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The Wildlife Society appreciates this opportunity to submit comments in response to the Notice of Availability of the Draft EIS for the Proposed TransCanada Keystone XL Pipeline Project.

The Wildlife Society (TWS) was founded in 1937 and is a non-profit scientific and educational association of over 9,100 professional wildlife biologists and managers, dedicated to excellence in wildlife stewardship through science and education. Our mission is to represent and serve wildlife professionals—the scientists, technicians, and practitioners actively working to study, manage, and conserve native and desired non-native wildlife and their habitats worldwide.

The Keystone XL Project would consist of approximately 1,380 new miles of pipeline in the U.S. that would cross the international border between Saskatchewan, Canada, and the United States near Morgan, Montana. The pipeline would eventually have the capacity to carry up to 900,000 barrels per day (bpd) of crude oil to terminals in Cushing, Oklahoma; Nederland, Texas; and Moore Junction, Texas.¹ This new capacity would allow TransCanada to greatly expand oil sands development in the Peace River, Athabasca, and Cold Lake oil sands areas of Alberta.² Such development will lead to the eventual removal of a region of Canadian Boreal Forest equivalent to the size of Florida.³

TWS is concerned about the development of the Keystone XL Pipeline Project for a number of reasons. First, we are concerned about careful development of any energy source that threatens wildlife and their habitat. We are also more specifically concerned by the lack of consideration of the upcoming CEQ guidance on climate change, and by the lack of basic compliance with U.S. environmental regulations, such as the National Environmental Protection Act (NEPA). We detail these issues further below.

Oil Sands Development Poses Severe Environmental Concerns

The refinement of oil sands is an environmentally destructive process. In this process, sands containing oil, or bitumen, are strip-mined or collected using underground heating techniques, and the heavy oil is extracted and separated during a subsequent refining process. Over two tons of sand are required to produce just one barrel of oil. This process of mining and extraction not only strips away features of the natural environment, uprooting trees, filling ponds, draining groundwater, and displacing wildlife, but also generates a number of toxic chemicals, including naphthenic acids, mercury, arsenic salts, and polycyclic aromatic hydrocarbons (PAHs), all of which have been shown to be rising in concentration in the atmosphere.⁴

The toxic pollution that is created from the refinement of oil sands has been described as “what amounts to a slow motion oil spill in the region’s river systems...worse in many respects than the Exxon Valdez oil spill.”⁵ Scientific and anecdotal reports from the locales in Alberta where oil sands are refined have noted deformed pickerel in Lake Athabasca,⁶ moose meat with 453 times the acceptable level of arsenic,⁷ and unusually high levels of cancer in local communities.⁸ This pollution enters the environment largely through massive toxic tailings ponds filled with acutely toxic chemicals. These chemicals are very concentrated and birds have been observed to die simply by landing on the ponds, necessitating that some companies hire workers to rake dead birds from the surface. These ponds are often built on the banks of the Athabasca River and are held in place only by earthen dikes; it has been predicted that if an earthquake or severe weather event were ever to cause the breach of a dike, the impacts on the downstream environment would be far-reaching and fatal.⁹

Because these ponds are built in the water-dominated boreal forest environment, the main environmental threats are a result of the migration of pollutants through the groundwater system and into neighboring surface water sources.¹⁰ The pollution coming into the Athabasca River from the oil sands refineries is already being found far downstream in the Peace-Athabasca Delta,¹¹ one of the largest freshwater deltas in the world, and a region of great biodiversity. More than 1/6 of Canada drains into this watershed, which is also one of the world’s most important migratory bird and animal habitats, with more than half of America’s birds migrating to the Canadian boreal forest region to nest every spring.

Oil sands refinement also is a significant source of air pollution. Benzene is a human carcinogen for which long-term exposure can lead to leukemia and other forms of cancer. When heated, tailing ponds can emit large amounts of benzene, and Environment Canada has estimated that oil sands could emit up to 500-800 tons of benzene per year by 2015. Likewise, oil sands emit large amounts of sulfur and nitrogen oxides, which interact with water to produce acid rain. Environment Canada estimates that oil sands release 158,000 tons of sulphur oxide pollution and 76,000 tons of nitrous oxide pollution that leads to acid rains.¹³ In a Saskatchewan site 200 kilometers downwind of the oil sands, the mean level of acid in the precipitation has increased in the past 12 years, from pH 5.3, down to pH 4.1. Such acid rain affects lakes, rivers, forests and human health, causing fish to take up larger amounts of mercury and death in sensitive species, such as some types of minnows.¹³ This rain, and these effects are, moreover, not confined to Canada and could cause similar deleterious consequences in the northern United States.

Effects on Endangered Wildlife

In addition to these general issues regarding the effects of the pollution generated from oil sands development, TWS is also particularly concerned with the effect that oil sands refinement and the Keystone XL Pipeline project may have on wildlife within the United States.

The Canadian boreal forest is a major North American bird nesting habitat, with anywhere from 22 million to 170 million waterfowl and songbirds breeding each year in the 35 million acres of Boreal forest that may eventually be destroyed by oil sands development.¹⁴ In addition to functioning as a breeding ground, it is also a globally-important flyway for a great diversity of wetland dependent birds. It is known to support at least 292 species of birds, which includes most of the declining species, as well as 65 species of known conservation concern. Oil sands

development harms these birds by causing direct mortality through oiling and poisoning from landing on the surface of tailing ponds, by fragmenting habitat; by eliminating the clean water supply from these critical wetland resources; by contributing to the bioaccumulation of toxins in the air and water; and by contributing to the climate change that is further changing the face of the boreal habitat¹⁵ While all of these effects would occur outside of the U.S., the repercussions would be felt by all migrating species, far across the international border.

The pipeline itself may also have more substantial effects on U.S. wildlife than the DEIS suggests. As noted in the DEIS, the proposed project would cross two counties in Montana and four counties in South Dakota that may contain black-footed ferret (*Mustela nigripes*) habitat, fragmenting prairie dog (food source) colonies, altering habitat, and leading to a possible increase of direct mortalities due to collisions and other disturbance.¹⁶ The DEIS notes that the populations it is likely to affect are non-essential experimental populations. However, with a population estimated to be as low as 750, each population is important to the survival of the species and should be treated with due caution.

The whooping crane (*Grus Americana*) is another endangered species that will be threatened by the Keystone XL Pipeline project. The DEIS notes that the pipeline crosses some of the migratory route, however, it fails to note that the complete expanse of the Keystone XL project in fact falls within the whooping crane migration route, from Texas, to North Dakota, up to Alberta.¹⁷ We believe this is a critical omission, and we believe that not only the pipeline, but the larger development that it supports must be considered when reviewing the adverse impacts this project will have upon a species. The DEIS concludes that the Project will not adversely affect whooping cranes, in part because of the “rarity of the species.” Citing this as a reason that the Project will not harm the species shows questionable logic; additionally, given that the Project is crossing the migratory route, and contributing to the destruction of whooping crane nesting grounds, it is difficult to see how the species will not be adversely affected. We urge a re-evaluation of the effects of the *entire* Keystone project on the *entire* life history of the whooping crane.

Lack of Consideration for U.S. Climate Policies

In February 2010 the Council on Environmental Quality (CEQ) released a draft of “Guidance on Consideration of the Effects of Climate Change and Greenhouse Gases under NEPA” document. The document, while still in draft form, does discuss several critical components that CEQ may expect to have in future NEPA reviews. These include consideration of the cumulative effects of greenhouse gas (GHG) emissions, the impacts of projects on climate change, and a longer-term consideration of effects than have been used in past NEPA assessments.¹⁸ While this document is not yet final, the Department of the State would be wise to act in accordance with impending changes that protect the health and environment of the nation.

As measured by the National Oceanic and Atmospheric Administration in May 2010, the atmospheric concentration of carbon dioxide, the leading GHG, is 392 parts per million, which is greater than any time in the last 650,000 years. The Carbon Dioxide Information Analysis Center lists 207 nations by order of carbon emissions. The oil sands of Canada have greater emissions than 145 of them and are the single largest contributor to emissions growth in Canada. This figure, it is also worth noting, is only the result of the *development* of oil sands and does not include all the associated activities, including the movement of oil using trucks and tankers,

energy that goes into the refinery process, and the burning of the oil and their resulting GHG emissions. These cumulative effects, most of which will occur in the United States, should be considered in any NEPA assessment.

The science of climate change clearly shows that GHG emissions need to be lowered immediately and rapidly if we are to prevent further drastic climatic impacts, conserve wildlife habitats, and protect human health. President Obama and Secretary Clinton already have national policies to address climate change and have said that combating climate change should be a national priority. Further, the UN Framework convention on Climate Change, to which we are a party, calls for all parties to “take precautionary measures to anticipate, prevent, or minimize the causes of climate change and mitigate its adverse effects.” By supporting the development of a pipeline that will increase GHG emissions in many ways, in the US and beyond, we are violating the spirit of international agreements and national commitments. Instead of supporting the Keystone XL project, the Secretary would be wise to use her authority to develop international agreements to create sustainable and environmentally-sound energy practices and protect habitats and human health across all national borders.

Inadequate Compliance with NEPA

Under NEPA requirements, all federal government agencies must prepare a detailed statement—the EIS—which must describe the environmental impact of a proposed action, as well as any adverse environmental effects that cannot be avoided if the proposal is implemented. Further, the EIS must include a discussion of the significance of all “direct,” “indirect,” and “cumulative” effects of the action; a discussion of the “means to mitigate adverse environmental impacts;” and an analysis of all “connected actions.”

While the DEIS does make some mention of connected actions, those that it references are inadequate. The DEIS does not address the connected actions from the impacts of additional refinery needs in the Gulf Coast. It also does not examine connected actions of how the expansion of oil sands mining activities will have adverse effects on human and wildlife health, environmental quality, and water quality in Canada and downstream. These “connected actions” will undoubtedly have significant impacts upon the environment and must be considered in preparation of the EIS.

Further, the DEIS also does not adequately address the “cumulative” effects upon surrounding wildlife habitats and the larger, more distant environment. The cumulative effects are defined as those that “result from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency...or person undertakes such other actions.”¹⁹ The DEIS limits its discussion of cumulative effects to relatively minor effects from noise, habitat fragmentation, vegetative resources, and viewshed degradation from disruption by pumping stations and increases in the width of right-of-way areas. As for the cumulative effects from GHG emissions, the DEIS notes that while crude oil does contribute to the release of CO₂ into the atmosphere, “the crude oil delivered by the Project would be replacing similar crude oils from other sources, [and] the incremental impact of these emissions would be minor.”²⁰

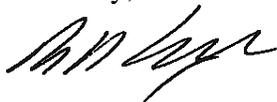
We believe this treatment of the cumulative effects to be woefully inadequate. As described above, the reach of this pipeline's effects go far beyond the actual physical bounds of the pipeline. The pipeline also has the potential to generate spills, will necessitate further refinery and pumping station upgrades, and will be using a significant amount of clean water and natural gas to create a pollution-heavy, difficult to process, carbon-emitting form of energy. While neither the Department of State regulations nor Executive Order 12114 may require the DEIS to analyze impacts on environmental activities outside of international borders, we believe that both in the spirit of supporting international accords on climate change and in the best interest of a nation that is downstream and downwind from the toxic effects of oil sands production, cumulative effects must be more carefully considered. For example, we suggest the DEIS consider:

- How will the Canadian boreal forest ecosystem react to the adverse impacts from oil sands development?
- How much habitat can be damaged before a species is lost forever?
- What will be the estimated loss of migratory birds due to the toxic ponds and tailings?
- What will be the potential near and downstream (as far as the U.S.) impacts of a breach in the dikes supporting these tailing ponds?
- What will be the cumulative impacts of the GHG emissions produced during the actual refining of the crude, esp. in respect to cleaner fuel sources?
- What will be the cumulative effects of the resulting GHG emissions from the use of fossil fuels?

Given that better, cleaner energy technologies are being developed every day, it seems insincere for the Department of State to argue that this pipeline is being built with our nation's best interests in mind. Supporting a technology that pollutes the nation's air and water, fragments and destroys important wildlife habitat, and continues to subsidize our national dependence on non-renewable energy sources seems somewhat backward-thinking and contrary to all new environmental and climate policies. We urge you to consider all of the comments in this letter and ask that the Secretary use her power to make sure all of the concerns discussed above are included in the final EIS, and to ensure that if the Project does go forth, it does so with the only the most careful environmental considerations.

Thank you for your careful attention to this issue, and please do not hesitate to contact Laura Bies, TWS Director of Government Affairs, at 301-897-9770 x 308 if you have any questions.

Sincerely,



Bruce Leopold, Ph.D.
President

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