

November 6, 2009

Mr. Steven Walls  
Regulatory Branch, CESWG-PE-RE  
U.S. Army Corps of Engineers  
Galveston District  
P.O. Box 1229  
Galveston, Texas 77553-1229

Texas Commission on Environmental Quality  
401 Coordinator  
MSC-150  
P.O. Box 13087  
Austin, Texas 78711-3087

Dear Mr. Walls and TCEQ,

Enclosed are the comments of the Houston Regional Group and Lone Star Chapter of the Sierra Club regarding the U.S. Army Corps of Engineers (Corps), Galveston District, Section 10/404, proposed Permit Application No. SWG-2009-00945, for the construction of a coal fired power-plant in Matagorda County, Texas, off County Road 2668, near Bay City.

This proposal is for:

1. The discharge of 19,000 cubic yards into 8.133 acres of jurisdictional waters of the United States including 2.705 acres of emergent wetlands; 4.95 acres of open water; 0.017 acres of ephemeral stream; and 0.461 acres of perennial stream.
2. The construction of two outfall aprons, two barge facility supports with sheet piling and concrete and base material and concrete for a coal-fired power plant.
3. The barge dock will modify 1,200 linear feet of the Colorado River.
4. Approximately 1.19 acres (56,000 cubic yards) will be excavated in adjacent uplands and 2.42 acres (60,520 cubic yards) of the bottom of the Colorado River will be excavated to 11 feet below water.
5. About 3,050 linear feet of perennial stream will be relocated.

6. About 3,900 feet of stream with a 25-foot wide ordinary high water mark (OHWM) will be recreated.

7. An unknown amount of mitigation credits will be purchased by agreement with the National Fish and Wildlife Foundation to purchase ecologically sensitive areas and by re-vegetation of relocated channels with native herbaceous wetland vegetation.

1) It is the understanding of the Sierra Club that U.S. Fish and Wildlife Service (FWS) and the National Fish and Wildlife Foundation have not reached any agreement with the applicant regarding mitigation for the loss of wetlands. The Sierra Club understands that a 2:1 mitigation ratio has been offered by the applicant. The Sierra Club also understands that the applicant prefers mitigation onsite only.

The Sierra Club strongly supports a mitigation ratio for forested or riparian wetlands of at least 8:1 and a mitigation ratio for freshwater wetlands of at least 4:1. Any mitigation ratios less than these would not ensure that created wetlands would protect sufficient wildlife habitat and water quality function to replace the functions that will be lost.

2) This proposal requires that the Corps of Engineers either prepare an environmental impact statement (EIS) or have the applicant prepare one that the Corps will “make its own” to meet the requirements of the National Environmental Policy Act (NEPA), the President’s Council on Environmental Quality’s (CEQ) NEPA implementing regulations, and the Corps own NEPA implementing regulations and provide a public review and comment period.

**On page 2**, the Sierra Club is concerned that the Corps states that “preliminary review of this application indicates that an EIS is not required”. The Corps is overlooking many environmental impacts and the intensity of degradation they will have. This proposal is a “major federal action significantly affecting the quality of the human environment.

It is evident in the 15 sheets of drawings/schematics that more than 8.133 acres of jurisdictional wetlands will be impacted and certainly more important wildlife habitat will be affected. For instance, on **sheets 4-7**, forested wetlands, emergent wetlands, open water, ephemeral streams, and perennial streams will be surrounded, isolated, and or affected by levees, coal pile sedimentation basin, rail-road tracks, drainage channel, live fuel storage areas, long-term fuel storage areas, transmission corridor, sanitary waste water treatment facilities, service roads, and barge facilities. Even if wetlands are not dredged or filled the flow into or out of these wetlands may be impacted by the proposal. Fragmentation of wildlife habitat must be addressed, an explanation placed in the public notice about all potential wetland and habitat impacts, and mitigation required for all potential impacts.

Bottomland hardwood forested wetlands are a vanishing ecosystem and it is in the public interest to protect and restore these important wetland ecosystems wherever possible. It is presumed that the forested wetlands shown on **sheets 4-7**, are bottomland hardwood forested wetlands called Columbia Bottomlands. Columbia Bottomland forested wetlands are very valuable for migratory birds and waterfowl. The FWS is actively conserving, protecting, and preserving Columbia Bottomland forested wetlands via their acquisition placement in national wildlife refuges on the Upper Texas Coast.

However, the public notice says nothing about what type of forested wetlands are on the site and may be impacted by the proposal. This is a significant oversight that must be addressed so that the public can review, comment on, and understand the entire proposal. The Corps should withdraw this permit proposal and add the information that the Sierra Club discusses as being needed in this letter and put the public notice back out for public comments.

Water and air quality can be affected by coal wastes which have heavy metals, volatile organic compounds, and radioactivity. The Corps calls this coal power plant a “new low-emission solid fuel power plant”. Upon what information is this statement based? The information is not found in the public notice.

Coal power plants generate hundreds to thousands of tons each year of nitrogen oxides, carbon dioxide, carbon monoxide, sulfur dioxide, volatile organic compounds, heavy metals (including mercury), radioactive compounds, and other air pollutants. The public has a right to know about these potential impacts and to review, comment on, and understand the entire proposal. This is particularly true since public interest review factors like conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs safety, food and fiber production, mineral needs and, in general, the needs and welfare of the people will be used to analyze, assess, and evaluate the impacts of this proposal. These potential environmental impacts and the others mentioned in these Sierra Club comments demonstrate the need for an EIS and public NEPA process.

3) It is not the Corps responsibility to ensure that the applicant receives a permit. If the applicant cannot do what is legally required and make a profit that is the applicant’s problem and that is how the free market is supposed to work. There is no information in the public notice about alternative analysis for wetlands which would include alternative sites. The permit process is site specific and if loss of jurisdictional waters of the United States cannot be mitigated adequately the Corps should turn down the permit. As mentioned above it is not the Corps business to supply the applicant with an economically feasible solution to achieve a return on investment.

4) The applicant does not provide any information about what best management practices (BMP) will be used. Since one of the significant impacts of this proposal is non-point source run-off from industrial development and roads the public and decision-makers need BMP information to review, comment on, and understand the magnitude of the proposal. The Corps should withdraw the permit and only put it out for public comment when this information is provided.

5) The applicant does not provide a mitigation plan in the public notice. The public and decision-makers have a right to know about and then review, comment on, and understand what the mitigation plan is and what protection it will provide.

There is no information that documents that the mitigation plan design is sufficient, over the long-term, to stand-up to day-in and day-out use of industrial coal plant development and will not result in degradation of the mitigation features and lands. Where is the documentation that proves that the mitigation will stay intact?

What is the record of the Corps, which is low on personnel and on conducting mitigation oversight to ensure that mitigation is done, is done correctly, and withstands the rigors of use for many years?

There must be a permanent monitoring, mitigation maintenance, and repair program to ensure that all mitigation does what it is supposed to and stays in place and performs the function as the level required for as long as the industrial coal power-plant exists.

What protection for mitigation lands is guaranteed in perpetuity?

Who will be responsible for the guarantee?

Who will monitor to make sure that the guarantee occurs?

What monitoring will be required to ensure ecosystem and water quality health?

What will be monitored?

How long will monitoring be required?

What will happen if the guarantee is not honored?

What happens if degradation of values/functions of protected wetlands occurs?

Will additional mitigation be required if the guarantee is not honored?

If mitigation lands are acquired they should be donated to a federal or state agency or a land trust and or provide the land trust with monitoring oversight?

How will the permit ensure that mitigation areas are not degraded and destroyed over time?

The Corps needs to discuss how separated mitigation areas (or avoided wetlands) will be affected by the development over time.

6) The Corps must provide **important information in the EIS or environmental analysis so that it will not hide from the public and decision-makers the magnitude and significance of this proposal. The need for this information and for an EIS or environmental analysis is documented in NEPA by the following:**

1. **CEQ NEPA Regulation, 1500.1(b)**, “NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.”

2. **CEQ NEPA Regulation, 1500.1(c)**, “The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences.”

3. **CEQ NEPA Regulation, 1500.2(b)**, “Implement procedures to make the NEPA process more useful to decision-makers and the public.”

4. **CEQ NEPA Regulation, 1500.2(d)**, “Encourage and facilitate public involvement in decisions which affect the quality of the human environment.”

5. **CEQ NEPA Regulation, 1500.4(b)**, “Preparing analytic rather than encyclopedic environmental impact statements.”

6. **CEQ NEPA Regulation, 1500.4(f)**, “Emphasizing the portions of the EIS that are useful to decision-makers and the public.”

7. **CEQ NEPA Regulation, 1501.2(b)**, “Identify environmental effects and values in adequate detail so they can be compared to economic and technical analyses.”

8. **CEQ NEPA Regulation, 1502.2**, “EISs shall be analytic rather than encyclopedic.”

9. **CEQ NEPA Regulation, 1502.4(a)**, “Agencies shall make sure the proposal which is the subject of an EIS is properly defined.”

10. **CEQ NEPA Regulation 1502.16**, “This section forms the scientific and analytic basis for the comparisons ... environmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, the relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity, and irreversible or irretrievable commitments of resources.”

11. **CEQ NEPA Regulation, 1502.21**, “No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment.”

12. **CEQ NEPA Regulation, 1502.24**, “Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in EISs. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement.”

13. **CEQ NEPA Regulation, 1506.6(a)**, “Agencies shall make diligent efforts to involve the public in preparing and implementing their NEPA procedures.”

14. **CEQ NEPA Regulation, 1508.3**, “Affecting means will or may have an effect on.”

15. **CEQ NEPA Regulation, 1508.14**, “Human Environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment ... When an EIS is prepared and economic or social and natural or physical environmental effects are interrelated then the EIS will discuss all of these effects on the human environment.”

16. **CEQ NEPA Regulation, 1508.18**, “Major Federal action includes actions with effects that may be major and which are potentially subject to Federal control and responsibility. Major reinforces but does not have a meaning independent of significantly ... Actions include new and continuing activities, including projects ... approval of specific projects, such as construction or management activities located in a defined geographic area.”

17. **CEQ NEPA Regulation, 1508.27**, “Significantly as used in NEPA requires considerations of both context and intensity ... Context means that the significance of an action must be analyzed in several contexts ... For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as whole ... Intensity refers to the severity of impact ... impacts may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial ... Unique characteristics of the geographic area (like the bottomland hardwood forested wetlands and other wetlands)... The degree to

which the effects on the quality of the human environment are likely to be highly controversial ... The degree to which the possible effects ... are highly uncertain or involve unique or unknown risks ... Whether the action is related to other actions with individually insignificant but cumulatively significant impacts ... Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.”

**The intensity of this proposal includes unique characteristics (proposed damage to forested wetlands, jurisdictional waters of the United States, and industrial coal plant development); controversial actions (filling of special aquatic sites under Section 404(b)(1) guidelines for non-water dependent activities and loss of bottomland hardwood forested wetlands), is precedent setting at the location (allows destruction of wetlands), has cumulative impacts (increases water pollutants and increased water pollution parameter readings – like dissolved oxygen and total suspended sediments and the loss of bottomland hardwood forested wetlands), and triggers NEPA.** Some of the resources that will be harmed include bottomland hardwood forested wetlands, solitude, quiet, enjoying natural sounds, water quality, natural flood control of the floodplain, bird habitat, human health via floods, plants, animals, freshwater wetlands, and air quality.

The Sierra Club is particularly concerned about non-water dependent activities like roads, coal piles, sediment basins, coal fired power plant, transmission lines, and railroad tracks affecting wetlands which are special aquatic sites. The Corps should not allow the applicant to affect, degrade, or destroy wetlands. The applicant can avoid wetlands and develop the rest of the site. There is no excuse, not monetary or other, that justifies the destruction of wetlands for non-water dependent activities.

7) For an EIS, dictionary usage of words or phrases will not suffice to provide the public with a clear picture of what the intensity, significance, and context of environmental impacts are. In other words, an all qualitative assessment, analysis, and evaluation of environmental impacts is not sufficient to deal with the clearly articulated CEQ requirements in **Section 1502.14**, that the EIS “should present the environmental impacts of the proposal and the alternatives in comparative form, thus **sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public**”.

Quantitative assessment, analysis, and evaluation are necessary to ensure that alternatives and environmental impacts are clearly defined and shown in the EIS. As stated in the CEQ NEPA implementing regulations, **Section 1500.1(b)**, Purpose, “NEPA procedures must insure that environmental information is available to public officials and citizens ... The information must be of high quality. Accurate scientific analyses ... are essential to implementing NEPA”.

As stated in **Section 1501.2(b)**, “Identify environmental effects and values in adequate detail so they can be compared to economic and technical analyses.”

As stated in **Section 1502.8**, “which will be based upon the analysis and supporting data from the natural and social sciences and the environmental design arts.”

As stated in **Section 1502.18(b)**, about the Appendix, “Normally consist of material which substantiates any analysis fundamental to the impact statement”.

As stated in **Section 1502.24**, “Agencies shall insure the professional integrity, of the discussions and analyses ... They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement.”

The analysis that the Corps must use for this EIS must be beyond “**best professional judgment**”. “**Best professional judgment**”, for assessment, analyses, and evaluation of environmental impacts and alternatives is an insufficient foundation upon which to base an EIS.

A qualitative description of phrases to describe environmental impacts or the protectiveness of an alternative does not provide the public with the degree of comparison required by the CEQ’s mandatory NEPA implementing regulations. These regulations state, in **Section 1502.14, Alternatives including the proposed action**, that, “This section is the heart of the EIS ... it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public ... Devote substantial treatment to each alternative in detail ... so that reviewers may evaluate their comparative merits.”

The CEQ also states, in **Section 1502.16 and (d), Environmental consequences**, that, “This section forms the scientific and analytic basis for the comparisons ... The environmental effects of alternatives including the proposed action the comparisons under **Section 1502.14** will be based on this discussion.”

It is key for the Corps to clearly compare and make apparent the distinctiveness of each alternative and its impacts or protectiveness. This is not accomplished when qualitative phrases are used instead of quantitative information or more detailed and clear descriptions of qualitative information. **The Sierra Club requests that the Corps clarify and detail clearly the comparative differences between each alternative and define clearly what the words or phrases used mean.**

8) In **Section 1502.22**, of the CEQ regulations, the Corps is required when evaluating reasonably foreseeable significant adverse effects on the human



environment in an EIS that incomplete or unavailable information be plainly stated as lacking in the EIS. This section requires that if the costs of obtaining this information are “not exorbitant” then the agency must include the information in the EIS. Finally, this section requires that if the information cannot be obtained due to exorbitant costs that the agency must state the information is incomplete or unavailable; state the relevance of this information to evaluating the significant adverse impacts; summarize the credible scientific evidence; and then provide the agency’s evaluation of impacts based upon theoretical approaches or research methods generally accepted in the scientific community. The Corps must use this section of the CEQ regulations to answer questions about long-term and cumulative effects on floodplains, human health and safety, and other impacts that may in fact be permanent.

9) A cumulative impacts assessment is required for this proposal. The site and the surrounding area have suffered tremendously and have been subject historically to damage due to farming, grazing, logging, oil/gas drilling, road construction, power-line and pipeline right-of-ways, point and non-point discharge of water pollutants, invasive species like Chinese Tallow, dredging of water courses and ditches, residential, commercial, and industrial developments, other utility right-of-ways, filling or dredging or draining of wetlands and other natural habitats, and road construction, widening, and maintenance.

There must be sufficient documentation in the EIS of cumulative impacts, including direct, indirect, secondary, and connected impacts of past, present, and foreseeable future actions. NEPA and the CEQ require that analysis, assessment, and evaluation of cumulative impacts be conducted. Please see **Sections 1502.16, 1508.7, 1508.8, and 1508.27** of the CEQ regulations which are binding on all federal agencies to implement.

This implementation of this proposal is a long-term action that must be addressed in an EIS regarding the cumulative impacts, biologically and ecologically, that will occur for the life of this proposal. The question must be answered: **Is this a forever human manipulated proposal that will last forever or for many years (decades or a century)?**

**At minimum, an adequate cumulative effects analysis must:**

1. Identify the past, present, and reasonably foreseeable actions of Corps and other parties affecting each particular aspect of the affected environment
2. Must provide quantitative information regarding past changes in habitat quality and quantity, water quality, resource values, and other aspects of the affected environment that are likely to be altered by Corps actions

3. Must estimate incremental changes in these conditions that will result from Corps actions in combination with actions of other parties, including synergistic effects
4. Must identify any critical thresholds of environmental concern that may be exceeded by Corps actions in combination with actions of other parties
5. Must identify specific mitigation measures that will be implemented to reduce or eliminate such effects

Please see the CEQ's January 1997 document, "Considering Cumulative Effects Under the National Environmental Policy Act." It is clear that the Corps has an affirmative duty, a statutory duty, and a regulatory duty to carry out cumulative impacts assessment. The FS must not short-circuit this required duty and must fully address cumulative impacts.

**Some of the especially important quotes from the CEQ document include:**

- a. On page v, "Only by reevaluating and modifying alternatives in light of the projected cumulative effects can adverse consequences be effectively avoided or minimized. Considering cumulative effects is also essential to developing appropriate mitigation and monitoring its effectiveness."
- b. On page v, "By evaluating resource impact zones and the life cycle of effects rather than projects, the analyst can properly bound the cumulative effects analysis. Scoping can also facilitate the interagency cooperation needed to identify agency plans and other actions whose effects might overlap those of the proposed action."
- c. On page vi, "When the analyst describes the affected environment, he or she is setting the environmental baseline and thresholds of environmental change that are important for analyzing cumulative effects. Recently developed indicators of ecological integrity (e.g., index of biotic integrity for fish) and landscape conditions (e.g., fragmentation of habitat patches) can be used as benchmarks of accumulated change over time ... GIS technologies provide improved means to analyze historical change in indicators of the condition of resources, ecosystems, and human communities, as well as the relevant stress factors."
- d. On page vi, "Most often, the historical context surrounding the resource is critical to developing these baselines and thresholds and to supporting both imminent and future decision-making."
- e. On page ... the consequences of human activities will vary from those that were predicted and mitigated ... therefore, monitoring the accuracy of predictions and the success of mitigation measures is critical.

- f. On page vi, “Special methods are also available to address the unique aspects of cumulative effects, including carrying capacity analysis, ecosystem analysis, economic impacts analysis, and social impact analysis.
- g. On page vii, Table E-1, “CEA Principles ... Cumulative effects analysis ...Address additive, countervailing, and synergistic effects ... Look beyond the life of the action.
- h. On page 1, “The range of actions that must be considered includes not only the projects proposal but all connected and similar actions that could contribute to cumulative effects.
- i. On page 3, “The purpose of cumulative effects analysis, therefore is to ensure that federal decisions consider the full range of consequences of actions ... If cumulative effects become apparent as agency programs are being planned or as larger strategies and policies are developed then potential cumulative effects should be analyzed at that times.
- j. On page 3, Cumulative effects analysis necessarily involves assumptions and uncertainties, but useful information can be put on the decision-making table now ... Important research and monitoring programs can be identified that will improve analyses in the future, but their absence should not be used as a reason for not analyzing cumulative effects to the extent possible now ... adaptive management provisions for flexible project implementation can be incorporated into the selected alternative.”
- k. On page 4, “The Federal Highway Administration and state transportation agencies frequently make decisions on highway projects that may not have significant direct environmental effects, but that may induce indirect and cumulative effects by permitting other development activities that have significant effects on air and water resources at a regional or national scale, The highway and other development activities can reasonably be foreseen as “connected actions.
- l. On page 7, “Increasingly, decision makers are recognizing the importance of looking at their projects in the context of other development in the community or region (i.e., of analyzing the cumulative effects) ... Without a definitive threshold, the NEPA practitioner should compare the cumulative effects of multiple actions with appropriate national, regional, state, or community goals to determine whether the total effect is significant ... Cumulative effects results from spatial (geographic) and temporal (time) crowding of environmental perturbations. The effects of human activities will accumulate when a second perturbation occurs at a site before the ecosystem can fully rebound from the effect of the first perturbation.”

m. On page 8, Table 1-2, lists 8 principles of cumulative effects analysis. **A summary of summary of these principles includes:**

1. Cumulative effects are caused by the aggregate of past, present, and reasonably foreseeable future actions.
2. Cumulative effects are the total effect, including both direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken no matter who has taken the actions.
3. Cumulative effects need to be analyzed in terms of than specific resource, ecosystem, and human community being affected.
4. It is not practical to analyze the cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful.
5. Cumulative effects on a given resource, ecosystem, and human community are rarely aligned with political or administrative boundaries.
6. Cumulative effects may result form the accumulation of similar effects or the synergistic interaction of different effects.
7. Cumulative effects may last for many years beyond the life of the action that caused the effects.
8. Each affected resource, ecosystem, and human community must be analyzed in term of its capacity to accommodate additional effects, based on its own time and space parameters.

n. On page 19, “The first step in identifying future actions is to investigate the plans of the proponent agency and other agencies in the area. Commonly, analysts only include those plans for actions which are funded or for which other NEPA analysis is being prepared. This approach does not meet the letter or intent of CEQ’s regulations ... The analyst should develop guidelines as to what constitutes “reasonably foreseeable future actions” based on planning process within each agency ... In many cases, local government planning agencies can provide useful information on the likely future development of the region, such as master plans. Local zoning requirements, water supply plans, economic development plans, and various permitting records will help in identifying reasonably foreseeable private actions ... These plans can be considered in the analysis, but it is important to indicate in the NEPA analysis whether these plans were presented by the private party responsible for originating the action. Whenever speculative projections of future development are used, the analyst should provide an explicit description of the assumptions involved ... NEPA litigation ... has made it clear that “reasonable forecasting” is implicit in NEPA

and that it is the responsibility of federal agencies to predict the environmental effects of proposed actions before they are fully known.

o. On page 23, “Characterizing the affected environment in a NEPA analysis that addresses cumulative effects requires special attention to defining baseline conditions. These baseline conditions provide the context for evaluating environmental consequences and should include historical cumulative effects to the extent feasible.

p. On page 29, “Lastly, trends analysis of change in the extent and magnitude of stresses is critical for projecting the future cumulative effects.

q. On page 29, “Government regulations and administrative standards ... often influence developmental activity and the resultant cumulative stress on resources, ecosystems, and human communities.

r. On page 31, “Cumulative effects occur through the accumulation of effects over varying periods of time. For this reason, an understanding of the historical context of effects is critical to assessing the direct, indirect, and cumulative effects of proposed actions. Trends data can be used ... to establish the baseline for the affected environment more accurately (i.e., by incorporating variation over time) ... to evaluate the significance of effects relative to historical degradation (i.e., by helping to estimate how close the resource is to a threshold of degradation) ... to predict the effects of the actions (i.e., by using the model of cause and effects established by past actions).”

s. On pages 38-40, “Using information gathered to describe the affected environment, the factors that affect resources (i.e., the causes in the cause-and-effect relationships) can be identified and a conceptual model of cause and effect developed ... The cause-and-effect model can aid in the identification of past, present, and future actions that should be considered in the analysis ... The cause-and effect relationships for each resource are used to determine the magnitude of the cumulative effect resulting from all actions included in the analysis ... one of the most useful approaches for determining the likely response of the resource ... to environmental change is to evaluate the historical effects of activities similar to those under consideration.

t. On page 41, “The analyst’s primary goal is to determine the magnitude and significance of the environmental consequences of the proposed action in the context of the cumulative effects of other past, present, and future actions ... The critical element in this conceptual model is defining an appropriate baseline or threshold condition of the resource.

u. On page 43, “Situations can arise where an incremental effect that exceeds the threshold of concern for cumulative effects results, not from the proposed action, but the reasonably foreseeable but still uncertain future actions.

v. On page 45, “The significance of effects should be determined based on context and intensity ... Intensity refers to the severity of effect ... As discussed above, the magnitude of an effect reflects relative size or amount of an effect. Geographic extent considers how widespread the effect might be. Duration and frequency refers to whether the effect is a one-time event, intermittent, or chronic.

w. On page 45, “Determinations of significance ... are the focus of analysis because they lead to additional (more costly) analysis or to inclusion of additional mitigation (or a detailed justification for not implementing mitigation) ... the project proponent should avoid, minimize, or mitigate adverse effects by modifying alternatives ... in most cases, however, avoidance or minimization are more effective than remediating unwanted effects.”

y. On page 51, “different resource effects that cumulatively affect interconnected systems must be addressed in combination.”

The Corps must utilize the CEQ document to the maximum extent possible so that a full and legal cumulative impacts assessment is conducted in a draft EIS.

10) The Corps is required to “Develop other alternatives fully and impartially. Ensure that the range of alternatives does not prematurely foreclose options that might protect, restore, and enhance the environment. Consider reasonable alternatives even if outside the jurisdiction of the agency.” **40 CFR 1502.22.**

All reasonable alternatives must be analyzed, evaluated, and assessed in the EIS according to CEQ regulations.

Reasonable alternatives include:

1. The proposed action.
2. No action.
3. An alternative site.
4. An alternative that is smaller in size.
5. An alternative that does not develop in the floodplain.
6. An alternative that avoids all wetlands dredge/fill activities.

These are only some of the reasonable alternatives that should be analyzed, assessed, and evaluated in the EIS. The Corps must provide for the public and

decision-makers a list of “all reasonable alternatives” and analyze them in the EIS.

11) The Sierra Club recommends:

1. That this permit be denied due to the public interest and environmental impacts that the proposal will cause, as outlined in these comments.
2. If the permit is not denied then the Corps must prepare a draft EIS and provide a public comment period before a final EIS is completed.
3. All jurisdictional waters of the United States and non-jurisdictional wetlands must be avoided or mitigated at least 8:1 for forested wetlands and 4:1 for freshwater wetlands.
4. The permit application should be withdrawn until all information identified in these Sierra Club comments is placed in the permit application public notice and the public and decision-makers have a 30-day opportunity to review, comment on, and understand the full, cumulative, environmental impacts of this proposal.

The Sierra Club appreciates this opportunity to comment. Thank you.

Sincerely,

Brandt Mannchen  
Forest Management Issue Chair  
Lone Star Chapter of the Sierra Club  
Chair, Forestry Subcommittee  
Houston Regional Group of the Sierra Club  
5431 Carew  
Houston, Texas 77096  
713-664-5962  
[brandtshnfbt@juno.com](mailto:brandtshnfbt@juno.com)