

APPENDIX C

POSSIBLE SUBJECTS FOR AN ENVIRONMENTAL INFORMATION DOCUMENT

APPENDIX C. POSSIBLE SUBJECTS FOR AN ENVIRONMENTAL INFORMATION DOCUMENT

Checklists are often used as guidance for preparing environmental impact studies. Such checklists can never substitute for the careful scoping of issues for a particular project, nor should they be used as "fill-in-the blanks" assessments. But they can be helpful as a starting-point for the scoping and writing of an assessment. Environmental studies have such a potentially broad scope that remembering every plausible topic is difficult. Thus, one value of checklists is to remind experienced environmental professionals about subjects which may need to be considered in the assessment of a given project.

Appendix C is such a list of reminders. It is an alphabetized list of subjects which often or sometimes appear in EIDs and other impact documents. EPA anticipates that experienced EID preparers may check this list, as one step in determining that an EID study is adequately scoped; and that an EID report is reasonably complete. To help ensure that major subjects are not ignored, the checklist is highly redundant. For example, "fugitive dust" is partly duplicated by "dust", "air quality" and "suspended particulates".

On the other hand, the checklist is certainly not complete: every possible variation on each term could not be and is not included. Effective use of the checklist will require that a reader consider the entire assemblage of terms and use his/her experience to recognize additional subjects which require consideration in the EID. As one simple example, an experienced environmental professional would recognize that if the EID assesses a potentially significant dust impact, it probably should consider "dust controls", even though the term "dust control(s)" is not included here. Also, any EID will need to discuss project-specific geography and processes which are beyond the scope of this list. Further, there is a considerable array of Federal laws and regulations which can sometimes impact a project, but which are not all listed here; and, of course, State and local laws would be project-specific and are not included. Users of Appendix C are not relieved from the obligation to exercise their own judgment in determining that an EID provides the information needed by EPA.

This Appendix is written with numerous comments. These comments are varied, with some providing cross-references; others suggesting how a subject might fit into an EID; and still others written to stimulate the user to think of additional subjects of a similar type. Collectively the comments are intended to reinforce the basic role of the checklist, which is as a reminder of EID contents. One other use of this Appendix could occur when an EID is being finalized. At that time, EID preparers could again consult the list to help select the few dozen terms which belong in the EID index.

Appendix C is provided in support of good EIDs. The checklist does not represent EPA requirements for the contents of an EID or an EID index.

Abandoned mines

(This is an example of a special issue which may be associated with some projects. The EID should consider any and all such special issues if they are important to a particular project. This Appendix is not and could not be complete with respect to such issues. For the specific case of abandoned mines, both strip mines and underground workings are of interest.)

Accidents

(This subject could be discussed in an EID which provides a risk assessment.)

Acid drainage

(Another special issue.)

Acid rain

(This special subject tends to be a concern for larger projects than are the subject of a typical EID.)

Acronyms

(A list of acronyms is useful for many EIDs.)

Administrative framework

(Some projects and decisions can best be understood in the context of the administrative framework in which they are undertaken; if so, the discussion of project purpose and need should discuss that framework.)

Administrative order

(E.g., when a project is subject to some type of special environmental oversight.)

Advisory Council on Historic Preservation

(Also see cultural resources.)

Aesthetics

(Considered in EID if project may have visual or other aesthetic effects.)

Affected environment

(EIDS may have a separate section on the affected environment.)

Affected groups

(Refers to neighborhood groups, ethnic groups, low-income populations, tribal peoples, etc.)

Agencies

(EIDS should contain substantive discussions of specific federal, state or local agencies which have regulatory authority over or are funding sources for a project.)

Agriculture, agricultural lands

(This subject will be appropriate in EIDS for projects in areas where agricultural activities are important; also see prime farmlands, food and fiber production.)

Agrochemicals

(Also see pesticides, fertilizers.)

Airports/aircraft

(Discussed where airports are an important part of the environmental setting; where airports contribute to cumulative impacts: etc.)

Air pollution/air quality

(For some documents, EIDS may contain, and the index may reference, discussions of different contaminants, such as carbon monoxide, hydrocarbons, nitrogen oxides, ozone, particulates, sulfur dioxide, volatile organics, toxic metals, and emissions impacting acid rain, greenhouse warming or ozone depletion. There may be separate discussions and/or index entries for air emissions, dispersion modeling, ambient standards, emissions standards, pollution controls, attainment areas and Potential for Significant Deterioration.)

Algal blooms

(Special subject which may be important to some projects, especially those which may contribute nutrients to a reservoir, lake, pond or stream.)

Alternative fuels

(Special subject for inclusion in a discussion of energy resources and impacts.)

Alternatives

(Essential part of any EID. The index may cite specific alternative categories - such as siting, scheduling, wastewater treatment, sludge management - or general Types, including the No Action Alternative.)

Ambient

(Modifier, such as in ambient conditions -- see environmental setting -- or ambient standards.)

Amenities

(Sometimes discussed in relationship to socioeconomic conditions and/or quality of life.)

Animals

(Also see wildlife, fisheries, livestock.)

Appendices

(EIDS benefit if technical information, correspondence etc. are placed in appendices rather than in the body of the main report.)

Approvals

(See permits.)

Archaeology

(EIDS typically discusses regional archaeology, results of survey of project area for archaeological sites, results of SHPO coordination and other attributes of archaeological resources; also see cultural resources, historic sites, and Table 2-4.)

Architecturally significant properties

(Example of unique resources germane to some projects.)

Aquaculture

(Special subject, if project involves or impacts aquaculture features. A related subject is mariculture.)

Aquatic resources

(Aquatic resources will be an important part of the EID discussion for any project which impacts streams, wetlands, lakes, ponds, estuaries or the ocean. Depending on case-specific facts, the EID may need to discuss: specific water bodies, habitat types, habitat components (e.g. substrate), faunal types (such as macrobenthos, fisheries, waterfowl), and/or specific key species -- such as indicator species, endangered species, and/or species of commercial and/or recreational value.)

Aquatic weeds

(Example of special category under aquatic resources; can be important where weeds affect a project water supply or the project alters water flows and quality.)

Aquifers

(Also see ground water. This is an example of a subject for which many technical subcategories could be included in an EID, if ground water resources are particularly important to a project. Subcategory terms include "artesian pressure", "transmissivity", "specific yield", 'safe yield' and "vulnerability mapping".)

Archeological resources and properties

(See cultural resources.)

Aspirations and attitudes

(These subjects are sometimes raised in the context of community impacts, quality of life and way of life.)

Assessed values

(Potentially discussed in projects which could alter land values or tax assessments.)

Attainment areas

(Discussed in the context of air quality regulations and impacts.)

Atmospheric stability

(Also see climate, meteorology, air quality.)

Audits/auditing

(In the EI context, this refers to studies which measure environmental performance; for example, a project may be judged as more likely to have insignificant environmental impacts if the effectiveness of mitigation measures will be verified through periodic audits.)

Baseline data/conditions

(Refers to information and data which describe pre-project conditions. part of the baseline.) Note that any trends that are already occurring are

Benefit-cost analysis

(Tool used in assessment of alternatives; also see cost-effectiveness.)

Bathymetry

(Submerged topography; possibly important for EIDS which concern coastal projects.)

Benthic organisms

(Example of a possible subcategory in the EID discussion of biological resources and impacts: most likely needed for projects which alter stream, estuary or coastal environments.)

Best Available Technology (BAT)

(One of several terms which are used formally in the discussion of effluent or emissions standards. Technology must be demonstrated and economically achievable to be BAT. Other examples: BCT is best conventional-pollutant control and BPT is best practicable control technology currently available.)

Best Management Practices

(Potentially important component of EID discussion with respect to pollution prevention, pollution control, mitigation and/or monitoring.)

Bioaccumulation

(Special subject for a project which may discharge bioaccumulating substances.)

Biological assessment
(Study conducted in accordance with Section 7 of Endangered Species Act.)

Biological diversity/biodiversity
(Where projects affect natural ecosystems, the issue of biodiversity normally needs to be discussed.)

Biological resources
(General EID section for discussion of vegetation, wildlife, aquatic environments, wetlands, endangered species etc.)

Biomass burning
(Some projects involve burning of in-situ or cleared burning during construction and/or operations; if so, the action needs to be characterized and its impacts evaluated.)

Biomonitoring
(Discussion of this subject is appropriate if biomonitoring is an NPDES requirement.)

Blasting
(Another example of a special activity associated with some projects. Discussions could include risks of accidents, air blast impacts, ground vibrations, damage to structures, subsurface effects, triggering of movement on unstable slopes, etc.)

Boating
(Also see recreation.)

Bonds
(Special subject for EIDS in which performance or restoration bonds are important.)

Border development, border issues
(For EIDS located in border areas, or with binational impacts.)

Burning
(Needs to be discussed, if project involves any burning of vegetation. Burning may be used as a method of land clearing, or vegetation already cleared may be burned: burning also is sometimes a practice in land management.)

Bypasses
(Refers to potential wastewater discharges without adequate treatment: also see overflows.)

Camping
(Also see recreation.)

Canals
(For EIDS which use or impact canals; also see navigation.)

Carbon monoxide
(Also see air quality; traffic.)

Carcinogens
(Important subject if there is concern that a project may release carcinogens to the environment: also see public health.)

Carrying capacity
(Measure of sustainable environmental productivity. Often discussed in EIDS dealing directly with ecosystem use and management, for example in grazing EIDS, marsh management EIDS.)

Cause-effect relationship

(This is unlikely to be an EID section or index item as such, but it is here as a reminder that impact predictions do need to reflect cause-effect analyses; and that some of those analyses may deserve indexing.)

CERCLA

(This reference to the Superfund Statute is included here to indicate the need for EIDS to discuss any laws which are directly important to a project; thus, for example, an EID for a project located in or near a Superfund site could need to discuss CERCLA.)

Chemicals

(This entry is a reminder for the EID to discuss any specific chemicals used at or produced by a project, if they are hazardous or otherwise important to prediction of impacts.)

Chlorination, chlorine residual

(Potentially important issue for projects which discharge treated sewage.)

Chlorofluorocarbons

(Also see ozone depletion.)

Citizens Advisory Committee

(These committees are most often formed when the project is publically funded.)

Clean Air Act

(Also see air quality.)

Clean Water Act

(Also see water quality; wetlands.)

Clearing

(Also see site preparation.)

Climate

(Most EIDS provide climate data as part of the environmental setting, but some projects may have sections which discuss impacts, e.g. impacts on site microclimate or on global climate.)

Closure

(EID may need to discuss how a prospect will be closed, and also post-closure monitoring and/or land use at the site.)

Coastal Barriers

(Used when EID is concerned with features protected by the Coastal Barriers Resource-g Act.)

Coastal zone

(For projects located in the coastal zone. EID contents and associated index entries might include many different types of landscape elements such as shorelines, barrier islands, estuaries, tidal wetlands.)

Coastal Zone Management Plan

(Use for EIDS which discuss CZMP conformance: for Region 6, only Louisiana currently has an adopted plan.)

Combustion

(Can be a component of project description, such as for projects involving generation of electricity or incineration; might also be discussed in the context of vehicle emissions.)

Comment letters

While comments and responses are usually part of EPA's EA, they can sometimes be part of an EID; this is especially true if there has been a scoping process for the EID.)

Commercial

(Used in conjunction with another subject, e.g. 'commercial land use', 'commercial fishing'.)

Commitments list

(Useful section in an EID, to summarize all commitments made for mitigation, monitoring and pollution prevention.)

Community

(This term can be applied to plant communities, wildlife communities and human communities. In the later context, it may be used to discuss any issue which is "community" based, including controversies over a project. Example: "community land use", "community infrastructure, "community lifestyles".)

Compensation

(Example of mitigation category, for example where the loss of a resource is paid for directly, or through some type of replacement.)

Compliance history

(EIDS often benefit from the discussion of the Applicant's past performance regarding environmental regulations.)

Comprehensive Plan

(Refers to any type of plan which specifies how a given resource or activity will be undertaken on a local or regional basis; and example is an urban or rural land use plan.)

Concentrated Animal Feeding Operations

(CAFOs near a project usually should be identified, because of the potential for cumulative impacts: also see feedlots, livestock.)

Condition

(Another term that has more than one context. For example, it can be used with reference to vegetation communities, as a measure of how close the community is to the climax community; related terms include trend, productivity. As different example, the term may refer to provisions included in a regulatory permit.)

Conflicting resource demands

(It can be important for EIDS to identify any resource uses for which there is past, present or potential future competition.)

Conservation

(This checklist entry is a reminder of the potential need to discuss water conservation, energy conservation, recycling or other types of resource conservation.)

Conservation areas

(Also see preserves.)

Controversial effects

(For projects which are controversial, or which have controversial aspects, the EID should present a clear and objective discussion of the issues. The EID index might refer to these by name, e.g. 'odor issues" rather than in the general category of controversial issues.)

Construction

(Construction methods and issues need to be included in the EID, and the discussion identified in the index. Construction impacts are sometimes presented in a standalone EID discussion, but more often are included in different resource categories, e.g. air quality, surface water etc.; see Table 2-2. There may be subcategories, such as construction materials, construction traffic, construction noise etc.)

Construction work force

(Reminder that projects with a large construction work force can have special impacts, associated with development of construction camps and/or a temporary influx of population.)

Containment

(For some projects, containment measures for leaks and spills are important to pollution control.)

Cooling water

(Used for projects which require cooling; discussions typically consider water source and discharge.)

Coordination

(May include subcategories for any or all items listed in Table 2-4; and/or refer to a section in the EID where all coordination efforts are described together.)

Corps of Engineers

(Example of an agency that may need to be mentioned in an EID, e.g. for projects which need Section 404 or Section 10 permits; see Table 2-4.)

Cost-effectiveness analysis

(Tool for assessment and comparison of alternatives. By definition, this subject implies that the EID would present information on the tangible and intangible costs and benefits of a project.)

Criteria pollutants

(Used to discuss certain water or air pollutants.)

Critical habitat

(Also see threatened and endangered species.)

Cross-media impacts

(Reminder that environmental controls to protect one type of resource may create new impacts on another resource. An example is that wastewater treatment to produce a high-quality discharge to a stream usually generates a sludge which is disposed of by incineration -- air impacts -- or land application -- ground water impacts.)

Cultural resources

(General EID section, usually used to discuss archaeological resources and historic sites. Also see Section 106.)

Cumulative impacts

(Most EIDS will have a single section which discusses all potentially cumulative changes.)

Currents

(Potentially important subject for projects in coastal areas.)

Customs and traditions; customary uses

(Special subject, where a project depends on or may affect ways of life.)

Dams
(Subject of interest when a project uses or impacts a dam and reservoir.)

Decommissioning
(Also Fee closure.)

Decomposition
(Special subject when it is important to discuss organic matter in wetlands or soils.)

Deforestation
(Also see clearing; forestry.)

Degradation
(General subject, referring to impacts which decrease the value or sustainability of a natural resource or measure of environmental quality.)

Demographics
(Also see population; for some EIDS, the discussions and index might extend to population characteristics in terms of age, gender, race, ethnicity, income level or other attribute: and it may refer to factors impacting population changes, such as fertility, mortality, morbidity and/or migration.)

Demolition
(May be relevant to project construction and/or closure.)

Desert
(Example of a habitat for discussion in EID sect)on regarding ecological resources. Other examples of habitat types include plains, grasslands, playas, and tundra. Some EIDS might refer to this subject in terms of "arid lands".)

Development
(Usually refers to uses of resources, increases in human population, and/or changes in land use.)

Dewatering
(Sometimes an important impact during project construction and/or operation; also see aquifers; ground water.)

Disasters
(May be discussed in context of risk analysis, worst-case analysis and/or public safety; disaster prevention is a related subject.)

Discharge of dredge and fill material
(For projects which require Section 404 permits; see Table 2-4.)

Discharge of pollutants
(Included in project description and assessed in a discussion of NPDES-related impacts.)

Discontinuity
(Concept in environmental analysis which relates to the effects of cumulative impacts, which exceed a threshold level and cause a non-linear response in the affected resources. An example might be overgrazing which eventually reaches the point that the underlying resource base is severely impaired.)

Discount rate
(Can be an important factor in a benefit-cost analysis@ relevant to determining if project impacts result from some type of economic subsidy.)

Disease

(Can be discussed in many public health contexts, but most often with respect to how a project may change sources and transmission of diseases; disease issues arise for water supply and wastewater treatment projects, projects which create standing water, projects which affect demographics, etc.)

Disinfection

(For projects which generate sanitary wastewater.)

Dispersion

(Subject which is often discussed in context of predicting air quality and/or public Health impacts.)

Dissolved oxygen

(Important measure of surface water quality for many projects.)

Distribution of income, goods and services

(Sometimes considered as a subject within the category of socioeconomic resources.)

Diversions

(Includes structures for diverting surface or ground water; or quantity of water diverted.)

Diversity

(See biological diversity. The diversity index, which measures species abundance and diversity, is a good example of an environmental index; see index.)

Dose-response relationships

(For projects where public health impacts are at issue.)

Drainage

(This term has many contexts. or construction dewatering. It can refer to runoff from a project, such as stormwater runoff; or irrigation return flows)

Drainage patterns

(This subject is sometimes included with topography and landforms and sometimes in surface water; it may be important for projects like a mine which changes the drainage network.)

DRASTIC

(The environmental literature contains many methodologies which use simple matrices to calculate environmental values. DRASTIC is just one example, and is applied to the mapping of aquifer vulnerability.)

Dredged materials

(Potentially important for projects which require a Section 10 or Section 404 permit: see Table 2-4.)

Drinking water

(Important resource which requires protection; also see surface water, ground water, water supply.)

Droughts

(Example of a factor which may influence a worst-case or risk analysis.)

Dust

(This subject might appear as fugitive dust; or be discussed under suspended particulates; and/or be expanded to include a subject such as "dust control". Also see air quality.)

Earthquakes

(This subject, and/or "earthquake potential", could be important for projects which experience a seismic hazard.)

Ecological resources

(This term is included to remind users that ecological resources are an important part of any EID; in practice, the discussion and index may be broken out into specific ecosystem components, such as wetlands.)

Ecological sensitivity

(EIDS need to consider impacts based on the vulnerability of a system to change, and not just based on average or regional conditions.)

Economics

(Typically includes topics such as employment, income, tax base, which are discussed both as to existing conditions and impacts. There may be discussions of specific economic sectors, and/or special economic factors such as opportunity costs, transaction costs and externalities.)

Ecoregion

(Placing the environmental setting into an ecoregion context can be useful for many projects.)

Ecosystem

(EID may contain and index a discussion of ecosystems in general, and subjects such as "ecosystem models": or specific named ecosystems in particular, such as (for a High Plains EID) "playa ecosystems".)

Ecotoxicology

(Some EID predictions may be based on studies of the fate and effect of toxic agents in ecosystems.)

Education

(An alternate term is "educational facilities". Also see infrastructure.)

Effluent

(For EIDS which discuss NPDES permits; an example of an alternative index term is "effluent characteristics".)

Electric transmission

(Also see power lines; electromagnetic fields.)

Electromagnetic Fields

(Another example of a subject which will be needed for only a few project types.)

Emergency Medical Facilities

(Also see infrastructure, risk assessment.)

Emergency planning/response

(Typically included when project-related accidents are an issue.)

Emission/emissions

(This term may be used in many contexts - emissions controls, emission factors. emissions trading, emissions inventory, emissions modeling, emissions standards. Also see air quality.)

Employment

(Could include characterization of existing labor conditions, including earnings, and predictions of both direct and indirect jobs created by project.)

Endangered species

(Most EIDS will have a standalone discussion of threatened and endangered species; individual species. such as the bald eagle, might also be indexed: also see Table 2-4; and Section 7.)

Enforcement

(For projects where environmental compliance is an issue.)

Energy

(This general subject may include or be divided into more detailed subjects, such as energy use, energy supply, energy conservation and energy impacts. An EID may consider the use of energy by a project; or its effect on energy supply and demand: or its impact on specific facilities - such as pipelines, wells, mines. power lines.)

Environmental assets

(Discussions of sustainability sometimes use this term, especially when discussion long-term and short-term tradeoffs, as in "depreciation of environmental assets".)

Environmental impacts

(There may be a separate EID section which discusses impacts; or impacts may be discussed throughout the EID, on resource-by-resource basis.)

Environmental indices

(Numerical or descriptive categorization of a large quantity of environmental data or information, with the primary purpose being to simplify such data and information to make it more useful to decision makers and the general public. Impact assessments often make use of indices to provide a semi-quantitative indication of impacts, and to make comparisons among alternatives.)

Environmental justice

(May be discussed if EID is for a project which has impacts on minority or disadvantaged communities.)

Environmental management and training

(General subject for consideration in the discussion of proposed mitigation and monitoring; deals with measures taken to ensure that all applicant has the institutional capability to accomplish the commitments which have been made to environmental protection.)

Environmentally sensitive areas

(May be a separate EID section and index term. and/or the EID and index may deal separately with areas such as wetlands. floodplains, steep slopes, recharge areas, prime farmlands. parklands. wilderness areas, Wild and Scenic Rivers, etc.)

Erosion

(An EID may discuss this in a separate section, in a discussion of stream changes, in a discussion of soil impacts, etc.; in some cases, a separate discussion and index might distinguish between wind and water erosion.)

Estuaries

(Where estuaries occur near project site, they usually represent an important habitat for discussion in the EID.)

Ethnic issues

(Can be discussed in projects which are located near minority populations.)

Eutrophication
(Typically considered when project contributes nutrients to stream, lake or estuary.)

Evaporation
(Potentially important if a project alters the local water balance.)

Executive Orders
(Discussed if EID is concerned with compliance with an Executive Order; see Table 2-4.)

Existing conditions
(There may be a separate EID section which discusses existing conditions; or these conditions may be discussed throughout the EID, on a resource-by-resource basis. The term can be modified, for example to refer to "existing facilities".)

Exposure assessment
(Used for projects with potential impacts to public health.)

Externalities
(Also see economics.)

Family impacts
(Special subject under socio-economics or social impacts)

Fauna
(See wildlife: fisheries; aquatic resources.)

Farmland Protection Policy Act
(See Table 2-4.)

Fatal flaw
(An important objective of environmental planning is to insure that there is no project effect which causes unacceptable impacts, or will lead to an unworkable project.)

Fecal contamination; fecal coliform bacteria
(May be important if project effluent contains high levels of bacteria or other pathogens. or would do so without treatment. Specific disease organisms may be discussed.)

Federal lands
(EID might also discuss specific federal ownerships, such as National Forests: and/or particular statutes, such as Federal Land Policy and Management Act.)

Feedback
(Subject included here as reminder to EID preparers to consider feedback relationships when making impact predictions.)

Feedlots
(Also see Concentrated Animal Feeding Operations; livestock.)

Fertilizers
(See comments for pesticides.)

Fill
(See comments on dredged materials.)

Financing

(Project financing can be an E1 issue, such as for public projects where funds for one type of activity foreclose investment in another type of activity.)

Finding of No Significant Impact

(Possible outcome of EPA's environmental evaluations see Chapter I in Handbook.)

Fire protection

(Also see infrastructure, public safety. The subject of fire itself may be important in some EIDS, such as those dealing with forest and rangelands.)

Firewood

(Example of special subject which can be in EIDS concerning forest management; or where customs and traditions are at issue.)

Fiscal impacts

(Potentially important if a project will alter the need for government services or infrastructure,)

Fish and Wildlife Coordination Act of 1958

(See Table 2-4.)

Fish, fisheries

(May be covered under "aquatic resources", or discussed and indexed separately if important resources or impacts are involved.)

Flood control

(Used in EIDS which discuss, impact or interact with flood control facilities.)

Flooding

(Often included with surface water. stormwater or runoff; but potentially a separate entry if EID concerns a site with a significant flood hazard; or the project may impact channel characteristics.)

Floodplains

(As with many of the entries in this checklist, the subject entry will be relatively minor in some EIDS, but quite important where a site is or may be in a floodplain: ir, the latter case. There may be separate discussions of floodplain characteristics and management, and flooding impacts,,)

Flora

(See vegetation.)

FNSI

(See Finding of No Significant Impact.)

Food and fiber

(Can refer to agricultural production: and/or to processing sectors of the economy. Related subjects like "forage" may be important to some EIDS.)

Food chain

(Often an important subject in discussions of ecological resources, fisheries, and wildlife habitats.)

Foreclosed options

(Important factor to consider. if project precludes long-term uses of a resource.)

Forests

(May be covered under "vegetation", or discussed and indexed separately if important resources or impacts are involved. Forestry is a related subject.)

Fossils

(Also see geology, paleontology.)

Fossil fuel

(Includes coal, oil, natural gas.)

Freshwater habitat

(Also see aquatic resources.)

Freshwater resources

(EIDS need to assess any impacts which result if a project alters the availability of freshwater; availability in this context includes the quantity of water, and its spatial and temporal variations.)

Fugitive emissions

(Refers to non-point source emissions to the air, such as fugitive dust or cumulative small leaks of gaseous pollutants; also see dust, so suspended particulate.)

Fumes

(Fumes may constitute a nuisance or public health issue.)

Gender

(Potentially discussed as part of a demographic analysis: in the context of environmental justice; and/or as part of customs and traditions.)

Genetic resources

(Also see biological diversity.)

Geochemistry

(Example of a subject which is seldom directly a part of the EID, but rather a scientific discipline sometimes required for good EID predictions, such as when pyrite-rich overburden is exposed to leaching as a consequence of strip mining.)

Geographic Information System

(Tool for computerized mapping and evaluation of data. which is seeing increased use in environmental impact analyses.)

Geology

(Special categories could include geologic resources (fossil and mineral collecting areas, sand and gravel, energy, mineral) and geologic hazards (earthquakes, faults, landslides, unstable steep, subsidence). Subjects like stratigraphy and structural geology can be included when important to a project.)

Geothermal resources

(Special subject, for EIDS on projects which use or impact geothermal reserves.)

GIS

(See Geographic Information System.,)

Global warming

(This special subject tends to be a concern for larger projects than are the subject of a typical EID.)

Glossary

(EIDS should include a glossary if needed to define technical terms, acronyms and abbreviations.)

Grading

(Often a component of project construction.)

Grasslands

(Habitat type; see discussion under desert.)

Grazing

(Also see livestock.)

Greenhouse warming

(Special subject. generally will apply to larger projects than covered by an EID)

Growth, growth impacts

(Also see development, secondary impacts.)

Ground water

(Often spelled as one word. Subcategories may include aspects of the aquifer and recharge system; ground water flow regime: water levels and drawdown: water quality - including any existing ground water contamination; water use; and water rights. Interconnections with surface water should be discussed if important to evaluating project impacts.)

Habitat

(Discussions will consider specific habitat types also see wildlife.)

Habitat Evaluation Procedure (HEP)

(Method of assessing ecological conditions and impacts. There are many variations on this type of methodology which can be appropriate for EIDS. One example is the Wetland Valuation Assessment, used to evaluate wetlands projects.)

Harvesting

(Typical relates to natural or cultivated biological resources: for example, may be discussed in the context of agriculture, forestry, fisheries aquaculture, wildlife.)

Hazardous materials, wastes

(Hazardous materials associated with a project must be discussed in the EID. Issues include the release of hazardous contaminants in trace amounts to air, soil or water, and/or the ultimate disposal of hazardous wastes.)

Hazards

(May refer to natural or man-caused hazards; index may reference specific hazards - such as earthquakes, unstable slopes, karst topography, underground mine workings, floods - if important to a particular EID.)

Health

(Important issue for most projects, especially where project may cause health impacts, or may affect the availability of health services; also see public health.)

Health care

(Also see infrastructure, emergency medical services.)

Heat

(Sometimes discussed as a nuisance impact.)

HEP
(Habitat Evaluation Procedure: method of assessing ecological conditions and impacts.)

Hiking, hiking trails
(Also see recreation.)

Historic resources and properties
(Similar to archeological resources.)

Hostile acts
(A subject which unfortunately must now be considered in some cases, e.g. as a factor in assessing the risk of accidents.)

Household
(For example, household size may be a subject in some EIDS.)

Housing
(An important issue for some projects: also see infrastructure.)

Humidity
(Discussed under climate and, sometimes, microclimate impacts as when a project gives rise to the local occurrence of fog.)

Hunting
(Also see recreation.)

Hydrocarbons
(May be used in the context of discussion oil and gas resources; or with respect to air pollution.)

Hydrologic cycle
(For many projects. it will be important to discuss the major features of the local or regional water balance, including surface and ground water: geographic features important to the hydrologic cycle may need to be discussed as well.)

Hydrology
(General subject in some EIDS; other EIDS may cover hydrology under "water resources".)

Hydropower resources
(Special subject, for EIDS on projects which use or impact hydropower resources.)

Impacts
(Every EID obviously will discuss impacts: this entry is a reminder for the EID index to identify EID sections with those impact discussions.)

Implementation, implementation plan
(May be important if there is some type of regulatory program which influences a project; or project is part of multi-facility activity.)

Incinerators
(Typically discussed only if project includes incineration, or is located within impact zone of an incinerator.)

Income
(Typically refers to income distribution in the impacted community.)

Index

(It is advisable for every EID to have an index, unless the document is very brief.)

Indicators

(EIDS often use readily measurable attributes of the environment as a basis for characterizing environmental conditions and changes, Biological diversity as determined in a Rapid Bioassessment is an example of an indicator of stream ecology and water quality.)

Indices

(See environmental indices.)

Indigenous peoples

(E.g. tribal peoples: also see Native Americans.)

Induced development

(Refers to growth directly or indirectly stimulated by a project, including growth which results from cumulative activities of which the project is one component.)

Industry, industrial land use

(EIDS usually will need to discuss industrial activities in and near a project site.)

Industrial hazards

(Also see accidental public health.)

Infiltration/inflow

(Used when sewer lines are an important issue.)

Infrastructure

(EID should discuss, and index should identify, facilities and services directly needed for project: and/or relocated or otherwise changed by project; specific discussions and index entries may be considered for subcategories such as roads, transportation, utilities such as power, gas, telecommunications, water supply, sewerage, solid waste services, police and fire protection, schools, parks, medical facilities and housing.)

Injection wells

(Typically discussed only if project includes injection wells, or is located within impact zone of influence of such wells.)

Innovative technology

(Sometimes innovative technology is an important part of the pollution prevention aspects of a project.)

Institutional assessment

(Most often raised in the context of environmental or other management issues; as when discussing whether existing or proposed institutions are sufficient to assure mitigation success.)

Instream flow

(For some projects, the impacts on streamflows available for fish and wildlife support is an important issue.)

Intakes

(As in water supply intakes.)

Integrated pest management

(Important issue in any EID which concerns pest control.)

Interaction matrix

(Tool commonly used in an EID to display how various factors interact with one another. An example is a chart showing interaction of conservation measures. These matrices help avoid giving double credit for benefits, when in fact benefits of different measures are overlapping, and likewise for negative effects.)

Interdisciplinary team

(EIDS benefit when they are prepared by an interdisciplinary team@ if such a team has been used, its makeup should be identified in the EID.)

Inundation

(Relevant if project will create or alter a reservoir.)

Inversions

(Important in areas where air quality problems are potentially significant.)

Investment

(May be part of a discussion on socioeconomic issues.)

Irretrievable resource commitments

(This is sometimes a separate section in an EID, because the term is used in NEPA.)

Irreversible impacts

(See above.)

Irrigation

(Important land use and economic activity in some project areas, and can have significant effects on water resources, habitats and wetlands.)

Jurisdictional wetlands

(Also see wetlands; see discussion of Section 404 in Table 2-4.)

Karst aquifer

(Example of special issue for ground water.)

Lakes

(Major water bodies in and near a project area are discussed in an EID, unless there is no possibility of impacts.)

Land application

(Where a project proposes to dispose of wastewater or sludge through land application, the methods and impacts of disposal need to be discussed in some detail.)

Land cleaning and leveling

(Typical component of project construction.)

Landfills

(Also see solid waste.)

Landforms

(Similar to climate in that this is a part of environmental setting; impacts may be included in other sections unless there are notable changes in terrain, slope stability, stream channels or the drainage network.)

Landscape units

(See text discussion of landscape units in Section 3 of the Handbook.)

Landscaping
(Sometimes discussed as a mitigation measure.)

Land subsidence
(Can be important impact in areas of underground mining or ground water pumping.)

Land use
(Most EIDS will have a section to characterize existing land use patterns, and both direct and secondary land use changes resulting from projects index entries to specific land use types - such as rangeland - may be appropriate.)

Land values
(Used if EID is for a project which is sensitive to or may have an impact on growth, land values, tax base etc.)

Law enforcement
(Also see public safety@ infrastructure.)

Leachate
(Important issue for projects involving landfilling or other soil-based disposal of solid wastes, including hazardous wastes.)

Leaks and spills
(For many types of projects, an important issue is the potential for, and the control of, leaks and spills during construction and/or from underground storage tanks.)

Legal framework
(Some projects and decisions can best be understood in the context of the legal framework in which they are undertaken: if so, the discussion of project purpose and need should discuss that framework.)

Life Cycle Analysis (LCA)
(Some projects may have employed LCA as part of project planning; if the result was pollution prevention, the LCA results should be included in the EID.)

Lifestyle
(Subject discussed in EIDS for projects which may change the way of life in a neighborhood or rural area; as with other items in this index, EID discussions of an impact are needed if there is public concern over the impact, even if the Applicant believes the concern is misplaced.)

Lift stations
(A component of the facilities for some water, wastewater or stormwater projects; may also be referred to as pump stations.)

Light
(Sometimes discussed as a nuisance impact, impacting quality of life.)

Limiting factors
(Not often discussed as a standalone EID subject, but may be an important consideration in the discussion of ecological impacts; as when evaluating whether a project will alter some factor which is limiting or controlling ecosystem production and structure.)

Limnology
(Important in EIDS for projects which use or impact lakes and reservoirs.)

Livestock
(Potentially important for projects where grazing is an existing or future land use; and for Concentrated Animal Feeding Operations; also see feedlots.)

Location of project
(Town/county/state; also township/range/section and/or latitude/longitude: should include reference to location map; location information on alternative sites may be appropriated also see Table 2-2 for additional location-related items.)

Long-term resource uses
(See short-term resource uses.)

Low-flow conditions
(These conditions usually are important in determining effluent limits for NPDES permits.)

Low-income populations
(Potentially important aspect of a socioeconomic analysis@ also see environmental justice.)

Lumbering
(For EIDS in which timber harvesting is an activity or issue.)

Mailing list
(While this is normally found in EPA's EAs, a mailing list is sometimes appropriate for an Applicant's EID.)

Maintenance
(Often an important part of a project description. also used as a modifier for other subjects, as in the example of "maintenance dredging".)

Management
(EIDS may discuss many types of management, associated with the project and/or the environmental setting; an example is "Best Management Practices". Another category would be "management areas", referring to areas which are under special management for environmental protection, reclamation, sustained yield, etc.)

Marine mammals
(Subject likely to be limited to offshore or coastal projects.)

Marine resources
(Similar in concept to aquatic resources.)

Markets
(Component of economic setting and impacts; discussed when projects are strongly influenced by, or potentially have an impact on the marketplace.)

Mass balance
(Important technique for describing and evaluating the distribution and fate of materials in a project or in the environment.)

Mass transportation
(Special subject, discussed as part of transportation infrastructure.)

Medical facilities
(For some projects, can be an important element of the infrastructure; and/or have a bearing on public health and safety.)

Mental stress
(Example of a psychological impact.)

Metals

(Metals as a class, and/or individual metals, may be important in the discussion of wastewater discharges, water quality impacts, air toxics, etc.)

Meteorology

(Typically discussed with climate.)

Microclimate

(Discussed if projects may have microclimate impacts; or if microclimates are important to understanding ecological gradients.)

Migration

(Can refer to movement of people, as when development and growth are issues; or the movement of fish and wildlife. as when a project may create barriers or otherwise interfere with movement.)

Mitigation bank

(Tool used to compensate for unavoidable resource Losses, such as wetlands losses.)

Migratory birds

(Subject likely to be discussed if project has potentially significant impacts on protected species.)

Minerals, mineral development, mineral processing

(Can be a component of the environmental setting and/or impact analysis, as when a project makes use of mineral resources, relocates production facilities, or is built over some reserves.)

Mines

(See discussion of minerals. above; also see abandoned mines.)

Minority populations

(See comments on environmental justice.)

Mitigation

(While mitigation measures may be discussed throughout a document, a section summarizing mitigation is useful in most EIDS.)

Mixing zone

(Potentially included in EIDS which describe calculation of effluent standards. The term mixing height has a somewhat equivalent meaning for air emissions.)

Mobility

(Special term that may be discussed in the context of access or migration.)

Modeling

(Models are used to predict some types of impacts for some EIDS; and the EID index may need to point the reader to specific text discussions of modeling methods and results.)

Monitoring

(Similar to mitigation; EIDS need to characterize specific monitoring components, e.g. monitoring wells, and not just make statements saying only that something "will be monitored".)

Multi-media issues

(EIDS need to discuss impacts which cross from one media to another; an example is where wastewater treatment provides protection of water media, but creates a solid sludge which must be land applied or incinerated, and thus creates a new impact to soil or air media.)

Municipalities
(EIDS may cite specific municipalities@ or municipal infrastructure.)

Mutagens, mutagenic
(See discussion under carcinogens.)

National Ambient Air Quality Criteria
(See air quality; standards.)

National Environmental Policy Act
(Some EIDS do include a discussion of NEPA, but this generally is not a needed.)

National Historic Preservation Act
(See Table 2-4.)

National Natural Landmarks
(See Table 2-4.)

National Parks
(Could also have discussions and index entries for individual named parks; for National Forests; etc.)

National Register of Historic Sites
(List of properties and resources afforded special protection: see Table 2-4.)

Native American concerns
(Relevant to projects which are on or near tribal lands. Of course, individual concerns - such as "ceremonial water quality standards" would be part of the EID discussion, and could be indexed separately if appropriate.)

Natural cycles
(Included in this checklist as a reminder that some of the most significant impacts occur when a project alters a natural cycle to the point that ecosystem processes and functions are changed.)

Natural sites
(Overlaps with subjects such as wildlands, unique resource.)

Navigable waters
(Mostly needed for projects which require Section 10 permits@ see Table 2-4.)

Navigation
(Also see transportation.)

Need for project
(Usually required as part of project description.)

Neighborhoods
(May be discussed in EIDS which discuss impacts to areas near a project, or to the community as a whole.)

New Source; New Source Performance Standards
(Refers to a particular concept/requirement of the Clean Water Act. At present, the primary situation in which EPA Region 6 engages in NEPA reviews is when a New Source is seeking an NPDES permit, and is located in Louisiana, New Mexico, Oklahoma, Texas.)

Nitrates

(Water-quality parameter important to evaluation of drinking water -- especially when the source is an aquifer; and/or eutrophication.)

Nitrogen oxides

(See air quality.)

No Action Alternative

(This subject is typically part of every EID.)

Noise

(Example of a subject which may have many subcategories; examples are "noise sources", "noise levels", "noise impacts", "noise regulations", "noise control" and "noise attenuation". Many related terms are not indexed separately, but will appear in a typical EID: examples include "dBA" -- decibels, A-scale; and "DNL" -- day-night average sound level.) Some EIDS may also discuss "Vibration".

Non-governmental organizations (NGOS)

(EIDS may discuss and index those NGOs - such as citizen groups, neighborhood groups, environmental organizations -which are directly concerned with project.)

Non-point sources

(Potentially important subject in the discussion of water quality issues, especially if non-point sources contribute to water quality problems, or will be changed by the project.)

Non-renewable resources

(The non-renewable resources consumed by a project should be identified.)

North American Free Trade Agreement

(May be discussed in EIDS for projects located near the border, or which have international impacts with Canada or Mexico.)

NPDES permit

(Index entry to identify any discussion of an NPDES permit.)

Nuclear facilities

(Special subject; can refer to medical and research facilities, as well as power reactors.)

Nuisance impacts

(General category which can include noise, odor and other impacts which are bothersome to project neighbors.)

Nutrient cycle

(Concerns the natural storage and flow cycle of nitrogen, phosphorus -- and sometimes other elements -- and changes which might result from a project.)

Nutrients

(Can be an important subject for EIDS on projects which discharge nitrogen, phosphorus or certain trace elements to the environment; also see eutrophication.)

Nutrition

(Special subject; can deal with human populations, such as when a project has benefits to low income groups; or to animal populations, such as grazing management to increase the abundance of nutritious forage.)

Objectives
(May be a part of the "purpose and need" discussion: or presented in association with the evaluation of alternatives.)

Ocean
(Also see marine resources, coastal zone. Oceanography is a related term.)

Odor
(Discussed if project impacts could include odors; for some projects, the EID may consider and the index may reference heat or light.)

Oil and gas resources
(Similar to minerals, EID discussions could consider extraction, transportation, storage, refining, distribution, consumption, and/or leaks and spills of these resources.)

Oil and grease
(Parameter of importance in some NPDES permits.)

On-site systems
(Discussed if wastewater disposal by the project, or in the neighborhood, uses septic tanks or other on-site drainage structures.)

Open space
(An important factor regarding aesthetics, quality of life and recreation, especially if a project will develop or other wise change lands now in open space.)

Operations
(Project operations are an important EID subject; the basic discussion of project operations usually should be referenced in the index. Also see Table 2-2.)

Operations and maintenance
(O&M is a potentially important part of the project description, especially with respect to Best Management Practices, pollution prevention and other types of mitigation.)

Organics
(This term refers to organic chemicals in wastewater, organic materials in soils, among other subjects.)

Overflows
(May be an issue with respect to wastewater management.)

Owner/Applicant
(Name, address, contact person, tel #: identity of operator, if not owner; see Table 2-2.)

Oxygen depletion
(See dissolved oxygen.)

Ozone
(This subject may be raised in more than one context. Ozone is an air quality contaminant of concern in some areas. Depletion of the ozone layer

Paleontology
(If fossil collecting sites are locally significant.)

Parking
(Parking can be a component of a project description: and/or it can be part of the urban infrastructure.)

Parks

(Often an important component of the recreational infrastructure and land use, and of assessments regarding aesthetics and the quality of life.)

Particulates

(Mostly used in the context of airborne materials: also see suspended particulates, dust. air quality.)

Pathogens

(Important subject for projects which may be a source of bacteria, viruses, cysts or other pathogens in wastewater effluent, runoff and/or air emissions.)

Pathways

(Pathways can be discussed as a component of cause-effect analyses and risk assessments: identification of any possible changes in environmental pathways is an important step in impact prediction,)

Paving

(Discussed where project causes a marked change in the impervious cover of the land surface, and thereby affects environmental factors such as runoff or heat retention.)

Permit information

(EIDS should discuss relevant federal/state permits, such as those which are part of environmental programs, e.g. Section 404 permits. Individual permit types may be indexed separately.)

Personal safety

(Also see accidents.)

Pests

(Discussed if pests are an environmental problem for an area or project.)

Pesticides

(This subject will be appropriate in EIDS for projects which use pesticides - including herbicides, insecticides, rodenticides, fungicides, or which occur in areas of notable pesticide use.)

pH

(One of many possible water-quality parameters.)

Phasing

(For projects which are multi-phased.)

Phosphorus

(Also see nutrients, eutrophication, water quality.)

Photochemical smog

(One of many air pollutants; see air quality.)

Physical setting

(EID discussions of topography, geology, soils and/or climate are sometimes included in a section with this name.)

Pipelines

(An infrastructure category which is most often discussed when a pipeline runs through and/or serves a project site.)

Planning area
(Discussed if the project has been planned and evaluated in the context of a specific area of influence.)

Plans, planning
(Potentially used if EID discusses an important planning process or plan document, such as a watershed management plan.)

Plants
(Also see vegetation.)

Playas
(important landform and habitat type in some areas.)

Playgrounds
(Also see parks, recreation)

Point source
(Most EIDS submitted to EPA Region 6 relate to point source discharges of wastewater. regulated under NPDES.)

Poisonous plants
(Special subject, found for example in projects concerning rangeland.)

Police
(This public safety component of the infrastructure is sometimes discussed under the term "law enforcement".)

Policy framework
(Some projects and decisions can best be understood in the context of the policy framework in which they are undertaken; if so, the discussion of project purpose and need should discuss that framework.)

Pollutants
(General term: discussion of important pollutants is an important part of most EIDS.)

Pollution prevention; pollution prevention plans
(See comments for mitigation.)

Ponds
(Important aquatic habitat for some projects.)'

Pool and riffle areas
(Example of special aquatic habitat.)

Population
(Can refer to human or animal populations, and to both data on existing conditions, and discussions of impacts.)

Ports and harbors
(Subject for EIDS on projects which use or impact shipping and shipping facilities; also see navigation, canals.)

Potential for Significant Deterioration
(This subject is raised for any project with potentially significant air emissions; also see Clean Air Act.)

Power
(EIDS may discuss subjects such as "power costs", "power lines"; also see energy.)

Precedent
(Important subject if the project is the first of its kind in occurring and is regulated.)

Precious resources
(See comments under unique resources.)

Precipitation
(Also see climate.)

Preparers
(It helps EPA if the EID identifies the individuals who prepared the EID, and their environmental credentials.)

Preserves
(Reminder for EID to discuss, and index to identify, areas which are subject to special management for their environmental, recreational, scientific or other value. This can include areas created or managed as part of the mitigation program of a project.)

Prevention of Significant Deterioration
(PSD issues generally arise with larger projects which have significant air emissions.)

Prime farmlands
(Example of coordination entry which needs separate discussion and index; also see Table 2-4.)

Productivity
(May be discussed in some EIDS. such as where cropland or grazing is being assessed; or for assessment of habitats; also may refer to EID section which discusses trade-offs between short-term and long-term productivity, a subject which is very important if the project will lead to either short-term or long-term productivity losses.)

Product transport
(Potentially important subject in the project description.)

Program
(Reminder that any project may be affected by one or more "programs", including governmental funding and regulatory programs, and these may be important enough to warrant discussion in the EID.)

Programmatic agreement
(One type of programmatic agreement is that sometimes signed between a project sponsor, EPA and the State Historic Preservation Officer, to establish procedures for protecting cultural resources at a project site.)

Programmatic impact assessment
(Refers to an EA or EIS which deals with the general or cumulative impacts of a given activity: EIDS can incorporate the findings of such documents by reference,)

Project description
(See Table 2-2 for ideas.)

Property
(Some EIDS may include discussions of private property, property rights, property values, etc.)

Proposed action

(The alternative which is being proposed by the EID sponsor should be identified clearly in any EID.)

Protected species

(General term which includes but is not limited to species on federal or state list of threatened and endangered species; plus animals such as marine mammals which have special statutory protection.)

Psychological impacts

(Special subject, which tends to be associated with controversial projects.)

Public facilities

(Public facilities -- along with public services -- are an important category in discussions of infrastructure.)

Public health

(EIDS generally should have a section which summarizes potential impacts on public health, including impacts not addressed by environmental standards; may include accidents as well as environmentally-related diseases; also see risk assessment.)

Public notice

(EIDS should mention any public notice which provided the affected public with information about the project.)

Public participation

(Public participation most often occurs for projects which are publically funded.)

Public safety

(May be important for an EID about a project which requires special fire protection, emergency medical and/or police services. Also may be raised with respect to a project which causes short-term or long-term immigration.)

Public services

(See comments under public facilities.)

Public transportation

(Subcategory of transportation infrastructure: also see mass transportation, transportation.)

Quality of life

(Element of environmental setting which can be important, especially if there may be changes caused by a project.)

Quarries

(Also see mines, mineral resources.)

Radiation, radioactivity

(More specific entries may be appropriate, e.g. to naturally occurring radioactive materials (NORM.); radon in groundwater; or radioactive materials used by project. Also see nuclear facilities.)

Railroads

(Discussed where railroads are an important part of the environmental setting; where railroads contribute to cumulative impacts, etc.)

Rangelands

(Also see grazing, livestock, agriculture, land use.)

Raptors

(Example of wildlife category which may be of special interest for some projects)

Raw materials

(Subject of potential interest in project descriptions.)

RCRA

(See comments for CERCLA; also see hazardous waste@ recycling.)

Reasonably foreseeable circumstances

(Assessments of impacts, especially cumulative impacts, are based on reasonable foreseeable circumstances. Determination of such circumstances can be difficult and may need to be discussed with EPA while an EID is being prepared.)

Recharge

(This component of the hydrologic cycle may be important for projects which affect soil or geologic materials, especially if there is a change in infiltration rates; and/or which can discharge pollutants.)

Receiving waters

(Refers to waters directly impacted by an effluent discharge.)

Reclamation

(See comments under restoration.)

Recreation

(Important component of the public and private infrastructure; may include facilities, types of activities, level of activities, value of activities. Many terms in this checklist refer to recreation facilities or activities.)

Recycling

(Used when EIDS discuss recycling measures which are part of project, or which were considered but not adopted.)

Reefs

(Example of special habitat type.)

References

(All EIDS need a bibliography which includes references cited in the document.)

Refuges

(See comments under preserves.)

Region (or area) of influence

(Represents the boundary in which impacts are evaluated in an EID. Different impacts may have different regions of influence. Regions of influence may have natural boundaries - such as watersheds, or be based on the extent of detectable impacts.)

Reasonably foreseeable circumstances

(Assessments of impacts, especially cumulative impacts, are based on reasonable foreseeable circumstances. Determination of such circumstances can be difficult and may need to be discussed with EPA while an EID is being prepared.)

Releases

(EIDS need to document all releases of pollutants from a project to the environment.)

Relocations

(Important subject if project involves relocation of residences, businesses, utilities or other facilities or activities.)

Renewable resources

(It normally will be important to discuss any consumption or degradation of renewable resources which results from a project.)

Reservoir

(Example of special subject for some EIDS. Reservoir management is a related term.)

Resettlement

(For smaller projects, usually covered under relocations; if resettlement of significant populations is required, an EIS will be required.)

Residuals

(The term residuals is often used to refer to the solid wastes which result from pollution controls - such as wastewater sludge and fly ash: if residuals are generated by a project, their characteristics and management need to be discussed.)

Resilience

(Ecosystem property which is often assumed, but seldom demonstrated. EIDS may need to consider if environmental effects will exceed a threshold level of resilience.)

Responses to comments

(See discussion under "comments".)

Restoration

(E.g. restoration plans for disturbed environments; if reclamation bonds are discussed in EID, an index entry to the discussion should be provided.)

Reuse

(See recycling.)

Right-of-way

(Can be important for projects which use, acquire or interfere with rights-of-way.)

Riparian

(Discussed if project may impact streamside habitats.)

Risk

(For EIDS, this term often refers to impacts which are related to public health and safety issues; and/or which are stated in terms of probability and uncertainty.)

Risk assessment/analysis

(EIDS may contain a risk assessment if there are safety or health issues.)

Risk management

(Component of risk assessment, concerned with pollution prevention, mitigation and other means of reducing risks; and with decisions about whether remaining risks are acceptable.)

Roads

(Important element of transportation infrastructure: also see traffic.)

Route selection

(Should be discussed in an@, EID which concerns a road, pipeline, power line or similar linear feature.)

Runoff

(The comments on recharge generally apply here; also see surface water.)

Rural areas

(This may be an important subject if projects will change or impact rural areas.)

Safe Drinking Water Act

(Statute most often discussed in EIDS for projects which impact the quality of rivers or aquifers used as supply.)

Safety

(See public safety.)

Saline intrusion

(Special subject, most likely discussed if project involves heaving pumping of an aquifer.)

Salinity

(Example of water-quality or soil parameter which may be important to some projects.)

Salinization

(Special subject, important if a project involves irrigation or otherwise may change soil salinity conditions.)

Sanctuaries

(See comments under preserves.)

Sanitation

(This subject typically is covered in discussions of wastewater and solid wastes, but may be a special subject or index term in some EIDS.)

Scenic areas; scenic values

(Also see visual resources; recreation.)

Schedule

(Refers to timing of project construction and/or operation. if these may be important to evaluating impacts.)

Schools

(Also see infrastructure, education.)

Scoping

(Scoping is usually undertaken by EPA in preparation of an EA, but this step is sometimes found in EIDS, especially when they are for publically funded projects.)

Screening

(The term screening is used to describe an initial step in the evaluation of possible alternatives.)

Secondary containment

(Component of pollution control system.)

Secondary effects

(Secondary effects -- e.g. indirect effects of project -- need to be identified to the extent practicable. Some EIDS discuss them in a standalone section: others discuss and index these impacts in resource-specific EID sections.)

Section 7

(Refers to Section 7 of the Endangered Species Act; requirements are discussed in Table 2-4.)

Section 106

(Refers to Section 106 of the National Historic Preservation Act@ requirements are discussed in Table 2-4.)

Sector

(This term is sometimes used to designate different components of the economy; and/or different types of resources which have economic value.)

Sediment

(Sediment may be an EID issue, as for example if project is discharging to a stream or estuary with contaminated sediments; or might cause sediment contamination without adequate environmental controls.)

Sedimentation

(As when eroded materials are deposited in stream bed, pond or lake.)

Sedimentation pond

(Example of a project-specific measure for pollution control and/or impact mitigation.)

Seepage

(Special subject, such as for projects which modify water flow systems.)

Seismic hazards

(Also see earthquakes; natural hazards.)

Sensitive resources/receptors

(Subject included in checklist as reminder that EID should point out any resources which are especially vulnerable to project impacts.)

Septic tanks

(See on-site systems.)

Sewers, sewerage

(An important component of the urban infrastructure for many projects; also see wastewater.)

Shipping

(Also see economics, navigation.)

Shoreline

(This landform category may need to be discussed in projects located in coastal areas@ and may also be considered in projects involving lakes and reservoirs.)

Short-term resource uses

(NEPA requires discussions of productivity tradeoffs between short-term and long-term resource uses.)

SHPO

(State Historical Preservation Officer: see Table 2-4.)

Significant impacts

(Significance of impacts is a vital issue under NFPA. but generally not the concern of an EID.)

Siltation

(Similar to siltation. This EID generally does not list all the possible synonyms for all terms. Also see erosion, runoff, non-point sources, sedimentation, turbidity.)

Site assessment

(If a project has been studied for purposes of establishing seller-buyer-lender environmental liability, the results of the study should be noted in the EID.)

Site preparation

(Component of project construction.)

Site selection

(Can be important part of discussion of alternatives.)

Slopes

(May be a subject in environmental setting, as part of landforms or topography; and potentially important where a project may impact unstable slopes.)

Sludge

(Discussed for projects which do produce a solid waste as a result of a treatment process.)

Smoke

(An air quality or nuisance issue; see burning; combustion.)

Smog

(Also see air quality.)

Socio-economics

(This is a major topic in most EIDS, and usually is broken down into several major subcategories - see generally economics, social impacts, population, infrastructure - and many additional minor topics.)

Social impacts

(Includes all impacts to human populations beyond those which are purely economic and infrastructure; especially denotes consideration of social integration, cohesion, conflict and quality of life.)

Social services

(Often an important component of the public service infrastructure.)

Soils

(Subcategories may include basic soil types and properties, as determined by a soil survey, along with soil factors directly impacting erosion, runoff, vegetation, habitat, cultivation and land use, especially uses included within the project description.)

Solid wastes

(Could include garbage/trash, hazardous materials if not separately discussed, landfills, recycling measures; also see infrastructure.)

Sound levels

(Ambient and predicted sound levels should be considered in EID section on noise.)

Source reduction

(Along with recycling, a major tool in pollution prevention.)

Species

(Discussions may consider species (or other taxonomic levels) which are important because they are dominants, indicators, commercially valued, exotic, threatened or endangered. Factors such as species diversity and abundance may be important.)

Spill Prevention, Control and Countermeasure Plan

(Such a plan is required for some projects, and is offered voluntarily in others: if a plan exists, it should be characterized in the EID.)

Spills

(Also see leaks and spills; important subject in any EID, if project construction or operation might lead to the spill of a hazardous or toxic material.)

Spent lubricants and fuels

(Identification of these materials may be important for a project description.)

Sponsor

(Project sponsor or applicant must be clearly identified in the EID.)

Spraying

(Also see pesticides.)

Stacks

(Project stacks, exhausts and other points where air emissions are released should be identified.)

Staffing

(Component of environmental management plans.)

Stagnant areas

(Potential source of disease transmission: also see vectors.)

Standards

(Most EIDS will contain some discussions of air quality, water quality and/or other environmental regulations and standards.)

State Historical Preservation Officer

(See SHPO.)

State Implementation Plan

(Potentially considered in section on Air Quality.)

State parks

(Discussed if such parks are in immediate area and/or might be impacted: similar discussions may be considered for any other type of State lands.)

Stockpiles

(Part of project discussion, where appropriate.)

Storage

(General term, used as a reminder to consider the storage -- of water, of fuel, of topsoil, of raw materials -- in the life cycle of a project.)

Stormwater

(Important for projects which generate stormwater runoff that is subject to special management considerations.)

Stratification
(Potentially important in discussions of water bodies.)

Stream standards
(Stream standards may need to be discussed in any EID which concerns an NPDES permit or non-point source discharges.)

Streamflow
(Included within surface water discussions.)

Submerged aquatic vegetation
(This subject may be important for projects which affect ponds, lakes, wetlands or estuaries.)

Subsurface flow
(See ground water)

Succession
(EIDS may discuss the successional stage of ecosystems impacted by a project, if only to indicate the changes which will occur without a project.)

Sulfur dioxide
(Also see air quality, acid rain)

Summary
(EID index entry should point reader to location of all summary discussions in the EID.)

Superfund
(Superfund sites which may affect or be affected by a project need to be discussed in an EID.)

Supplemental EA/EID
(Environmental document which deals with limited scope of subjects, and adds information evaluation.)

Surface Mining Control and Reclamation Act (SMCRA)
(Often discussed in EIDS about surface mines.)

Surface water
(Subcategories may include surface impoundments, drainage network, stream bank and channel characteristics: surface water flow characteristics: runoff - timing and amount; water quality: water use@ and water rights.)

Suspended particulates
(EIDS may discuss airborne and/or waterborne particulates.)

Sustainable resources: sustainable development
(Special subject which would be considered for and project where sustainability is an issue.)

Synergism
(Important concept in assessment of cumulative impacts; refers to interaction of elements which lead to a greater effect than the sum of effects of the elements.)

Tailwater
(Impact issue for many irrigation projects.)

Taxes

(Subcategories may include tax abatements, tax base, tax payments by project, and tax revenues.)

Temperature

(Air temperatures are usually discussed with climate; water temperatures with water quality. Soil temperatures may be germane in special cases.)

Terrain

(Sometimes used instead of or in addition to "landforms" and "topography".)

Terrestrial habitats

(A comparable term is "terrestrial communities": both wildlife and vegetation are included in these terms.)

Thermal impacts; thermal pollution

(Appropriate for projects which discharge cooling water or which impact microclimate.)

Third party

(When third-party agreements are part of a project -- e.g. where operations are under contract -- this should be so indicated in the project description.)

Threatened species

(See comments under endangered species.)

Threshold

(Example of a subject which would be considered in the assessment of impacts, especially ecological and cumulative impacts. The concept of a threshold implies a non-linear cause-effect relationship: when environmental stresses reach a threshold level, significant change occurs.)

Tidal zones

(Also see coastal zones, estuaries.)

Timbering

(Harvesting of forest products.)

Topography

(A basic subject for most discussions of environmental setting; and, for some projects, impacts.)

Topsoil

(Example of subject discussed only for certain types of projects, and which is usually part of the overall discussion of soils.)

Total Maximum Daily Loads

(Important concept in wasteload allocations within a watershed.)

Tourism

(Potentially discussed if area affected by project has important existing or projected tourism activity.)

Toxicity

(Most often discussed for projects which could discharge toxic pollutants; also see biomonitoring. The term toxic materials is sometimes used instead of hazardous materials.)

Tradeoffs; tradeoff analysis
(EIDS involving decisions about project siting, design, operation etc. usually contain a tradeoff analysis which describes the positive and negative attributes of a project proposal, and of the alternatives to that proposal.)

Traditions; traditional practices
(See discussion under customs and traditions.)

Traffic
(Often an important element in the discussion of transportation, especially if a project adds to traffic levels or impacts transportation access.)

Trails
(Also see hiking.)

Training
(This activity is sometimes part of the environmental management of a project, as for example when project staff are trained in pollution prevention techniques.)

Transboundary effects
(EIDS need to discuss impacts which cross state or U.S. boundaries.)

Transportation
(Usually an important component of an infrastructure discussion.)

Trash and garbage
(Most often discussed in terms of how a project will handle its solid wastes to avoid any litter, nuisance or environmental degradation.)

Treatment systems
(EIDS should discuss treatment systems which are part of a project's environmental controls.)

Trends
(This subject is included in the checklist to remind EID preparers of the need to assess time-variations in environmental conditions; used more narrowly, it refers to changes in the condition of rangelands.)

Tribes, tribal peoples
(Also see Native American issues.)

Turbidity
(Example of water quality parameter which may be important to some projects.)

Tunnels
(Special subject, discussed if a project involves tunneling; or would impact a tunnel.)

Uncertainty
(Uncertainty in impact predictions should be indicated where important to the assessment: also see risk assessment, worst-case analysis.)

Unemployment
(See comments under employment.)

Unique resources
(Usually refers to special environmental features, such as a wilderness area, major archeological site, critical habitat, unusual landform, rare water feature, National Parks, etc.)

Urban design
(Special subject, e.g. for projects which involve construction in an urban setting.)

Urbanization
(Can be important if a project is affected by, or contributes to urban development and the conversion of rural to urban land uses.)

Utilities
(May include telecommunications and energy supplies; also see infrastructure; energy.)

Vadose zone
(Also see ground water, recharge.)

Vectors
(Disease-carrying organisms.)

Vegetation
(Subcategories may include different environmental settings or habitats: key species, including species of commercial value; plant communities and condition of vegetative community@ measures or indices of diversity, productivity, biomass, carrying capacity. Both native and managed vegetation communities can be considered.)

Vibration
(Special subject which may be discussed for some projects.)

Viruses
(Also see pathogens: coliform bacteria.)

Visibility
(Can be an important issue where a project affects airborne particulates or aerosols.)

Visitors
(May be discussed in context of tourism and/or recreation.)

Visual analysis
(See visual resources)

Visual resources
(EIDS for some projects will contain a specific analysis of visual resources and impacts.)

Violations
(Also see compliance history.)

Volcanic activity
(Rarely an issue, but an important geologic hazard where it may occur.)

Vulnerability
(May be a subject for a risk assessment or worst-case analysis; also see hostile acts.)

Waste
(General term, which encompasses project activities such as waste handling and disposal.)

Wasteload: wasteload allocations
(Discussed where effluent limits for an NPDES permit are based on wasteload calculations, which in turn reflect assimilative capacity of receiving waters.)

Wastewater

(This is the EID section which discusses effluent being regulated by the NPDES permit regulation; see Table 2-2. A related term is "wastewater lagoons".)

Water balance

(See comments under water resources.)

Water quality

(As appropriate there may be separate discussions and index citations for different parameters of concern, ranging from general indicators of water quality - pH, hardness, salinity, temperature, dissolved oxygen - to specific contaminants or contaminant types - nutrients, iron and manganese, heavy metals, pesticides, synthetic organics, radionuclides, etc.)

Water resources

(May be covered under ground water and/or surface water@ or used to point reviewers to discussions of a water balance, water use, water rights, water quality standards etc.)

Water rights

(See comments under water resources.)

Water supply

(See comments under water resources; also see infrastructure. Discussions of this subject could be organized by major economic sectors.)

Waters of the U.S.

(Special subject, such as for projects involving Section 404 permits.)

Watershed

(EID subject when project analyses leave a watershed context.)

Water table

(If important, included in the discussion of ground water.)

Water use

(See comments under water resources.)

Waterway

(Also see navigation@ waters of The U.S. Comes into play under several statutes@ for example, see Table 2-4.)

Way of life

(Somewhat akin to quality of life; relates to a projects impact on how people go about their lives.)

Weather

(Typically part of the climate discussion.)

Wellhead protection

(Special subject, for EIDS in which wellhead protection areas bear on project alternatives or impacts.)

Wells

(Example of a sensitive environmental receptor.)

Wetlands

(This subject will be found in almost all EIDS. Many different types of wetlands may be discussed, depending on the project location: examples are salt marsh, fresh marsh, swamp, bog, playa, pothole, riparian area. Subjects may include wetland classification and wetland habitat value.)

Wilderness

(Used when projects are in or near wilderness areas.)

Wildlands

(This term refers to all kinds of habitats which have experienced minimal human disturbance, even if located within developed areas and therefore not truly wilderness.)

Wildlife

(Subcategories may include different environmental settings or habitats, habitat functions - such as nesting, feeding and resting; migration corridors@ key species, including species of commercial and recreational value; measures or indices of diversity, productivity, biomass, carrying capacity.)

Wild and Scenic Rivers

(See Table 2-4.)

Wind

(Also see climate: for projects which may be an important source of air emissions and/or odors, a wind rose is often provided in the EID.)

Work force

(Can include work force size, skill level, minority component, whether local or migrant; also see employment.)

Worker health and safety

(Specialized subject within public health and safety.)

Worst-case analysis

(Used to assess impacts such as public health and safety, or ecosystem loss. where it is important to understand the plausible consequences of a project under adverse conditions.)

Zoning

(Typically found in EIDS for projects set in developed areas.)