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SOAH DOCKET NO. 473-10-4398
PUC DOCKET NO. 38230

APPLICATION OF LONE STAR TRANSMISSION COMPANY FOR CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE CENTRAL A TO CENTRAL C TO SAM SWITCH TO NAVARRO PROPOSED CREZ TRANSMISSION LINE	§	**BEFORE THE STATE OFFICE**
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	§	**OF**
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	§	**ADMINISTRATIVE HEARINGS**

REBUTTAL TESTIMONY OF NEAL WILKINS, Ph.D.
ON BEHALF OF
CHALK MOUNTAIN COMMUNITY ALLIANCE, LLC

August 31, 2010

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I. INTRODUCTION AND OVERVIEW

Q. WHAT IS YOUR NAME AND YOUR BUSINESS ADDRESS?

A. My name is Neal Wilkins. My business address is 1500 Research Parkway, College Station, Texas 77845.

Q. DID YOU SUBMIT DIRECT TESTIMONY IN THIS DOCKET?

A. Yes, I did.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to the testimony of certain intervenor witnesses. Specifically, I respond to testimony given by John Baccus, Marc Myers, John Cornelius, and Michael Noonan.

III. RESPONSE TO DIRECT TESTIMONY OF JOHN BACCUS

Q. HAVE YOU REVIEWED AND ANALYZED DR. BACCUS'S TESTIMONY?

A. Yes, I have.

Q. TO START, DO YOU HAVE ANY CRITICISMS OF DR. BACCUS'S "MAIN CONCLUSIONS" (BACCUS DIRECT AT 3)?

A. Yes. First, without the benefit of survey data and field verification along much of Link RR, Dr. Baccus concludes that "there are at least 10 miles of warbler habitat on that link." At best, this should be considered potential habitat, a distinction that is particularly relevant given that he depended upon an unvalidated predictive model (Model C) for identifying habitat. I am familiar with Model C, and have learned of some of its limitations. As with all models, there is error in Model C. While Model C is relatively reliable for identifying areas that might provide breeding habitat for Golden-cheeked Warblers, it tends to over-predict and include significant areas that are also not breeding habitat. Model C is useful for identifying areas to survey for breeding warblers, but its utility for actually identifying areas that are highly likely to be occupied during the breeding season is limited; in the language of model evaluation, Model C has a high "error-of-commission."

Given the error-of-commission inherent in Model C, it is not appropriate to compare *unverified* results of Model C along Link RR to the amounts of habitat

that are *verified* elsewhere. For instance, the habitat I identified along KK1, KK2, and ST was not only verified through field visits, but is known through repeated surveys to be used by warblers as breeding habitat. So, my primary criticism of Dr. Baccus's main conclusion is that his identification of at least 10 miles of habitat along Link RR was not accompanied by an appropriate caution regarding the model's inherent prediction error in, and level of uncertainty regarding, the actual use of that habitat by breeding warblers.

Q. IS THE DISTINCTION BETWEEN "POTENTIAL" AND "PROVEN" OR "OCCUPIED" HABITAT IMPORTANT?

A. Yes. While it is important to consider relative amounts of "potential habitat" in a comparative analysis, it is important to note that not all potential habitat is ultimately occupied and used by the species. Habitat that is known to be occupied through surveys – what might be called "proven" habitat – is a subset of potential habitat that is identified through aerial photo interpretation or a model such as Model C. Habitat area that is known to be occupied naturally plays a more significant role in a decision-making process for avoiding impacts to endangered species.

Q. DO YOU HAVE ANY COMMENTS ON THE MODELS DR BACCUS SAYS HE USED TO MAKE HIS ESTIMATES?

A. Dr Baccus refers in his Direct Testimony to his "review of USFWS Model C." (Baccus Dir. at 7) Dr Baccus is apparently referring to "Model C" produced by David Diamond's group in Missouri. If so, this model for predicting potential habitat has not been widely field-verified – and in addition, it has not to my knowledge been adopted by the USFWS. Characterizing the map as a USFWS model gives the product a misplaced status of reliability. If Dr. Baccus relied upon Model C to make his ultimate calculations leading to his estimate of 10 miles of habitat along Link RR, then the estimate should at least be qualified that it emerges from a model with unknown reliability for the region in which it is being applied, and it should be noted that the model tends to over-predict potential habitat when compared to habitat that is ultimately found to be occupied. In fact, if one were to rely strictly on Model C, the length of potential habitat (identified in the model as moderate to high quality) predicted by the Model is 8.12 miles along

Link RR. By way of comparison, Model C predicts 7.50 miles of the same quality habitat along Links KK1, KK2, and ST.[1] Again, I don't rely on Model C, because I would not consider its comparisons to be reliable, particularly when other data are available. But on an "apples-to-apples" basis, even under the unreliable Model C, Links KK1, KK2, and ST are of equivalent value to Link RR.

Q. WHAT IS YOUR RESPONSE TO DR. BACCUS'S FINDINGS WITH RESPECT TO LINK RR?

A. Dr. Baccus identified what he suggests may be an additional 5.3 miles of potential golden-cheeked warbler habitat along Link RR using Model C and other data. I have no significant basis to dispute this finding, as long as the significant degree of uncertainty inherent in Dr. Baccus's methodology is recognized and the singular measure of "length" is put into context. To address the likely impacts to a species, "length" is not always the best choice of statistic in making comparisons among links or routes. Dr. Baccus confirmed, for instance, that some of his "additional" potential habitat was found along county roads. For example, Dr. Baccus refers to habitat along County Road 2160 on page 6 in his testimony. While the clearing of a transmission line right-of-way that follows an existing corridor would likely have some impact on habitat, the impact would be more severe when clearing of right-of-way through previously unbroken habitat.

Q. DOES THAT MEAN THAT THE "POTENTIAL HABITAT" THAT MAY BE FOUND ALONG CERTAIN ROUTES COULD SIMPLY BE DESTROYED WITHOUT CONSEQUENCE?

A. No. In my experience, the history of ESA compliance tends to follow a precautionary principle. If the vegetation structure and composition defined as potential habitat is present– in this case if it meets the general characteristics defined by Texas Parks & Wildlife Department[2] -- then the US Fish & Wildlife Service requires a survey protocol intended to verify a species' absence prior to allowing any take of that habitat.

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[1] Details of this analysis are presented in testimony of Tom Van Zandt.

[2] Campbell, L. 1995. Endangered and Threatened Animals of Texas: Their Life History and Management. University of Texas Press. 144 pp.

As an alternative, a party may enter into a Habitat Conservation Plan (an "HCP") that supports an incidental take permit. The HCP outlines the steps that will be used to avoid, minimize, and mitigate the incidental take of endangered species. Through this HCP process, Lone Star might agree to more closely identify potential habitat through on-site field verification and then conduct surveys to document occupancy. These results could then be used to determine the amount of incidental take to be expected from the clearing of a right-of-way. This would then have a bearing on the mitigation and other conservation measures that would be required as part of the grant of an incidental take permit.

Q. DO YOU DISAGREE WITH DR. BACCUS'S CONCLUSIONS THAT A TRANSMISSION LINE ALONG LINK RR WOULD RESULT IN A TAKING OF HABITAT UNDER THE ENDANGERED SPECIES ACT AND MIGRATORY BIRD TREATY ACT?

A. No. I do not disagree with Dr. Baccus on this point. It would be statistically unlikely that all of the potential habitat identified along Link RR would be found to be unoccupied if properly surveyed. If habitat along the route is found to be occupied by Golden-cheeked Warblers, then I see no reason to believe that the clearing of a transmission line would not result in an incidental take under ESA. More definitely, however, routes that would include Links KK1, KK2, or ST would certainly incur a taking of Golden-cheeked Warbler habitat, as the habitat along these routes is already known to be used by this species during the breeding season.

In addition – and just as important – the routing of Central C to Sam Switch through any of the links that run through the Chalk Mountain area (Links KK1, KK2, and ST) would result in a taking of known breeding habitat for endangered Black-capped Vireos. This is a species that both Lone Star's Environmental Assessment and Dr. Baccus's testimony failed to acknowledge.

Q. WHAT IS WRONG WITH USING A MEASURMENT LIKE "LENGTH THROUGH KNOWN THREATENED AND ENDANGERED SPECIES HABITAT," SUCH AS IS FOUND IN TABLE C-2, ENVIRONMENTAL DATA FOR ALTERNATIVE ROUTE EVALUATION AND TOUTED BY MR. BACCUS WITH REGARD TO LINK RR?

A. When considering the basics of this species' ecology, a simple measure of the length of a proposed line running through potential habitat is actually a crude measure of likely impact. Both presence and abundance of Golden-cheeked Warblers is closely-related to patch size. If a single large patch is divided into smaller patches with a transmission line across a previously unfragmented area, the net impact to the species will likely be much more than a transmission line that cuts along the margin of several smaller patches or simply widens an existing corridor bordered by habitat. While I have not had the benefit of verifying the potential habitat patches Dr. Baccus identified, it appears from aerial imagery that several are relatively small (*i.e.*, <500 acres) and some are adjacent to existing transportation or utility corridors. In the case of Links KK1, KK2, and ST, the clearing of a right-of-way will impact relatively large patches of habitat (>500 acres) already known to be occupied. What this means is that the *known-to-be-occupied* habitat along Links KK1, KK2, and ST would likely receive a greater net impact due to clearing of a transmission line right-of-way than would similar activities on Link RR. This is not to say that the potential impacts along Link RR should be disregarded, but they should be qualified.

Q. WOULD YOU CONCLUDE, BASED UPON DR. BACCUS'S PROSPECT OF A TAKING, THAT LINK RR SHOULD BE AVOIDED, BUT A ROUTE INCLUDING LINKS KK1, KK2, OR ST SHOULD BE SELECTED?

A. No, of course not. The routing decision is necessarily based upon comparisons. Considering the endangered species resources at stake, a reliable comparative analysis would first take note of habitat already known to be occupied. While a shortage of data along Link RR makes the comparison more difficult, any analysis must take into account the prospect of actual habitat use at some point or points along the link. But at the same time, it is important that the analysis take account of the fact that Golden-cheeked Warbler habitat along Links KK1, KK2, and ST are already known to be occupied, and that many of the landowners in that area have intentionally managed their land for the conservation of these endangered birds for a number of years. Lone Star's Environmental Assessment underestimates the potential Golden-cheeked Warbler habitat along Link RR as well as Links KK1, KK2, and ST.

Moreover, the additional presence of substantial areas of Black-capped Vireo habitat along Links KK1, KK2, and ST adds a substantial additional reason to avoid a route that would include any of those links.

Q. WHAT IS YOUR VIEW OF THE CONCLUSIONS REGARDING THE ACCEPTABILITY OF LINK RR TO THE U.S. FISH & WILDLIFE SERVICE?

A. I disagree with Dr. Baccus' conclusion regarding the likelihood of U.S. Fish & Wildlife Service actions. Dr. Baccus testified that he doubts the U.S. Fish & Wildlife Service would issue a take permit for Link RR, stating that "Lone Star has no assurance a permit will be issued based on the scientific evidence." (Baccus Direct at 6) In fact, the amount of incidental take along Link RR could be more or less than along other alternative routes, but the difficulties in attaining an incidental take permit (supported by a Habitat Conservation Plan under section 10 of the Endangered Species Act) cannot be predicted by simply quantifying the amount of potential habitat along this link.

While I will not pretend to speak for the U.S. Fish & Wildlife Service here, I can speak from experience: obtaining an incidental take permit is more likely related to the conservation measures Lone Star ultimately offers for offsetting the actual incidental take the construction and maintenance of the transmission line is expected to cause. For instance, if as part of an HCP Lone Star offers mitigation measures that would clearly assure a net conservation benefit to these endangered species, Lone Star could well obtain an incidental take permit. While the probability of Lone Star obtaining or not obtaining a permit is somewhat speculative, the likelihood is no higher or lower on Link RR than it is on routes that include Links KK1, KK2, or ST, and Lone Star is largely in control of the factors that would make a permit more likely.

Q. WHAT DO YOU THINK ABOUT THE IDEA THAT HABITAT LOSSES MUST INCLUDE A 300-FOOT BUFFER ZONE UNDER U.S. FISH & WILDLIFE SERVICE RULES OR THAT A 900-FOOT BUFFER IS MORE APPPROPRIATE?

A. First, the U.S. Fish & Wildlife Service does not necessarily include a "buffer" in its evaluation of habitat losses. Beyond U.S. Fish & Wildlife Service requirements, for Golden-cheeked Warblers, I think the idea for a set buffer width overstates

the certainty regarding the level of impact resulting from a disturbance. Using a 300 or 900-foot buffer when calculating potential take is akin to the idea of only accounting for length of habitat along a proposed link of the transmission line. The resulting change in habitat use as a function of changing habitat patch sizes and landscape composition are more reliable measures of take.

That said, the *proven* Golden-cheeked Warbler and Black-capped Vireo habitat along Links KK1, KK2, and ST and specific presence survey confirmation within Dr. Baccus's proposed "buffers" contrasts with the *potential* habitat of Link RR, whether buffers are used or not.

Q. CAN YOU DEMONSTRATE GRAPHICALLY THE PRESENCE SURVEY DATA FOR LINKS KK1, KK2, AND ST USING DR. BACCUS'S "BUFFERS"?

A. Yes. Chalk Mountain produced discovery responses relating to the more than 20 Chalk Mountain area surveys of endangered species habitat and recorded observations that were prepared by or under the direction of Linda Laack, a wildlife biologist, between 2005 and 2010, including maps using the "buffers." The complete surveys are attached to my Direct Testimony as Exhibit NW-2; attached to my Rebuttal Testimony as Exhibit NW-3 is an additional map prepared by Linda Laack showing the "buffer" zones overlaid for the areas around Links KK1, KK2, and ST.

Q. WHAT DO THESE MAPS SHOW YOU?

A. The additional maps attached as Exhibit NW-3 again show clearly that the proposed links would run through known, occupied habitat for Black-capped Vireos and Golden-cheeked Warblers. The presence of both Golden-cheeked Warblers and Black-capped Vireos is confirmed along each of Links KK1, KK2, and ST, particularly taking into account "buffers" Dr. Baccus references in his testimony.

Q. DO YOU HAVE ANY OPINIONS ON DR. BACCUS'S FINAL RECOMMENDATION?

A. Dr. Baccus is qualified to offer expert opinion on this topic, but his final recommendation was largely contingent upon the reliability of the estimates and extrapolations that could be made from aerial imagery and the reliability of Model C. Dr. Baccus did not, however, discuss this inherent uncertainty arising from his

methodology. While I also find it reasonably likely that there is more Golden-cheeked Warbler habitat along Link RR than was noted in Lone Star's EA, most of that habitat has not been field verified or surveyed for occupancy and is not supported by occupancy data. I contrast Dr. Baccus's data with the data collected along stretches of alternative Links KK1, KK2, and ST, where lands have been repeatedly surveyed for endangered birds as part of management over the last several years and where presence has been repeatedly confirmed.

Q. DOES DR. BACCUS DISCUSS BLACK-CAPPED VIREOS AT ALL?

A. No. He did not note any potential Black-capped Vireo habitat in his testimony.

IV. RESPONSE TO DIRECT TESTIMONY OF MARC MYERS

Q. HAVE YOU REVIEWED AND ANALYZED MR. MYERS'S TESTIMONY?

A. Yes, I have.

Q. DO YOU HAVE ANY OBSERVATIONS FOLLOWING YOUR REVIEW OF MR. MYERS'S TESTIMONY?

A. Mr. Myers's abbreviated comparison of the preferred route with several of the other alternative routes is useful, although perhaps not as he intended. *See* Attachment JMM-3. As was illustrated by Mr. Myers's testimony, the appraisal district maps of parcel boundaries do not necessarily reflect real property-ownership boundaries, thereby making unreliable the metric of apparent property boundaries. It is often the case that larger ranches or farms are consolidated from the multiple former owners. Yet, the county records will often continue to reflect the boundaries associated with the separate tracts *i.e.*, the parcel boundaries – even after they have ceased to have any meaning as to ownership. To use parcel boundaries as an assumed property line – or existing corridor – is an error. A more meaningful metric from a natural resources perspective would be the sum of actual corridor distance made up of existing transmission lines, roads, pipelines, and railroads. This is particularly true from an endangered species standpoint, because property boundaries are often just fences that pose little or nothing in the way of fragmentation of habitat for endangered bird species, whereas roads, existing transmission lines, pipelines, railroads, and

other construction tend to fragment potential habitat, reducing the size of habitat blocks and lowering the probability of occupation.

Q. WHAT DOES MR. MYERS'S TESTIMONY AND ATTACHMENT JMM-3 DEMONSTRATE WITH RESPECT TO COMPARATIVE POTENTIAL HABITAT FRAGMENTATION?

A. According to Mr. Myers's summaries of the routes compared, the preferred route CSS14 has the 2nd largest total proportion (60%) of its length across lands currently *unfragmented* by other transmission lines, roads, or pipelines. The distance of unfragmented land along the preferred route is only exceeded by that of the closely-related CSS1. Thus, the fragmentation impact of a new transmission line would be disproportionately greater on the Preferred Route (and other northern routes).

Among the central and southern routes, several have the majority of the route following *existing* utility or transportation corridors. For comparison, only 47% of southern route CSS249, only 33% of central route CSS246, and only 35% of central route CSS230 deviate from existing transmission line, pipeline, and transportation corridors. From the standpoint of fragmentation and probable impacts on native rangelands and potential endangered species habitat, literally *all* of the central and southern routes Mr. Myers examined are preferable to the northern routes, including the Preferred Route.

V. RESPONSE TO DIRECT TESTIMONY OF JOHN CORNELIUS

Q. HAVE YOU REVIEWED AND ANALYZED MR. CORNELIUS'S TESTIMONY?

A. Yes, I have.

Q. DO YOU HAVE ANY OBSERVATIONS FOLLOWING YOUR REVIEW OF MR. CORNELIUS'S TESTIMONY?

A. Mr. Cornelius states that his purpose in testifying is to assess the extent of Golden-cheeked Warbler habitat on properties owned by certain members of Bosque Property Owners. Due to the fact that his field review and supporting evidence did not include validation of these (and representative) sites through confirming occupancy, it is appropriate for this habitat designation to be qualified by the term "potential" Golden-cheeked Warbler habitat. Mr. Cornelius also

notes that he found no potential Black-capped Vireo habitat of consequence, finding it only away from the link he examined.

VI. RESPONSE TO DIRECT TESTIMONY OF MICHAEL NOONAN

Q. HAVE YOU REVIEWED MR. NOONAN'S TESTIMONY?

A. Yes, I have.

Q. DO YOU HAVE ANY OBSERVATIONS FOLLOWING YOUR REVIEW OF MR. NOONAN'S TESTIMONY?

A. On page 23 of his Direct Testimony, Mr. Noonan correctly notes that Links XX2 and YY2 cross Steele Creek, an Ecologically Significant Stream Segment ("ESSS") as designated by Texas Parks & Wildlife Department and the Texas Legislature (although Link XX2 does so at a previously disturbed point on the stream in perpendicular to the stream's banks and parallel to an existing transmission line).

Although I have not seen it noted in other testimony or even mentioned in the EA, Link VV1 of the preferred route also crosses an ESSS. This ESSS is the segment of the Brazos River from its confluence with Camp Creek in Johnson/Bosque County to DeCordova Bend Dam. Link VV1 of Lone Star's preferred route not only crosses this segment of the Brazos River, but it crosses at what appears to be a previously undisturbed crossing point. In addition, the route is proposed to cross the river at such a point and angle as to destroy significant amounts of riparian habitat.

VII. CONCLUSION

Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. Yes.

CERTIFICATE OF SERVICE

I hereby certify that a copy of this document was served in accordance with PUC and SOAH Rules and the Orders in this proceeding on August 31, 2010.

David F. Brown

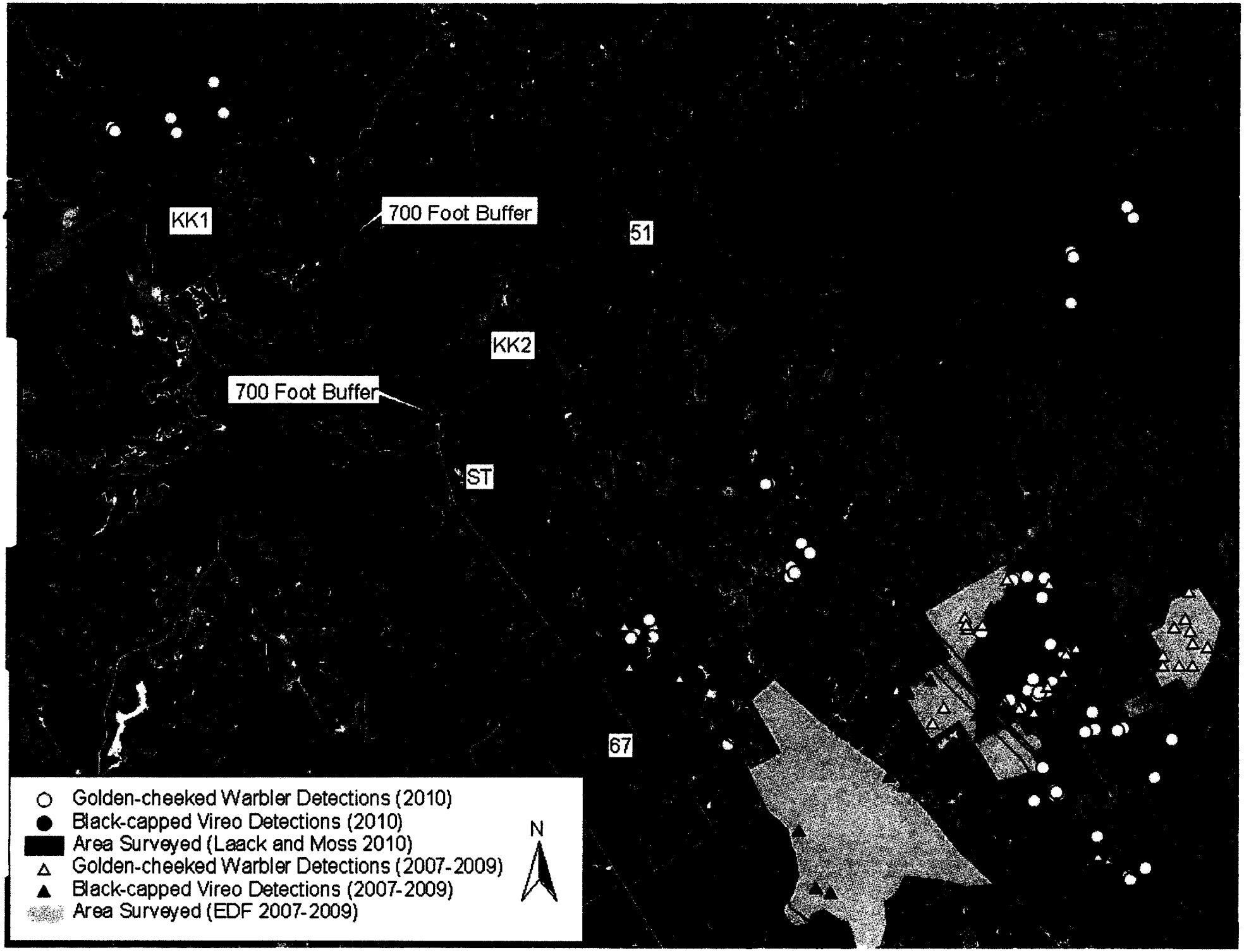
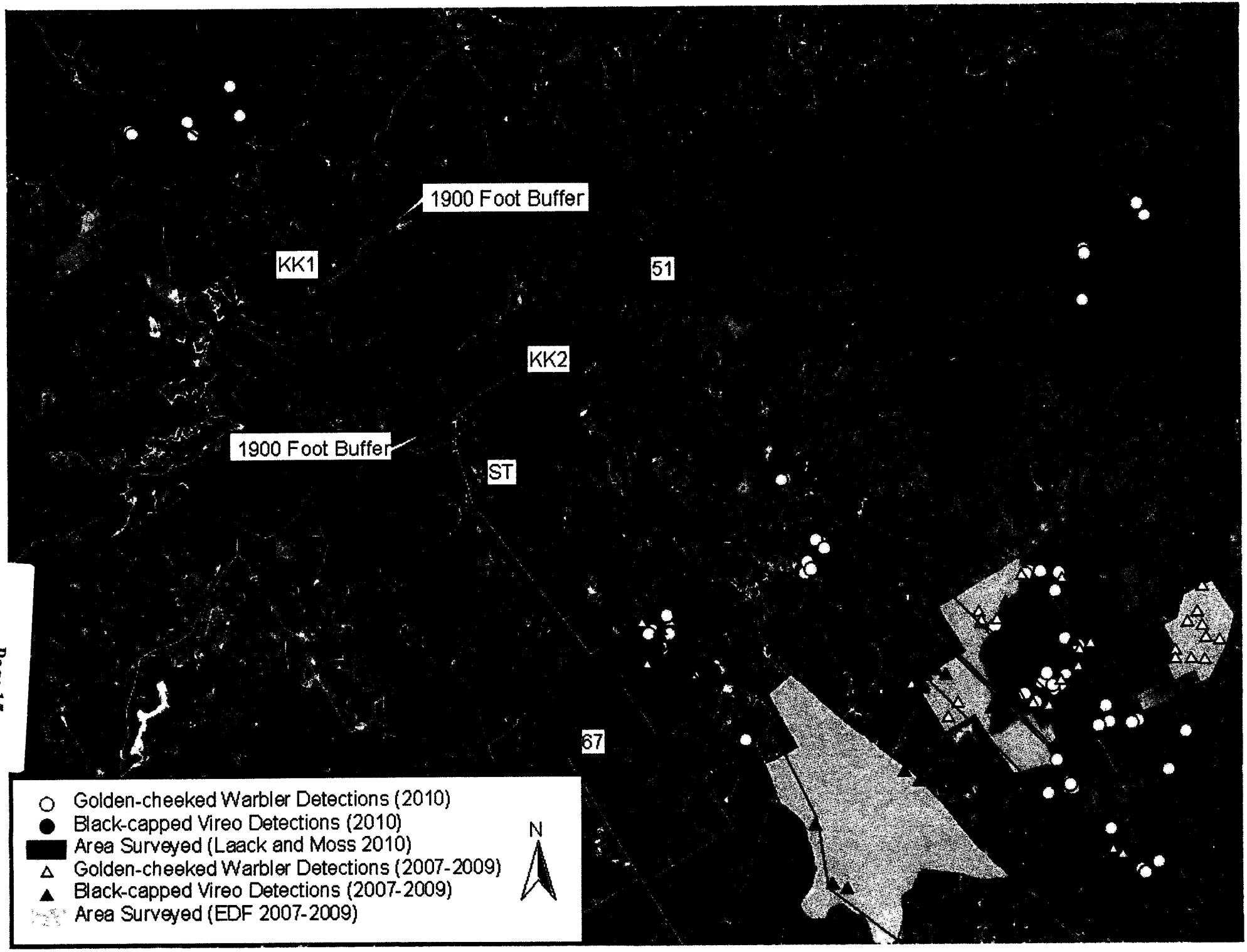

KK1
700 Foot Buffer
51
KK2
700 Foot Buffer
ST
67
Golden-cheeked Warbler Detections (2010)
Black-capped Vireo Detections (2010)
Area Surveyed (Laack and Moss 2010)
Golden-cheeked Warbler Detections (2007-2009)
Black-capped Vireo Detections (2007-2009)
Area Surveyed (EDF 2007-2009)
N

EXHIBIT NW-3


1900 Foot Buffer
KK1
51
KK2
1900 Foot Buffer
ST
67
Golden-cheeked Warbler Detections (2010)
Black-capped Vireo Detections (2010)
Area Surveyed (Laack and Moss 2010)
Golden-cheeked Warbler Detections (2007-2009)
Black-capped Vireo Detections (2007-2009)
Area Surveyed (EDF 2007-2009)
N