adopt their own environmental planning protocols (known as the “functional equivalence doctrine”).
7. **Public Comment**: Most agencies are required to post EISs for public review and comment.
8. **Sufficient EIS**: For an EIS to be approved by an oversight agency, it must be considered legally “sufficient.” Most jurisdictions require agencies to detail the potential environmental impacts of the action, feasible alternatives, and possible mitigation measures to reduce the harmful impacts of planned action. Some states also require agencies to enumerate socio-economic effects, effects on private or historical property, and irreversible changes.

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>D.C. DCEPA (1989) D.C. Code. Ann. § 8-36</td>
<td>Department of Consumer &amp; Regulatory Affairs (DCRA)</td>
<td>Mayor, district agencies &amp; officials, &amp; private actions 255</td>
<td>No</td>
<td>Yes256</td>
<td>Broader</td>
<td>Adverse change only</td>
<td>Functional equivalence</td>
<td>Yes</td>
<td>Alternatives, impacts, mitigation measures, social-economic effects &amp; conservation considerations</td>
</tr>
</tbody>
</table>

29
<table>
<thead>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Georgia GEPA (1991)</td>
<td>Environmental Protection Division (EPD)</td>
<td>State agencies</td>
<td>No</td>
<td>Yes 297</td>
<td>More Limited</td>
<td><em>May significantly adversely affect</em></td>
<td>Agricultural &amp; forestry land management practices</td>
<td>Yes</td>
<td>Alternatives, impacts, mitigation measures &amp; social-economic effects</td>
</tr>
<tr>
<td>Hawaii HEPA (1974)</td>
<td>Office of Environmental Quality Control (OEQC)</td>
<td>State agencies, local agencies, &amp; private actions</td>
<td>No</td>
<td>Yes 298</td>
<td>Mixed</td>
<td>Case by case basis</td>
<td>Agencies develop own exemptions</td>
<td>Yes</td>
<td>Alternatives, impacts, mitigation measures, social-economic effects &amp; effects on community cultural practices</td>
</tr>
<tr>
<td>Indiana IEPA (1972)</td>
<td>Department of Environmental Management (DEM)</td>
<td>State agencies</td>
<td>No</td>
<td>Yes 239</td>
<td>Equivalent</td>
<td>Significant effect</td>
<td>Air, water pollution &amp; waste Management Board</td>
<td>No</td>
<td>Alternatives, impacts, mitigation measures, social-economic effects &amp; irreversible damages</td>
</tr>
<tr>
<td>Maryland MEPA (1973)</td>
<td>Department of Natural Resources (DNR)</td>
<td>State agencies</td>
<td>No</td>
<td>Yes 260</td>
<td>Broader</td>
<td>Significant effect, natural, socioeconomic, &amp; historic impact</td>
<td>Administrative actions of state agencies</td>
<td>Yes</td>
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<tr>
<td>Massachusetts MEPA (1977)</td>
<td>Executive Office of Energy &amp; Environmental Affairs (EEA)</td>
<td>State agencies, local agencies, &amp; private actions</td>
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<td>No</td>
<td>Broader</td>
<td>Potential for damage is not insignificant</td>
<td>None specified</td>
<td>Yes</td>
<td>Alternatives, impacts &amp; mitigation measures</td>
</tr>
<tr>
<td>Minnesota MEPA (1973)</td>
<td>Environmental Quality Board (EQB)</td>
<td>State agencies, local agencies, &amp; private actions</td>
<td>Yes</td>
<td>Yes 261</td>
<td>Equivalent</td>
<td>Potential for significant effect</td>
<td>Determined by rulemaking or programmatic review adopted by the agency</td>
<td>Yes</td>
<td>Alternatives, impacts, mitigation measures &amp; social-economic effects</td>
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<tr>
<td>Montana MEPA (1971)</td>
<td>Environmental Quality Council (EQC)</td>
<td>State agencies</td>
<td>No</td>
<td>Yes</td>
<td>Equivalent</td>
<td>Significant effect</td>
<td>Determined by rulemaking</td>
<td>Yes</td>
<td>Alternatives, impacts, mitigation measures, social-economic effects, irreversible damages &amp; impacts on private property</td>
</tr>
<tr>
<td>New Jersey Executive Order 215 (1989)</td>
<td>Department of Environmental Protection (DEP)</td>
<td>State agencies</td>
<td>No</td>
<td>No</td>
<td>More limited 263</td>
<td>Major construction projects</td>
<td>Expansive list of actions 264</td>
<td>No</td>
<td>Alternatives, impacts, mitigation measures, social-economic effects, cultural resources &amp; historic</td>
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<tr>
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<tr>
<td>New York SEQRA (1978) N.Y. Envtl. Conserv. Law §§ 8-0101 – 8-0117</td>
<td>Department of Environmental Conservation (DEC)</td>
<td>State agencies, local agencies, &amp; private action</td>
<td>Yes</td>
<td>Yes&lt;sup&gt;365&lt;/sup&gt;</td>
<td>Broader</td>
<td>May have significant effect</td>
<td>Expansive list of actions&lt;sup&gt;366&lt;/sup&gt;</td>
<td>Yes</td>
<td>Alternatives, impacts, mitigation measures, social-economic effects, irreversible damages &amp; growth-inducing energy impacts</td>
</tr>
<tr>
<td>North Carolina SEPA (1971) N.C. Gen. Stat. Ann. §§ 113a-1 – 113a-20</td>
<td>Department of Administration (DOA)</td>
<td>State agencies</td>
<td>No</td>
<td>Yes&lt;sup&gt;367&lt;/sup&gt;</td>
<td>More limited</td>
<td>Significant effect &amp; expenditure of public monies&lt;sup&gt;368&lt;/sup&gt;</td>
<td>Expansive list of actions&lt;sup&gt;369&lt;/sup&gt;</td>
<td>Yes&lt;sup&gt;270&lt;/sup&gt;</td>
<td>Alternatives, impacts, mitigation measures, social-economic effects &amp; irreversible changes</td>
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<tr>
<td>South Dakota SDEPA (1974) S.D. Codified Laws §§ 34a-9-1 – 34a-9-13</td>
<td>Department of Environment &amp; Natural Resources (DENR)</td>
<td>State agencies</td>
<td>No</td>
<td>Yes&lt;sup&gt;271&lt;/sup&gt;</td>
<td>Broader&lt;sup&gt;272&lt;/sup&gt;</td>
<td>Significant effect&lt;sup&gt;273&lt;/sup&gt;</td>
<td>No categorical exclusion process</td>
<td>No</td>
<td>Alternatives, impacts, mitigation measures, irreversible damages to resources &amp; growth-inducing aspects</td>
</tr>
<tr>
<td>Virginia VA EIR (1978) Va. Code Ann. § 10.1-1188</td>
<td>Department of Environmental Quality Office of Environmental Impact Review (DEQ OEIR)</td>
<td>State agencies</td>
<td>No</td>
<td>No</td>
<td>Broader&lt;sup&gt;274&lt;/sup&gt;</td>
<td>Major state project&lt;sup&gt;274&lt;/sup&gt;</td>
<td>Municipalities exempt from EIR requirement for local road projects; housing development authorities</td>
<td>No</td>
<td>Alternatives, impacts, mitigation measures, social-economic effects &amp; irreversible changes</td>
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<td>Washington SEPA (1981) Wash. Rev. Code Ann. §§ 43.21c.010-43.21c.914</td>
<td>Department of Ecology</td>
<td>State agencies</td>
<td>No</td>
<td>Yes&lt;sup&gt;275&lt;/sup&gt;</td>
<td>Broader</td>
<td>More than moderate effect is reasonably probable</td>
<td>Expansive list of actions&lt;sup&gt;276&lt;/sup&gt;</td>
<td>Yes</td>
<td>Alternatives, impacts, mitigation measures, social-economic effects &amp; irreversible damages to resources</td>
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<tr>
<td>Wisconsin WEPA (1971) Wis. Stat. Ann. § 1.11</td>
<td>Department of Natural Resources (DNR)</td>
<td>State agencies</td>
<td>No</td>
<td>Yes&lt;sup&gt;277&lt;/sup&gt;</td>
<td>Equivalent</td>
<td>Reasonableness standard</td>
<td>Minor actions&lt;sup&gt;278&lt;/sup&gt;</td>
<td>Yes</td>
<td>Alternatives, impacts, mitigation measures, social-economic effects &amp; irreversible damages to resources</td>
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</table>
Appendix 2: NEPA – Case Law Search Terms

This table provides general search queries for NEPA-related cases across all federal using Westlaw’s advanced search. Search term result figures include all reported and unreported federal cases found from January 1, 1968 to June 21, 2016. The results in each row are exclusive to that row’s terms and do not account for any overlap in cases between search queries. Within each row, cases reflected in column 1 were filtered by way of the “Search within results” tool to produce the more limited figures in columns 2 and 3.

<table>
<thead>
<tr>
<th>SEARCH TERMS (Federal)</th>
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<th>FILTERED FOR “health impact”</th>
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<td>859</td>
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Appendix 3: SEPA – Case Law Search Terms

This table provides general search queries for SEPA-related cases across all courts within the specific state jurisdictions and DC (not including related federal cases) using Westlaw’s advanced search. This search includes all reported and unreported cases in the specified jurisdiction found from January 1, 1968 to June 21, 2016. Each row’s results are exclusive and do not account for any overlap in cases between search queries.

<table>
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<tr>
<th>SEARCH TERMS</th>
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<th>DC</th>
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<th>IN</th>
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<td>842</td>
<td>69</td>
<td>4</td>
<td>2</td>
<td>12</td>
<td>1</td>
<td>0</td>
<td>59</td>
<td>25</td>
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<td>3</td>
<td>17</td>
<td>3</td>
<td>6</td>
<td>113</td>
<td>50</td>
<td>16</td>
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<td>2</td>
<td>1</td>
<td>0</td>
<td>386</td>
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<td>1</td>
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<td>2</td>
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<td>69</td>
<td>21</td>
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<td>586</td>
<td>29</td>
<td>3</td>
<td>1</td>
<td>187</td>
<td>49</td>
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<tr>
<td>(ATLEAST1(&quot;ENVIRONMENTAL ASSESSMENT&quot;) OR ATLEAST1(&quot;ENVIRONMENTAL IMPACT STATEMENT&quot;) &amp; ATLEAST1(HEALTH))</td>
<td>257</td>
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<td>15</td>
<td>26</td>
<td>103</td>
<td>31</td>
<td>47</td>
<td>667</td>
<td>29</td>
<td>3</td>
<td>9</td>
<td>194</td>
<td>55</td>
</tr>
</tbody>
</table>
References

3 Improving Health in the United States: The Role of HIA, Committee on HIA, National Research Council 12 (2011).
5 The State of Health Impact Planning Assessment, American Planning Association (July 2016).
10 Promoting the Use of Health Impact Assessment to Address Human Health in Reviews Conducted Pursuant to the National Environmental Policy Act and Section 309 of the CAA, EPA (Nov. 10, 2015), https://www.epa.gov/sites/production/files/2016-03/documents/hia_memo_from_bromm.pdf.
11 Promoting the Use of Health Impact Assessment to Address Human Health in Reviews Conducted Pursuant to the National Environmental Policy Act and Section 309 of the CAA, EPA.
12 Promoting the Use of Health Impact Assessment to Address Human Health in Reviews Conducted Pursuant to the National Environmental Policy Act and Section 309 of the CAA, EPA.
13 Improving Health in the United States: The Role of HIA, Committee on HIA, National Research Council (2011); James G. Hodge, Jr., et al., Legal Review Concerning the Use of HIAs in Non-Health Sectors, Health Impact Project, http://www.pewtrusts.org/~~/media/legacy/uploadedfiles/phg/content_level_pages/reports/asufullwebsitep15webpdf.pdf.
15 New Jersey’s SEPA was created through an Executive Order and D.C.’s SEPA was established through municipal regulation.
21 40 C.F.R. § 1508.3.
22 40 C.F.R. § 1508.8.
Federal agencies must adopt processes that delineate criteria for determining types of actions they consider categorical exclusions. 40 C.F.R. 1507.3(b)(2)(ii).


COOPERATING AGENCIES IN IMPLEMENTING THE PROCEDURAL REQUIREMENTS OF THE NEPA, CEQ, (Jan. 30, 2002); THIRD REPORT ON COOPERATING AGENCIES IN IMPLEMENTING THE PROCEDURAL REQUIREMENTS OF THE NEPA, CEQ (June 10, 2015).


Ohio Valley Envtl. Coal v. Aracoma Coal Co., 556 F.3d 177, 191 (4th Cir. 2009) (citing Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989)). “Because NEPA is a procedural and not results-driven statute, even agency action with adverse environmental effects can be NEPA-compliant so long as the agency has considered those effects and determined that competing policy values outweigh those costs.”


DANIEL R. MANDELMAN, NEPA LAW AND LITIGATION § 10:9 (2016 ed.).


Metro. Edison Co., 460 U.S. at 775.


Other jurisdictions may have comprehensive or more limited environmental policy acts in addition to the 17 identified in this report. However, many sources refer to these 17 as the only jurisdictions with SEPAs similar to NEPA, which this report adopts.
NEPA AND CEQA; INTEGRATING FEDERAL AND STATE ENVIRONMENTAL REVIEWS, THE WHITE HOUSE 3 (2014),

40 C.F.R. § 1506.2(c).


Wash. Admin. Code, § 43.21C.090.


66 Exec. Order No. 13175.


72 42 U.S.C.A. §§ 5159, 5192; 40 C.F.R. § 1506.11.

73 40 C.F.R. § 1506.11.


75 DOE, Alternative Arrangements Pursuant to 40 CFR Section 1506.11 – Emergencies 1 (2008),

76 CEQ, Department of the Interior National Park Service Request for Alternative Arrangements for Emergency Access Route along the Lava-Covered Section of Chain of Crater Kalapana Road (2014),

77 FEMA, Alternative Arrangements to Meet NEPA Requirements for the Reconstruction of New Orleans Metropolitan Area Infrastructure Funded by Federal Emergency Management Agency Grant Programs 2,


80 21 C.F.R. § 25.16.


82 Concerning this table, EA process determines whether an action is major for the purposes of an EIS and whether categorical exemptions or exceptions may apply. EIS process is required where a proposed action may significantly affect the quality of the human environment. EISs must state reasonable alternatives to mitigate effects of adverse impacts. EISs must also reflect public and outside agency input gathered during comment and hearing phases. Final Determination consists of Record of Decision or FONSI in which an agency either states its planned course of action and mitigation measures or its finding that the action will not significantly impact the human environment.
84 42 U.S.C. § 4331(b)(3).
85 42 U.S.C. § 4372(d).
87 40 C.F.R § 1508.8.
88 40 C.F.R. § 1502.16.
91 Minn. Stat. § 116D.01.
92 Minn. Stat. § 116D.03 Subd.2(8).
94 Conn. Agencies Regs. § 22a-1a-3(a)(13).
95 N.Y. Comp. Codes R. & Regs. tit. 6, § 617.2(l).
96 N.Y. Comp. Codes R. & Regs. tit. 6, § 617.7(c)(1)(vii).
98 D.C. Mun. Regs. tit. 20, § 7201.2(j).
99 D.C. Mun. Regs. tit. 20, § 7210.3.
100 Haw. Code R. § 11-200-17(j).
102 Cal. Code Regs. tit. 14, § 15126.2(a) (EIR discussion must include health & safety problems caused by the physical changes); § 15186(a) (projects at and near schools require examination & disclosure of “potential health impacts resulting from exposure to hazardous materials, wastes, and substances”); § 15192 (threshold Requirements for Exemptions for Agricultural Housing, Affordable Housing, and Residential Infill Projects, which include the exposure of significant health hazards to future occupants is assessed and “the project site does not present a risk of a public health exposure at a level that would exceed the standards established by any state or federal agency”); § 15251(i)(3) (pesticide regulatory program administered by the Department of Pesticide Regulation & the county agricultural commissioners insofar as the program consists of dealing with monitoring human health & environmental effects of pesticides”); § 15278 (projects for applying coatings in auto plants must not “cause a net increase in adverse impacts of toxic air contaminants as determined by a health risk assessment”); § 15284(c)(1) (lead agencies for pipeline projects must inform all responsible parties & public health protection agencies that the agency chooses to invoke an exemption); § 15301(d) (for existing facilities, “[r]estoration or rehabilitation of deteriorated or damaged structures, facilities, or mechanical equipment to meet current standards of public health and safety” (with exception for emergency situations)).
106 42 U.S.C.A. § 4332(C).
107 40 C.F.R. § 1508.27.
108 40 C.F.R. § 1508.27(b)(2).
109 40 C.F.R. § 1508.27(b)(4); Indiana Forest Alliance, Inc. v. USFS, 325 F.3d 851, 857 (7th Cir. 2003) (controversy is not merely public opposition, but instead requires a “substantial dispute [about] the size, nature, or effect of the major Federal action”).

110 40 C.F.R. § 1508.27(b)(5); Nat’l Parks & Conservation Ass’n v. Babbitt, 241 F.3d 722 (9th Cir. 2001).


112 Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350-51 (1989) (“it is now well settled that NEPA itself does not mandate particular results, but simply prescribes the necessary process.... If the adverse environmental effects of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs. . . . NEPA merely prohibits unscrupulous—rather than unwise-agency action.”).

113 Highway J Citizens Grp. v. Mineta, 349 F.3d 934 (7th Cir. 2003).


115 Highway J Citizens Grp., 349 F.3d 938, 957-58; Kentucky Coal Ass’n, Inc. v. Tennessee Valley Auth., 804 F.3d 799, 802-03 (6th Cir. 2015) (TVA’s consideration of possible harms to human health or the environment suffices to support its decision to switch to natural gas).


117 State v. Andrus, 483 F. Supp. 255, 260 (D.N.D. 1980) (“indirect effects which are caused by the action and are later in time or farther removed from the action must still be “reasonably foreseeable.”).


119 Ohio Valley Envtl. Coal., Inc. v. U.S. Army Corps of Eng’rs, 716 F.3d 119 (4th Cir. 2013) (plaintiff fell short of proving the Corps conducted an arbitrary or capricious analysis).
135 40 C.F.R. § 1508.25.
136 40 C.F.R. § 1501.7(a)(1).
137 40 C.F.R. § 1501.7(a)(2)(3).
138 40 C.F.R. § 1501.7(a)(3).
139 Custer Cty. Action Ass'n v. Garvey, 256 F.3d 1024 (10th Cir. 2001); 40 C.F.R. § 1506.3 (agencies may adopt federal draft or final EISs so long as the document satisfies CEQ's NEPA regulations).
140 See e.g. 33 C.F.R. 325, App B § 7(b) (the U.S. Army Corps of Engineers).
141 40 C.F.R. § 1501.7(a).
142 Wyoming v. U.S. Dept. of Agric., 661 F.3d 1209 (10th Cir. 2011).
143 40 C.F.R. 1503.4(a); Memorandum for General Counsels, NEPA Liaisons and Participants in Scoping, Executive Office of the President, CEQ (Apr. 30, 1981), https://ceq.doe.gov/nepa/regs/scoping.htm. See also CITIZENS' GUIDE TO HAVING YOUR VOICE HEARD, CEQ 13 (DEC. 2007), HTTPS://CEQ.DOE.GOV/NEPA/CITIZENS_GUIDE_DEC07.PDF (scoping is “the best time to identify issues, determine points of contact, establish project schedules, and provide recommendations to the agency”).
146 40 C.F.R. §§ 1508.27(b)(7), 1508.8, 1508.25(a)(2).
147 CONSIDERING CUMULATIVE EFFECTS UNDER NEPA, OFFICE OF THE PRESIDENT, 23.
148 CONSIDERING CUMULATIVE EFFECTS UNDER NEPA, OFFICE OF THE PRESIDENT, 24-5.
149 CONSIDERING CUMULATIVE EFFECTS UNDER NEPA, OFFICE OF THE PRESIDENT, 24-5.
150 40 C.F.R. § 1508.7.
151 Klamath-Siskiyou Wildlands Ctr. v. BLM, 387 F.3d 989 (9th Cir. 2004) (EAs for two timber sales did not sufficiently identify or discuss the potential cumulative impacts of all sales, and are thus inadequate under NEPA).
152 Amigos Bravos v. BLM, 2011 WL 7701433 (D.N.M. 2011) (BLM’s EA adequately addressed cumulative effects of its actions on ozone emission levels and public health).
155 Coal. for Healthy Ports, 2015 WL 7460018 at 25.
157 Mont. Admin. R. 36.2.529(4)(b), 36.2.522; See Friends of the Wild Swan v. Dep’t. of Natural Res. & Conservation, 6 P.3d 972 (Mont. 2000) (department of Natural Resources and Conservation’s EIS is insufficient under NEPA for failing to include an explicit description and analysis of the project’s cumulative impacts).
159 Minnesota: MN ADC 4410.0200(11)(a), MN ADC 4410.1700, Citizens Advocating Responsible Dev. v. Kandiyohi Cty Bd. of Comm’rs, 713 N.W.2d 817 (Minn. 2006); But see Wisconsin’s Envtl. Decade, Inc. v. Wisconsin Dept. of Natural Res., 340 N.W.2d 722 (Wis. 1983) (WEPA dictates that cumulative impacts must only be considered if the environment will be significantly affected).
156 Mont. Admin. R. 36.2.525(d)–(e).
159 Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208 (9th Cir. 1998)(requiring the USFS to complete a single EIS addressing the cumulative effects of 5 proposed timber salvage sales where the sales raised “substantial questions that they [would] result in significant environmental impacts.”).
164 Hogback Basin Pres. Ass’n v. USFS, 577 F.Supp.2d 1139 (W.D. Wash. 2008) (geographic scope used by USFS when analyzing cumulative effects of a ski area in an inventoried roadless area was sufficiently exhaustive consistent with NEPA’s requirement to examine cumulative impacts); see also Idaho Sporting Congress, Inc. v. Rittenhouse, 305 F.3d 957 (9th Cir. 2002) (while agencies have broad discretion to determine the geographic scope of analysis, the choice “must represent a reasoned decision and cannot be arbitrary.”); Habitat Educ. Ctr., Inc. v. Bosworth, 363 F.Supp.2d 1090 (E.D. Wis. 2005) (USFSs EIS was inadequate for failure to discuss the choice of geographic area in which to analyze cumulative impacts).

165 Salmon River Concerned Citizens v. Robertson, 32 F.3d 1346 (9th Cir. 1994).

166 Salmon River Concerned Citizens, 32 F.3d at 1357.

167 Salmon River Concerned Citizens, 32 F.3d at 1358.

168 40 C.F.R. § 1500.2(d).


170 40 C.F.R. §§ 1502.8, 1502.21.

171 40 C.F.R. §1505.3(d).


173 State of Cal. v. Block, 690 F.2d 753, 770 (9th Cir. 1982).


176 Comments must be formal and in writing, otherwise they are not required to be included in the agency’s decision-making process. See Warm Springs Dam Task force v. Gribble, 621 F.2d 1017 (9th Cir. 1980); Gerber v. Babbit, 294 F.3d 173 (D.C. Cir. 2002) (the public had an adequate opportunity to comment).

NEPA requires a 45-day public comment period for draft EISs. A public hearing on a draft is only required if there is significant public interest. A 30-day review period is required for final EISs, which can also be used as the public review and comment period. 40 C.F.R. §§ 1506.10(c), 1506.6(c).

177 40 C.F.R. § 1502.12.


180 42 U.S.C. § 7475(c).


184 Unite Here! Local 5 v. City and Cty. of Honolulu, 231 P.3d 423 (Haw. 2010) (a person’s actual knowledge of an agency’s determination does not change requirement to submit the notice of publication).

185 D.C. Mun. Regs tit. 20 § 7208.3 (public hearing on an EIS must be within 45 days of any request made during the public comment period by 25 registered voters in a single member district, or if there is significant public interest); Ga. Code Ann. §§ 12-16-4(c), 12-16-5(a) (the public must be provided a copy of the environmental effects report, and a hearing is required upon the request of at least 100 Georgia residents).

186 S.D. Codified Laws § 34A-9-6 (public scoping meetings must take place in the county where the planned action will occur); Minn. Stat. § 116D.04(2a) (public scoping meeting must be held within the county of the proposed project).

187 CEQA Guidelines § 15082 (CEQA mandates that agencies provide a scoping meeting for projects that require an EIR or projects at the state and area-wide level and neighboring cities and counties must be invited to the meeting).

188 Conn. Gen. Stat. § 22a-1a-11 (all oral and written comments received at the public hearing to be considered for the final decision); D.C. Mun. Regs tit. 20 § 7209.2 (the hearing must give citizens affected and other interested parties the opportunity to present written and oral comments).

189 Skyline Sportsmen’s Ass’n v. Board of Land Comm’rs, 951 P.2d 29 (Mont. 1997) (the public should be given an opportunity to discuss whether a proposed project will take place in an area with significant public use values, including the area’s potential to provide significant public use value).

190 N.Y. Comp. Codes R. & Regs. tit. 6, § 617.14(g)(1)(i).


193 40 C.F.R. § 1502.14; NEPA Law and Litigation § 9:18 (citing Monroe Cty Conservation Council, Inc. v. Volpe, 472 F.2d 693 (2d Cir. 1972)).


199 NEPA Law and Litigation § 10:30; Wildearth Guardians v. BLM, 8 F. Supp.3d 17 (D.D.C. 2014).

200 Concerned About Trident v. Rumsfeld, 555 F.3d 817 (D.C. Cir. 1997); Sierra Forest Legacy v. Rey, 577 F.3d 1015 (9th Cir. 2009).


202 Alabama ex rel. Siegelman v. EPA, 911 F.2d 499, 503 (11th Cir. 1990) (RCRA is a functional equivalent to NEPA despite the fact that RCRA procedures do not require all that is required in a formal EIS.) But see Stephen M. Johnson, NEPA and SEPA’S in the Quest for Environmental Justice, 30 Loy. L.A. L. Rev. 565, 589-90 (1997) (RCRA lacks required consideration of indirect of effects of agency actions).


CERCLA 42 U.S.C. § 9601 (24) (“Remedy” or “remedial action” “means those actions consistent with permanent remedy taken instead of or in addition to removal actions in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or future public health or welfare or the environment, including any monitoring reasonably required to assure that such actions protect the public health and welfare and the environment...”).


42 U.S.C. § 7609(b).


EPA NEPA Compliance Division, EPA’s Review of NEPA Documents (EPA’s 309 Process) Slide 12.


40 C.F.R. § 1501.1.


VEGETATION TREATMENTS USING AMINOPYRALID, FLUROXYPYR, AND RIMSMULFURON, BLM 4-117 (2016).


COMMANDMENT INSTRUCTIONS M1675.1D, USCG 76.


A RESOURCE HANDBOOK ON DOE TRANSPORTATION RISK ASSESSMENT, DOE 10.

A RESOURCE HANDBOOK ON DOE TRANSPORTATION RISK ASSESSMENT, DOE 20.

Environmental Checklist Guidance, STATE OF WASHINGTON DEP’T OF ECOLOGY § 7,


Environmental Checklist Guidance, STATE OF WASHINGTON DEP’T OF ECOLOGY § 7.


NEW YORK, FULL EA FORM at 9. These factors include: proximity of the action location to a school or daycare, hospital, nursing home, or retirement community whether the action will lead to unearthed hazardous waste; an whether the proposal has planned mitigation measures to protect the health of current and future generations.


ASSESSING AND MITIGATING LOCAL COMMUNITY RISK AND HAZARD IMPACTS, BAY AREA AIR QUALITY MANAGEMENT DISTRICT 5-2 – 5-3.


Federal theories of environmental justice (and associated health concerns) may extend to other agencies and groups given that NEPA applies beyond federal agency actions (such as those funded partially with federal dollars).


Sur Contra La Contaminacion v. EPA, 202 F.3d 443, 449 (1st Cir., 2000); Morongo Bank of Mission Indians v. FAA, 355 F.3d 678, 688-89 (U.S. App. D.C. Cir. 2004). This court and others have also determined that they can review agency’s consideration of environmental justice issues under the APA’s “arbitrary and capricious” standard. Coliseum Square Ass’n, Inc. v. Jackson, 465 F.3d 215, 232 (5th Cir. 2006).


N.Y. Comp. Codes R. & Regs. tit. 6 § 617.2(l) (defines environment as “the physical conditions that will be affected by a proposed action” which includes existing patters of neighborhood character and human health); § 617.5(c)(33) (type II actions. Actions not subject to review include emergency actions immediately necessary for the protection or preservation of life and health); § 617.7(c)(1)(vii) (criteria for determining significance: “the creation of a hazard to human health”); § 617.14(g)(1)(i) (CEA designated if it uniquely relates to a “benefit or threat to human health.”). The goal of Wash. Rev. Code § 43.21C.010 is to stimulate the health and welfare of human beings; § 43.21C.480 (act necessary for immediate preservation of public peace, health, and safety); § 43.21C.020 (2)(c) (“[a]ttain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.”).


250 42 U.S.C. § 4321 (The purpose of the act includes “promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.”) Other relevant sections include: § 4331(b)(3) (“attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences”); § 4344(4) (CEQ must “develop and recommend to the President national policies to foster and promote the improvement of environmental quality to meet the conservation, social, economic, health and other requirements of the nation’’); § 4372(d) (one of CEQ Director’s duties is “promoting the advancement of scientific knowledge of the effects of actions and technology on the environment and encouraging the development of the means to prevent or reduce adverse effects that endanger the health and well-being of man.”).

251 Cal. Pub. Res. Code, § 21000(d) (“take immediate steps to identify and critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached.”); § 21094.5.5 (guidelines developed by the Office of Planning and Research shall include statewide standards that promote, among other goals, “protection of public health, including the health of vulnerable populations from air or water pollution, or soil contamination.”); § 21151.4(a) (EIRs must not be certified, and negative declaration must not be approved “for any project that might reasonably be anticipated to emit hazardous air emissions, or that would handle an extremely hazardous substance or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified pursuant to . . . the Health and Safety Code, that may pose a health or safety hazard to person who would attend or would be employed at the school” provided a few exceptions); § 21151.8(a)(3)(B)(i)-(iii) (regarding school districts, if the governing board of a school district makes a written finding that “the health risks from the facilities or other pollution sources so not and will not constitute an actual potential endangerment of public health to person who would attend or by employed at the school,” then, in combination with other factors, a project involving the purchase of a school site or construction of a new elementary or secondary school by a school district may allow for a negative declaration.).

252 Conn. Gen. Stat. § 22a-1 (“the policy of the state of Connecticut is to conserve, improve and protect its natural resources and environment and to control air, land and water pollution in order to enhance the health safety and welfare of the people of the state’’); § 22a-1a-3(13) (one of the indirect consequences is creation of human health or safety hazards); § 22a-1a(b)(3) (government has responsibility to use its resources so the state may: “attain widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable consequences.”).

253 Conn. Gen. Stat. § 22a-1f(b) (Connecticut Juvenile Training School project; extension of Connecticut River Interceptor Sewer Project); § 10a-109c(16) (“conversion of an existing structure for educational rather than office or commercial use.”).

254 D.C. Code § 8-109.04 (agencies must indicate whether impact threatens public health, safety, or welfare.).

255 Ga. Code Ann. 12-16-2(1) (“t]he protection and preservation of Georgia’s diverse environment [are] necessary for the maintenance of the public health and welfare . . . .”)

256 H.R. Code §§ 344-1 (“stimulate health and welfare of humanity”); § 344-2 (Environment definition includes conditions that “influence human well-being.”).

257 Ind. Code § 13-12-4-1 (“t]o promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humans.”); § 13-12-4-4(3) (Part of Indiana’s responsibility is to “attain the widest range of beneficial uses of the environmental without degradation, risk to health or safety, or other undesirable and unintended consequences.”).

258 Md. Code Ann. Envir. § 1-302 (“t]he protection, preservation, and enhancement of the State’s diverse environment [are] necessary for the maintenance of the public health and welfare . . . .”)

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261 Minn. Stat. §116D.01 (the purpose is to “promote efforts that will…stimulate the health and welfare of human beings”); §116D.03 Subd.2(8) (all departments and agencies required to “undertake, contract for or fund research as is needed in order to determine and clarify effects by known or suspected pollutants which may be detrimental to human health’’); §116D.04(6) (actions not allowed where there is a reasonable alternative that is consistent with public health, safety, and welfare requirements.)


263 N.J. Exec. Order 215.1 (“[p]rojects directly initiated by departments, agencies, or authorities of the State, as well as projects in which the State departments, agencies or authorities are granting at least 20% financial assistance, shall comply with this Order.”).


265 N.Y. Comp. Codes R. & Regs. tit. 6 § 617.2(1) (environment defined as “the physical conditions that will be affected by a proposed action” which includes existing patterns of neighborhood character and human health); § 617.5(c)(33) (Type II actions, actions not subject to review include emergency actions immediately necessary for the protection or preservation of life and health); § 617.7(c)(1)(vii) (criteria for determining significance: “the creation of a hazard to human health’’); § 617.14(g)(1)(i) (CEA designated if it uniquely relates to a “benefit or threat to human health.”).

266 N.Y. Comp. Codes R. & Regs. tit. 6 § 617.5 (type II actions).

267 N.C. Gen. Stat. § 113A-3 (declaration of State environmental policy is to “assure that an environment of high quality will be maintained for the health and well-being of all… widest range of beneficial uses of the environment without degradation, risk to health or safety…..”).


270 N.C. Gen. Stat. § 113A-4(2a) (NCEPA provides for a public comment period, requiring consideration of “written comment from units of local government and interested parties that is received within the established comment period.”).

271 S.D. Codified Laws § 34A-9-3(3) (exclusions include “emergency actions responding to an immediate threat to public health or safety.”).

272 S.D. Codified Laws § 34A-9-2(1)-(3) (new and continuing projects directly undertaken by an agency in whole or in part, policy creation, and issuance of a public entitlement to an applicant.).


274 Va. Code Ann. § 10.1-1188(A) (“[t]he acquisition of an interest in land for any state facility construction, or the construction of any facility or expansion of an existing facility which is hereafter undertaken by any state agency, board, commission, authority or any branch of state government, including state-supported institutions of higher learning, which costs $500,000 or more.”).

275 Wash. Rev. Code § 43.21C.010 (purpose of the law is to stimulate the health and welfare of human beings; 43.21C.480 (act is necessary for immediate preservation of public peace, health, and safety); § 43.21C.020 (2)(c) (“[a]ttain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.”).

276 Wash. Rev. Code §§ 43.21C.210-227 (specific Statutory Exemptions); §§ 43.21C.031(1), 43.21C.110(1)(a), 43.21C.229, 43.21C.450 (categorical Exemptions); Wash. Admin. Code §§ 197-11-800—890 (categorical Exemptions).

277 Wis. Stat. § 1.11 (citing policies set forth in Wis. Stat. § 274(c) (1971)). The purpose is to stimulate health and welfare of man; Attain the most and best use of the environment while attempting to minimize risk to health.

278 Wis. Stat. §§ 150.20(1m), 150.03(15).