

North American Waterfowl Management Plan Science Support Team
Technical Report No. 2024–02

**Guidance for selecting between autumn and winter regional
duck abundance objectives for conservation planning**

Joseph D. Lancaster
Gulf Coast Joint Venture, Ducks Unlimited Inc.

Barry C. Wilson
Gulf Coast Joint Venture, U.S. Fish and Wildlife Service

ABSTRACT

Fleming et al. (2019) developed autumn and winter nonbreeding abundance objectives for 23 duck species or species groups at Joint Venture scales. Abundance objectives and guidance on their temporal application relative to migration chronology from Lancaster et al. (2024) has furthered Joint Ventures' ability to calculate regional duck use day estimates for conservation planning. However, choosing between Fleming et al. autumn or winter regional abundance objectives has remained a subjective decision for Joint Ventures. Instinctively, extreme northern and southern Joint Ventures are likely to select autumn and winter objectives, respectively due to regional duck distributions and harvest within those periods. However, differential timing of species-specific migrations makes it difficult to identify the appropriate period objective among other Joint Ventures, especially those at mid-latitudes. We developed a visualization of regional daily harvest and eBird relative abundance information across the nonbreeding period to allow planners to make informed species-specific decisions to use Fleming et al. (2019) autumn or winter regional abundance objectives. Further, we make recommendations for 23 duck species or species groups for which Fleming et al. (2019) developed abundance objectives.

Recommendations were based on three criteria; 1) cumulative daily harvest across the autumn or winter period; 2) cumulative eBird relative abundance across the autumn or winter period; and 3) the eBird relative abundance at the suggested autumn and winter anchor point date. In most cases (79%), recommendations were unanimous across data types, but in some cases additional scrutiny is necessary. We suggest regional planners use our visualizations and recommendations to help inform decisions establishing nonbreeding objectives using either the autumn or winter abundance objectives in Fleming et al. (2019).

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INTRODUCTION

Regional conservation planning for nonbreeding waterfowl (as envisioned and advocated in other NSST reports) involves derivation of population abundance objectives stepped down from continental objectives developed for the North American Waterfowl Management Plan (NAWMP). Development of nonbreeding population and habitat objectives has become streamlined due to recent developments in migration chronology and stepdown processes. Previous methods utilized distributions of waterfowl only at mid-winter, and these methods were of limited utility for northern Joint Ventures (JVs) because few birds remained at northern latitudes in mid-winter. Fleming et al. (2019) developed a process to step down NAWMP duck population objectives to an autumn and winter period using harvest data from the 1999-2000 to 2013-2014 hunting seasons, with the expectation that one period or the other be used for each JV or JV-species combination. The autumn period utilized harvest from September through November, and the winter period utilized harvest from December and January. Lancaster et al. (2024) provided guidance on temporally anchoring stepped down objectives to migration chronology curves for estimation of duck use day objectives. However, the choice between autumn or winter regional abundance objectives has remained for JVs a subjective decision that can have significant consequences on regional duck use day estimates (Fleming et al. 2019). Fleming et al. (2019) suggested northern JVs would find greatest utility in autumn objectives and southern JVs winter objectives. However, the differential timing of species-specific duck migrations makes it difficult to identify the appropriate period objective among other JVs, especially those at mid-latitudes. We developed a series of visualizations of daily harvest and eBird relative abundance information across the nonbreeding period to assist planners in making informed species-specific decisions whether to use Fleming et al. (2019) autumn or winter regional abundance objectives. We used period-specific information on harvest and relative abundance to make a period recommendation for each species across JVs.

METHODS

Two data sets were instrumental in calculation of duck use day estimates – harvest and migration chronology. Harvest is utilized in the Fleming et al. (2019) step down process to proportionally allocate adjusted NAWMP objectives among JVs during autumn and winter periods and in the derivation of Lancaster et al. (2024) anchor points, which are the

recommended date when the Fleming et al. (2019) stepped down objective is applied to migration chronology to estimate use-days. Migration chronology is necessary to extrapolate stepped down population abundance objectives across the relevant portion(s) of the nonbreeding period used by individual JVs to estimate cumulative duck use days for conservation planning in their geography (Petrie et al. 2011, Fleming et al. 2019). These datasets were also useful to visualize the timing of species abundance with JV geographies and inform decisions whether to use autumn or winter stepdown objectives.

Daily harvest

We followed the methodology of Fleming et al. (2019) to estimate JV level harvest by calendar date within the autumn and winter periods. We used the same 1999-2000 to 2013-2014 U.S. and Canadian harvest datasets used by Fleming et al. (2019) to estimate harvest of each species on each calendar date between 1 September and 31 January within each Joint Venture geography. Specifically, we summed estimated harvest across years for each calendar date (i.e., month and day) at the county (U.S.) or degree block (Canada) scale. We then summed harvest across all counties/degree blocks within a JV. For split counties, we allocated county harvest based on the proportion of a county in each JV. We utilized the same approach as Fleming et al. (2019) to allocate blue-winged and cinnamon teal harvest within counties using the ratio of blue- and cinnamon teal observed during autumn and winter from eBird checklist data.

Migration Chronology

We used the ‘ebirdst’ package in program r to download weekly median relative abundance estimates of each duck species at the 27 x 27 km scale from eBird Status and Trends (Fink et al. 2020). We summed weekly relative abundance values for each species within JV geographies to estimate weekly relative abundance at the JV scale. To correspond with Fleming et al. (2019) objectives, we combined abundance from greater and lesser scaup into a single scaup category, common and king eiders into an eider category, common and red-breasted mergansers into a merganser category, and black, white-winged, and surf scoters into a scoter category. We removed weekly abundance estimates outside of the nonbreeding period (mid-August through March) and interpolated daily relative abundance between weekly estimates with a spline function.

We calculated three statistics to make a recommendation on the most suitable period to establish nonbreeding objectives across species and JVs: 1) cumulative harvest within the autumn and winter periods; 2) cumulative eBird abundance within the autumn and winter periods; and 3) eBird abundance at the Lancaster et al. (2024) autumn and winter anchor point dates.

Harvest within periods – Cumulative daily harvest across the 1999-2000 to 2013-2014 waterfowl hunting seasons provides a good representation of when hunting seasons were open and the species of interest was present in the region. Viewing harvest can immediately rule out a period if a species was not harvested, because there would be no Fleming et al. (2019) abundance objective for that period. Therefore, we only produced visualizations and recommendations for species that were harvested in one or both periods within a JV. We summed harvest across dates within periods to estimate total harvest within periods.

Relative abundance within periods – Like harvest, the cumulative relative abundance information provides information about the period when a species is most prevalent in the region. However, eBird relative abundance is not limited by harvest and reliance on hunting seasons being open. Thus, eBird provides an alternative view of the relative abundance of a species through time and has proven to be a reasonable estimate of migration chronology for many duck species in most places (Stuber et al. 2022). We summed relative abundance within periods to estimate the cumulative abundance of a species within each period.

Relative abundance at anchor point – Changes in relative abundance (i.e., typically a consequence of migration chronology) across the nonbreeding period are used to account for the temporal variation in duck abundance within and outside of the periods of hunting season used by Fleming et al. (2019). In the calculation of duck use day objectives across the nonbreeding period, a stepped down objective is applied to the autumn or winter anchor point to estimate the relative objective throughout the remainder of the nonbreeding season. In practice, the relative abundance values are rescaled relative to the anchor point date, thus, the relative abundance at the anchor point date cannot be zero. Moreover, if the relative abundance at the anchor point is very low relative to other times of the nonbreeding period, the extrapolated estimates can become extremely high and lead to erroneous estimates.

Visualizations and formulating recommendations

We constructed a visualization for each species across Joint Ventures for which Fleming et al. (2019) provided a stepped down objective for either period. Visualizations displayed daily harvest and eBird relative abundance across the nonbreeding period with the Fleming et al. (2019) autumn and winter periods (Figure 1). At the top of each visualization, we provide total harvest, cumulative relative abundance, relative abundance at the anchor point, and projected duck use days using information from each period. For each of the three data points, we make a recommendation between autumn and winter based on the season which had the greater value. If the value was equal between periods, including when the values were zero, we refrained from suggesting a period using that data source. While we decided to choose the period with the greatest value, we acknowledge that in some cases, the values within each period may be similar and may each produce logical outcomes. However, given our automated process to create visualizations and display recommendations, we settled on the greater value due to its simple coding. The final recommendation for each species-JV combination was taken as the most frequently recommended season by the previous 3 statistics. We recommend that planners further examine the values for each data source and ensure they agree with the recommendation before proceeding with suggested periods.

RESULTS

We produced 478 visualizations of daily harvest and eBird relative abundance (Appendix 1). Selecting the period with greatest cumulative harvest, greatest cumulative eBird relative abundance, and abundance at anchor point date resulted in a unanimous recommendation in 377 (79%) combinations, mixed recommendations in 89 (19%) cases, and incomplete information to make all recommendations in 12 (2%) cases. Of the cases with incomplete information, 9 were due to a lack of eBird relative abundance information and 3 were due to the relative abundance being 0 at both autumn and winter anchor point dates. In total, there were 229 autumn and 249 winter recommendations (Table 1). Period recommendations varied among species and JVs with only 3 JVs having a single period recommended across all species.

DISCUSSION

Our visualizations provide planners with important data on the relative abundance of ducks across the nonbreeding period to inform decisions on which Fleming et al. (2019) stepdown period to base planning. We recommend conservation planners examine visualizations

for their geography and not solely rely on the recommended periods in Table 1. Harvest and relative abundance may be similar between periods but lead to drastically different duck use day estimates due to the total harvest of a given species within a period across JVs. While the visualizations appear to perform well, JVs with large area (e.g., Intermountain West) or with substantial latitudinal extent (e.g., Atlantic Coast) may want to recreate visualizations for smaller sub-geographies. We did not create visualizations for the Mexican portions of the Sonoran and Rio Grande JVs because Fleming et al. (2019) only estimated winter objectives for these geographies except for blue-winged teal. Blue-winged teal populations are greatest during winter in Mexico, thus the winter period is expected to be the appropriate period for establishment of nonbreeding objectives for all species in the Mexican portion of JVs (Fleming et al. 2019).

The visualizations highlighted several cases where incomplete information prevented formulation of a recommendation using one or more data points. In all 12 cases, there were ≤ 2 harvest occurrences over the 14-year dataset within the JV boundary and those harvests mainly occurred in a peripheral county shared with an adjacent JV. In a few cases, no eBird relative abundance information was available, which precludes extrapolation of stepped down estimate across the nonbreeding period. Regardless, vagrant harvest or lack of eBird relative abundance information reflect the limited importance of that geography for the species during the nonbreeding season. We advise planners to apply most scrutiny to species for which population objectives are relatively large and thus influential in a planning outcome (e.g., a habitat objective). We acknowledge that there are some advantages (e.g., in communicating to partners) of selecting a single period as the basis for planning across all species of a given JV, and we believe this is a plausible approach where use day estimations are similarly logical for each period.

Fleming et al. (2019) suggested it may be possible, but unnecessary, to utilize both autumn and winter stepdown objectives to calculate use days for a species within a geography. We strongly suggest against using both autumn and winter objectives for a given species-JV and instead suggest regional planners utilize our recommendations and additional scrutiny to select the appropriate period objective to be anchored to a migration chronology curve using Lancaster et al. (2024) anchor points to estimate duck use day objectives across the desired planning period(s). In most geographies, harvest opportunity is skewed towards the early or late period,

and estimation of an objective when harvest is not representative of regional abundance can lead to substantial error in use-day estimates. Reliable relative abundance information is widely available through eBird status and trends and other established monitoring programs allowing extrapolation of a single period abundance estimate across the entire nonbreeding period. While eBird relative abundance information has been shown to provide valuable information on the relative abundance of waterfowl through time at certain geographical scales (Stuber et al. 2022) we suggest regional planners compare data from established scientific monitoring programs such as professional waterfowl surveys where applicable.

ACKNOWLEDGEMENTS

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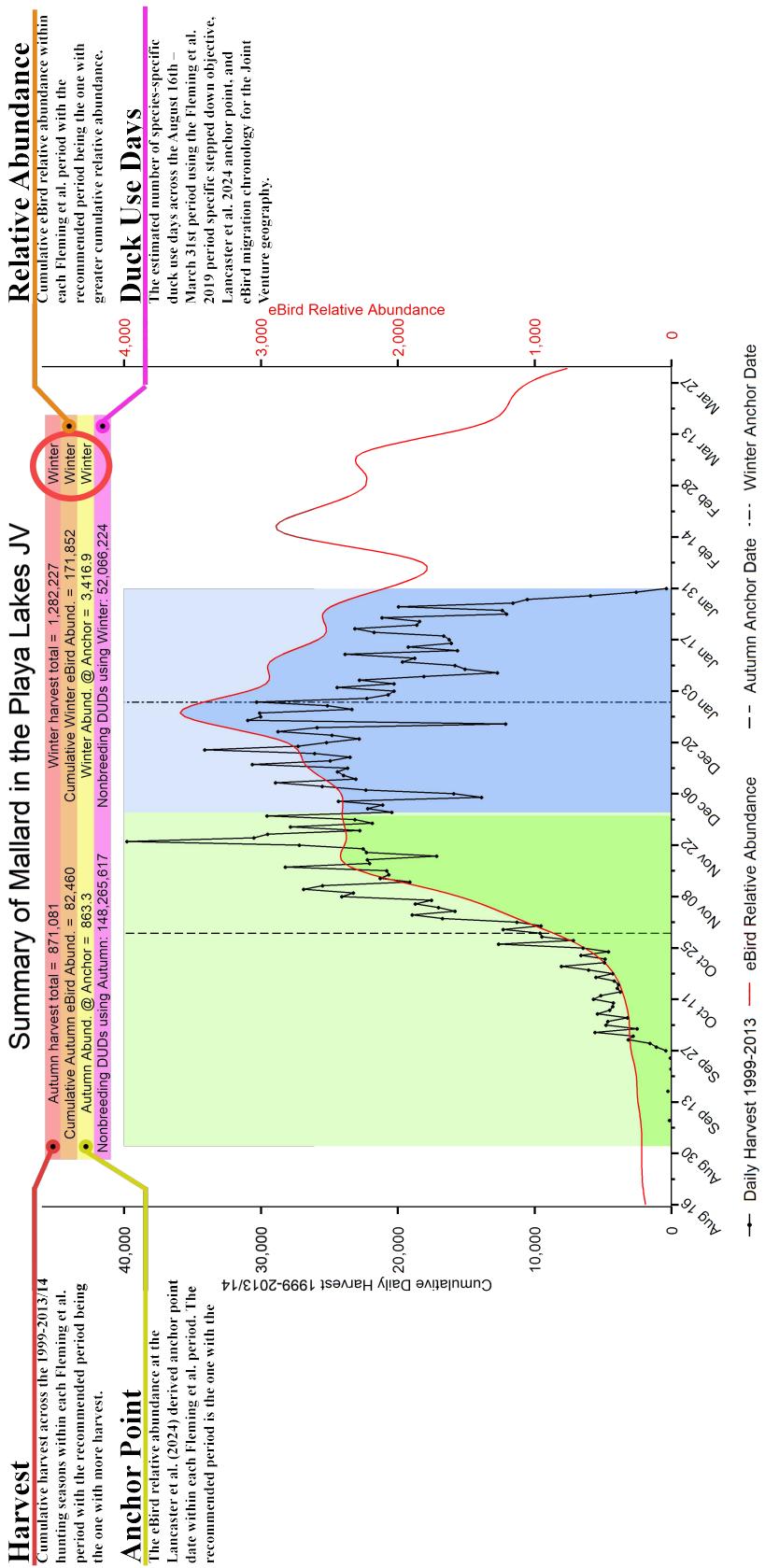


Figure 1. Example visualization for mallards (*Anas platyrhynchos*) in the Playa Lakes Joint Venture. Green highlighted area depicts the Fleming et al. autumn period (1 September – 30 November) with the area under the relative abundance curve a darker green. Blue highlighted area depicts the winter period (1 December – 31 January) with the area under the relative abundance curve a darker blue. The red ellipse depicts the location of three data derived recommendations for species-specific period to select the Fleming et al. (2019) stepped down population abundance objective and apply to the migration curve to derive duck use day estimates across the nonbreeding season.

Table 1. Model based recommendations for using Fleming et al. (2019) stepped down objectives for estimation of nonbreeding duck use day estimates.

Joint Venture	ABDU	AGWT	AMWI	BAGO	BUFF	BWTE	CANV	CITE	COGO	EIDR	GADW	HOME
Appalachian Mountains	WINT	AUTM	WINT	AUTM	WINT	AUTM	WINT	WINT	AUTM	WINT	WINT	WINT
Atlantic Coast	WINT	WINT	WINT	WINT	WINT	AUTM	WINT	WINT	AUTM	WINT	WINT	WINT
California Central Coast		WINT										
Canadian Intermountain	AUTM											
Central Hardwoods	WINT	WINT	WINT		WINT	AUTM	WINT		WINT	WINT	WINT	WINT
Central Valley	WINT	WINT	WINT	WINT	WINT	AUTM	WINT	WINT	WINT	WINT	WINT	WINT
East Gulf Coastal Plain	WINT	WINT	WINT		WINT	AUTM	WINT		WINT	WINT	WINT	WINT
Eastern Habitat	AUTM	AUTM	AUTM	WINT	AUTM	AUTM	WINT		AUTM	AUTM	AUTM	AUTM
Gulf Coast	AUTM	WINT	WINT		WINT	AUTM	WINT		WINT	WINT	WINT	WINT
Intermountain West	AUTM	AUTM	AUTM	WINT	AUTM							
Lower Mississippi Valley	WINT	WINT	WINT		WINT	AUTM	WINT		WINT	WINT	WINT	WINT
Northern Great Plains	AUTM	AUTM	WINT	AUTM								
Oaks and Prairies	AUTM	WINT	WINT		WINT	AUTM	WINT	WINT	WINT	WINT	WINT	WINT
Pacific Birds Habitat		WINT	AUTM	WINT	WINT	AUTM	WINT	AUTM	AUTM	WINT	WINT	WINT
Playa Lakes	AUTM	AUTM	AUTM	WINT	AUTM	AUTM	WINT	AUTM	AUTM	WINT	AUTM	WINT
Prairie Habitat	AUTM	AUTM	AUTM		AUTM							
Prairie Pothole	WINT	AUTM										
Rainwater Basin	AUTM	AUTM	AUTM		AUTM	AUTM	AUTM	AUTM	AUTM	WINT	AUTM	AUTM
Rio Grande ^a		WINT	WINT		WINT	AUTM	WINT	AUTM	WINT	WINT	WINT	WINT
San Francisco Bay		WINT										
Sonoran ^a		WINT	WINT	WINT	WINT	AUTM	WINT	AUTM	WINT	WINT	WINT	WINT
Upper MS/Great Lakes	WINT	AUTM	AUTM	WINT	AUTM	AUTM	AUTM	AUTM	AUTM	WINT	AUTM	AUTM
Western Boreal	AUTM	AUTM	AUTM		AUTM							

ABDU=American black duck, AGWT=American green-winged teal, AMWI=American wigeon, BAGO=Barrows goldeneye, BUFF=bufflehead, BWTE=blue-winged teal, CANV=canvasback, CITE=cinnamon teal, COGO=common goldeneye, EIDR=eiders (common and king), GADW=gadwall, HOME=hooded merganser.

^a Recommendations for the Sonoran and Rio Grande Joint Ventures only pertain to the U.S. portion of their geography.

Table 1 cont.

Joint Venture	LTDU	MALL	MERG	NOPI	NSHO	REDH	RNDU	RUDU	SCAU	SCOT	WODU
Appalachian Mountains	AUTM	WINT	WINT	WINT	WINT	WINT	AUTM	WINT	AUTM	AUTM	AUTM
Atlantic Coast	WINT	AUTM									
California Central Coast	AUTM	WINT									
Canadian Intermountain	AUTM										
Central Hardwoods	WINT	AUTM									
Central Valley	AUTM	AUTM	WINT	AUTM							
East Gulf Coastal Plain	WINT										
Eastern Habitat	AUTM										
Gulf Coast	AUTM	WINT									
Intermountain West	WINT	AUTM									
Lower Mississippi Valley	WINT	AUTM	WINT								
Northern Great Plains	WINT	AUTM									
Oaks and Prairies	WINT										
Pacific Birds Habitat	WINT	AUTM	WINT	AUTM							
Playa Lakes	WINT	WINT	WINT	AUTM	AUTM	AUTM	WINT	AUTM	AUTM	WINT	AUTM
Prairie Habitat	AUTM										
Prairie Pothole	AUTM										
Rainwater Basin	WINT	WINT	WINT	AUTM							
Rio Grande ^a	WINT	AUTM									
San Francisco Bay	AUTM			WINT							
Sonoran ^a	WINT	AUTM									
Upper MS/Great Lakes	AUTM	WINT	WINT	AUTM							
Western Boreal	AUTM										

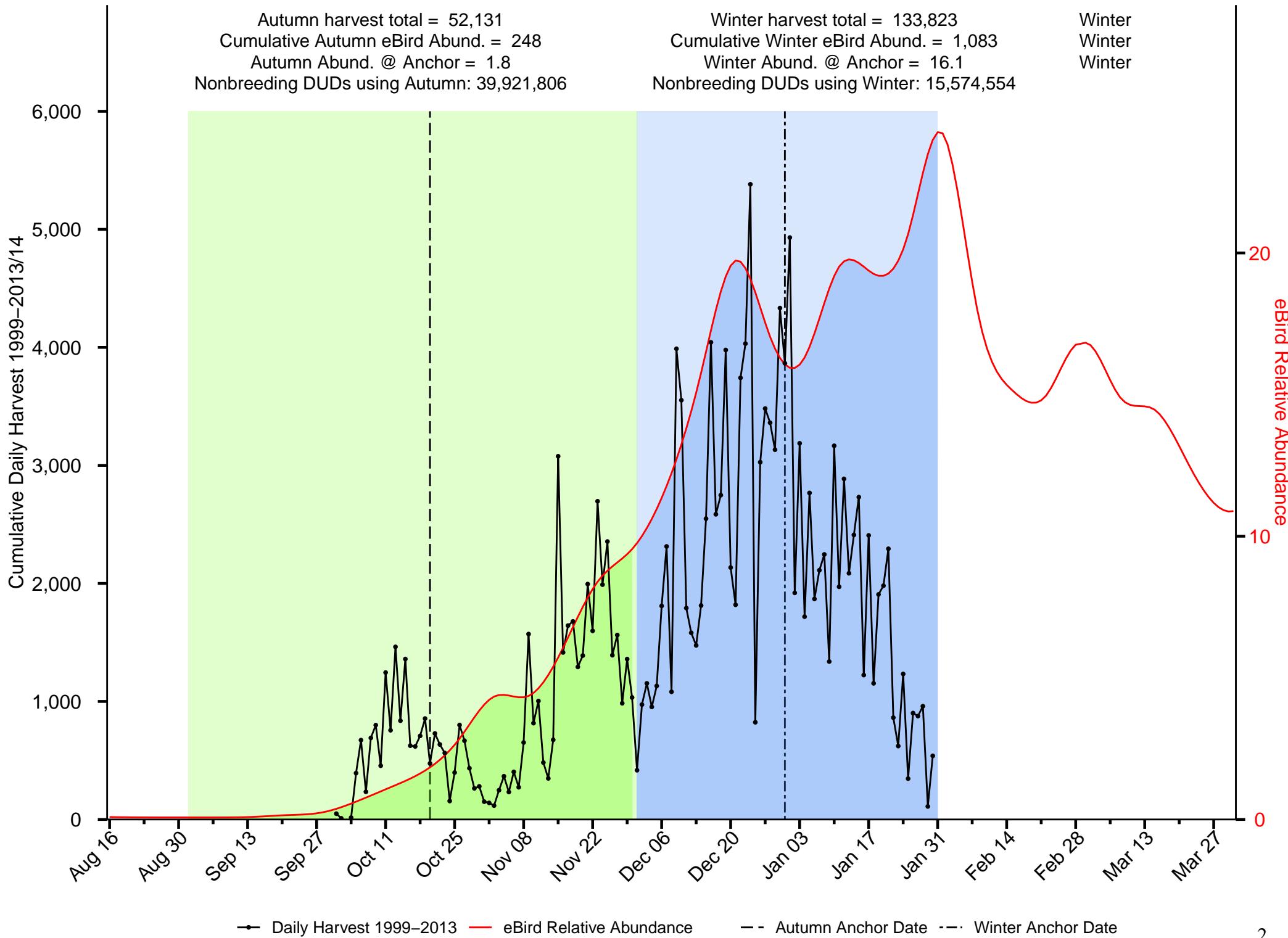
LTDU=long-tailed duck, MALL=mallard, MERG=mergansers (common and red-breasted), NOPI=northern pintail, NSHO=northern shoveler, REDH=redhead, RNDU=ring-necked duck, RUDU=ruddy duck, SCAU=scaup (greater and lesser), SCOT=scoters (black, surf, and white-winged), WODU=wood duck.

^a Recommendations for the Sonoran and Rio Grande Joint Ventures only pertain to the U.S. portion of the geography.

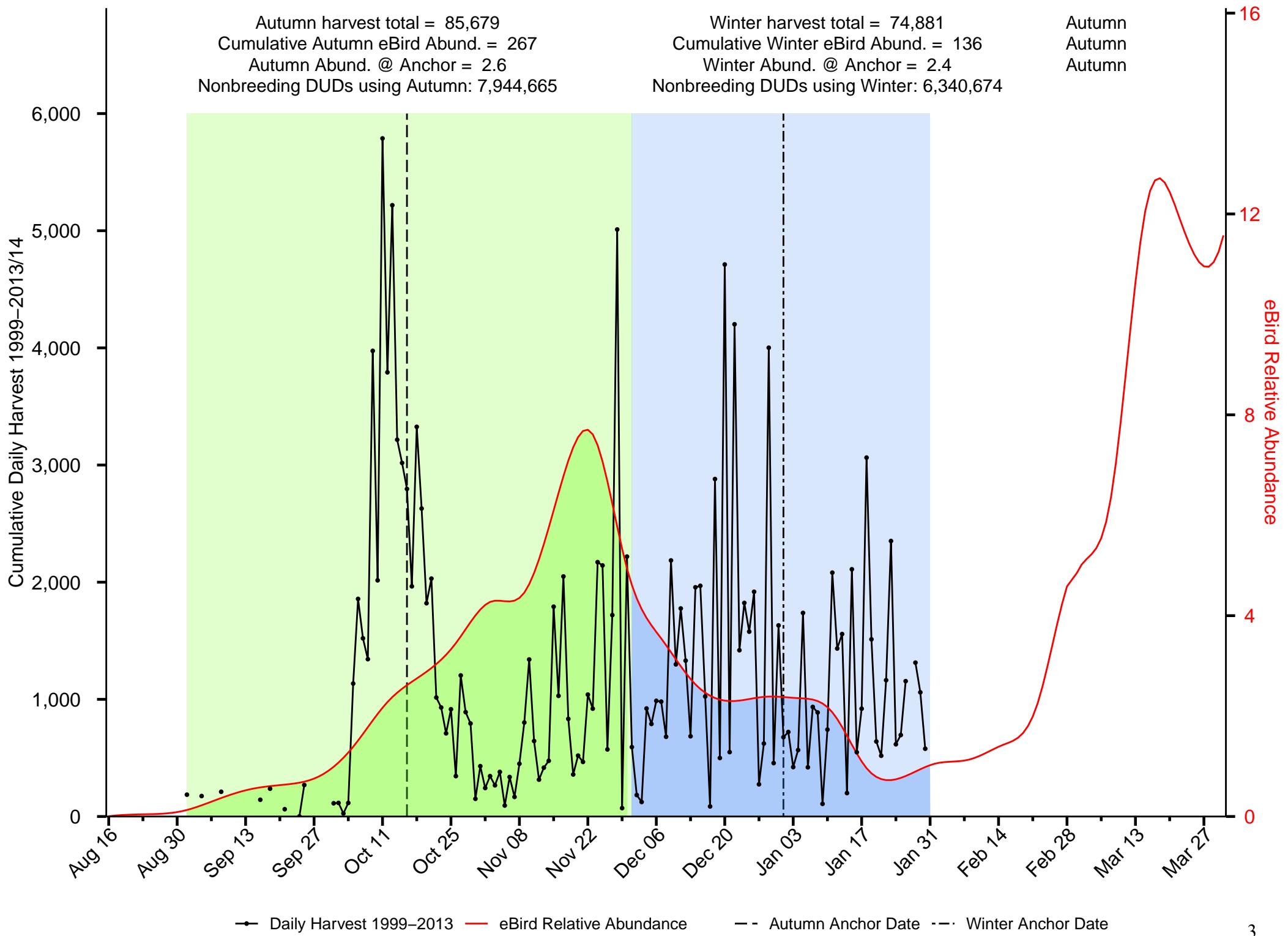
APPENDIX A
VISUALIZATIONS

Appalachian Mountains Joint Venture	2
Atlantic Coast Joint Venture	24
California Central Coast Joint Venture	46
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Central Hardwoods Joint Venture	89
Central Valley Joint Venture	107
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Eastern Habitat Joint Venture.....	147
Gulf Coast Joint Venture.....	169
Intermountain West Joint Venture	190
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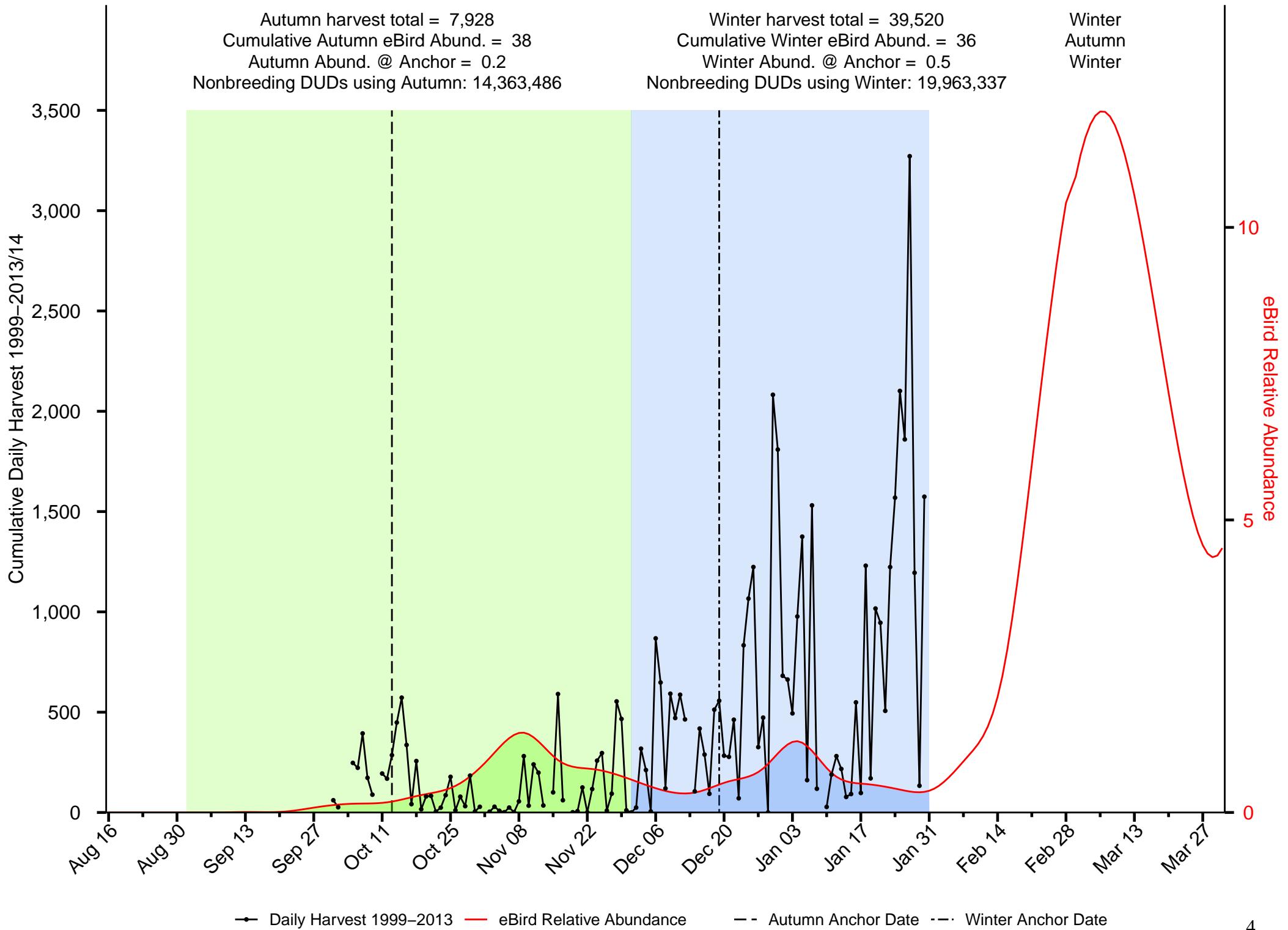
Summary of American Black Duck in the Appalachian Mountains JV



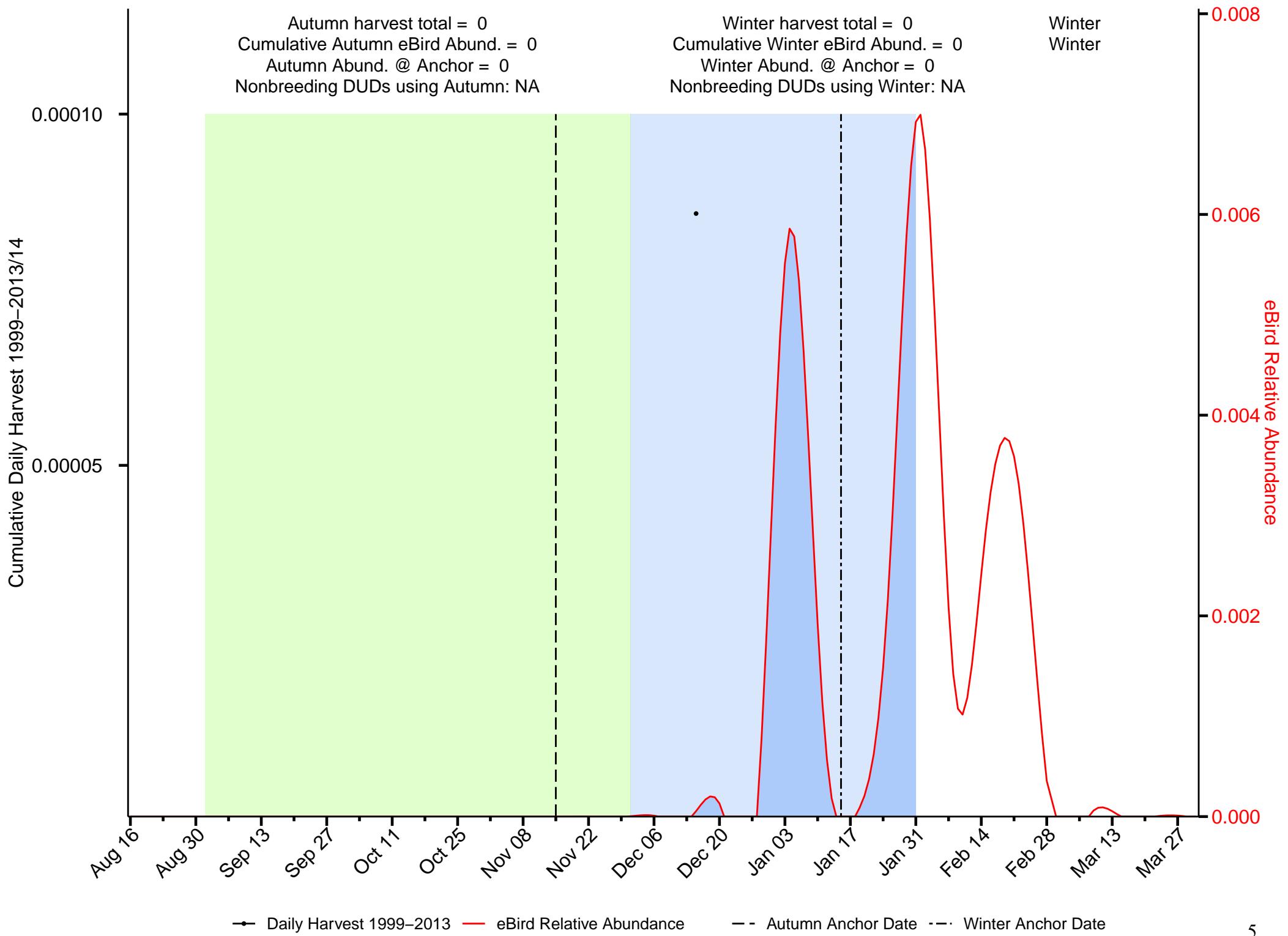
Summary of Green-winged Teal in the Appalachian Mountains JV



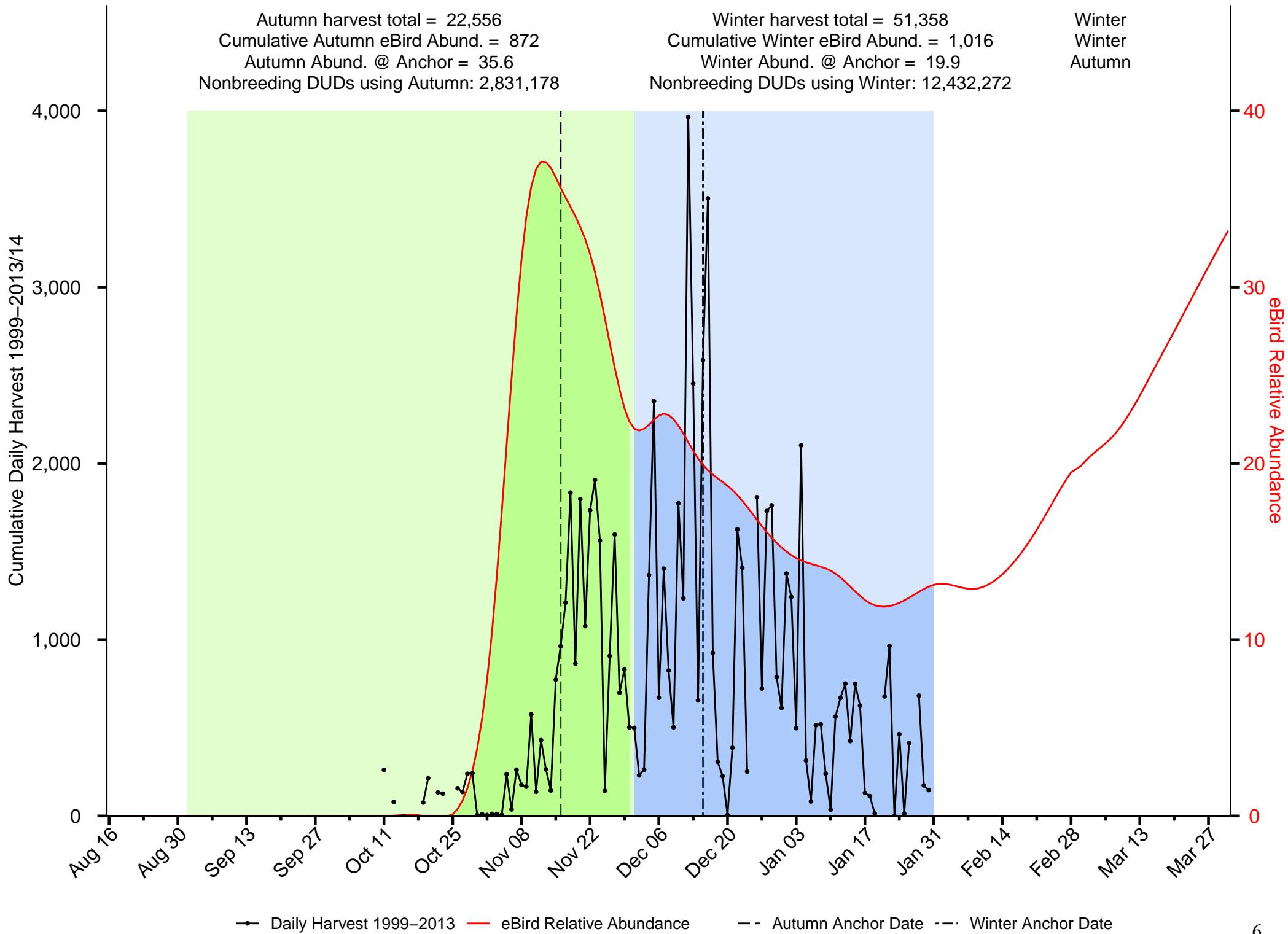
Summary of American Wigeon in the Appalachian Mountains JV



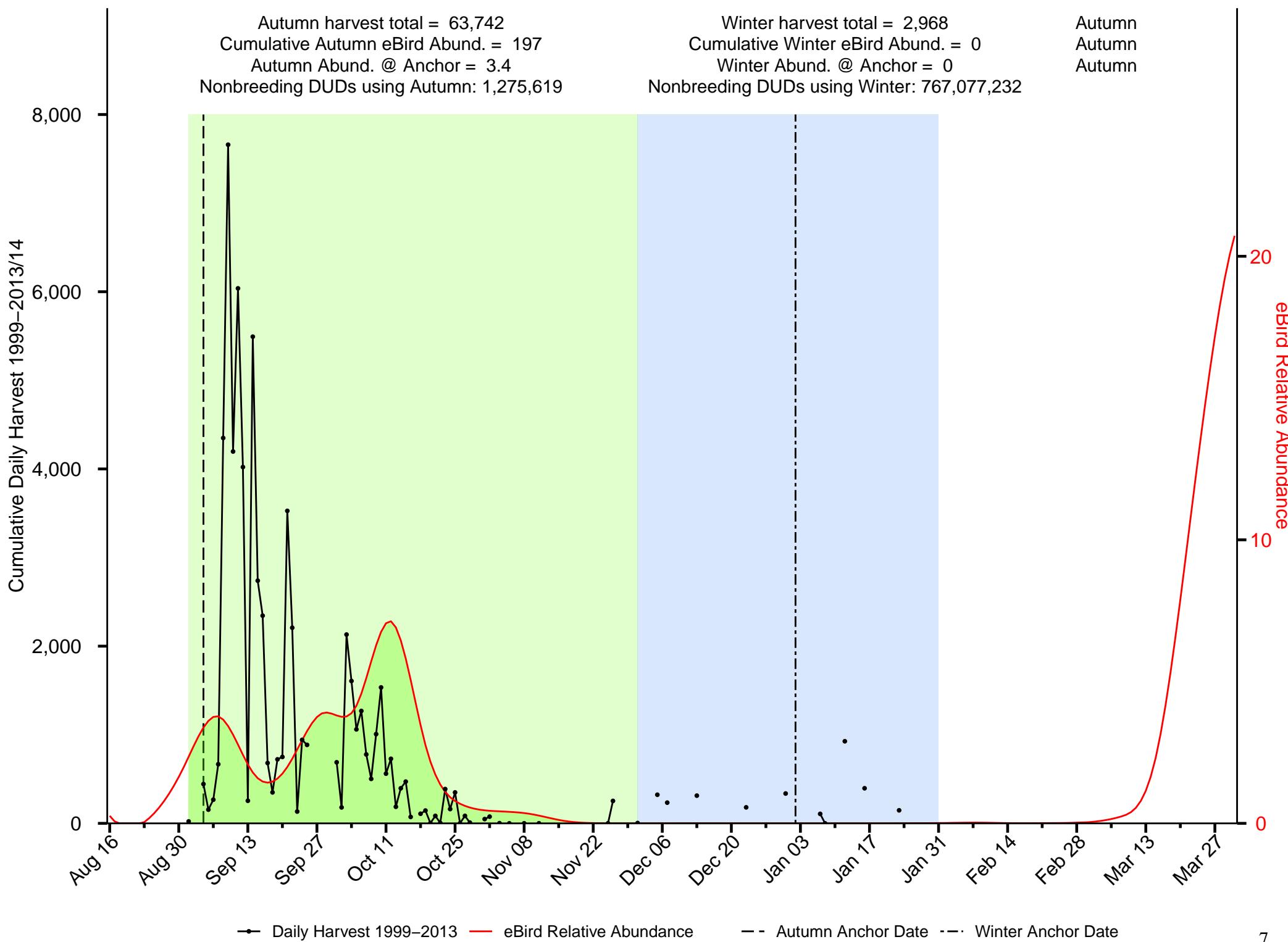
Summary of Barrow's Goldeneye in the Appalachian Mountains JV



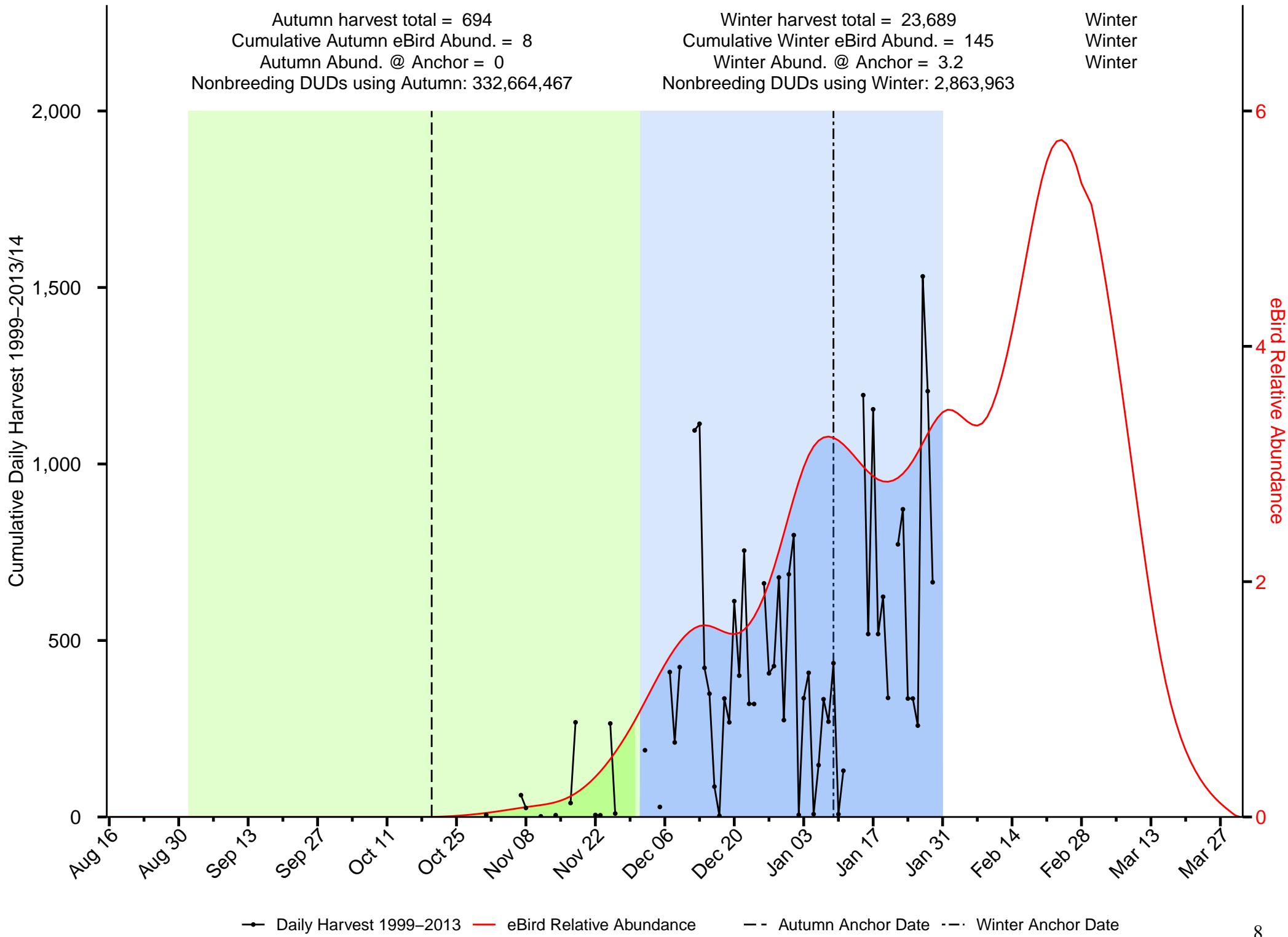
Summary of Bufflehead in the Appalachian Mountains JV



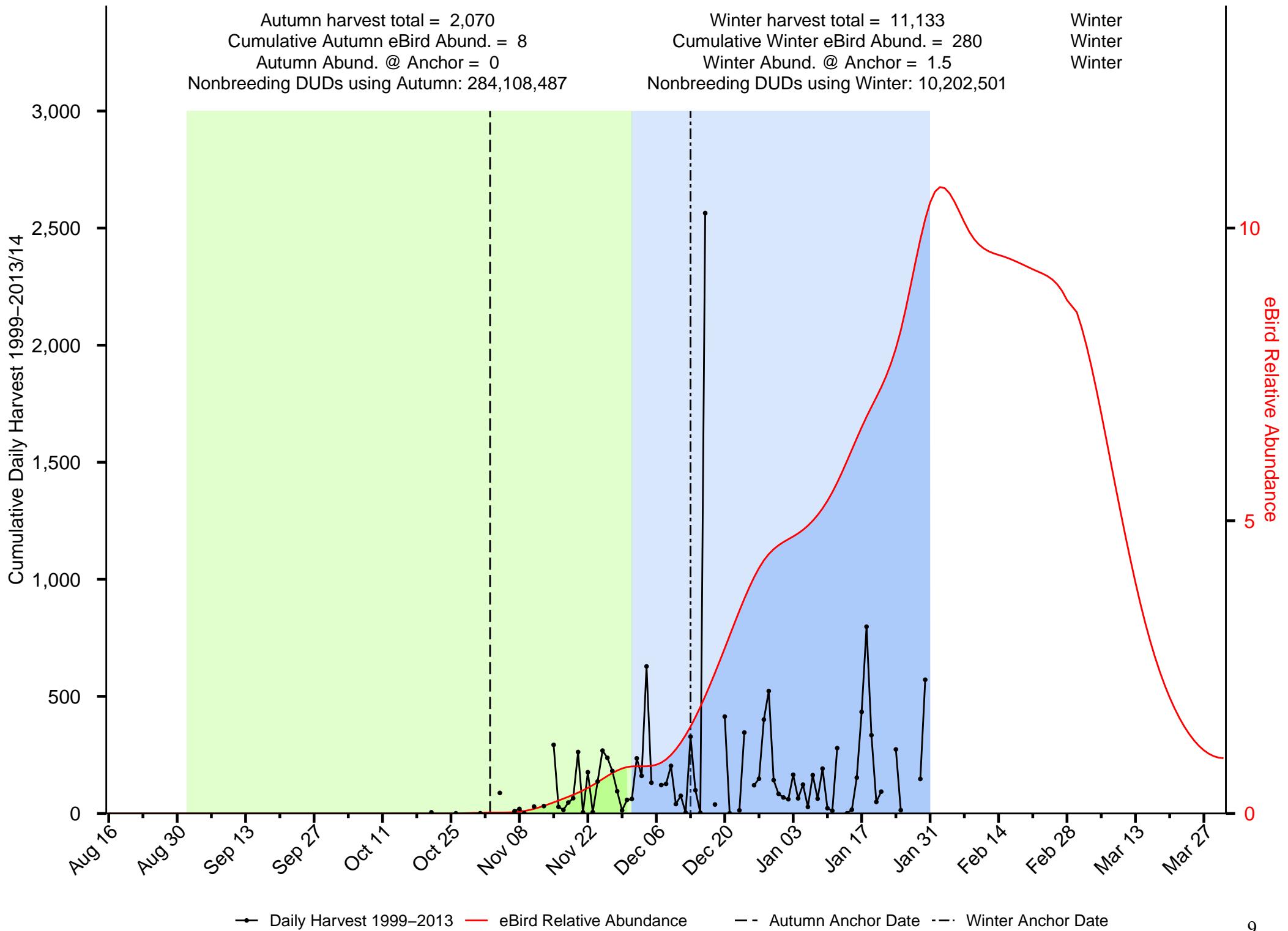
Summary of Blue-winged Teal in the Appalachian Mountains JV



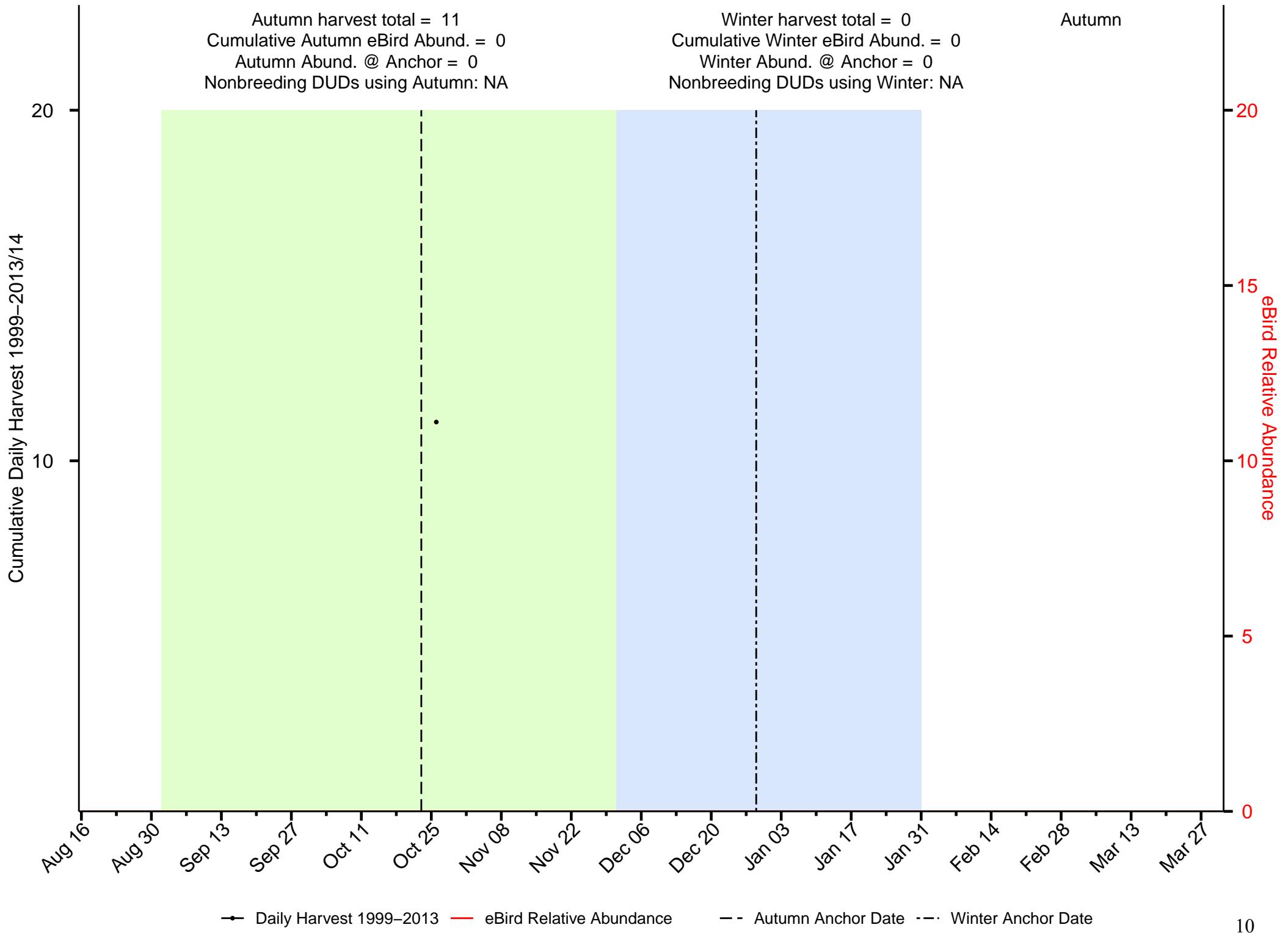
Summary of Canvasback in the Appalachian Mountains JV



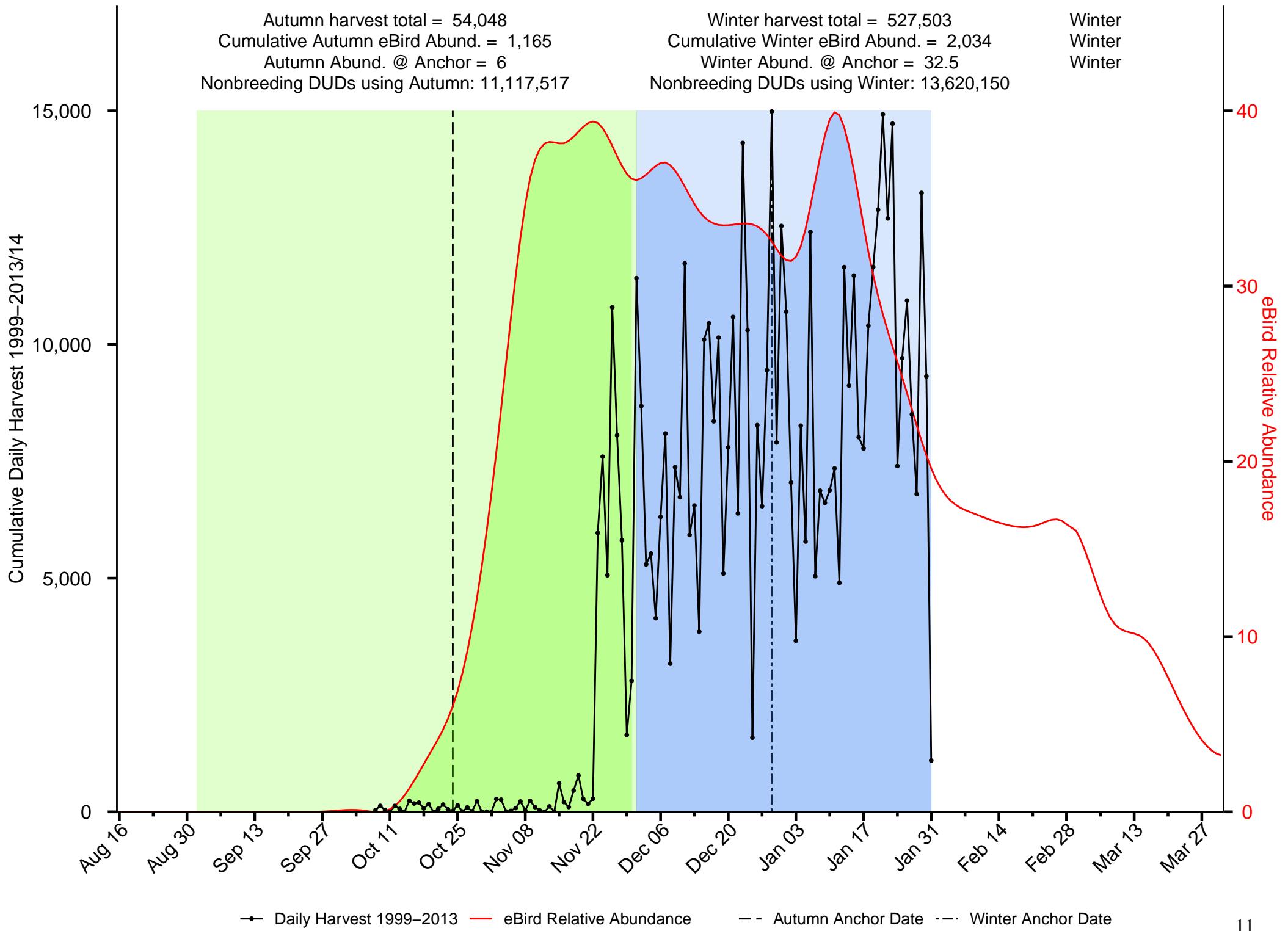
Summary of Common Goldeneye in the Appalachian Mountains JV



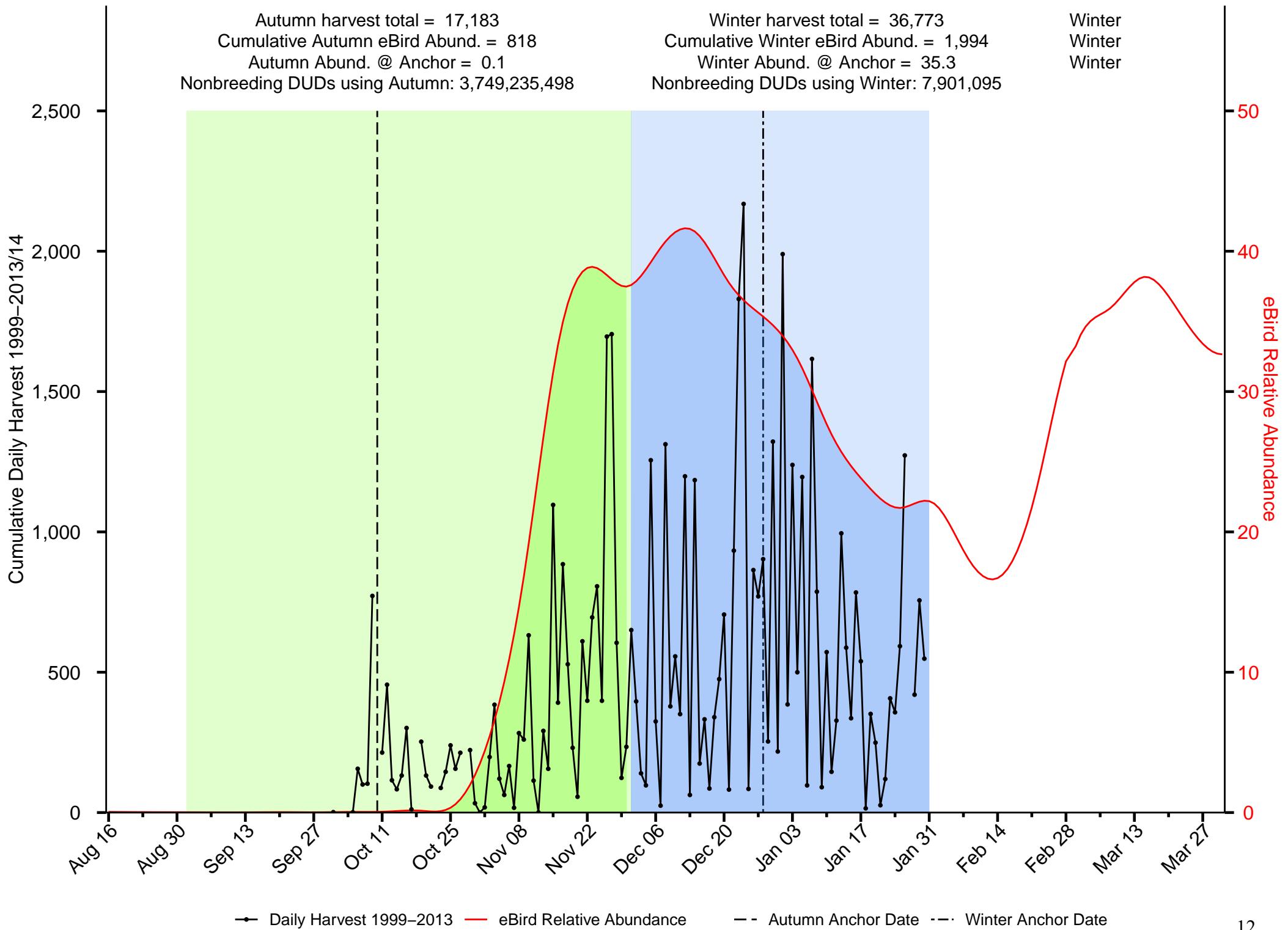
Summary of Eider in the Appalachian Mountains JV



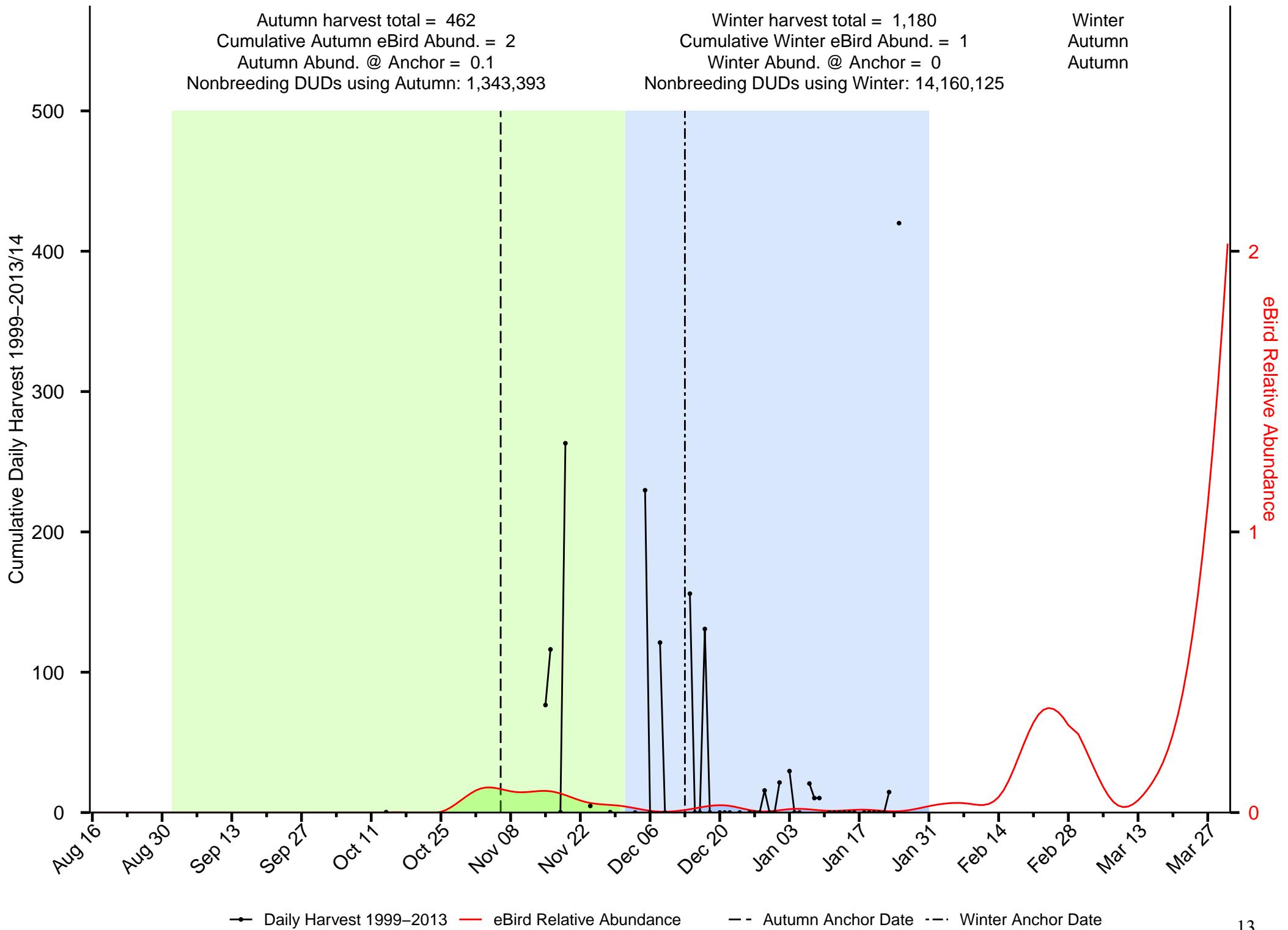
Summary of Gadwall in the Appalachian Mountains JV



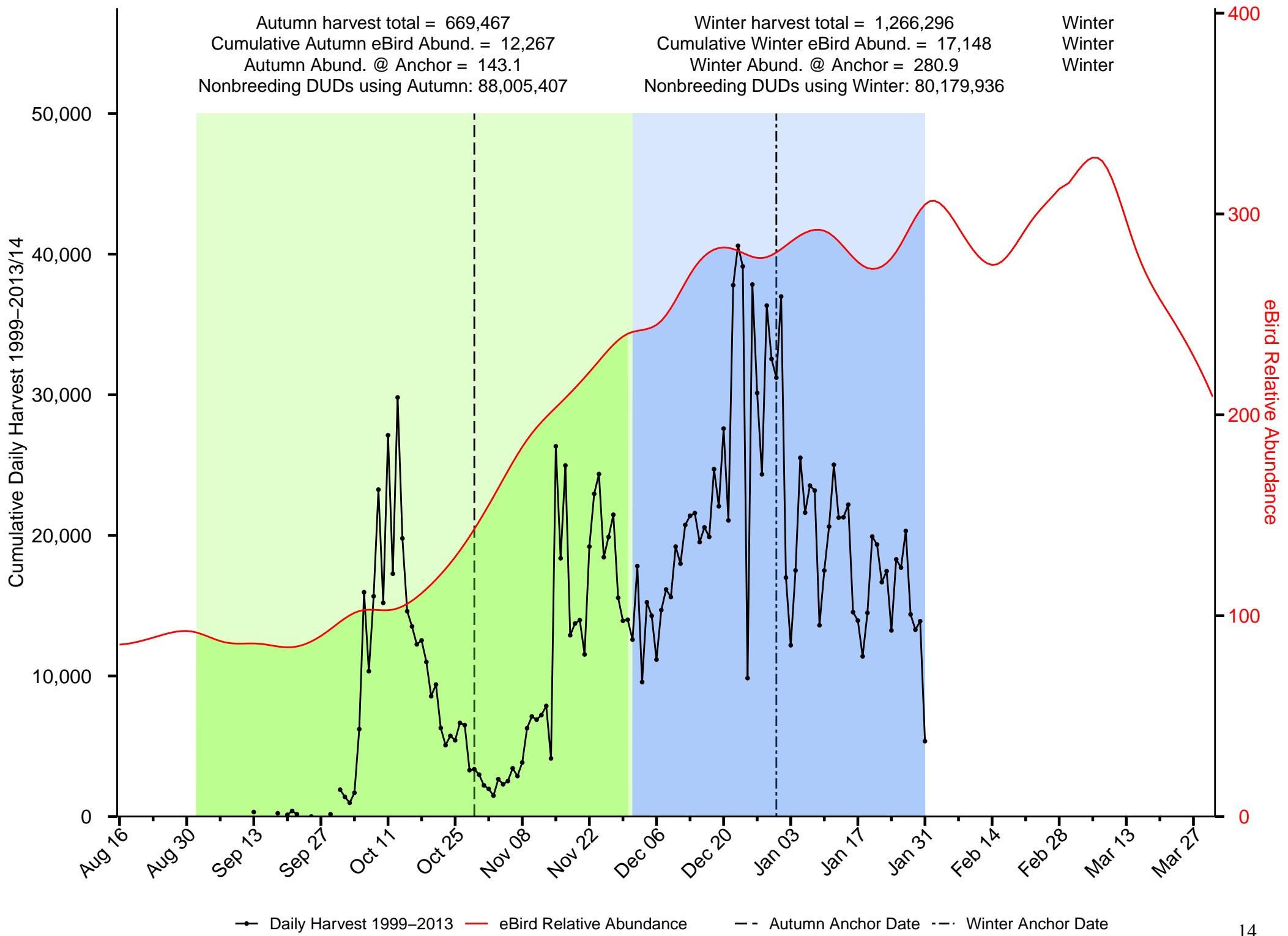
Summary of Hooded Merganser in the Appalachian Mountains JV



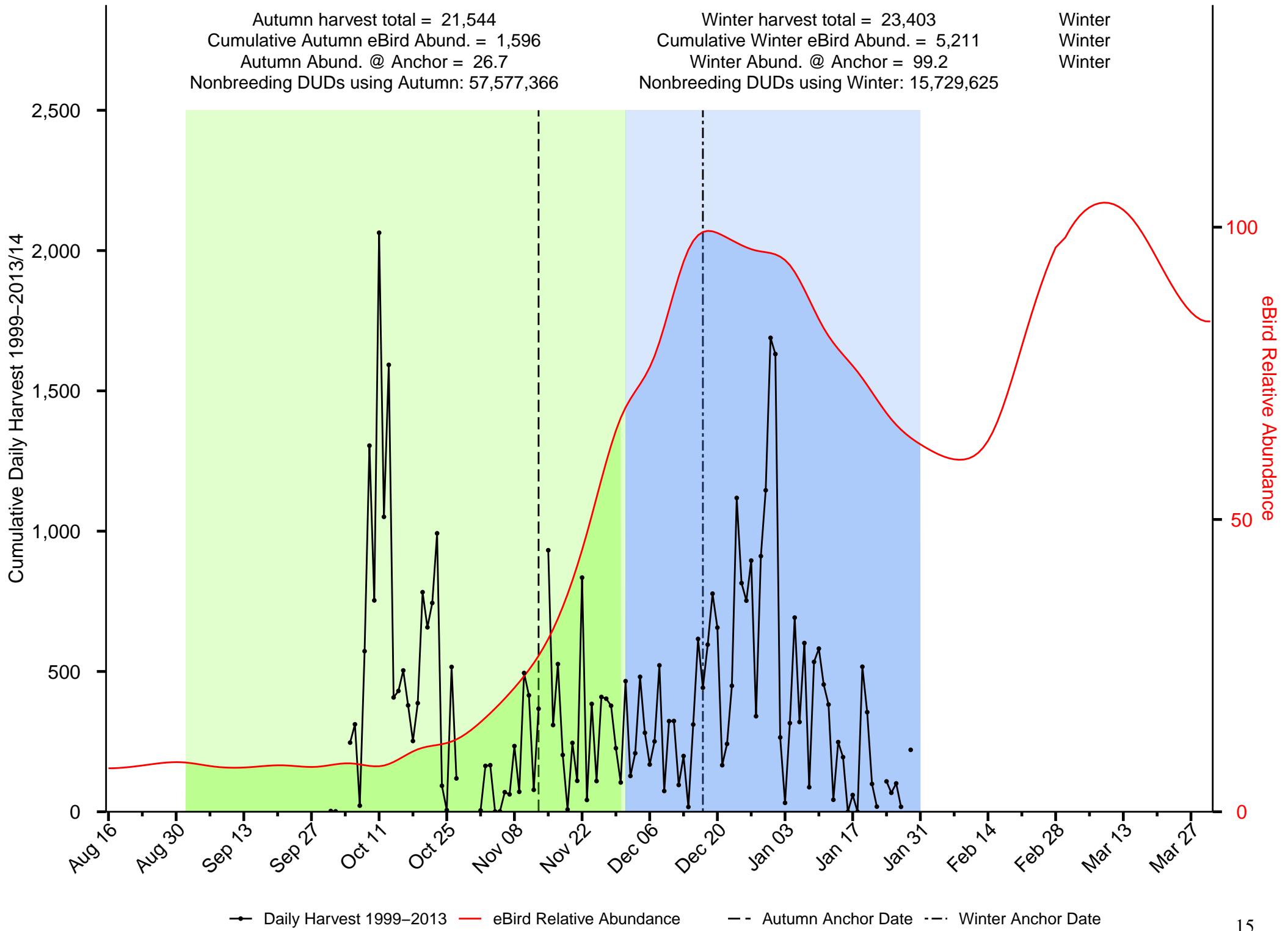
Summary of Long-tailed Duck in the Appalachian Mountains JV



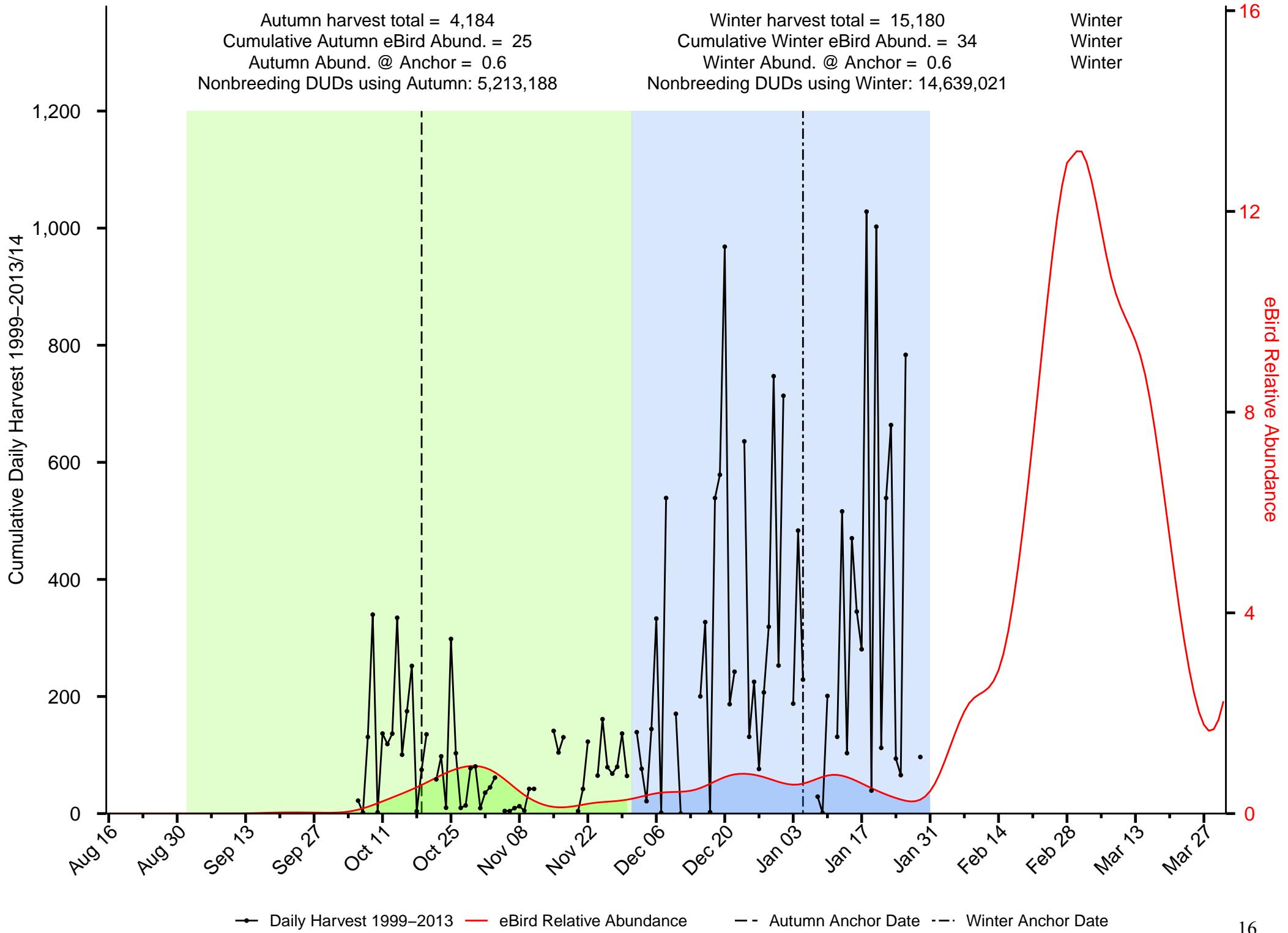
Summary of Mallard in the Appalachian Mountains JV



Summary of Merganser in the Appalachian Mountains JV



Summary of Northern Pintail in the Appalachian Mountains JV

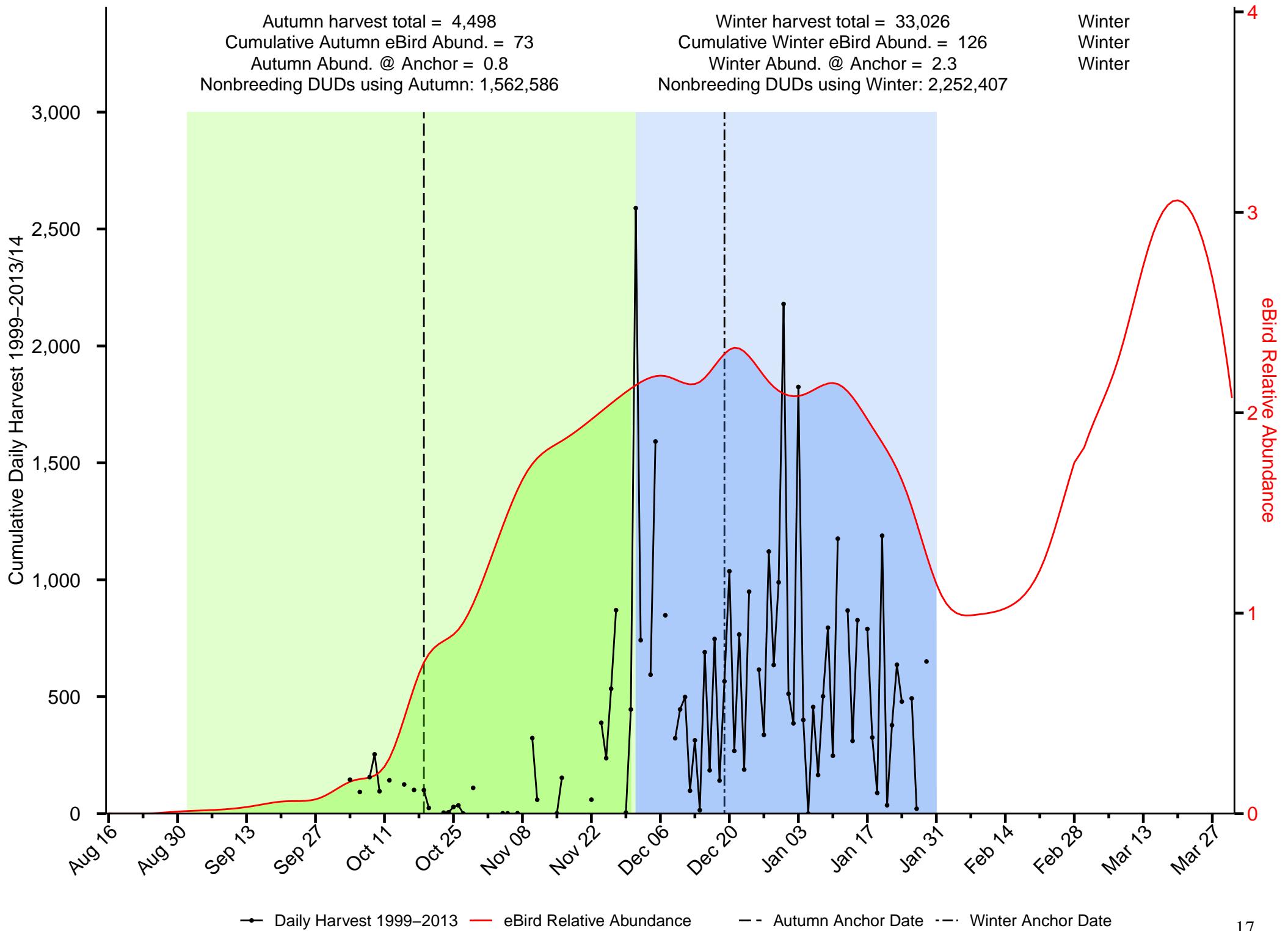


Summary of Northern Shoveler in the Appalachian Mountains JV

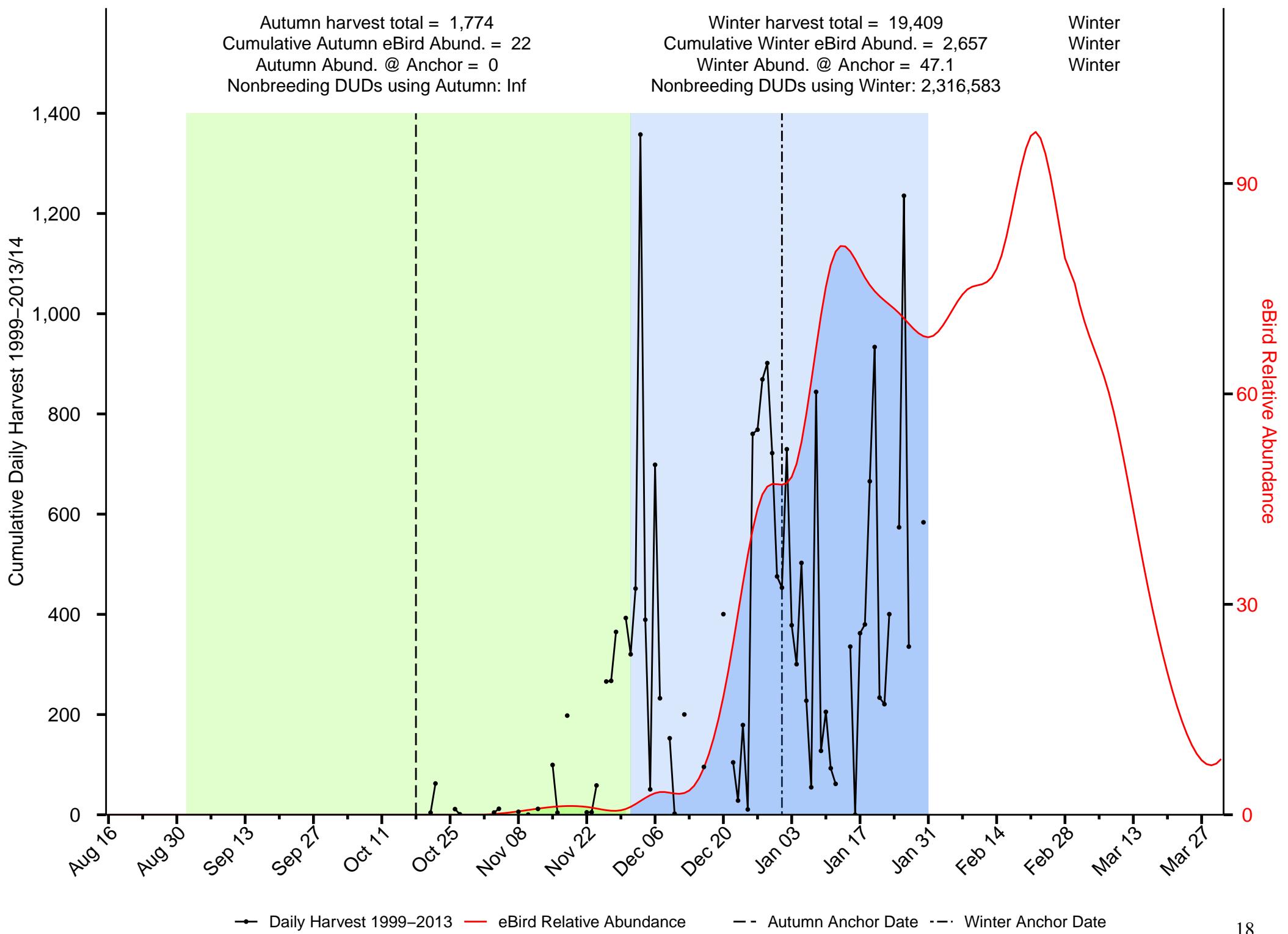
Autumn harvest total = 4,498
Cumulative Autumn eBird Abund. = 73
Autumn Abund. @ Anchor = 0.8
Nonbreeding DUDs using Autumn: 1,562,586

Winter harvest total = 33,026
Cumulative Winter eBird Abund. = 126
Winter Abund. @ Anchor = 2.3
Nonbreeding DUDs using Winter: 2,252,407

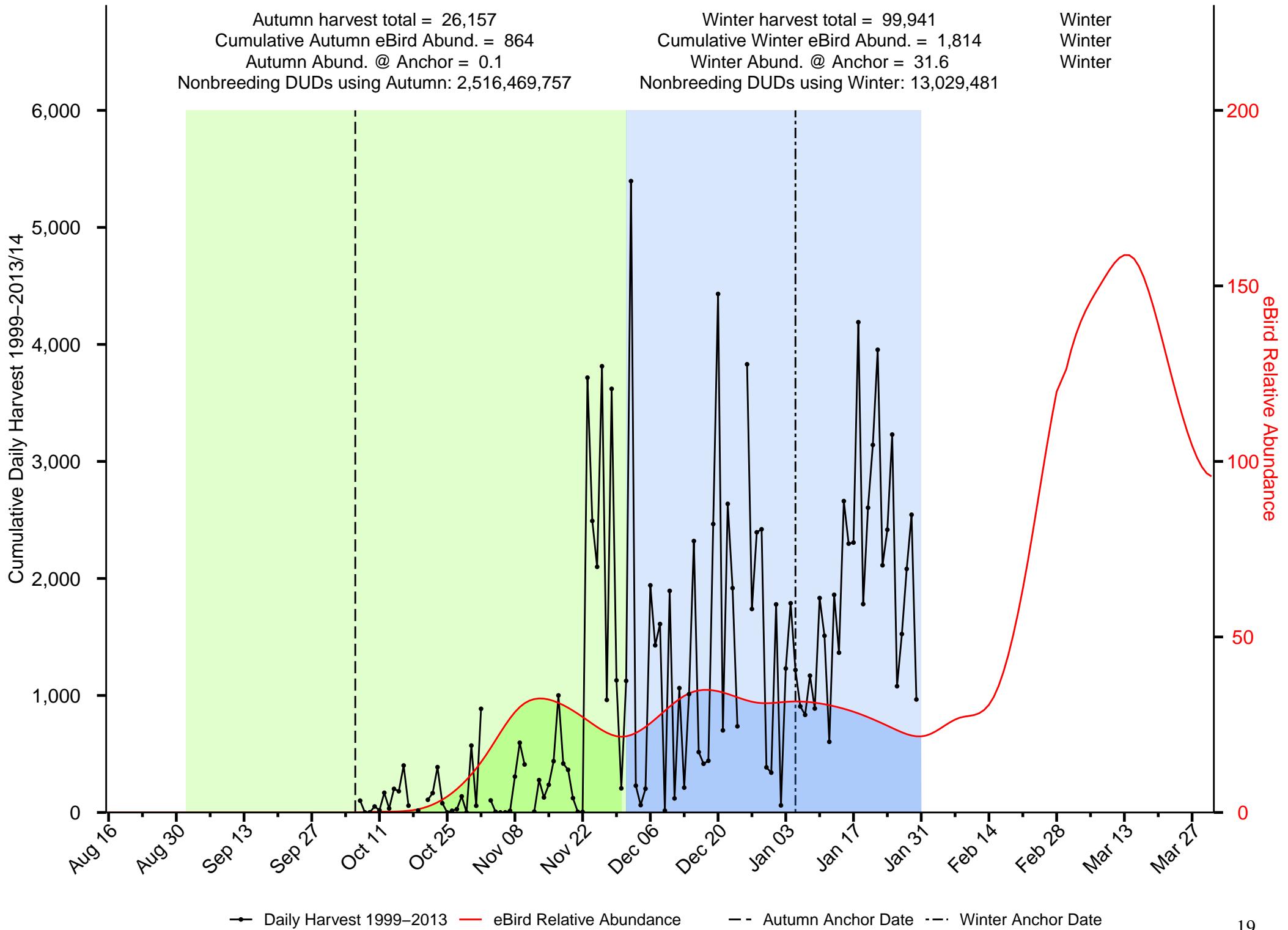
Winter
Winter
Winter



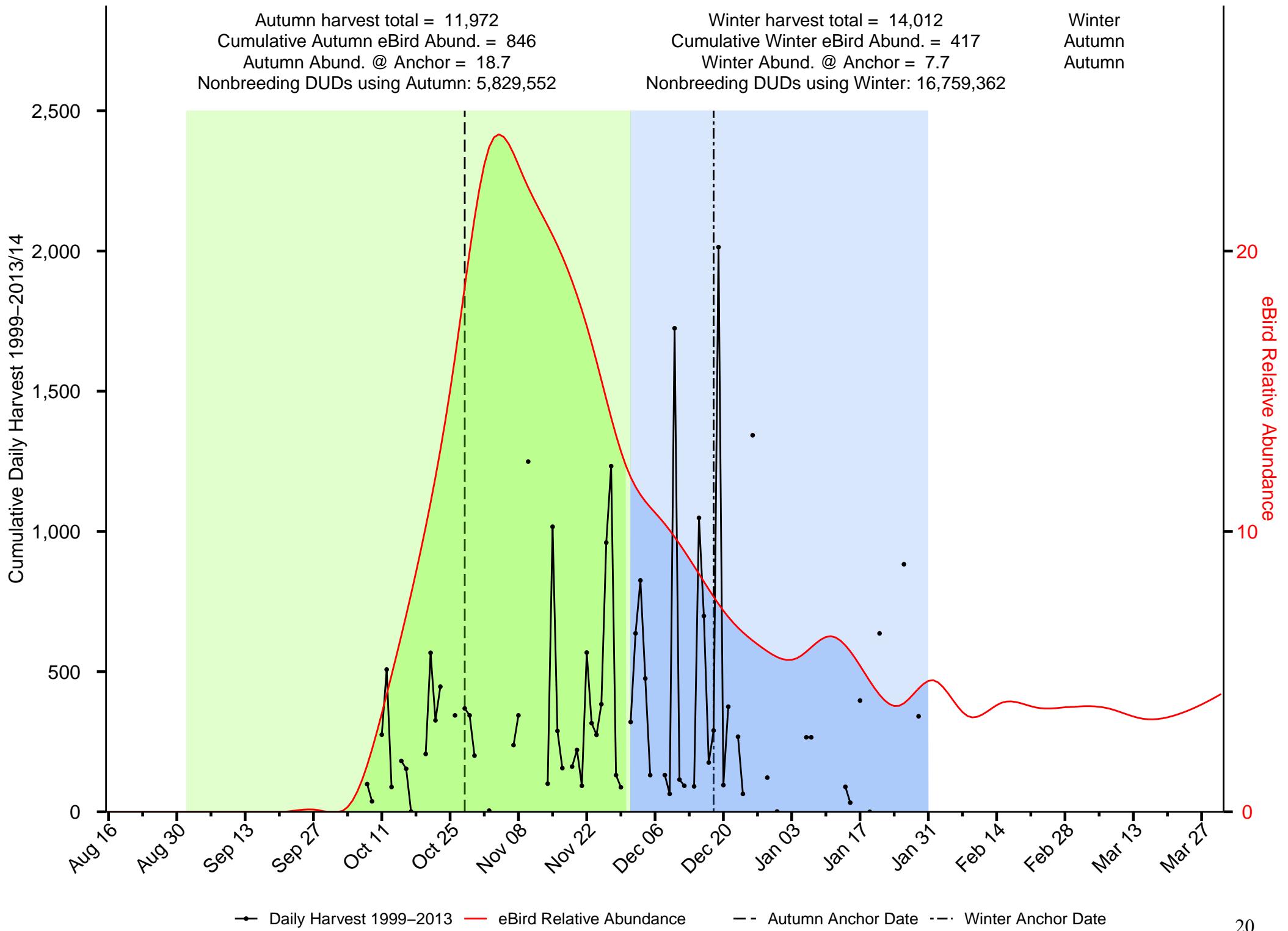
Summary of Redhead in the Appalachian Mountains JV



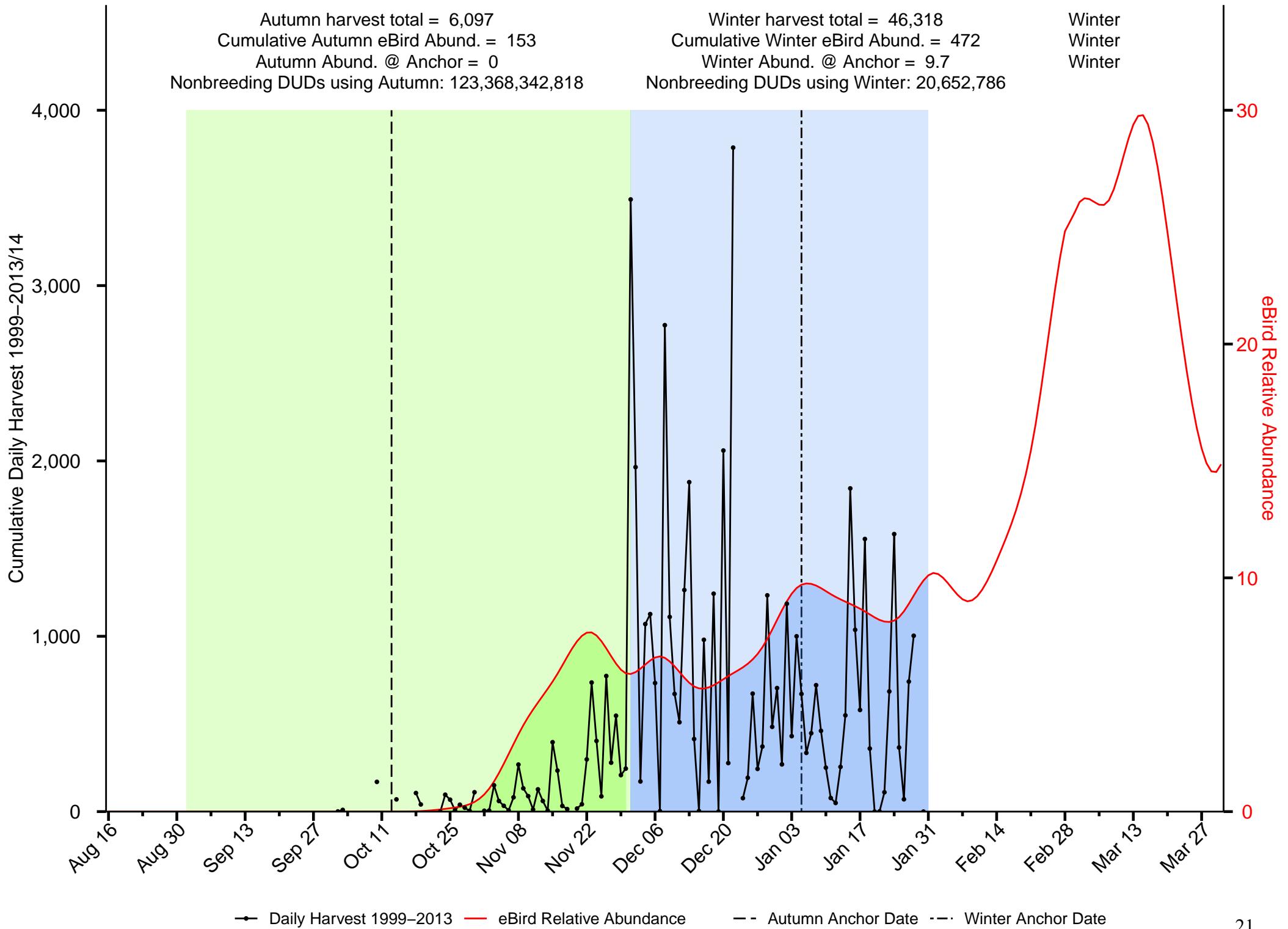
Summary of Ring-necked Duck in the Appalachian Mountains JV



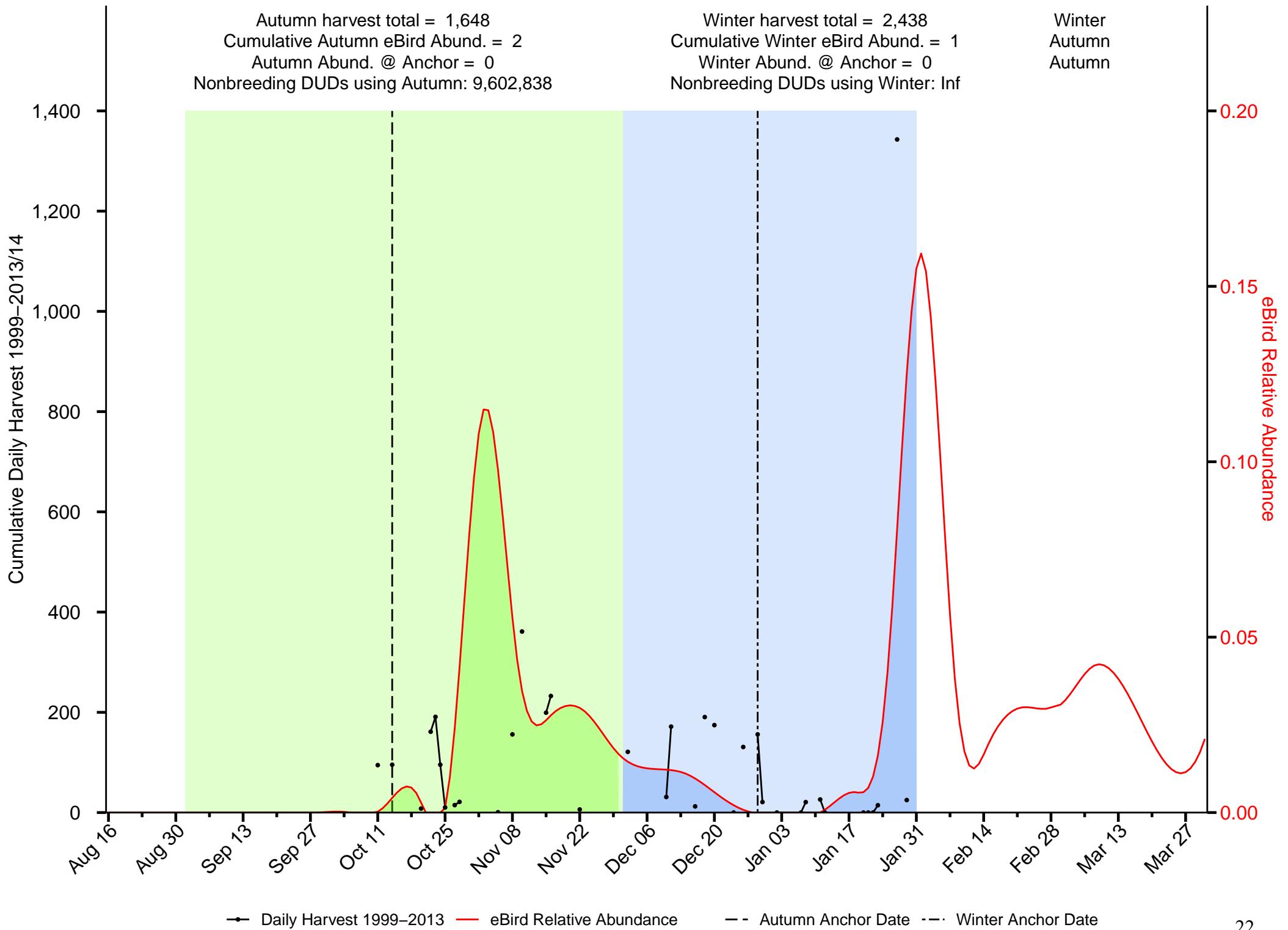
Summary of Ruddy Duck in the Appalachian Mountains JV



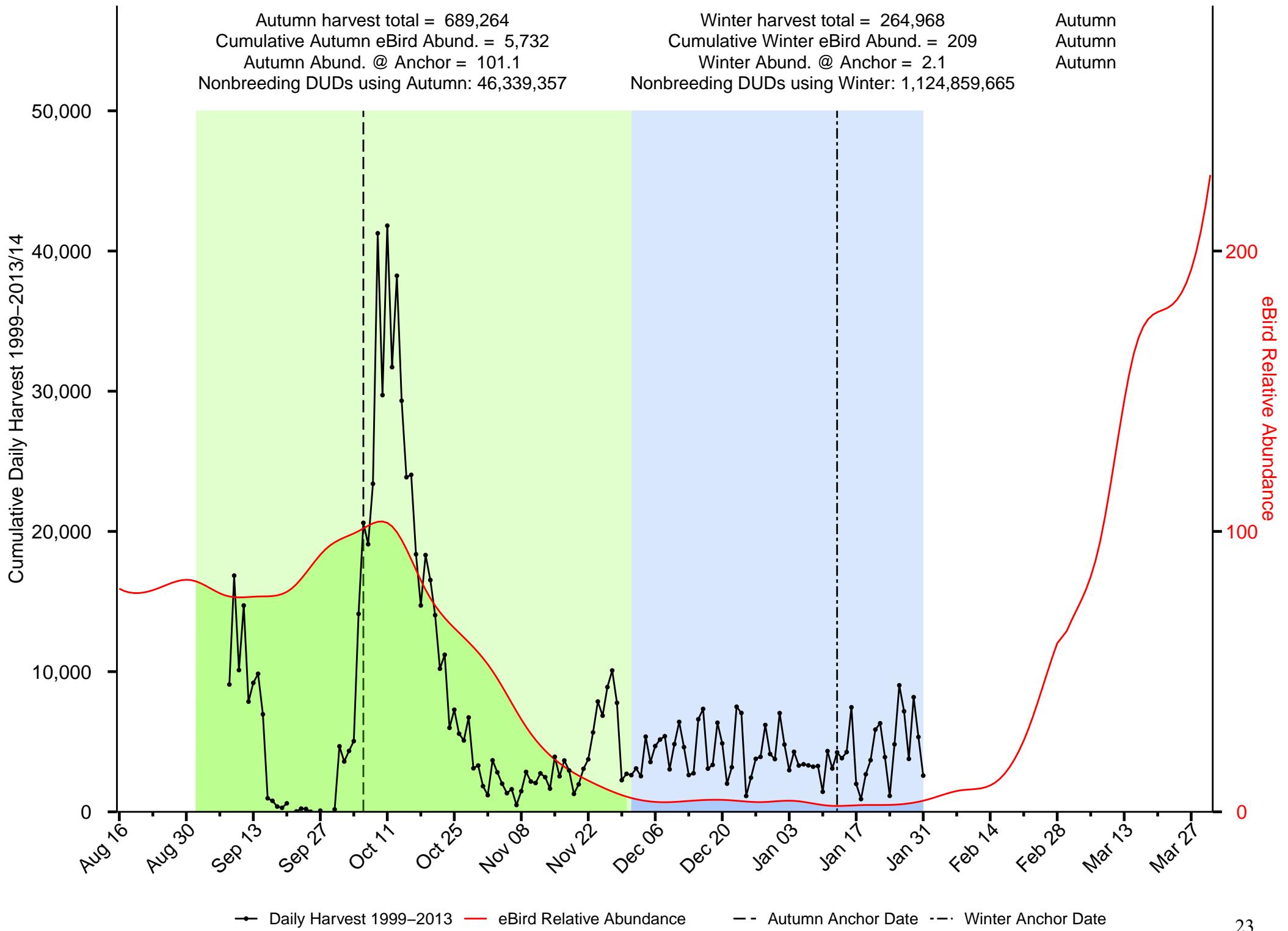
Summary of Scaup in the Appalachian Mountains JV



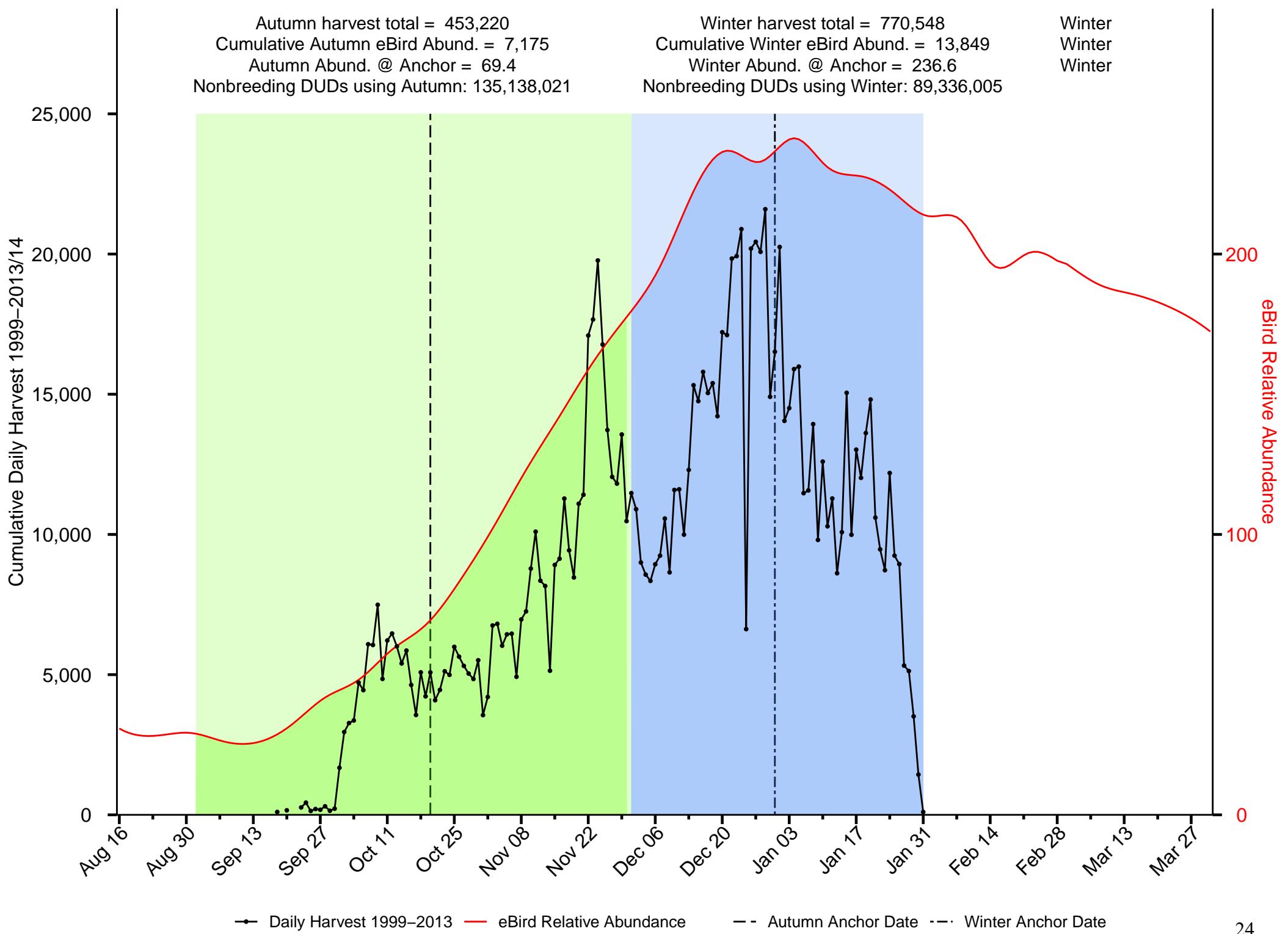
Summary of Scoter in the Appalachian Mountains JV



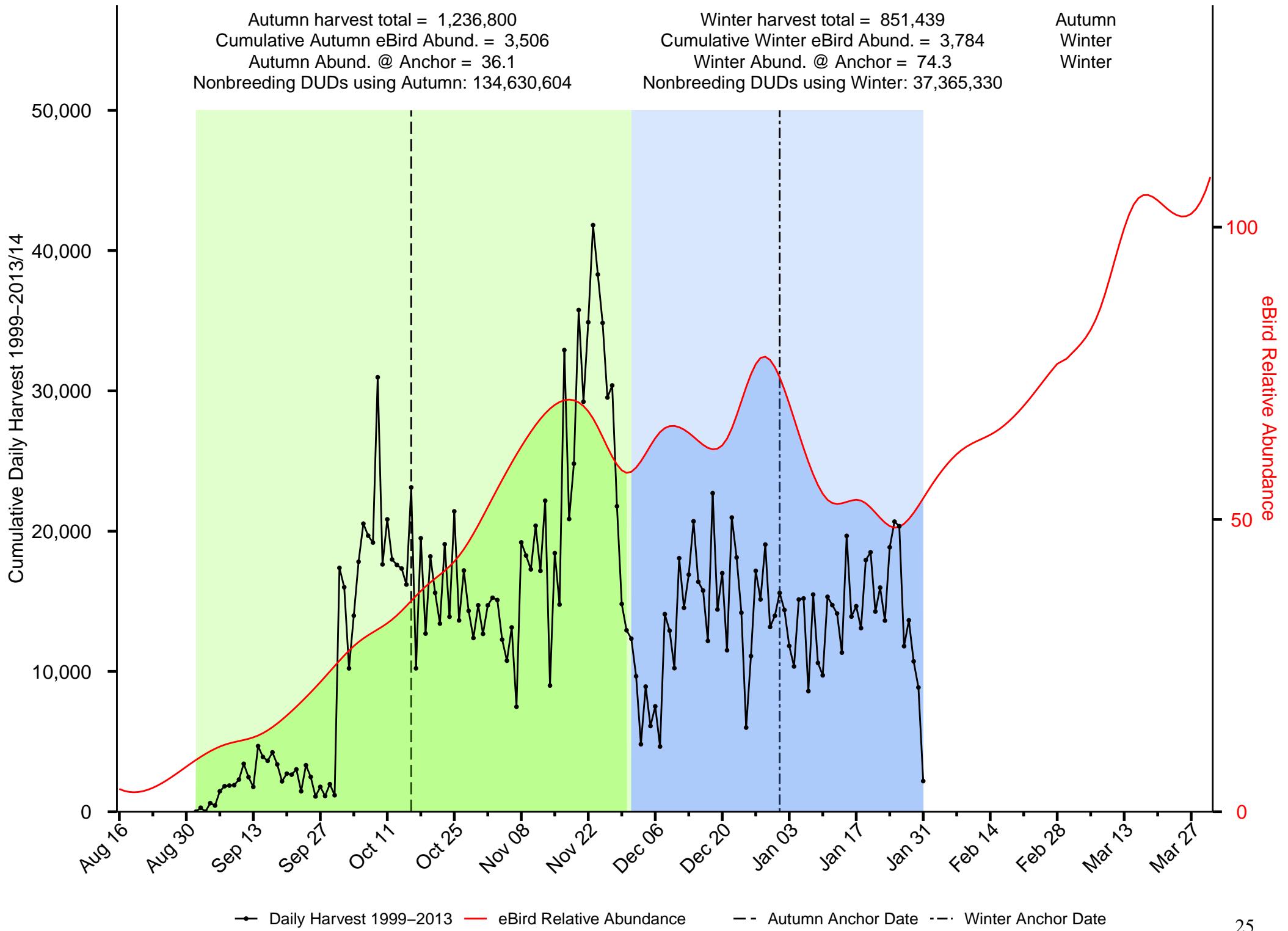
Summary of Wood Duck in the Appalachian Mountains JV



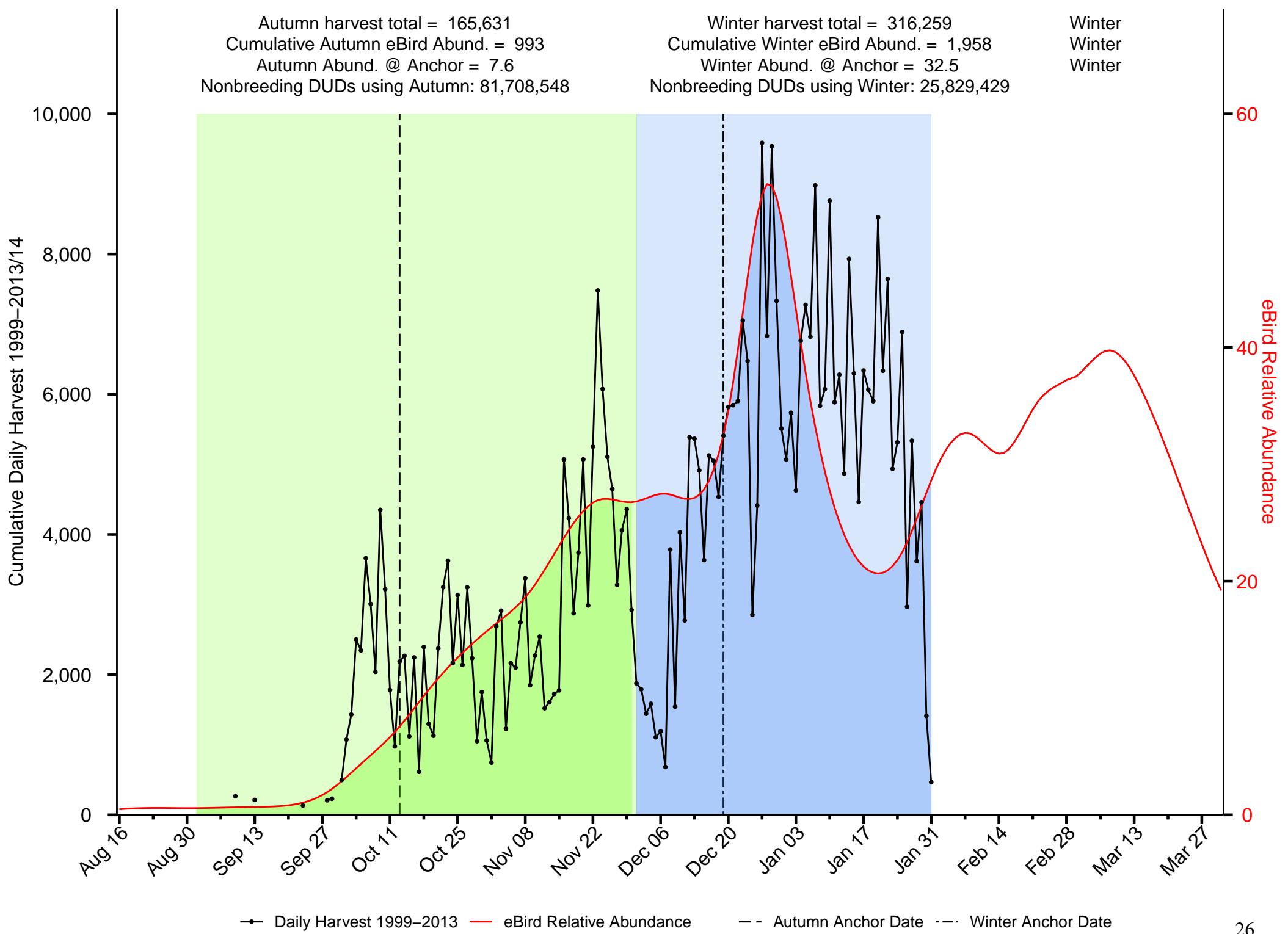
Summary of American Black Duck in the Atlantic Coast JV



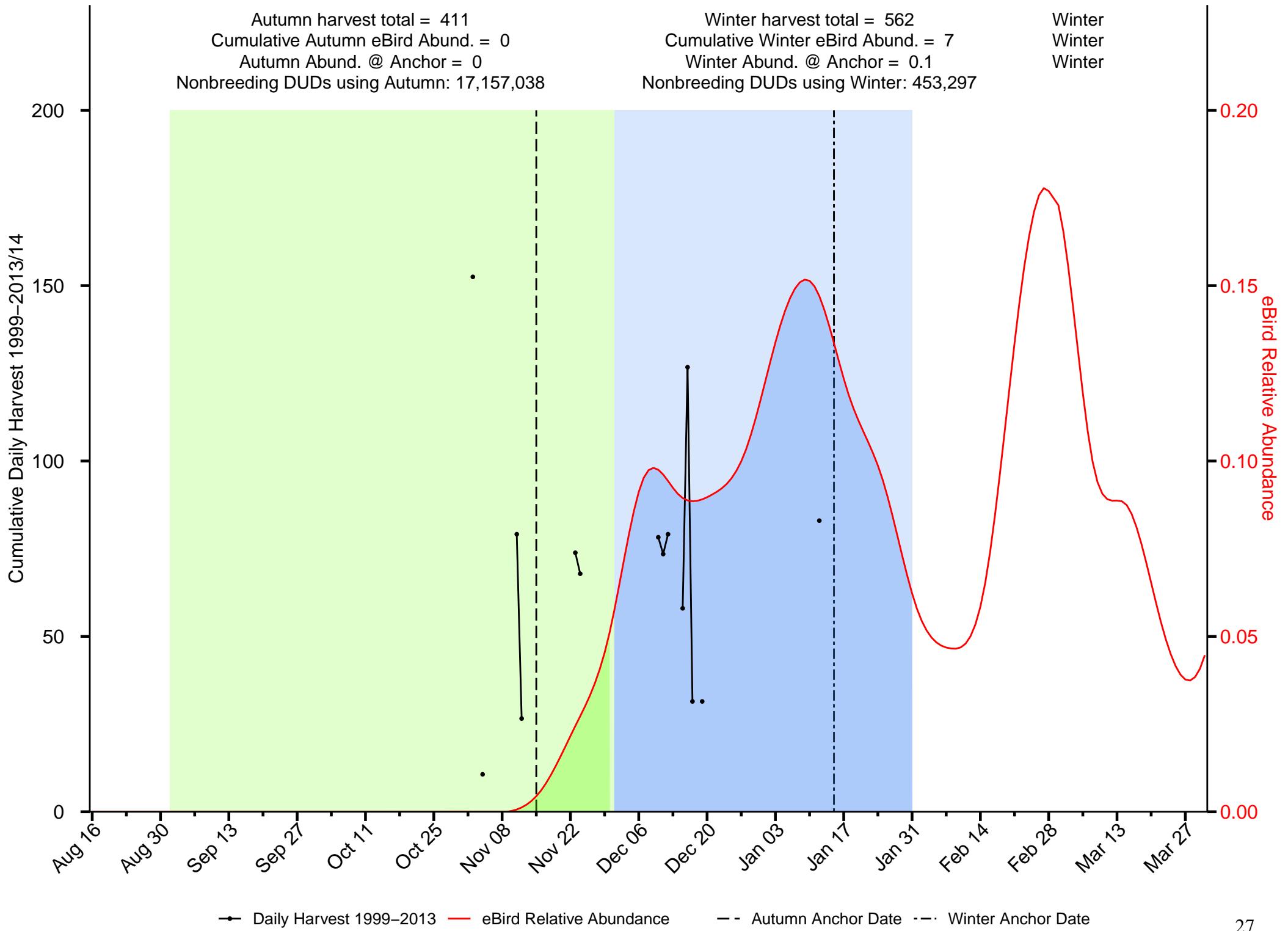
Summary of Green-winged Teal in the Atlantic Coast JV



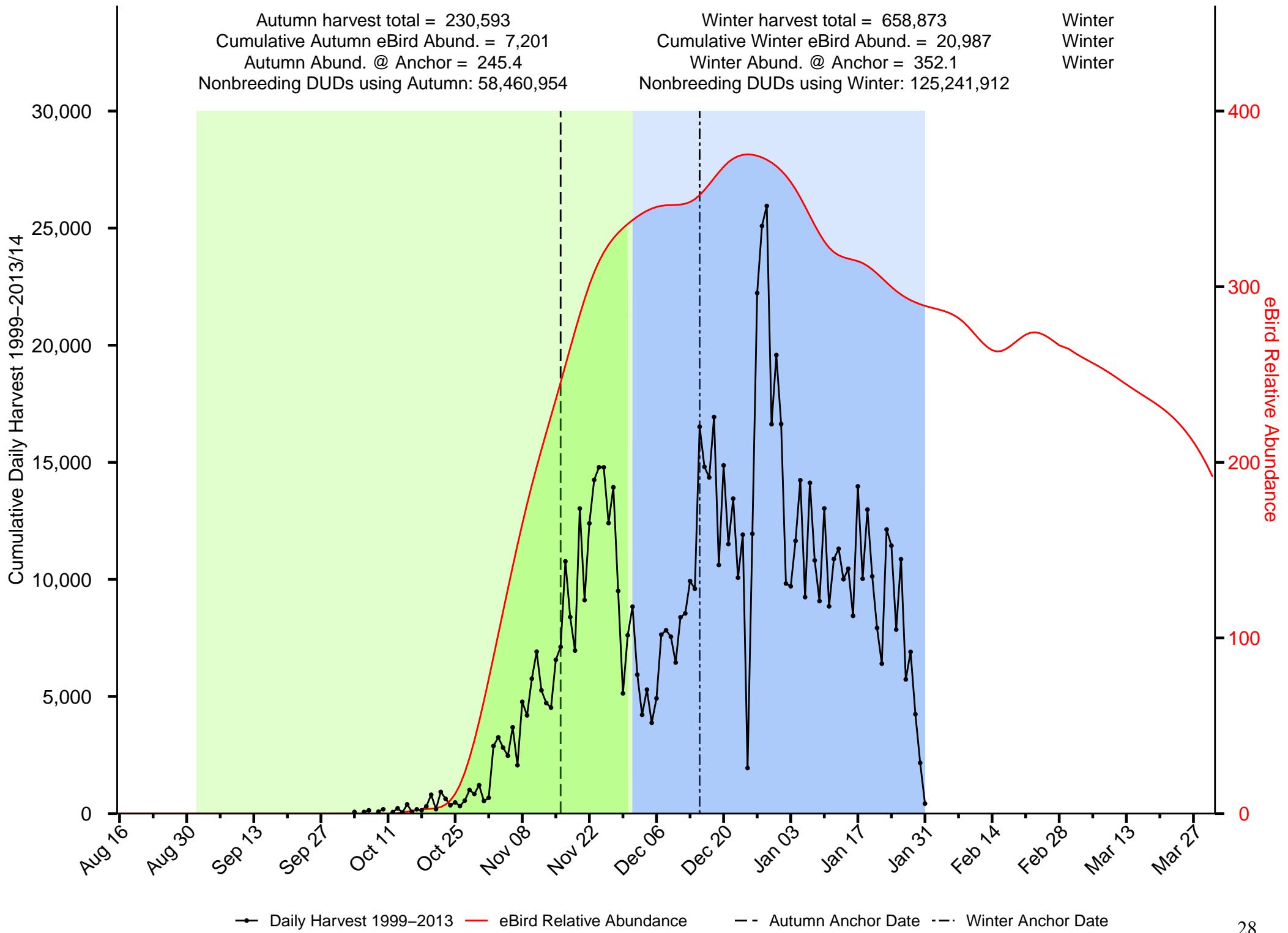
Summary of American Wigeon in the Atlantic Coast JV



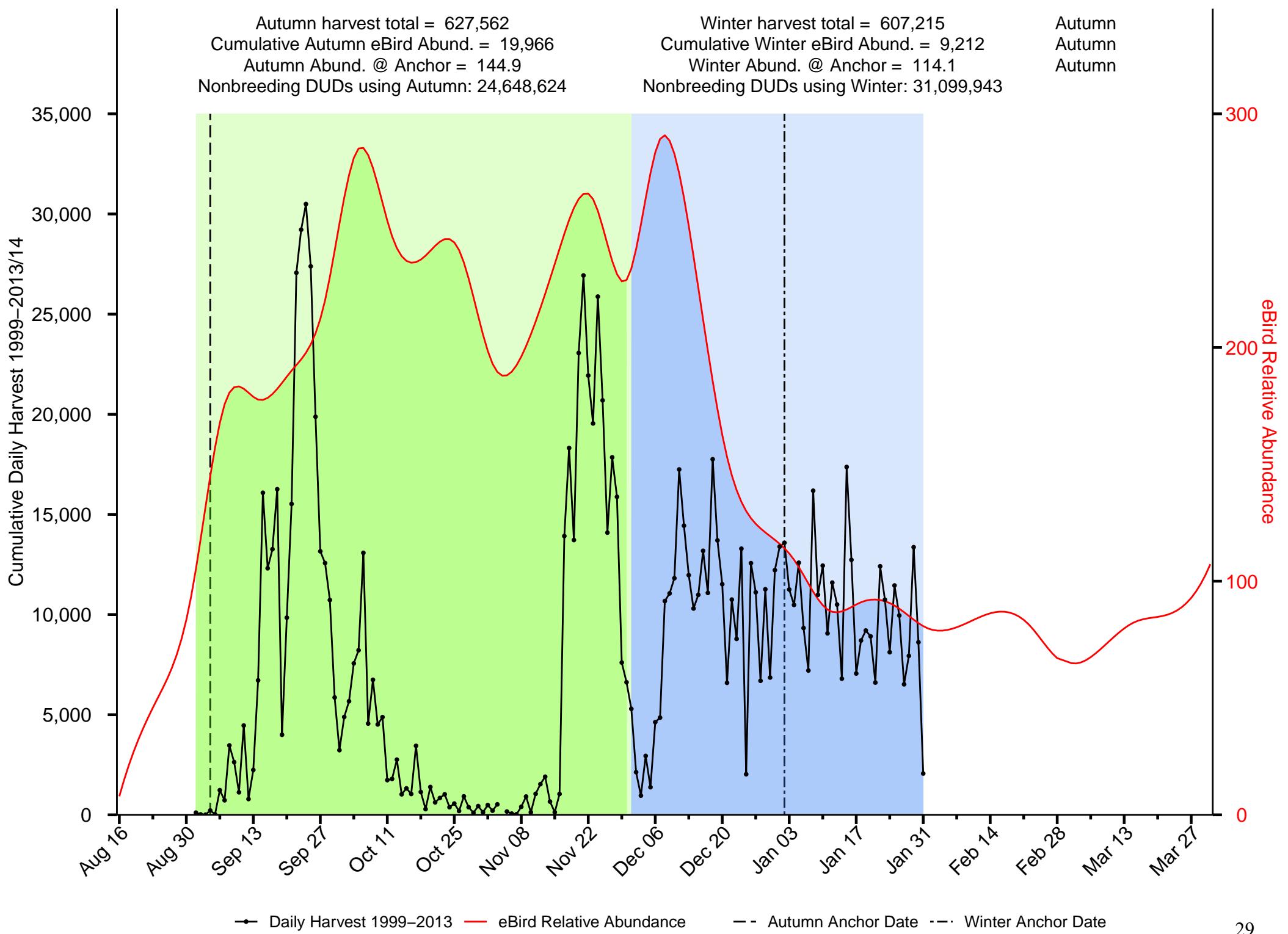
Summary of Barrow's Goldeneye in the Atlantic Coast JV



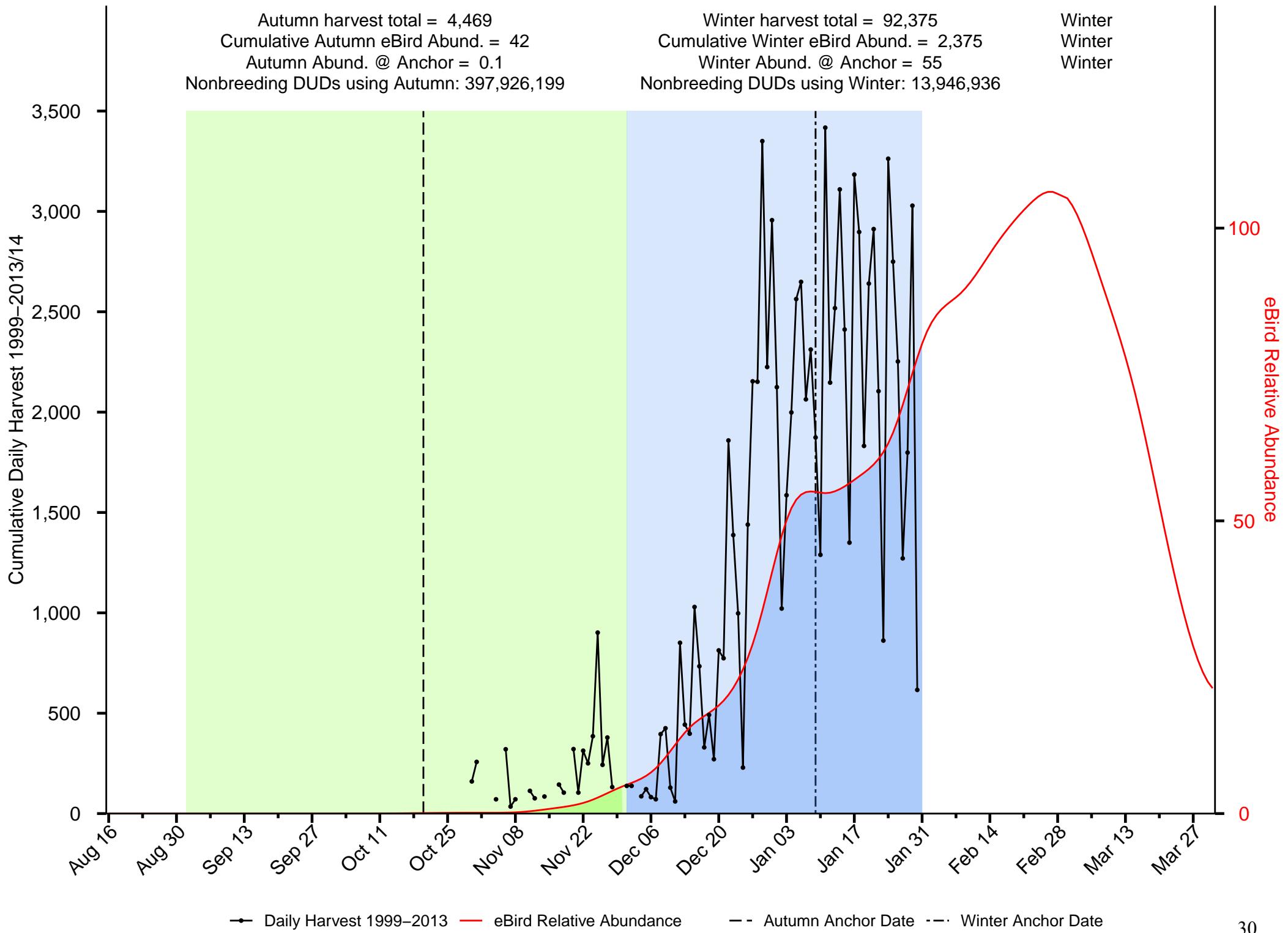
Summary of Bufflehead in the Atlantic Coast JV



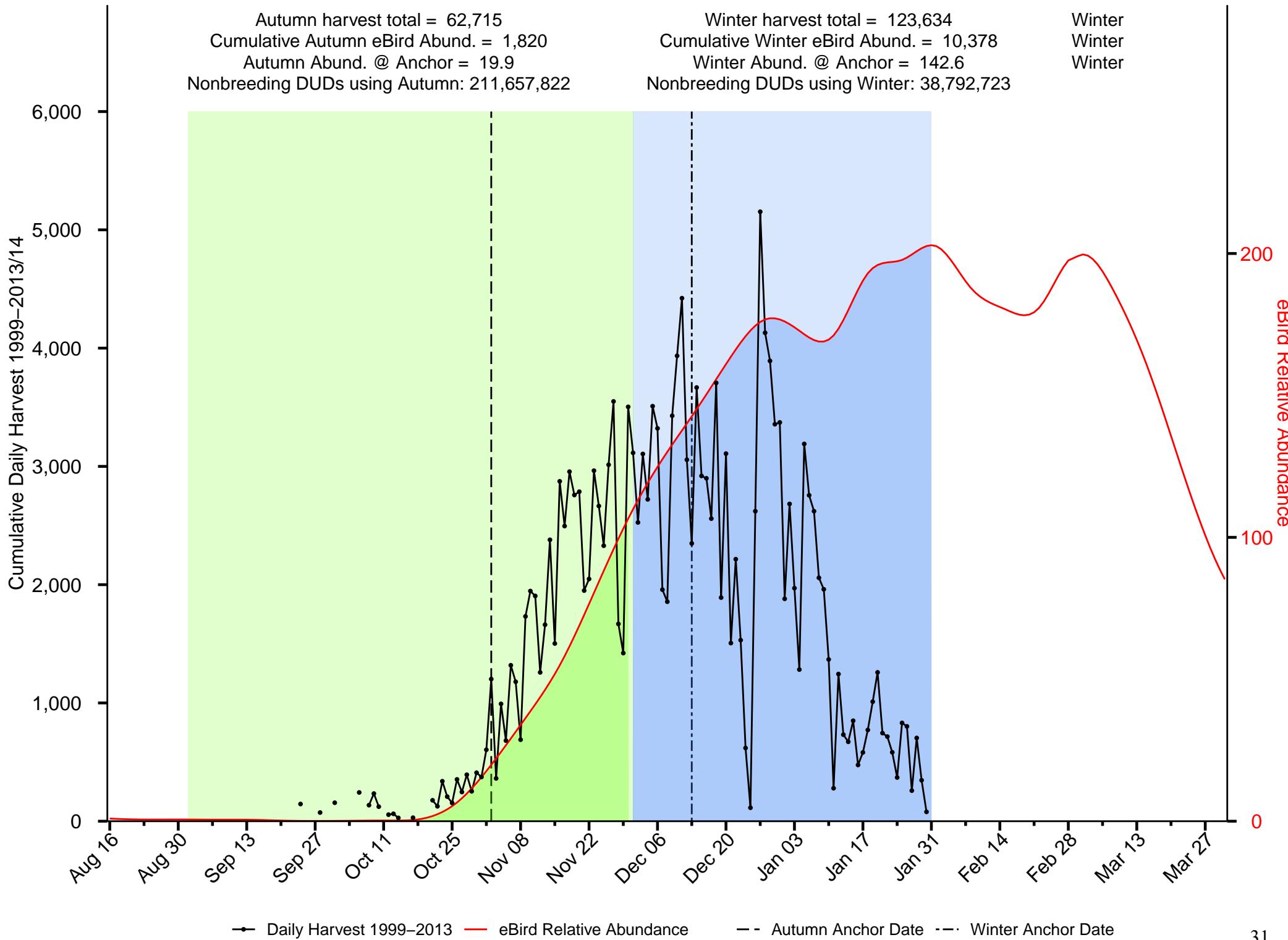
Summary of Blue-winged Teal in the Atlantic Coast JV



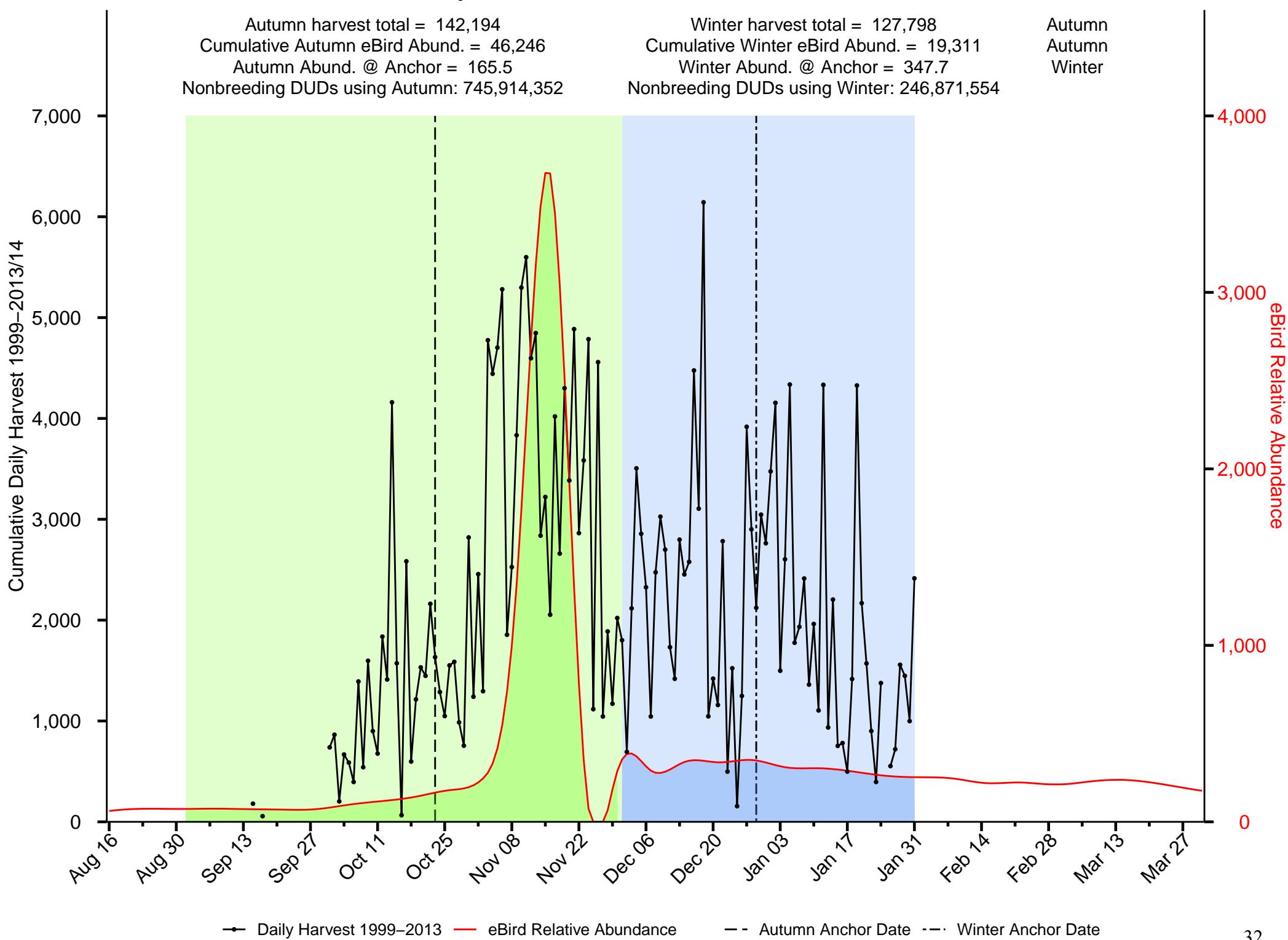
Summary of Canvasback in the Atlantic Coast JV



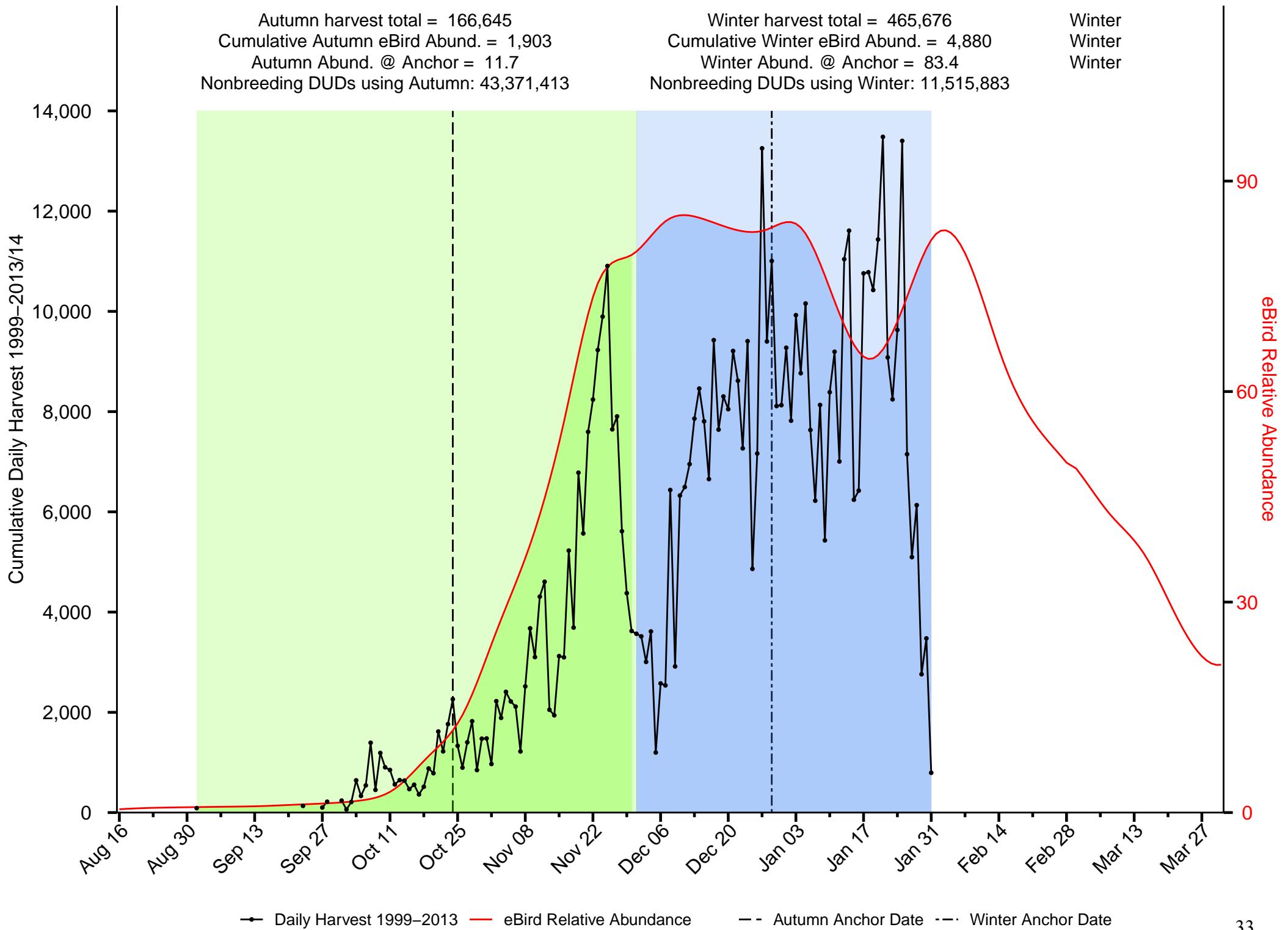
Summary of Common Goldeneye in the Atlantic Coast JV



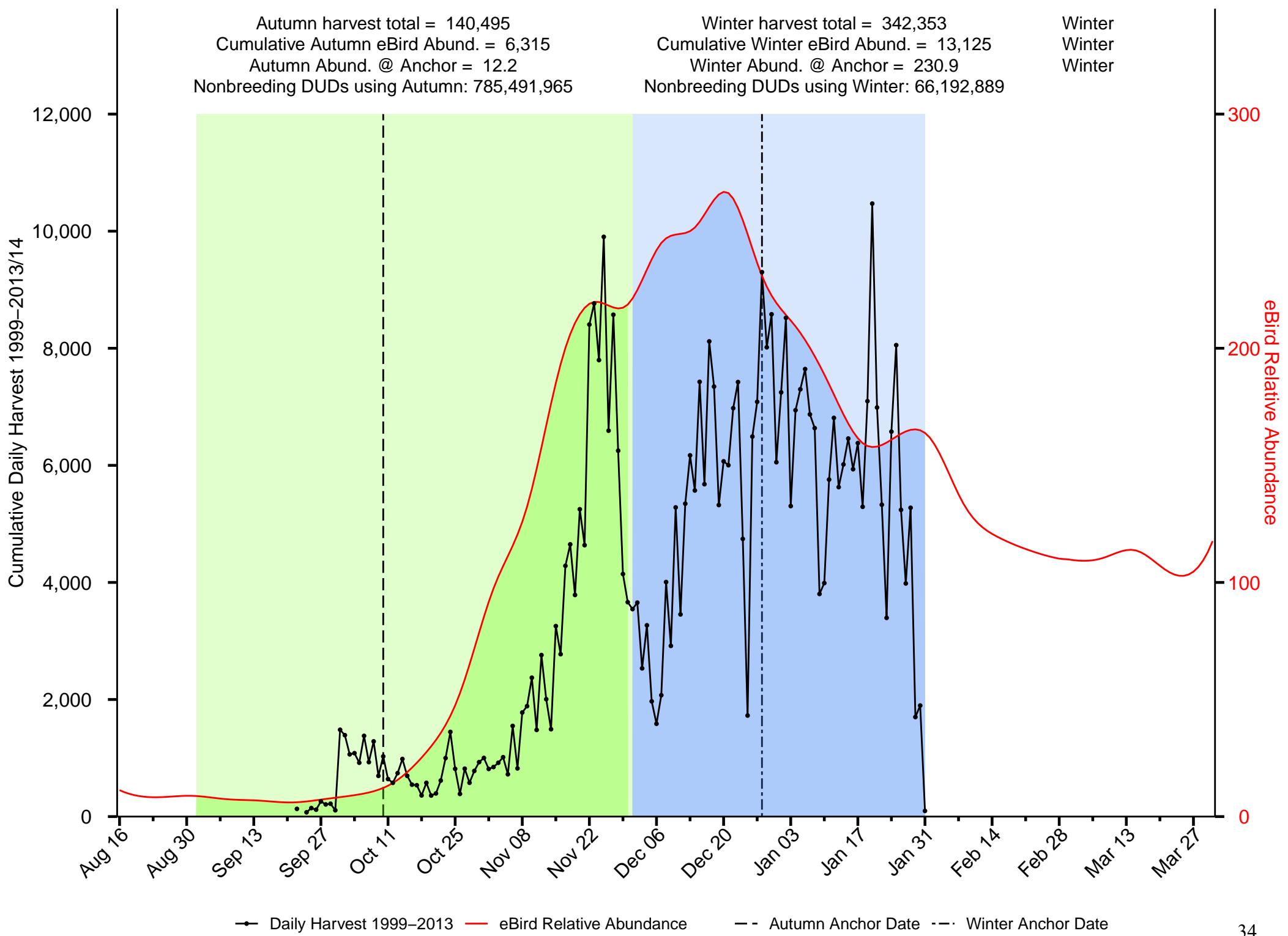
Summary of Eider in the Atlantic Coast JV



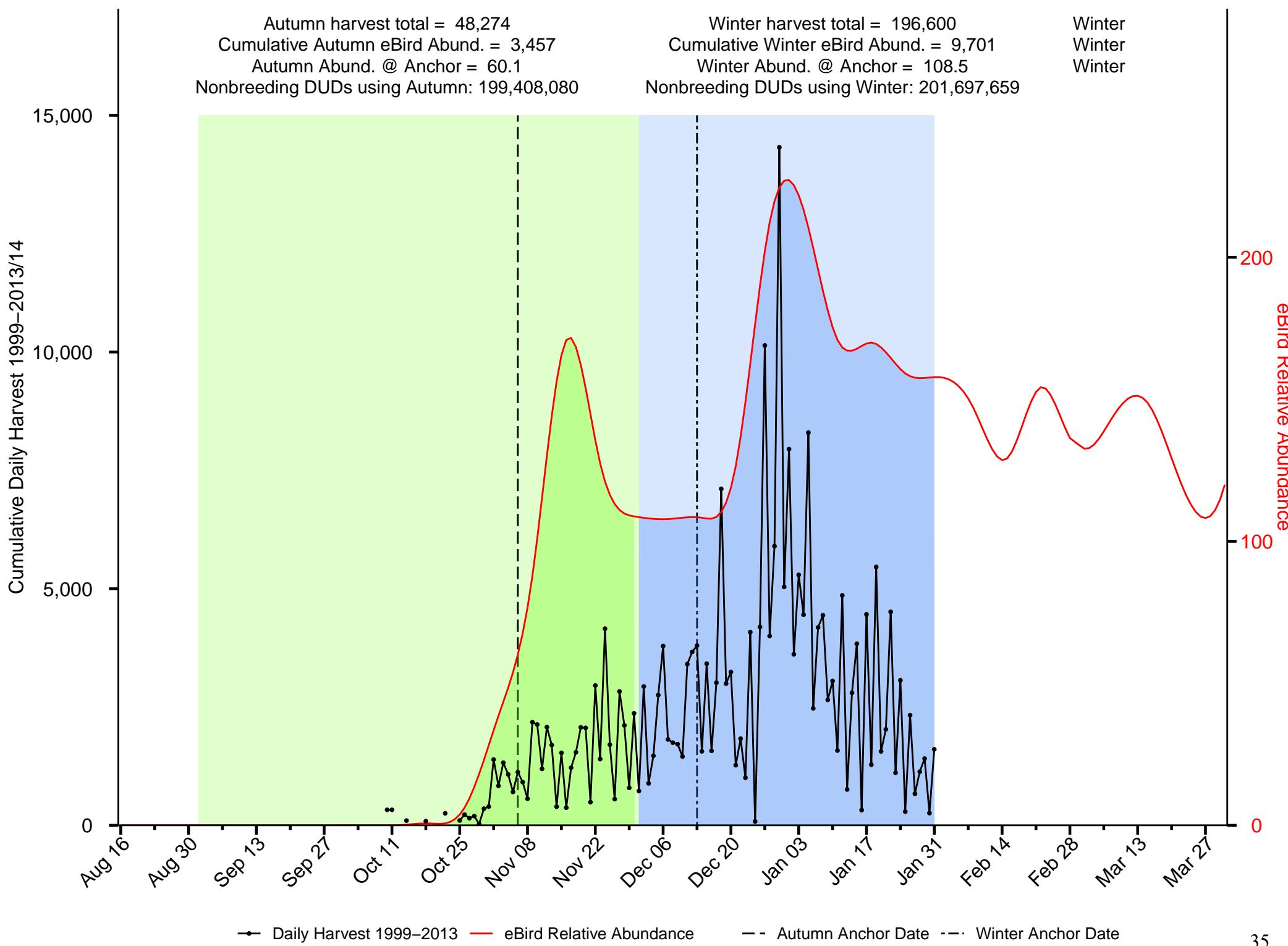
Summary of Gadwall in the Atlantic Coast JV



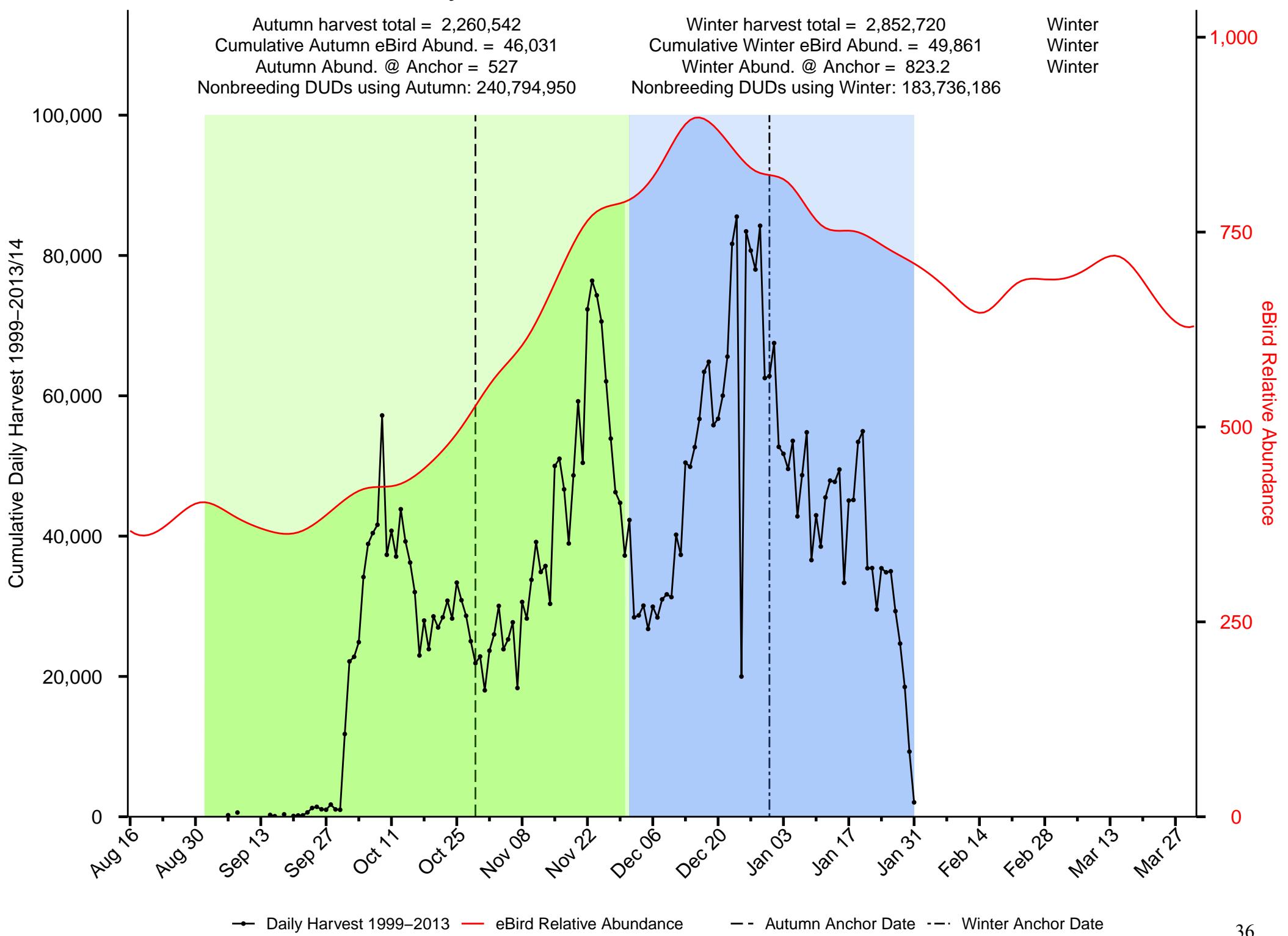
Summary of Hooded Merganser in the Atlantic Coast JV



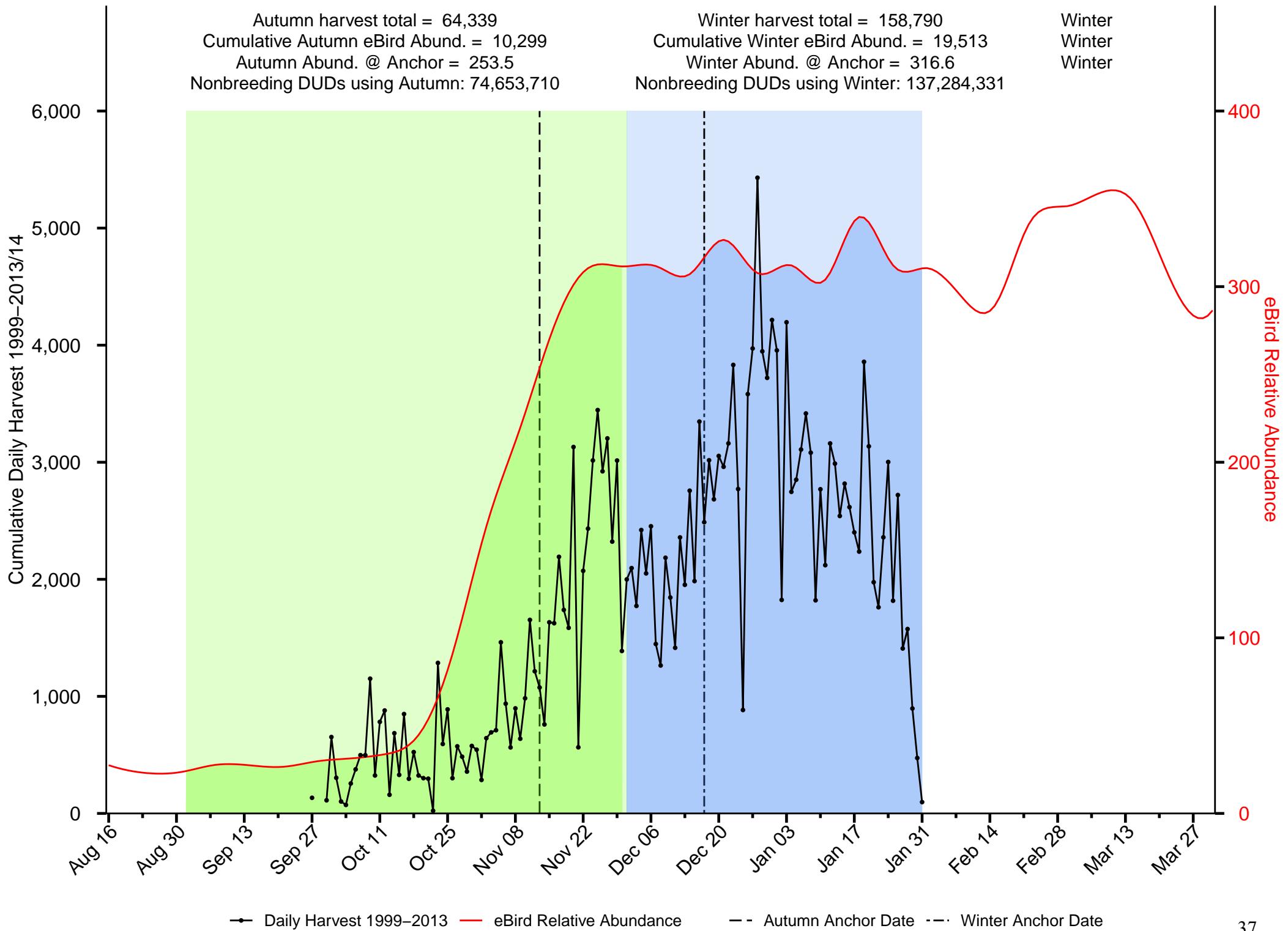
Summary of Long-tailed Duck in the Atlantic Coast JV



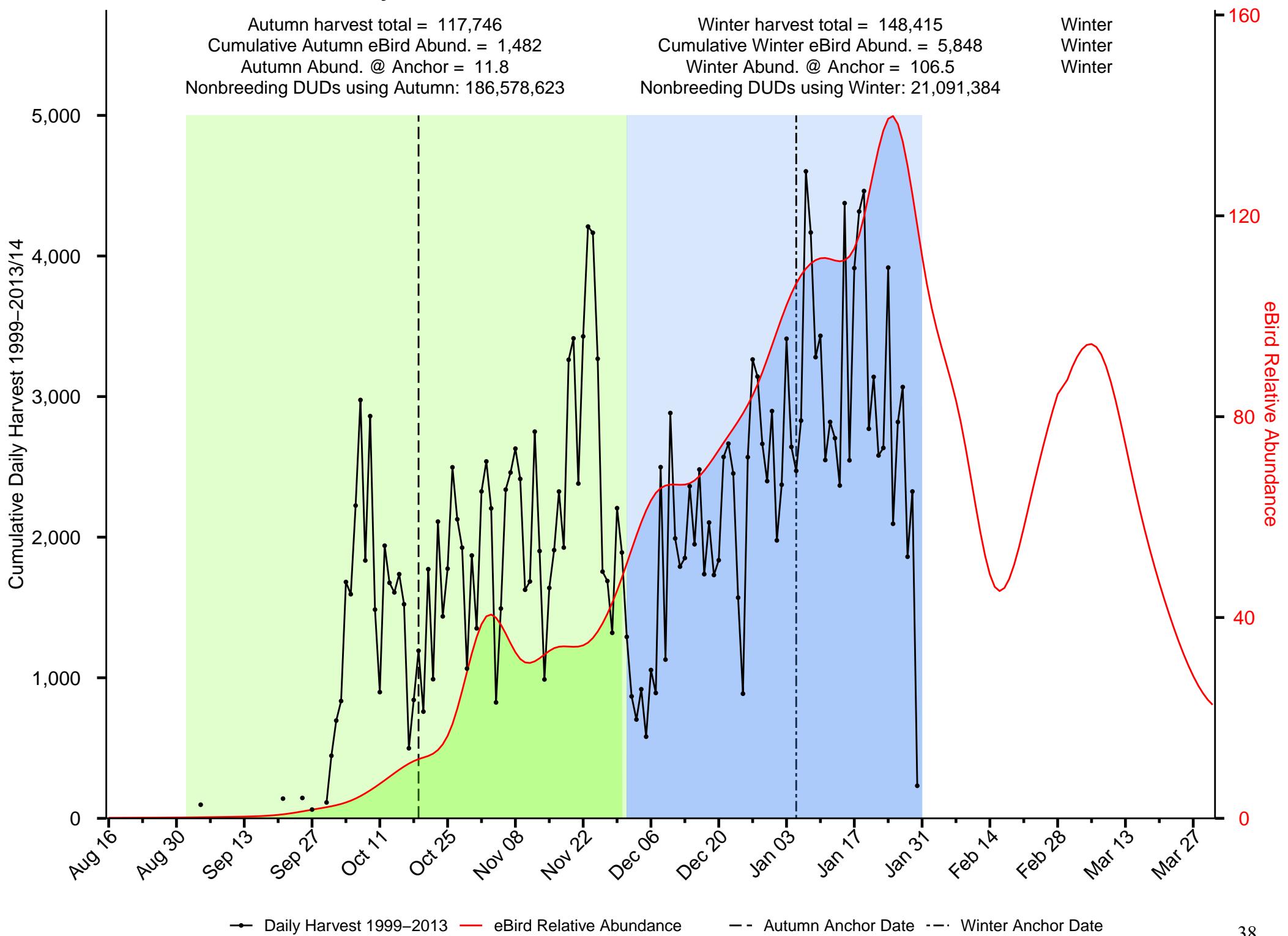
Summary of Mallard in the Atlantic Coast JV



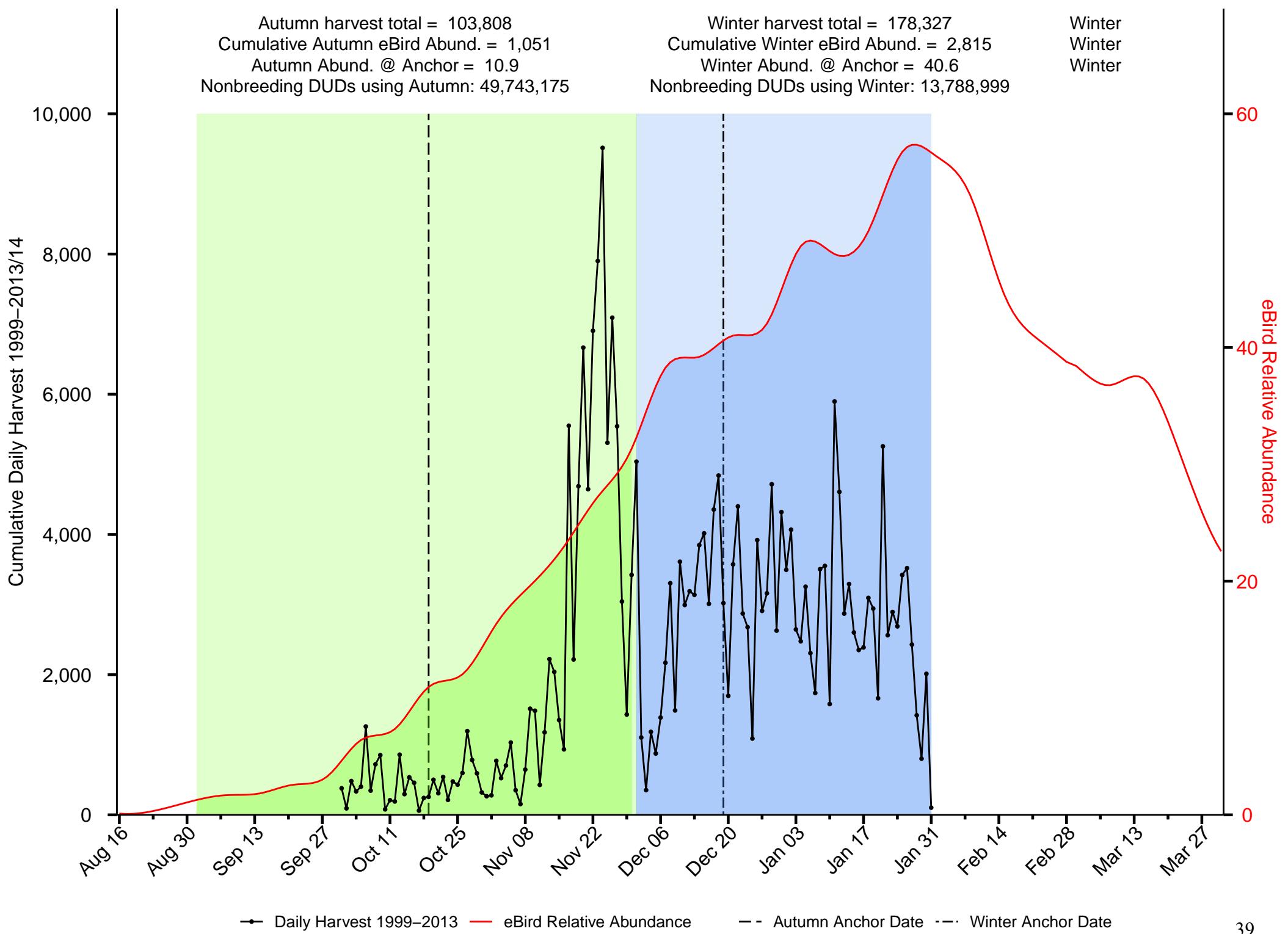
Summary of Merganser in the Atlantic Coast JV



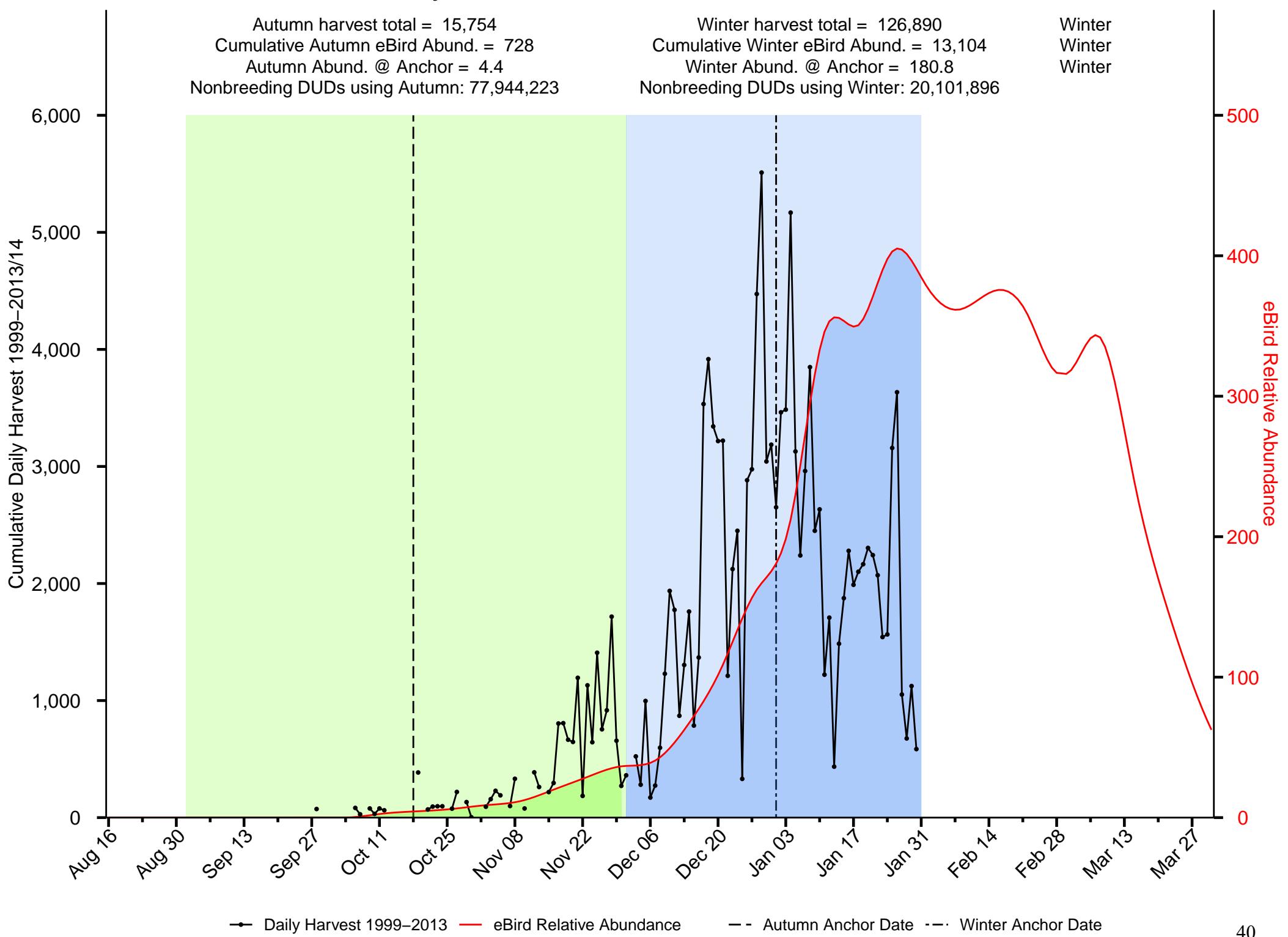
Summary of Northern Pintail in the Atlantic Coast JV



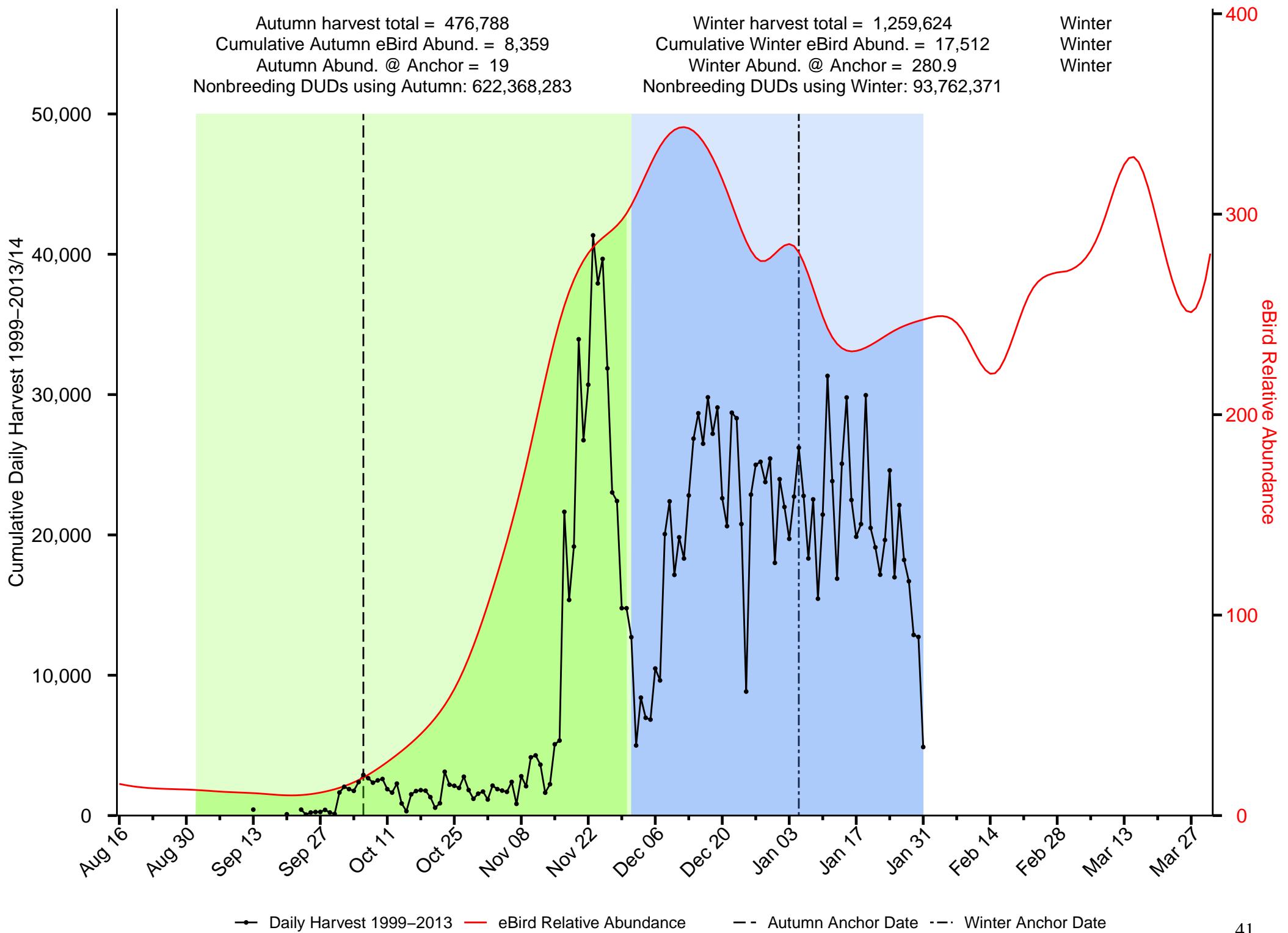
Summary of Northern Shoveler in the Atlantic Coast JV



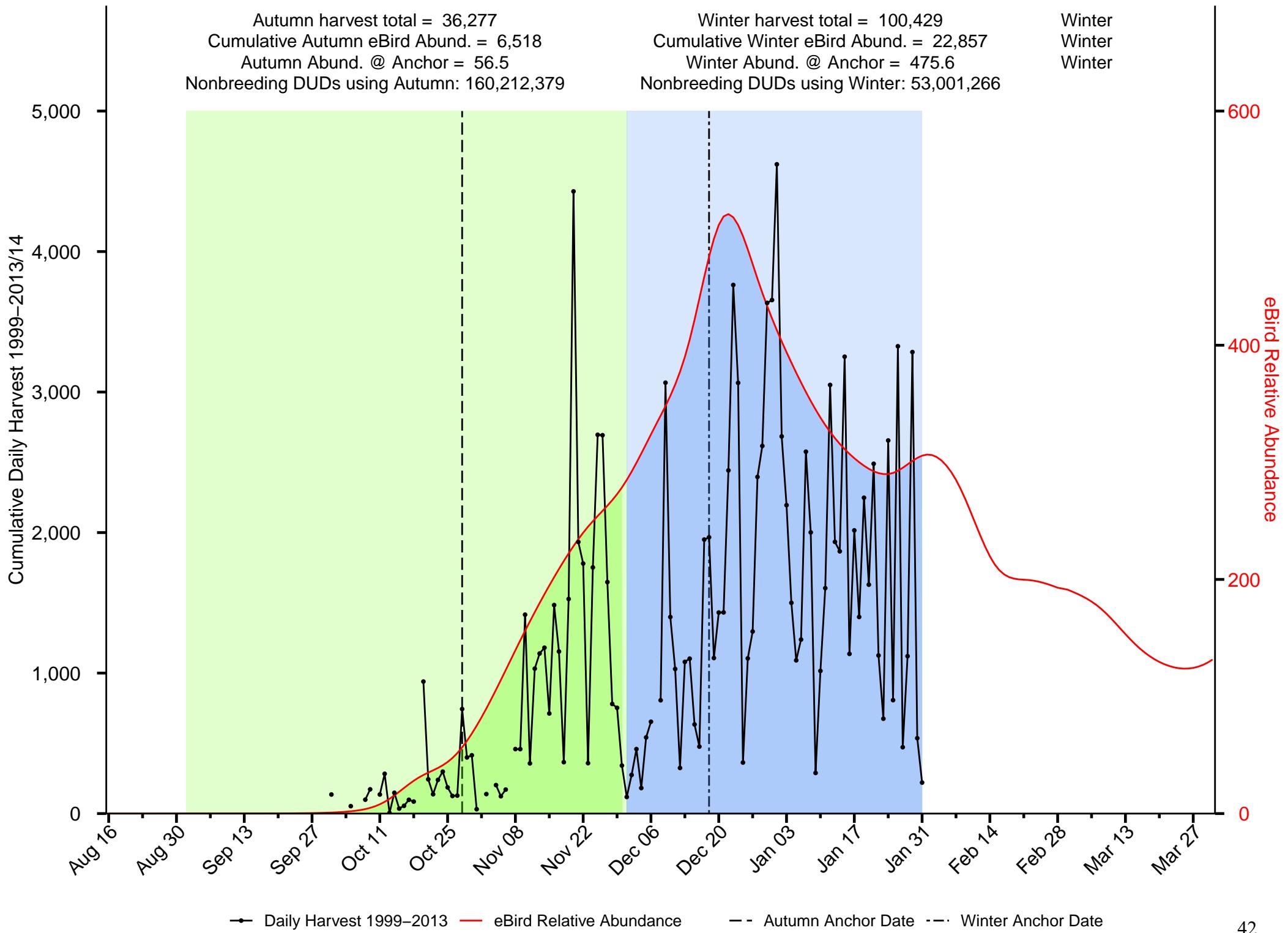
Summary of Redhead in the Atlantic Coast JV



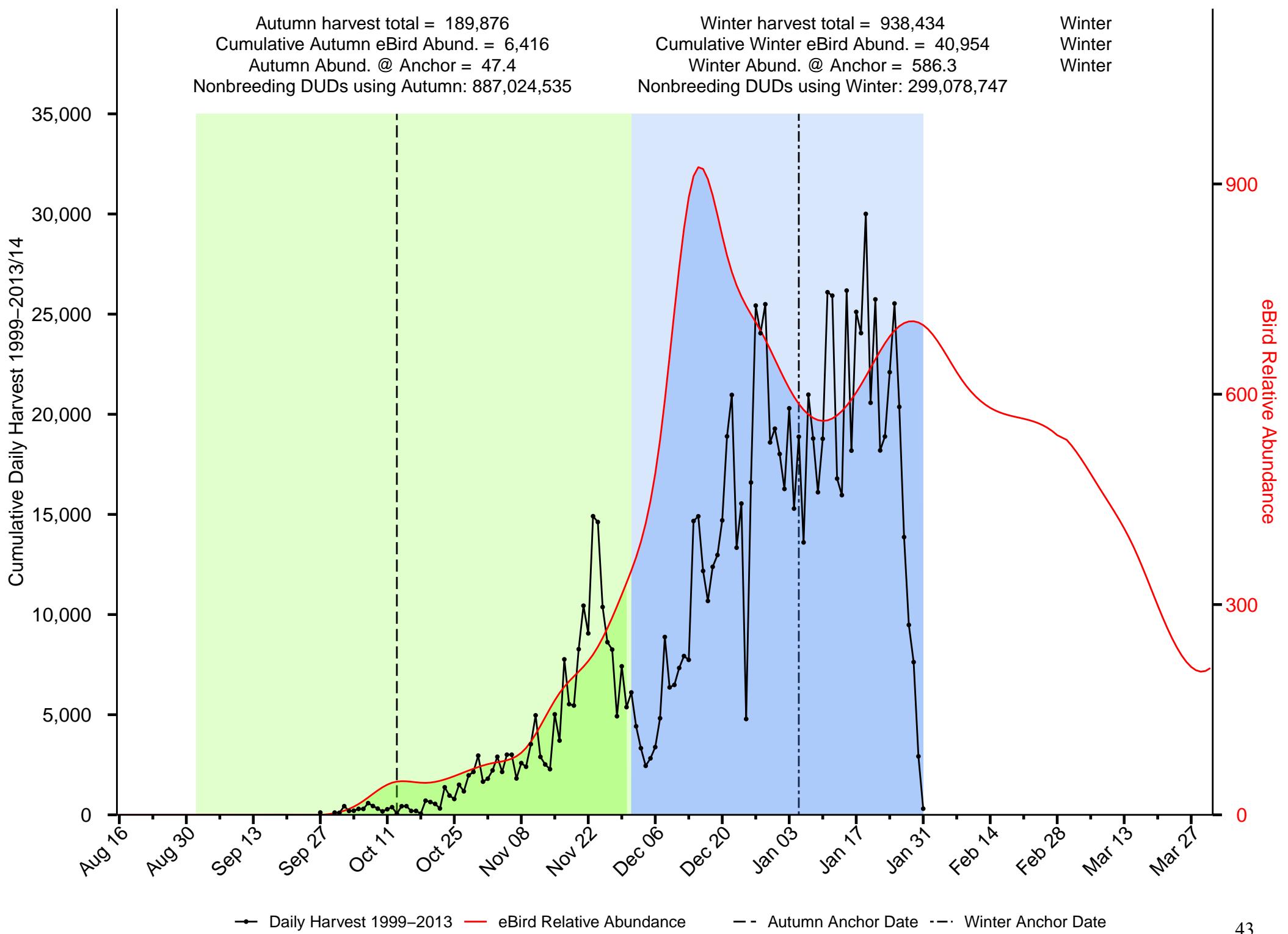
Summary of Ring-necked Duck in the Atlantic Coast JV



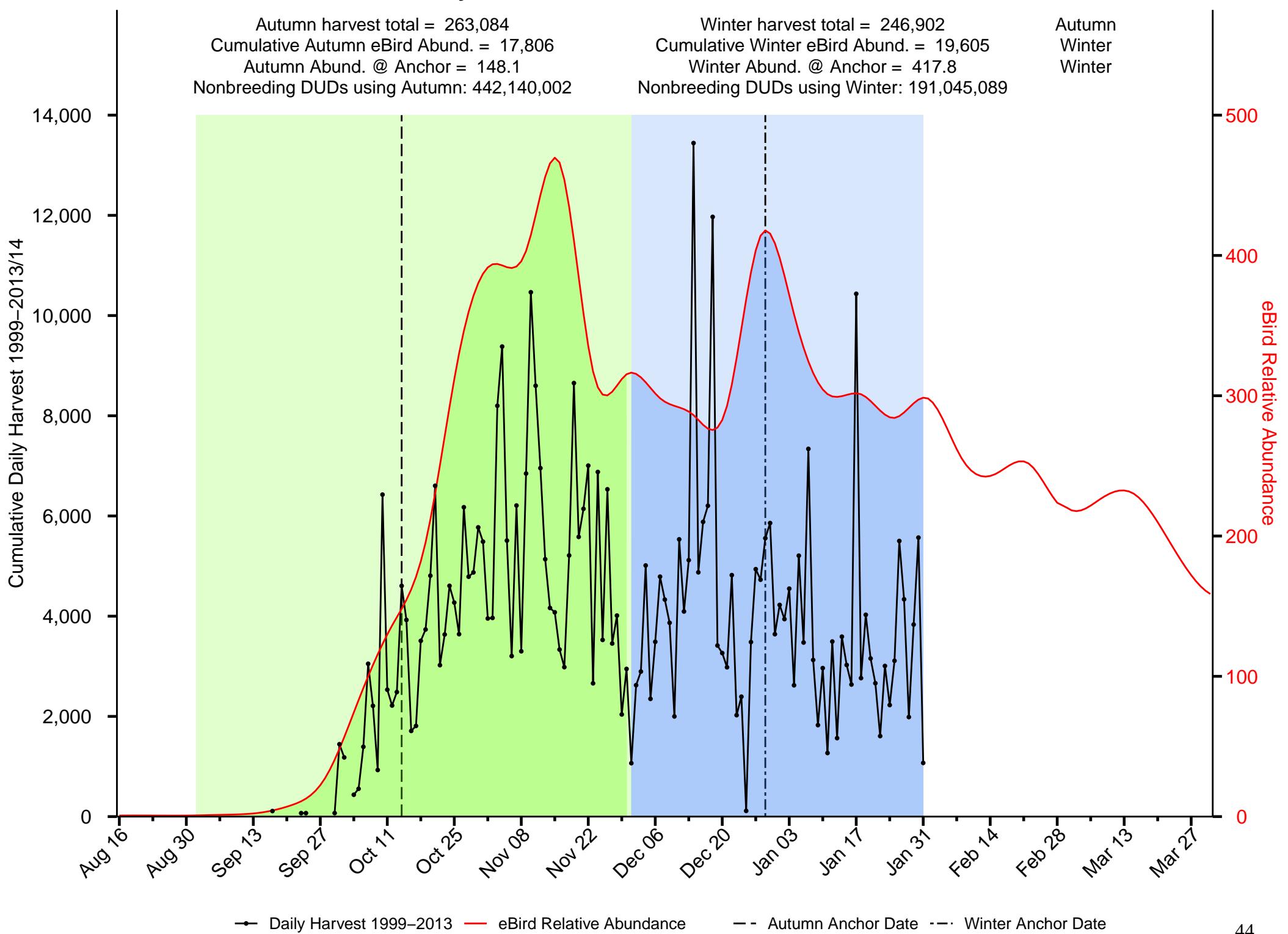
Summary of Ruddy Duck in the Atlantic Coast JV



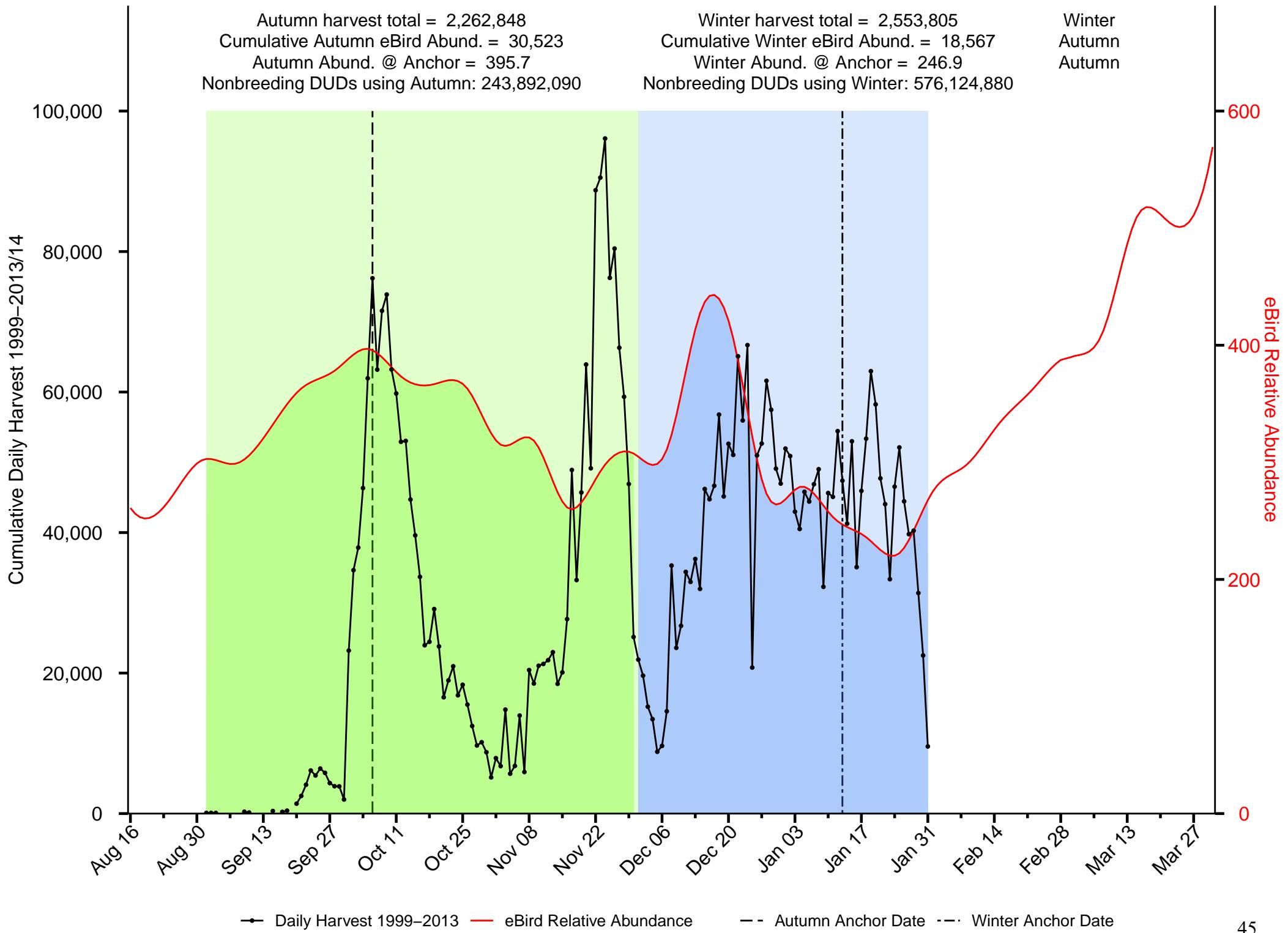
Summary of Scaup in the Atlantic Coast JV



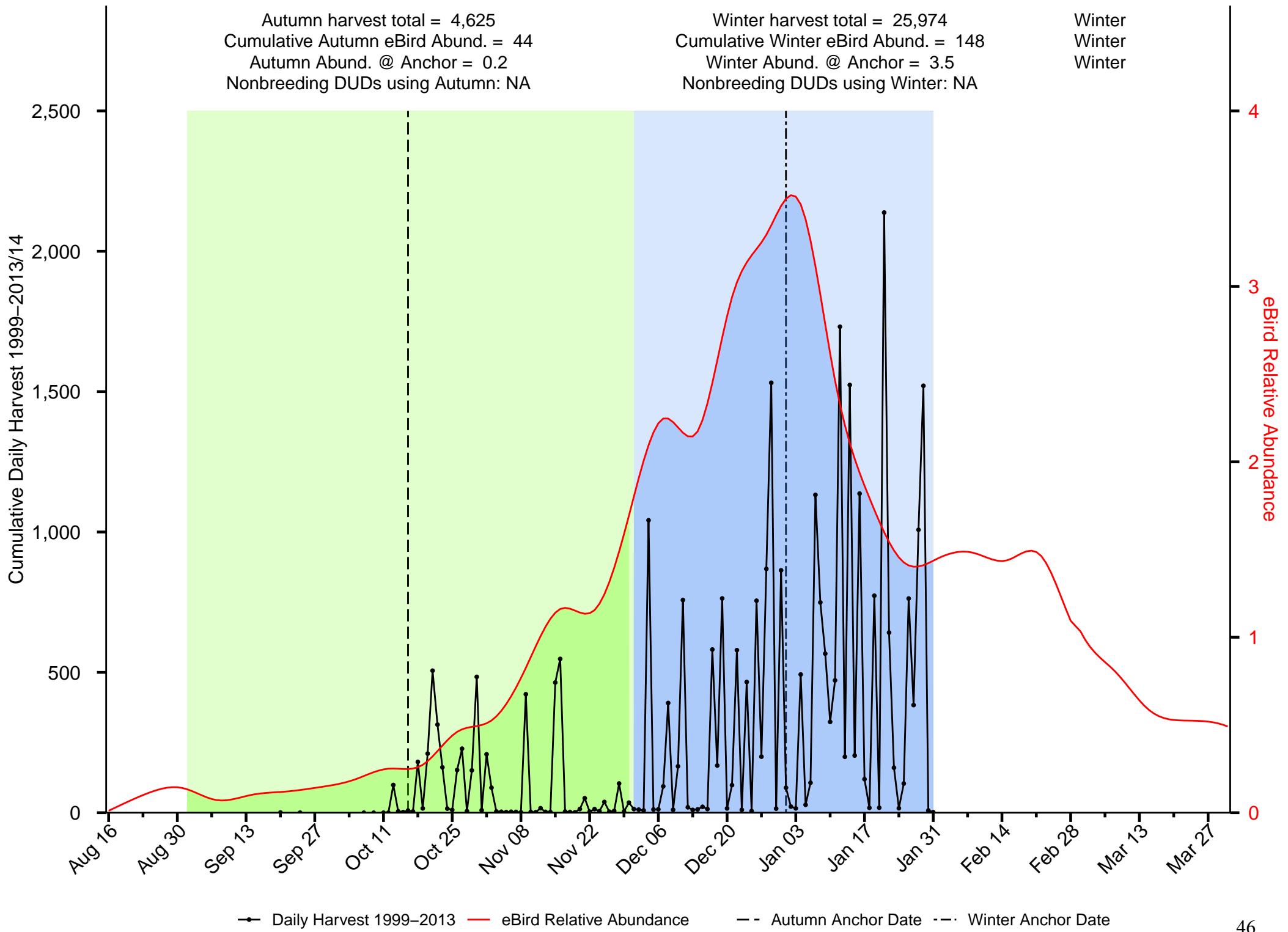
Summary of Scoter in the Atlantic Coast JV



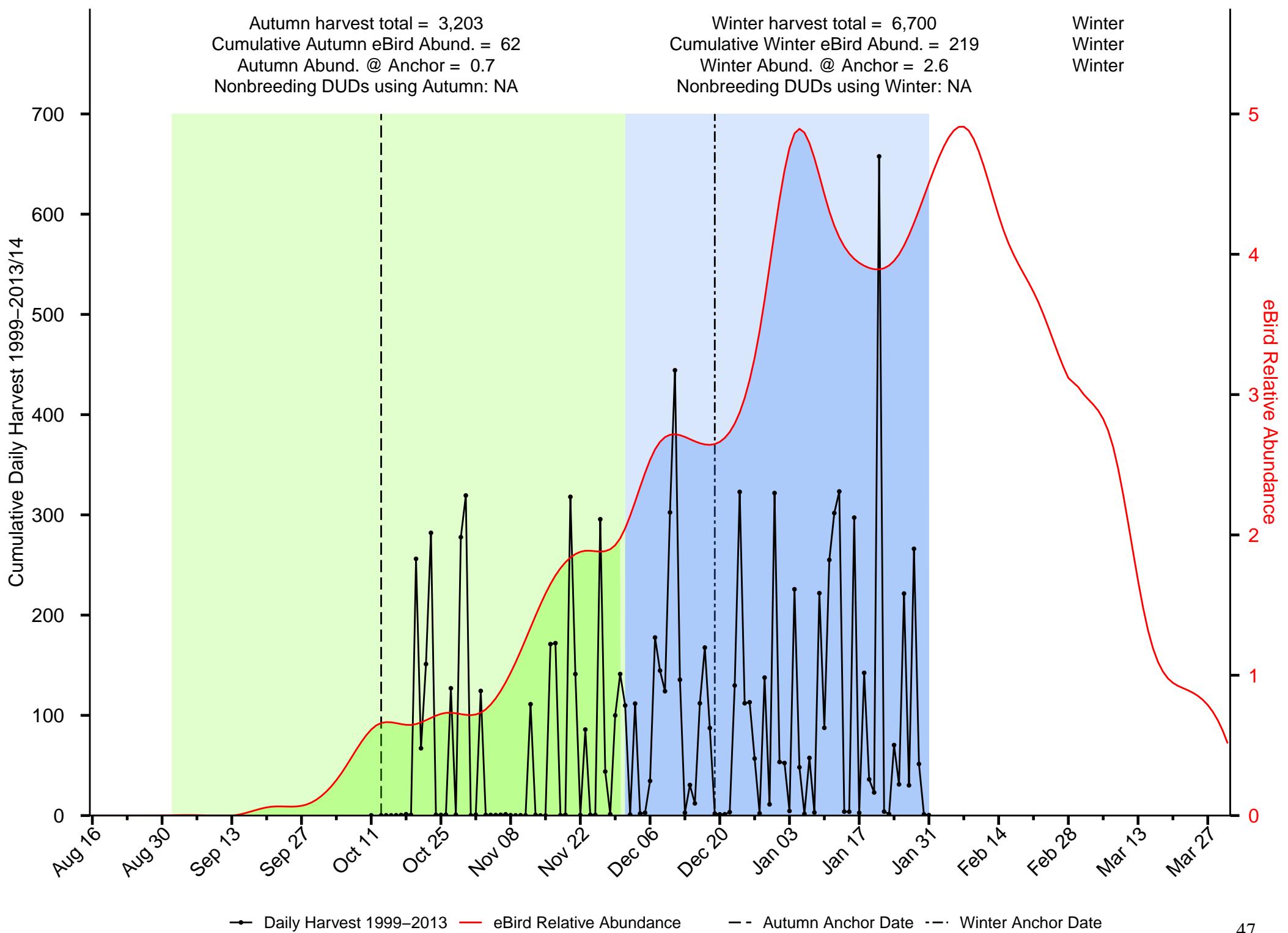
Summary of Wood Duck in the Atlantic Coast JV



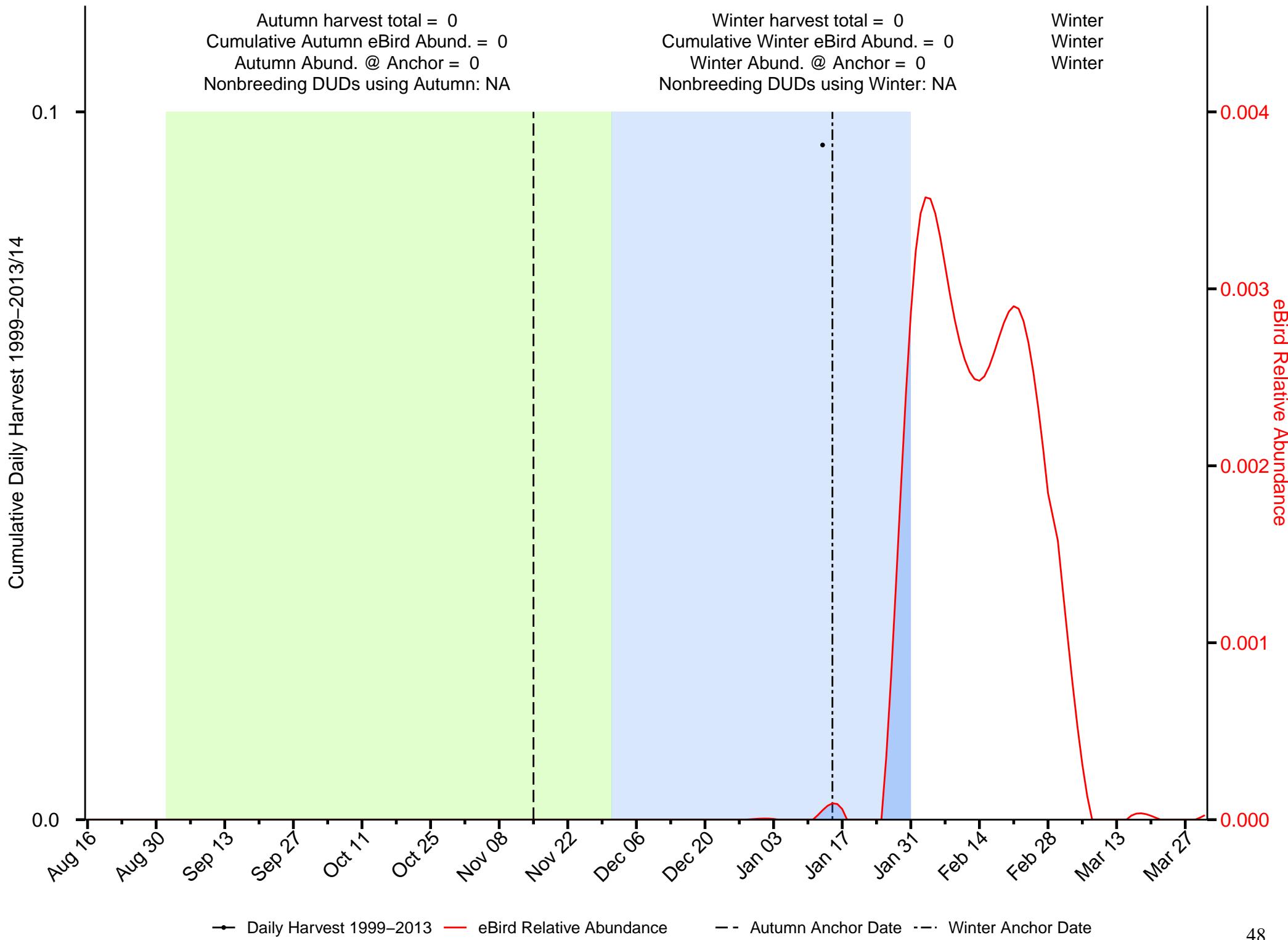
Summary of Green-winged Teal in the California Central Coast JV



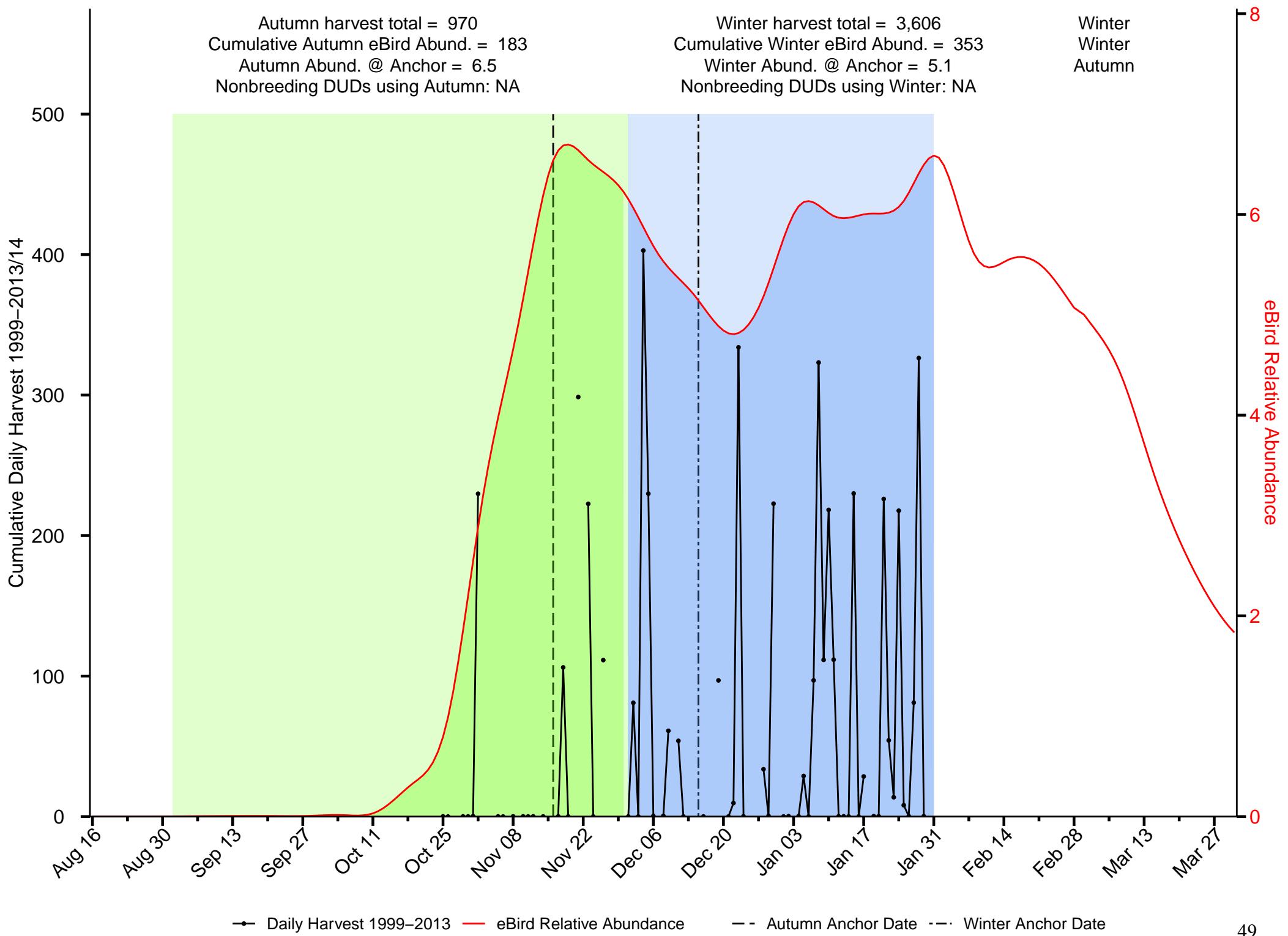
Summary of American Wigeon in the California Central Coast JV



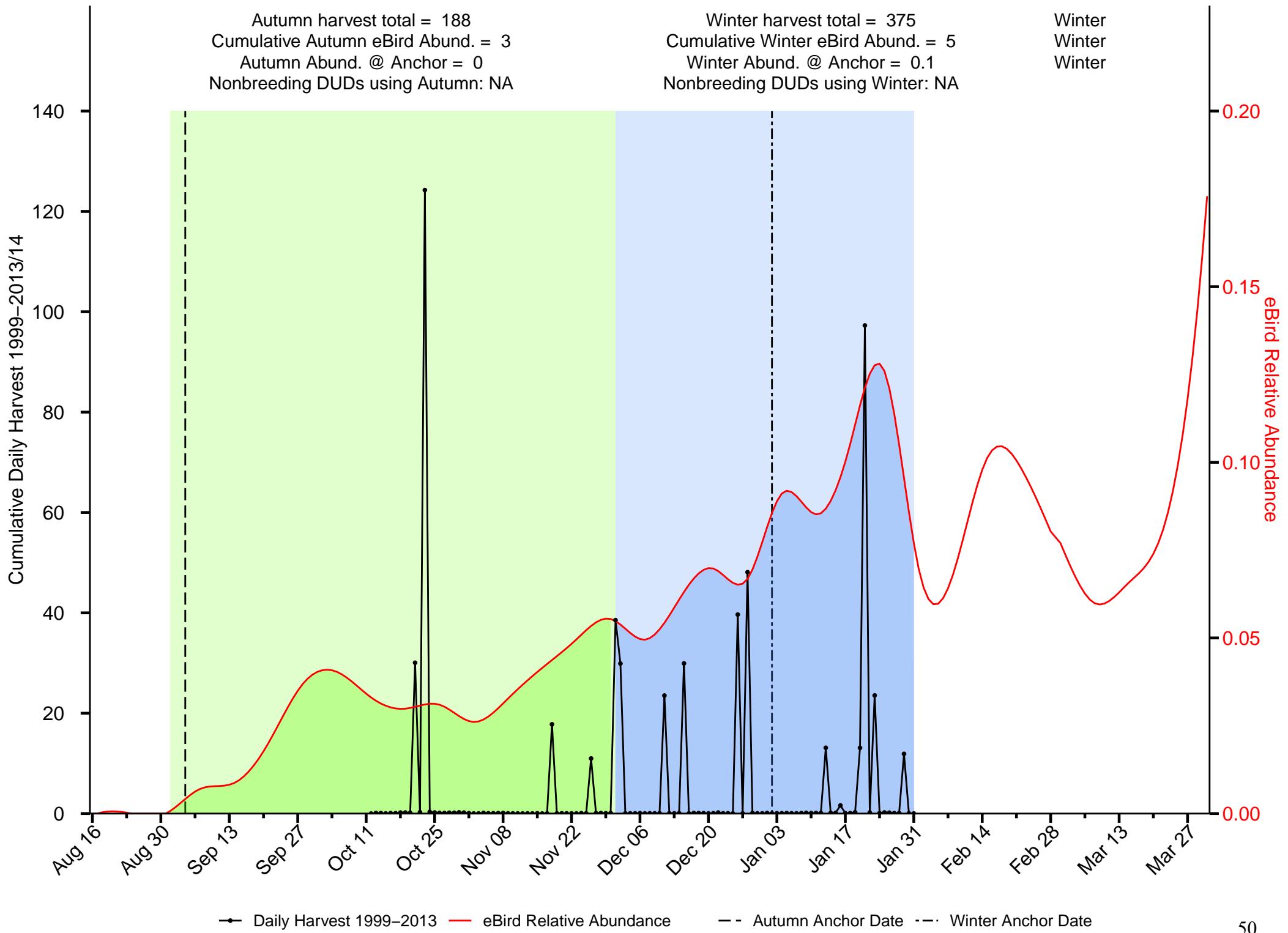
Summary of Barrow's Goldeneye in the California Central Coast JV



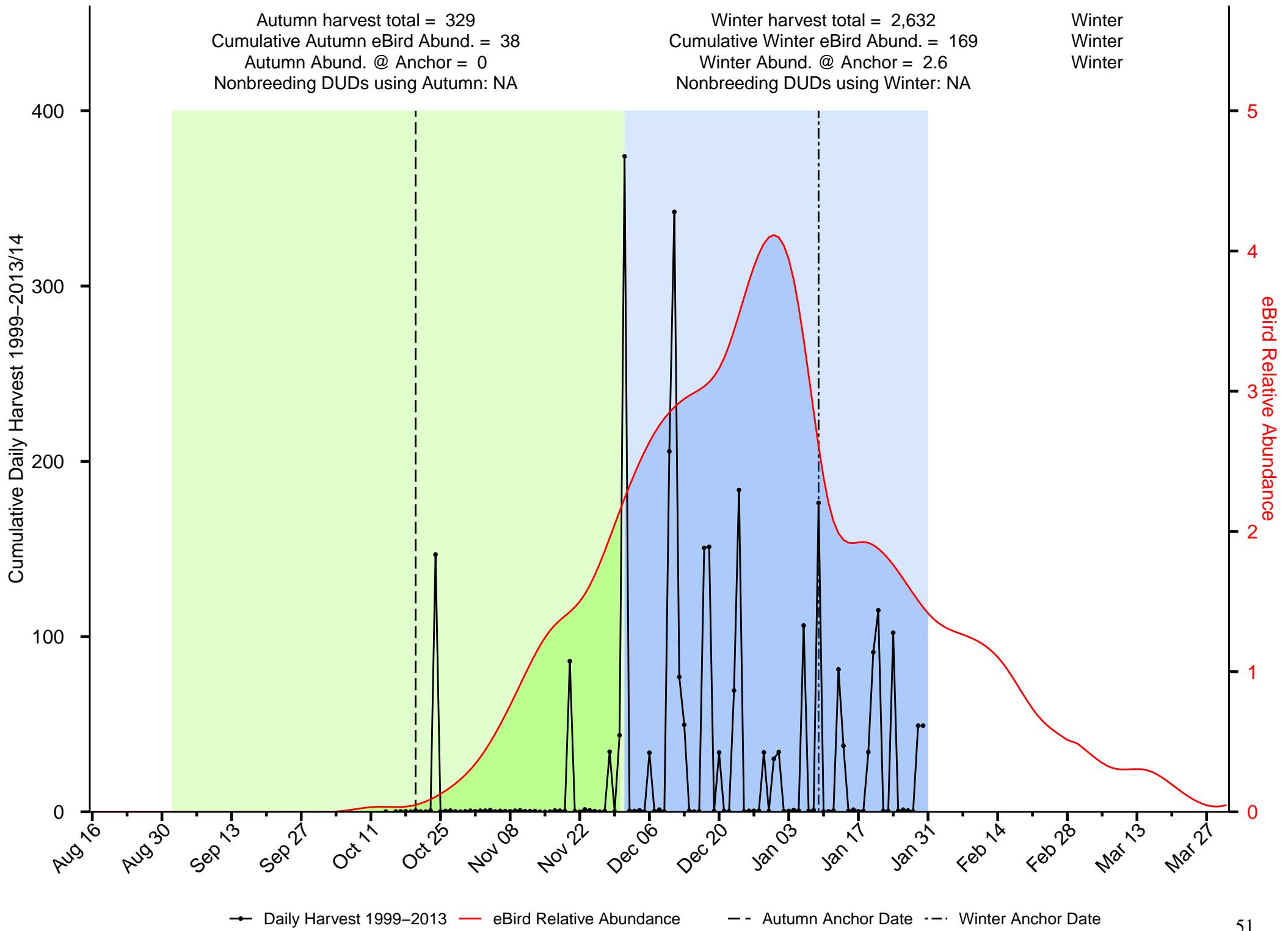
Summary of Bufflehead in the California Central Coast JV



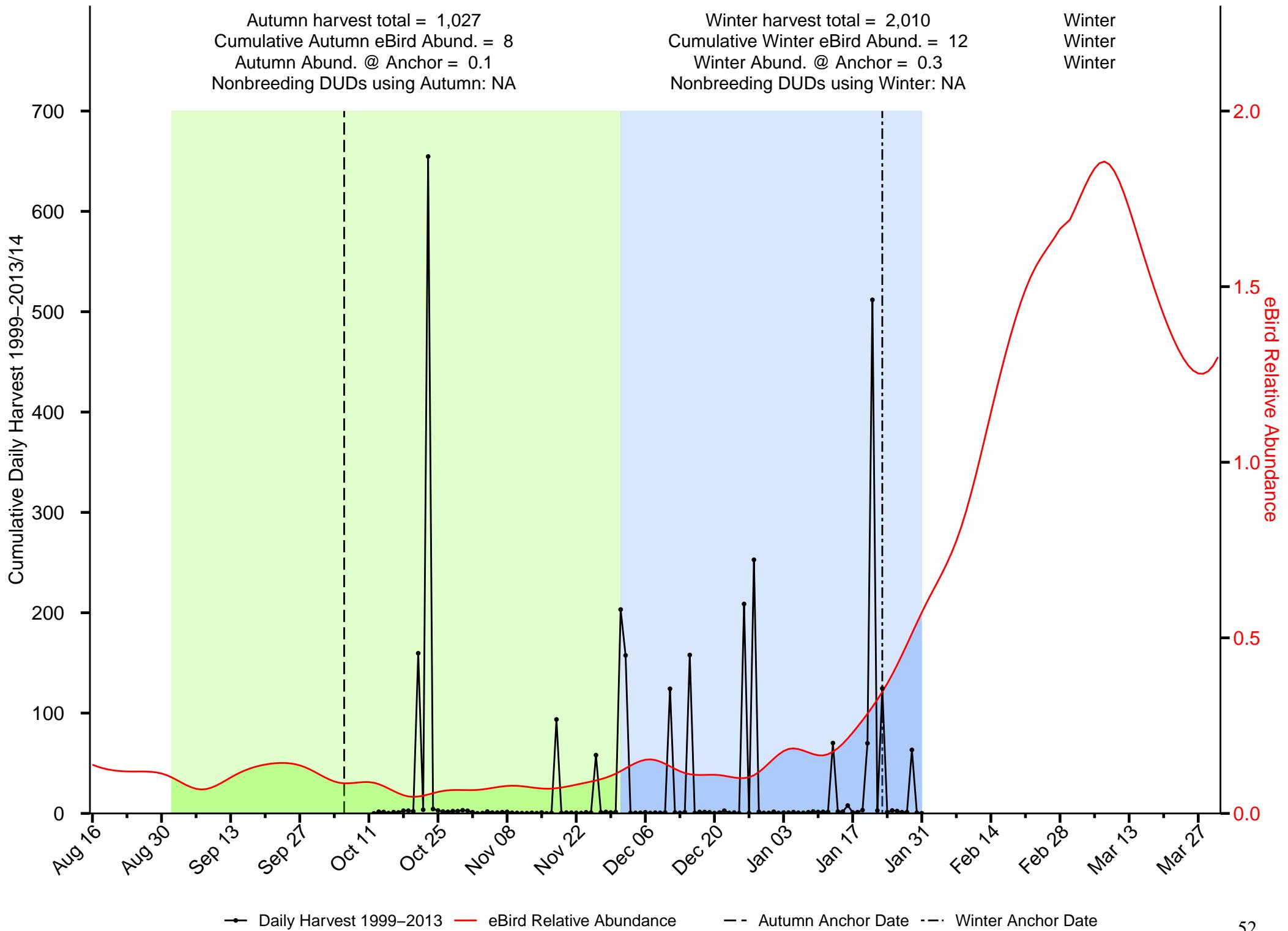
Summary of Blue-winged Teal in the California Central Coast JV



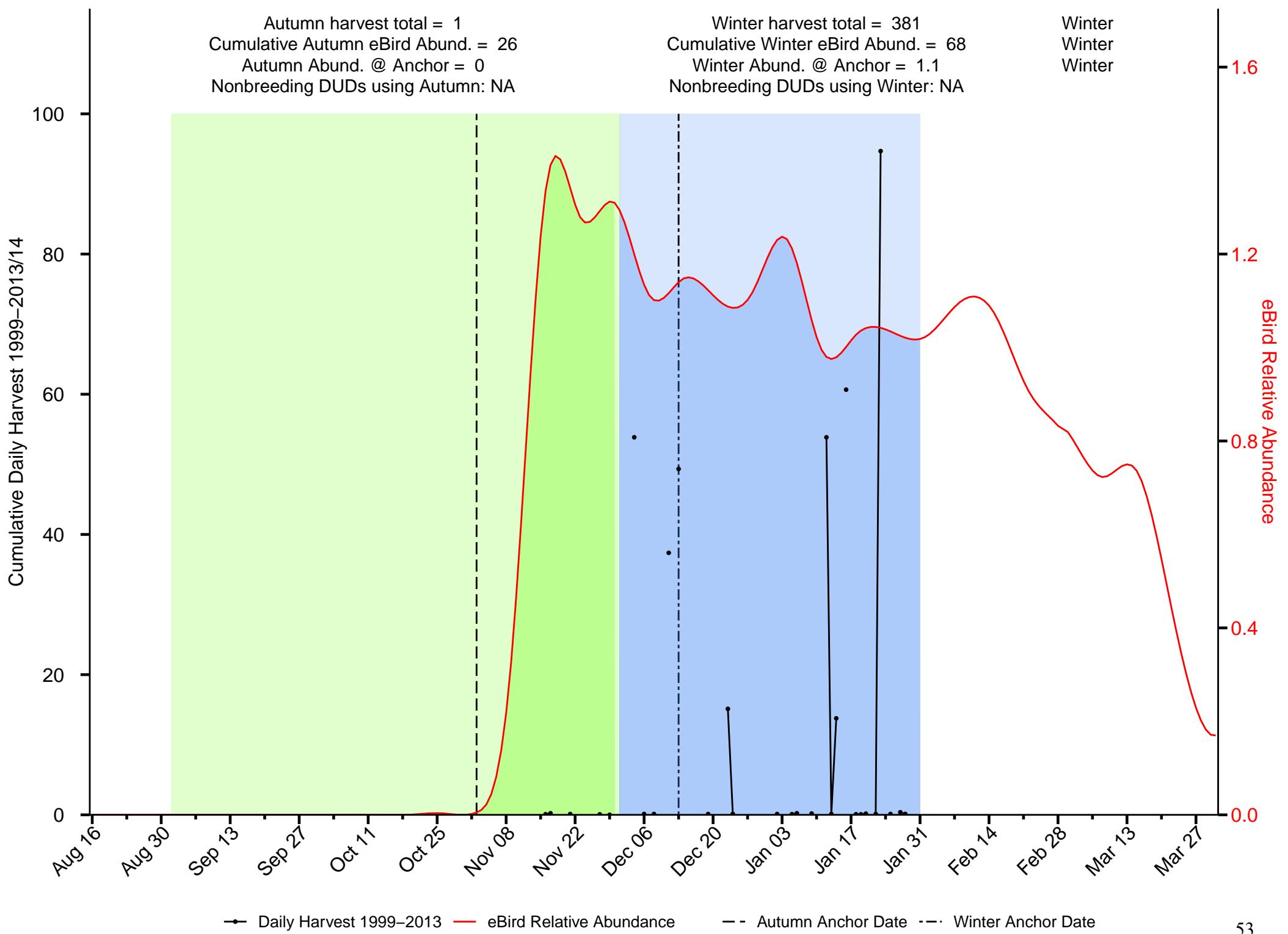
Summary of Canvasback in the California Central Coast JV



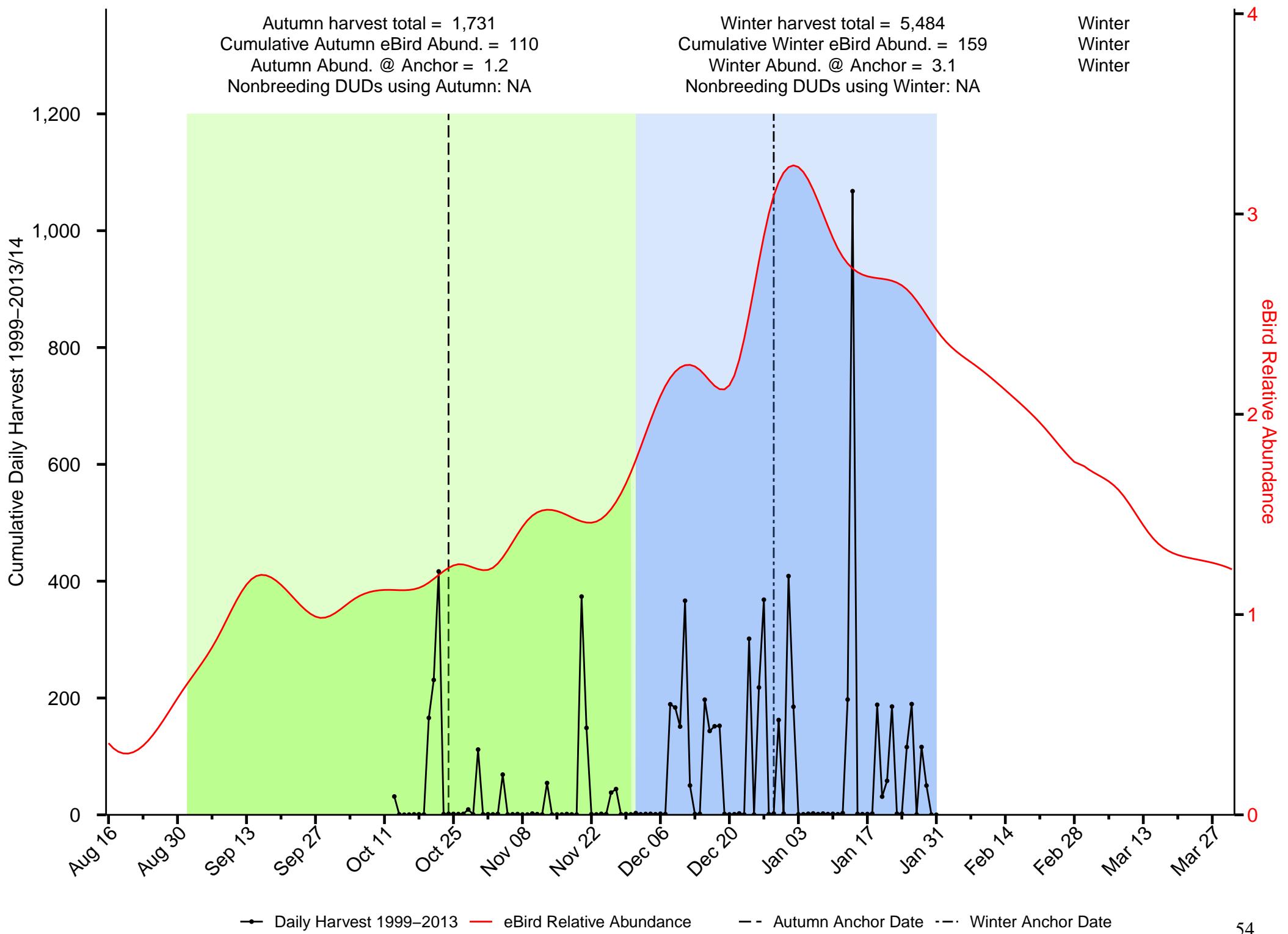
Summary of Cinnamon Teal in the California Central Coast JV



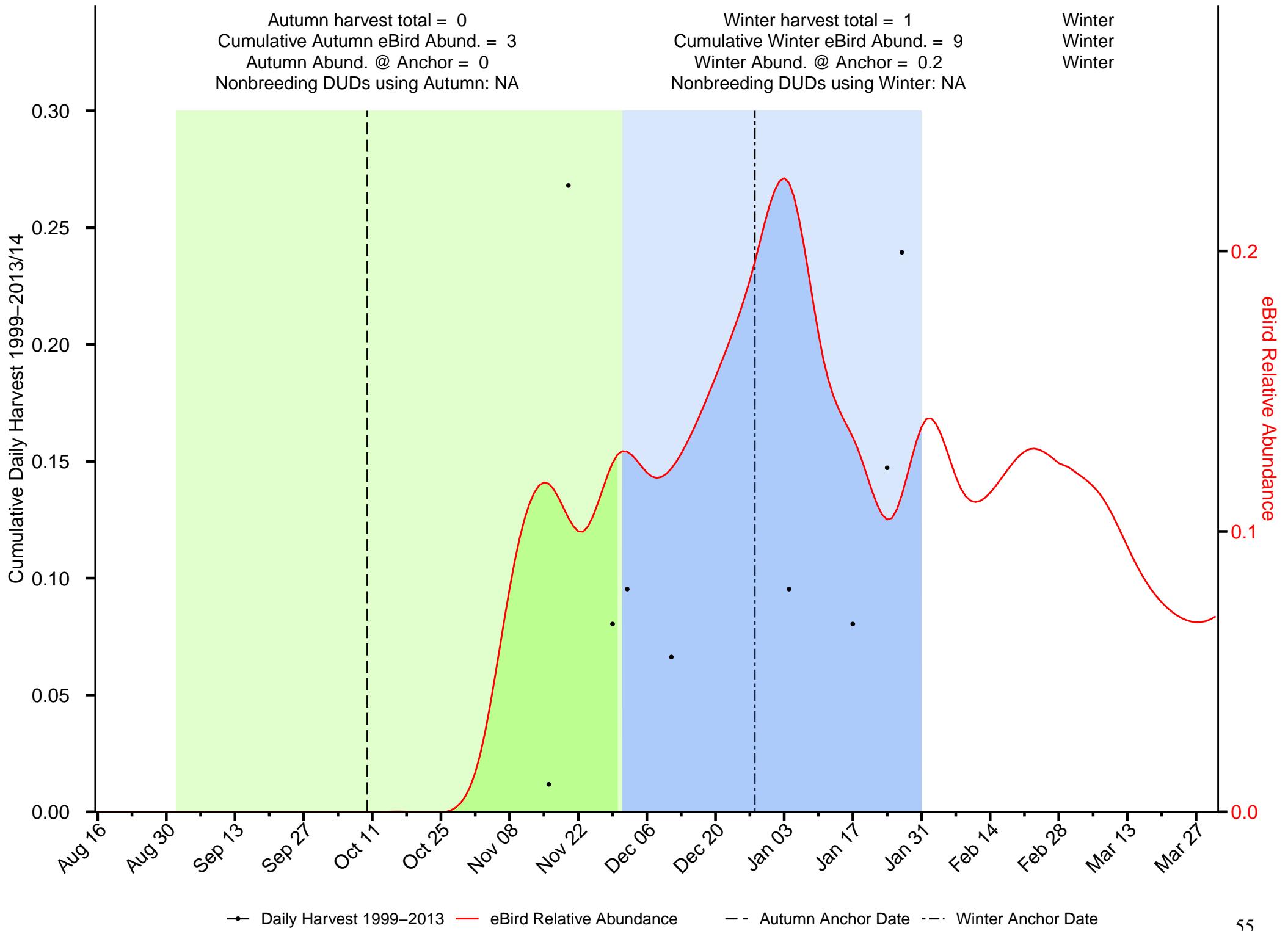
Summary of Common Goldeneye in the California Central Coast JV



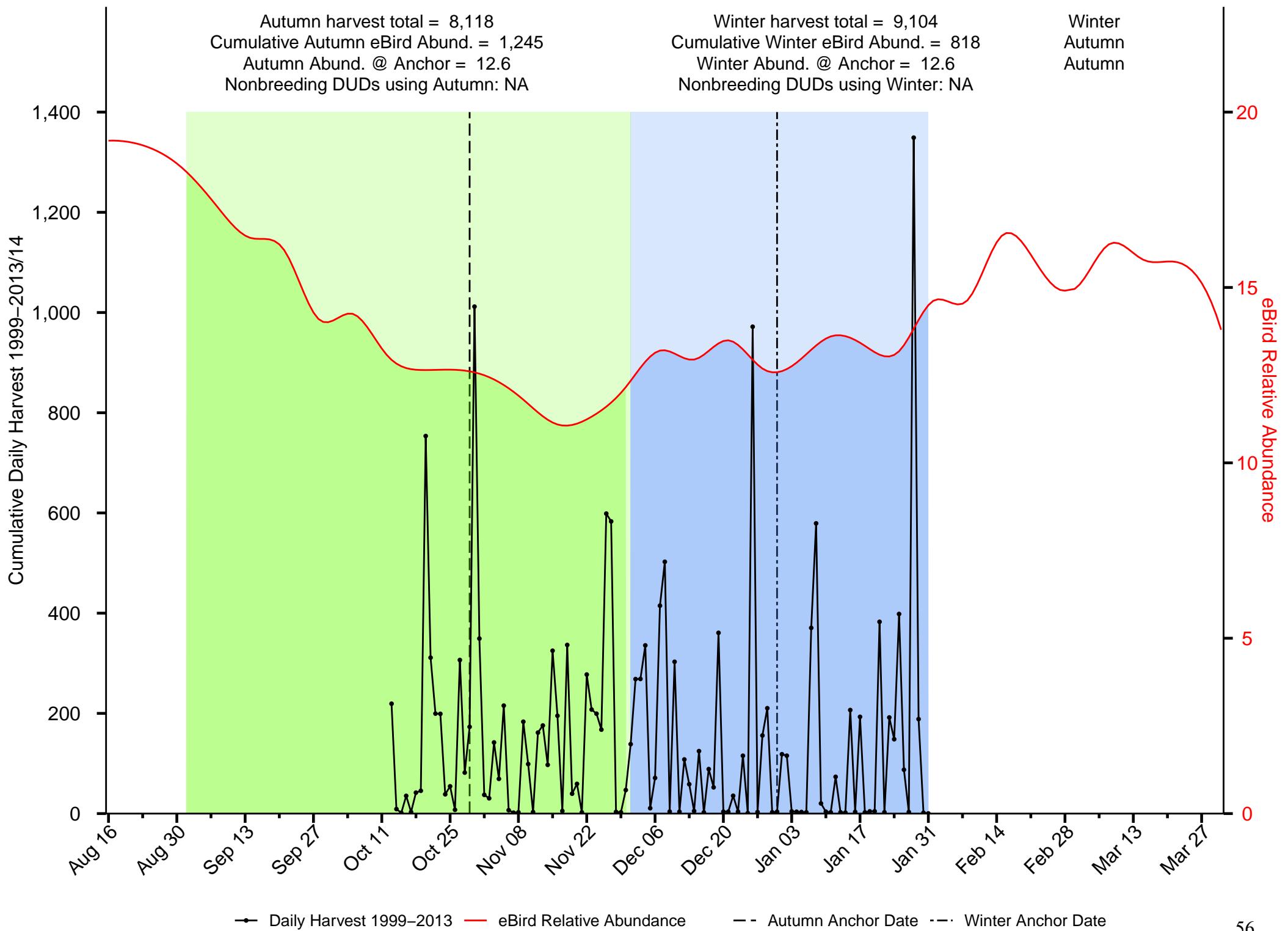
Summary of Gadwall in the California Central Coast JV



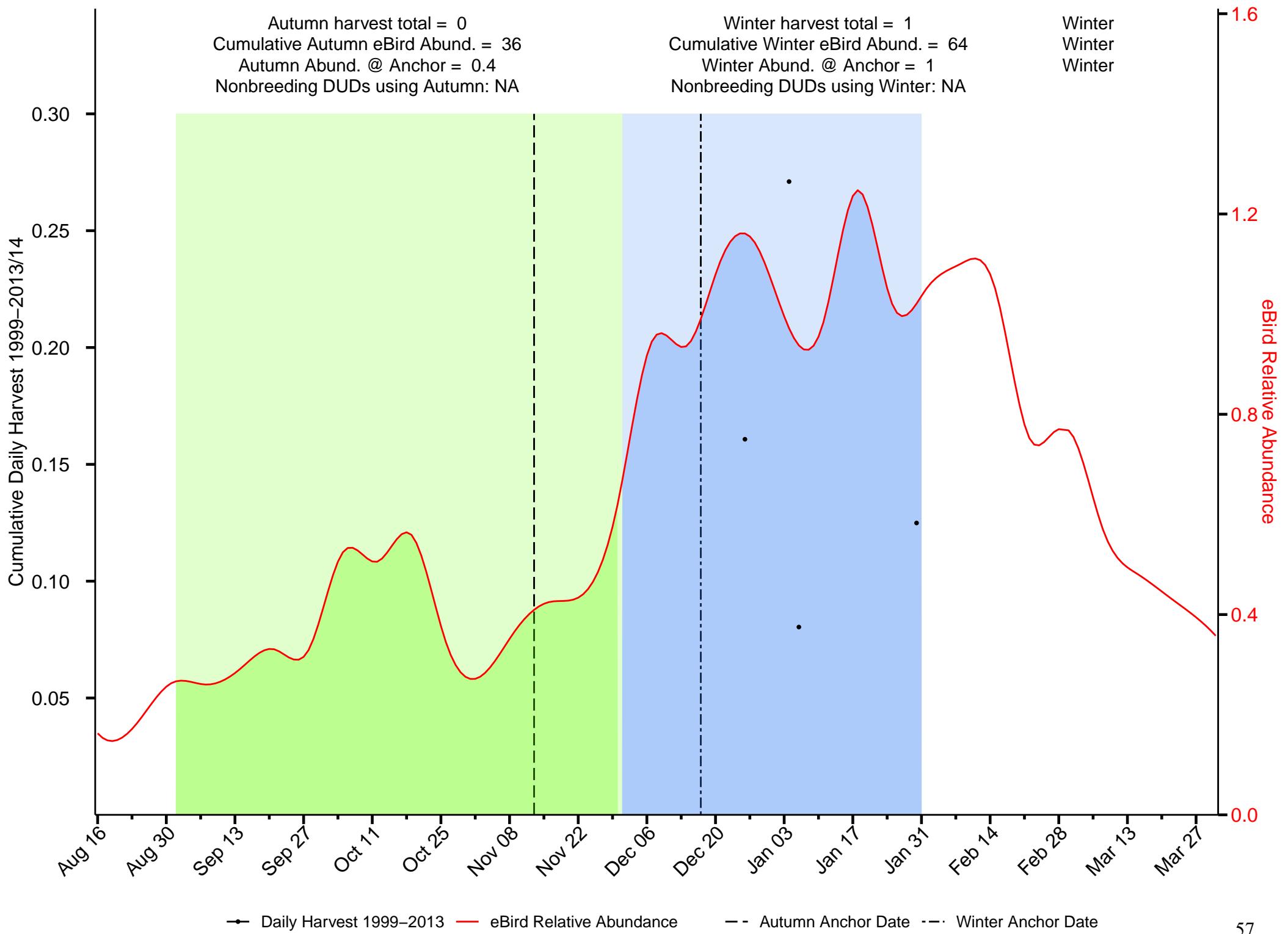
Summary of Hooded Merganser in the California Central Coast JV



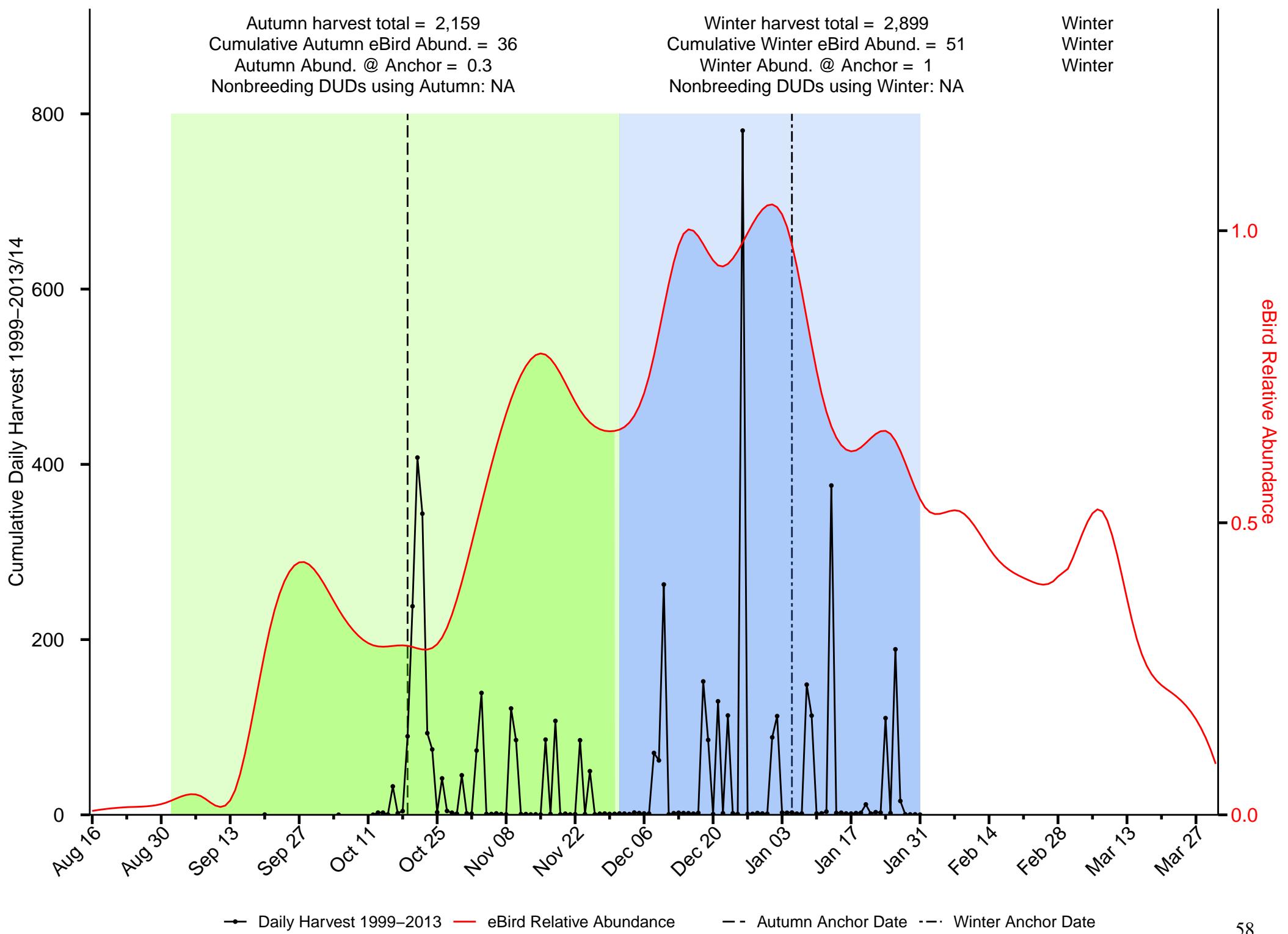
Summary of Mallard in the California Central Coast JV



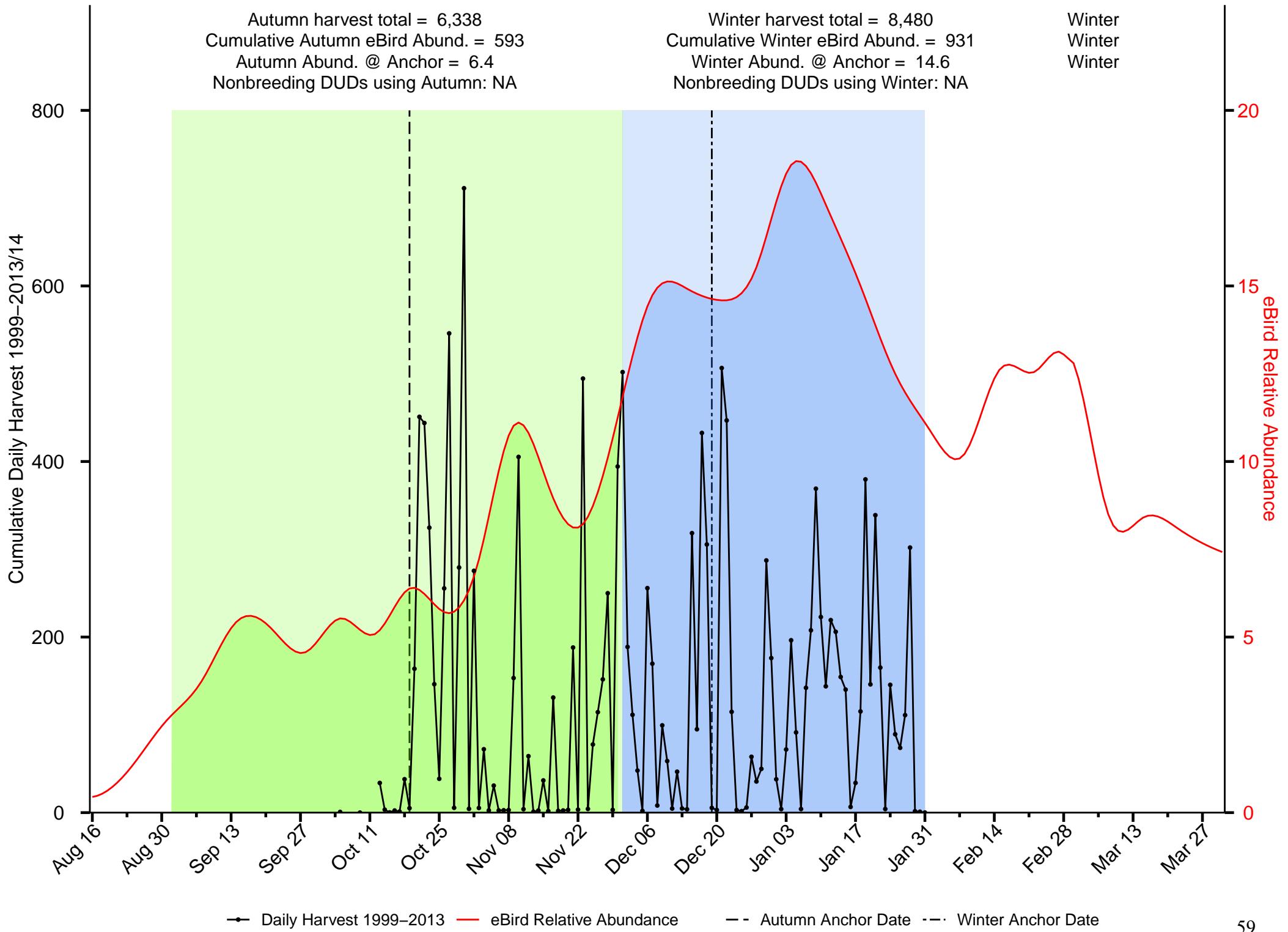
Summary of Merganser in the California Central Coast JV



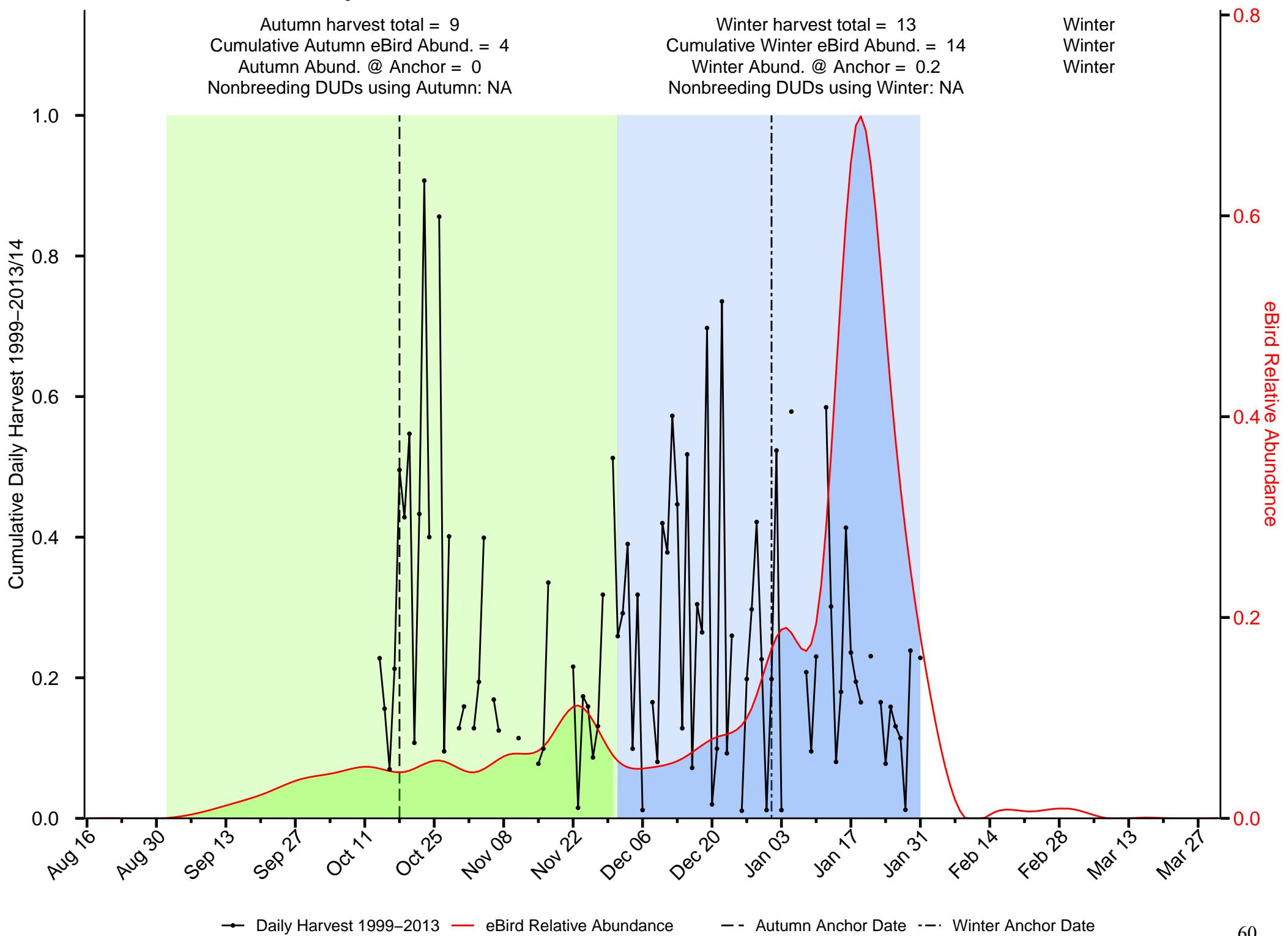
Summary of Northern Pintail in the California Central Coast JV



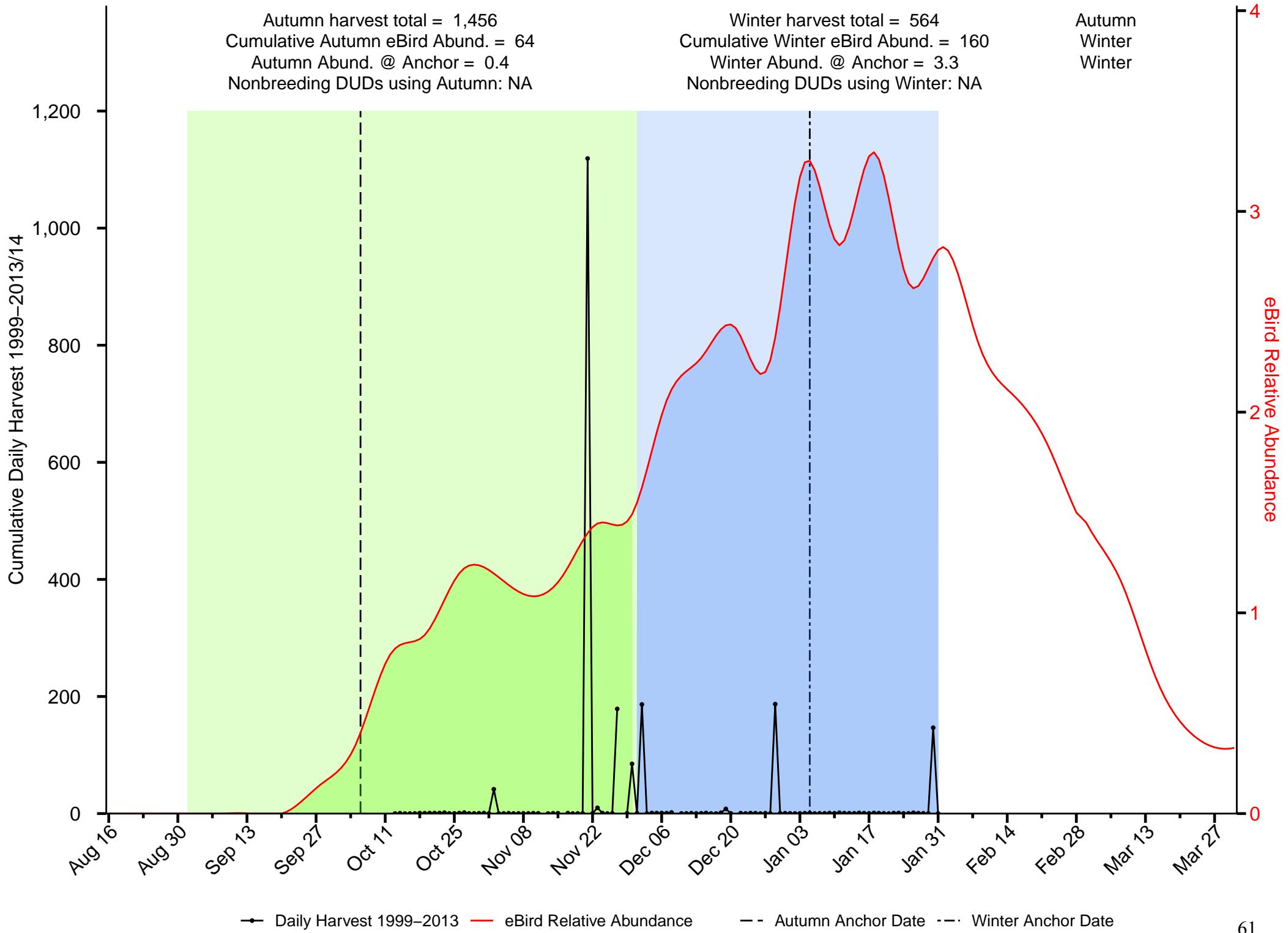
Summary of Northern Shoveler in the California Central Coast JV



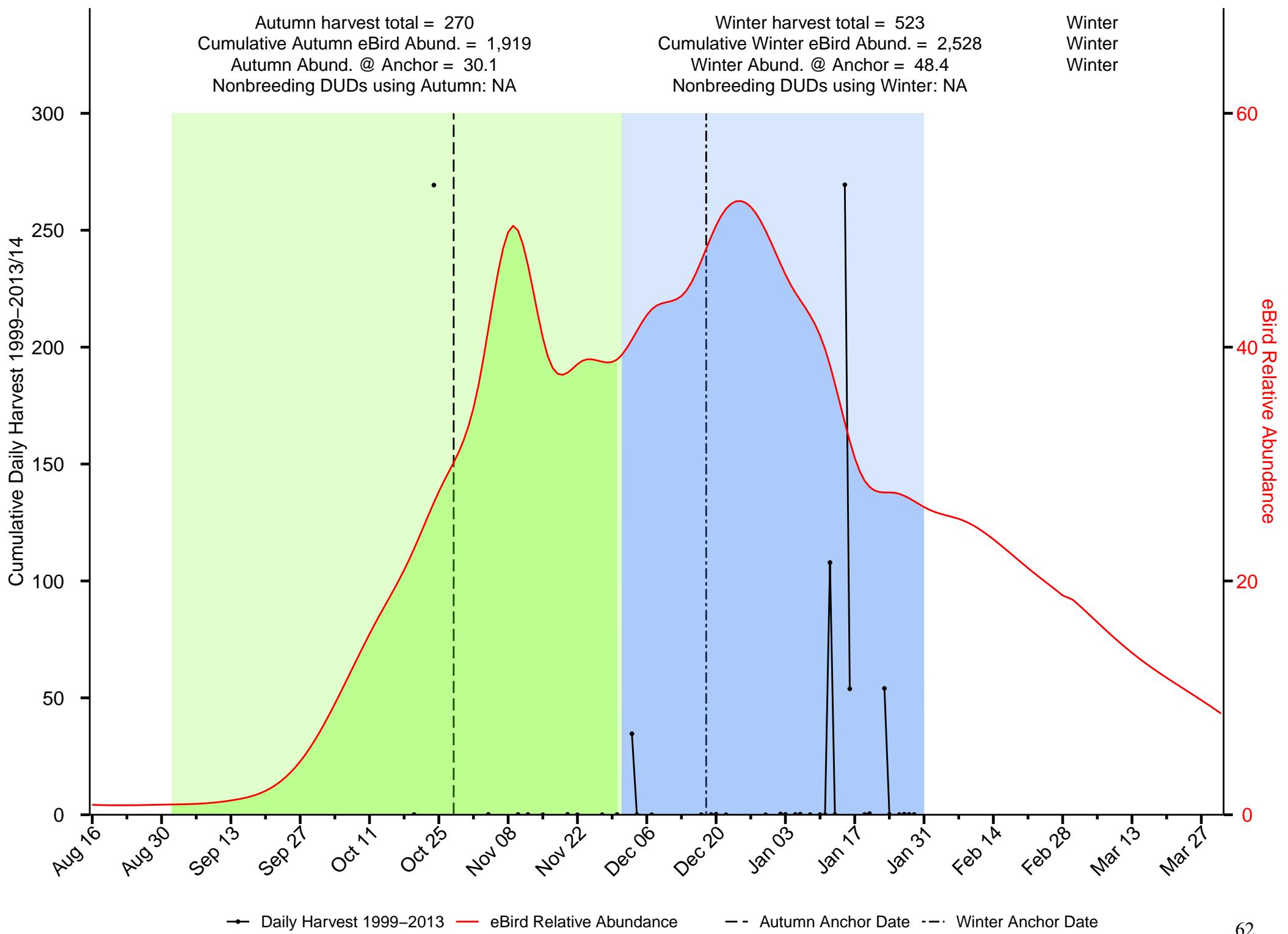
Summary of Redhead in the California Central Coast JV



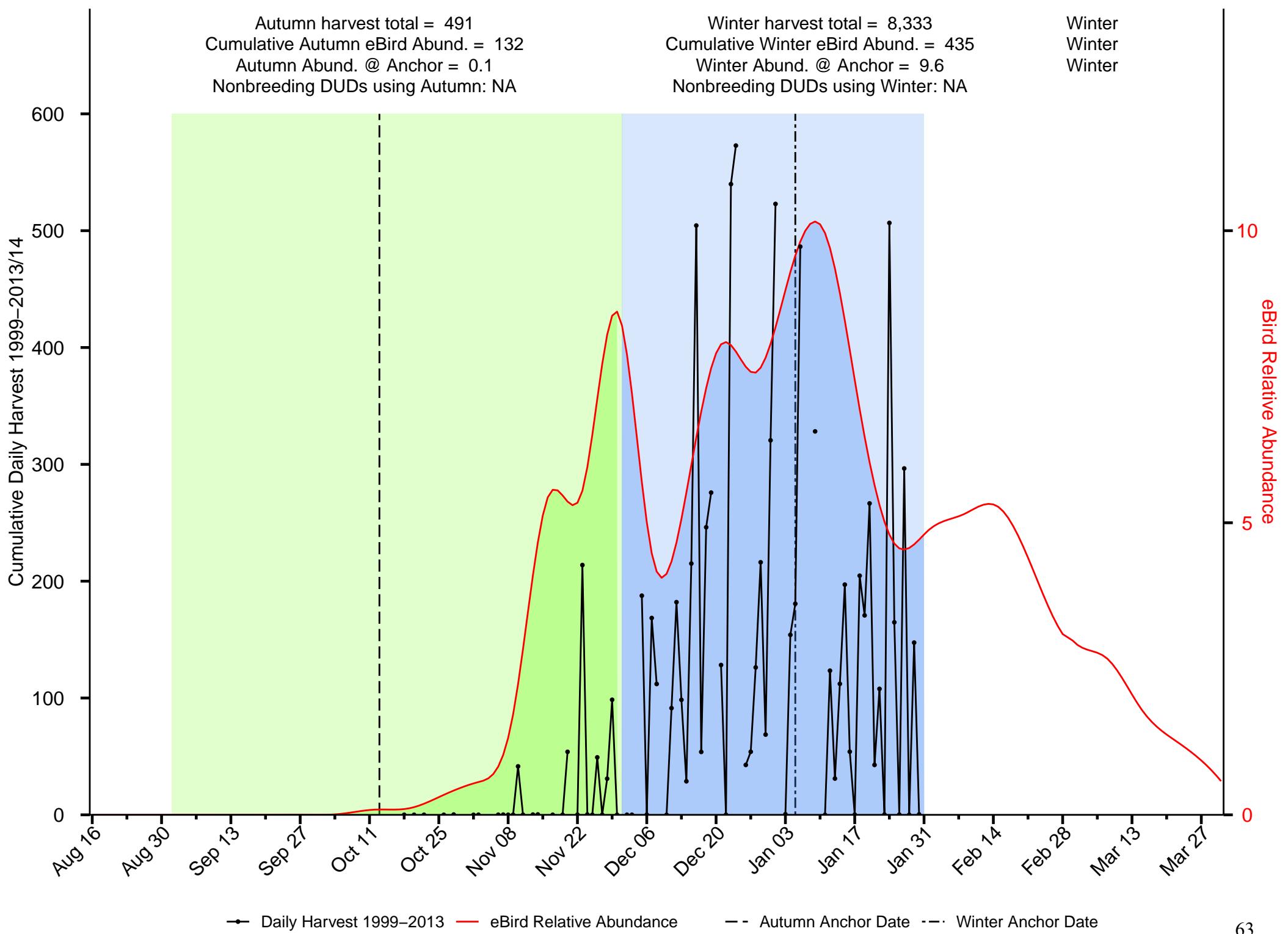
Summary of Ring-necked Duck in the California Central Coast JV



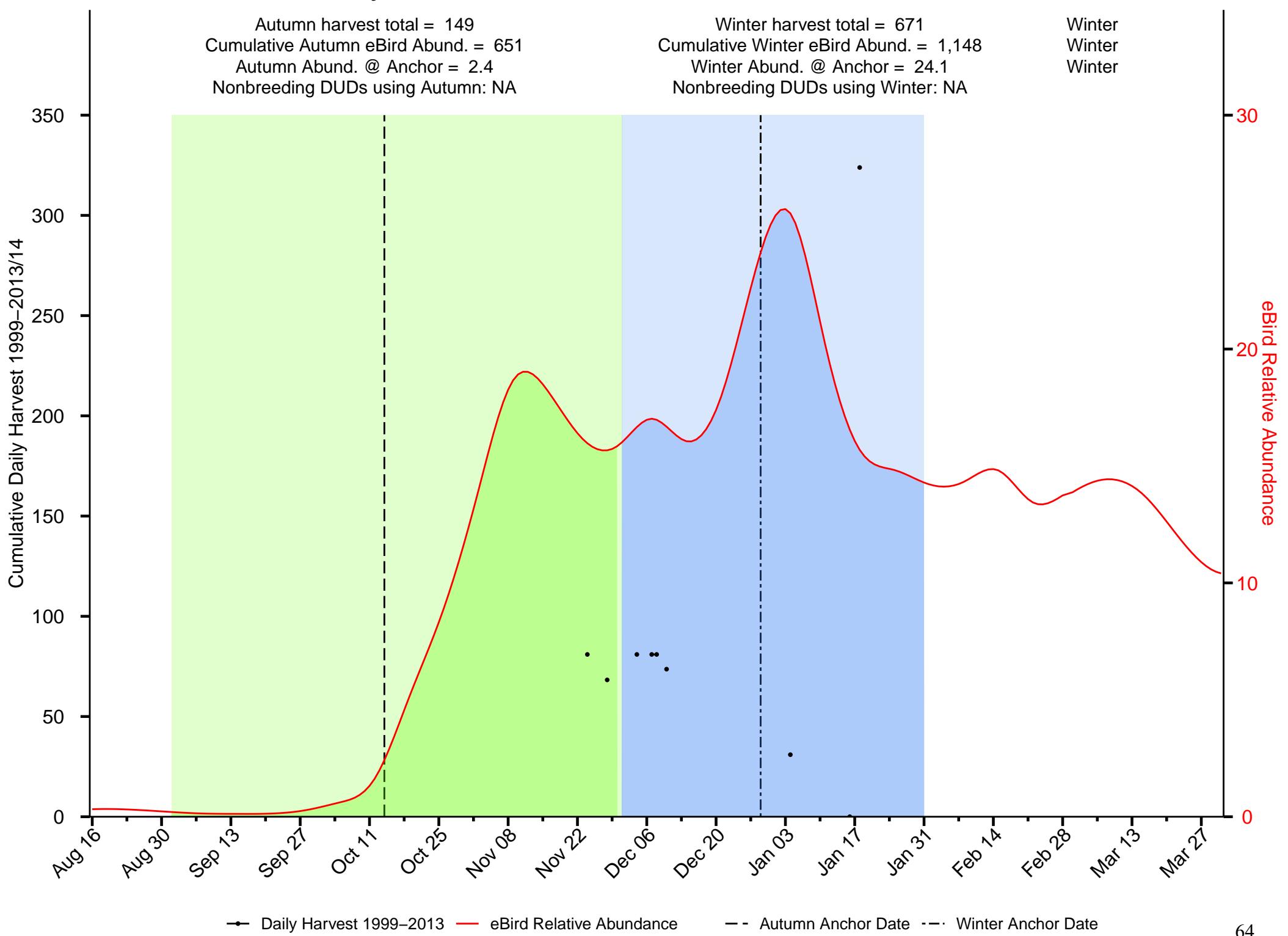
Summary of Ruddy Duck in the California Central Coast JV



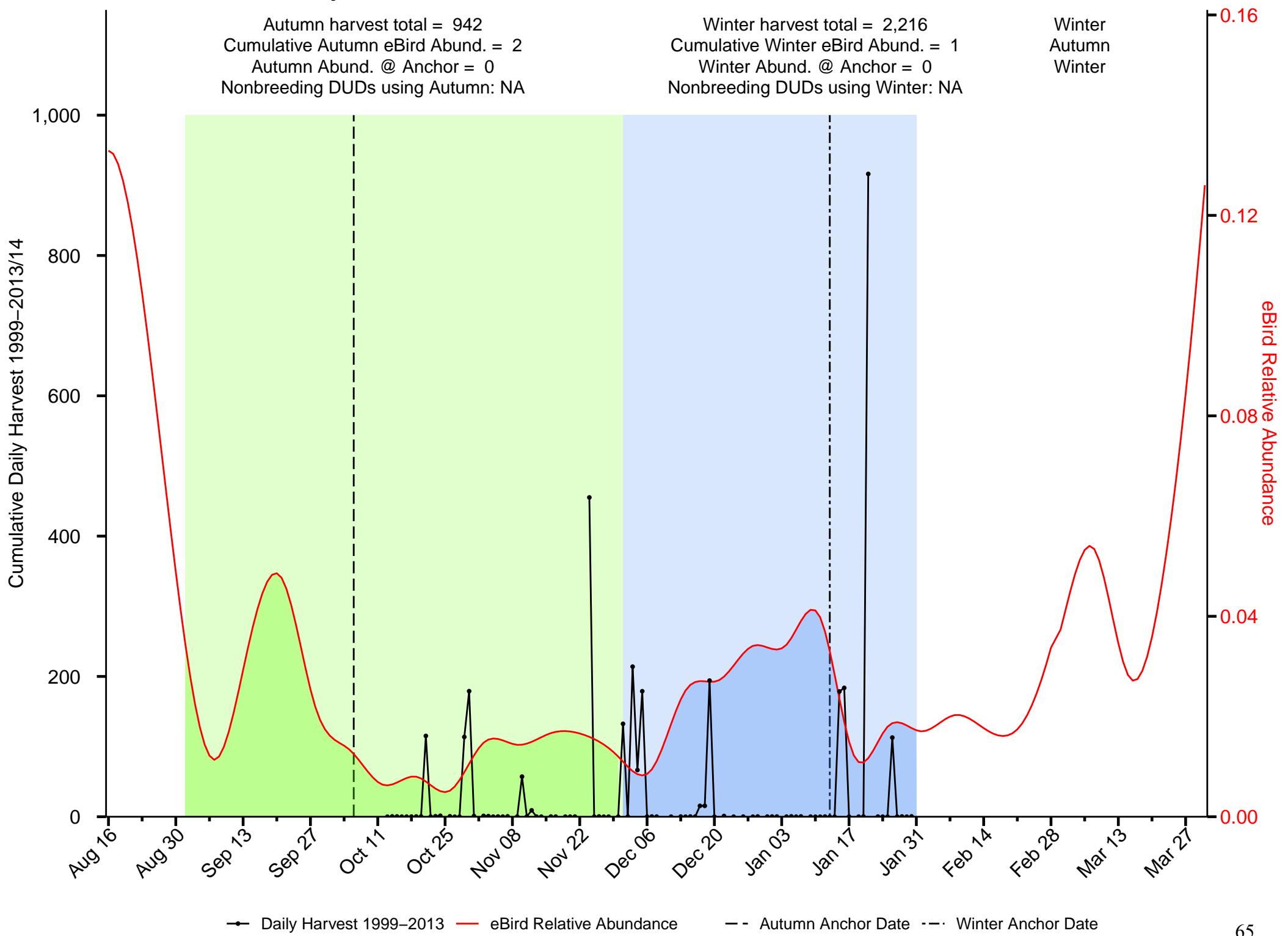
Summary of Scaup in the California Central Coast JV



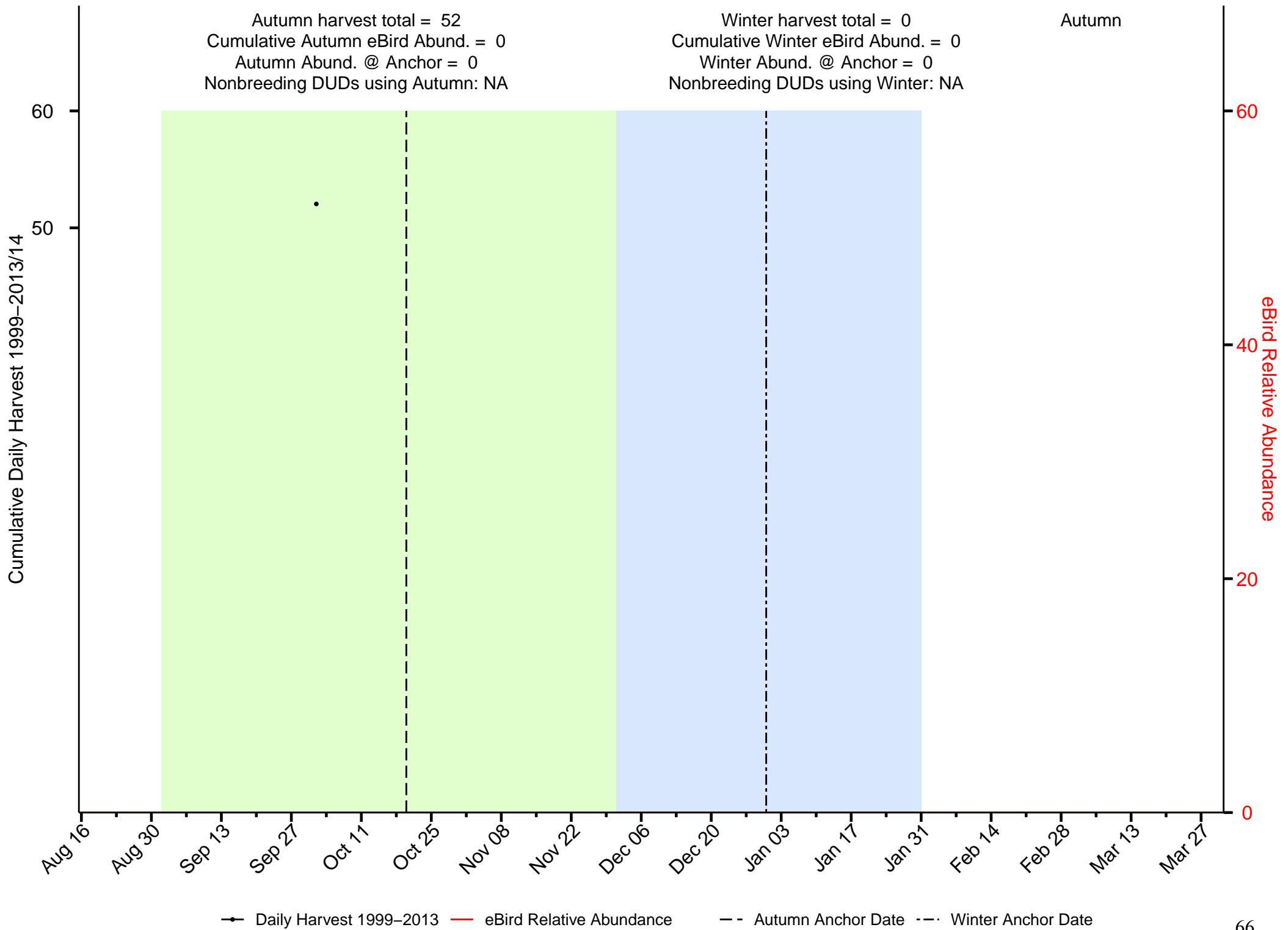
Summary of Scoter in the California Central Coast JV



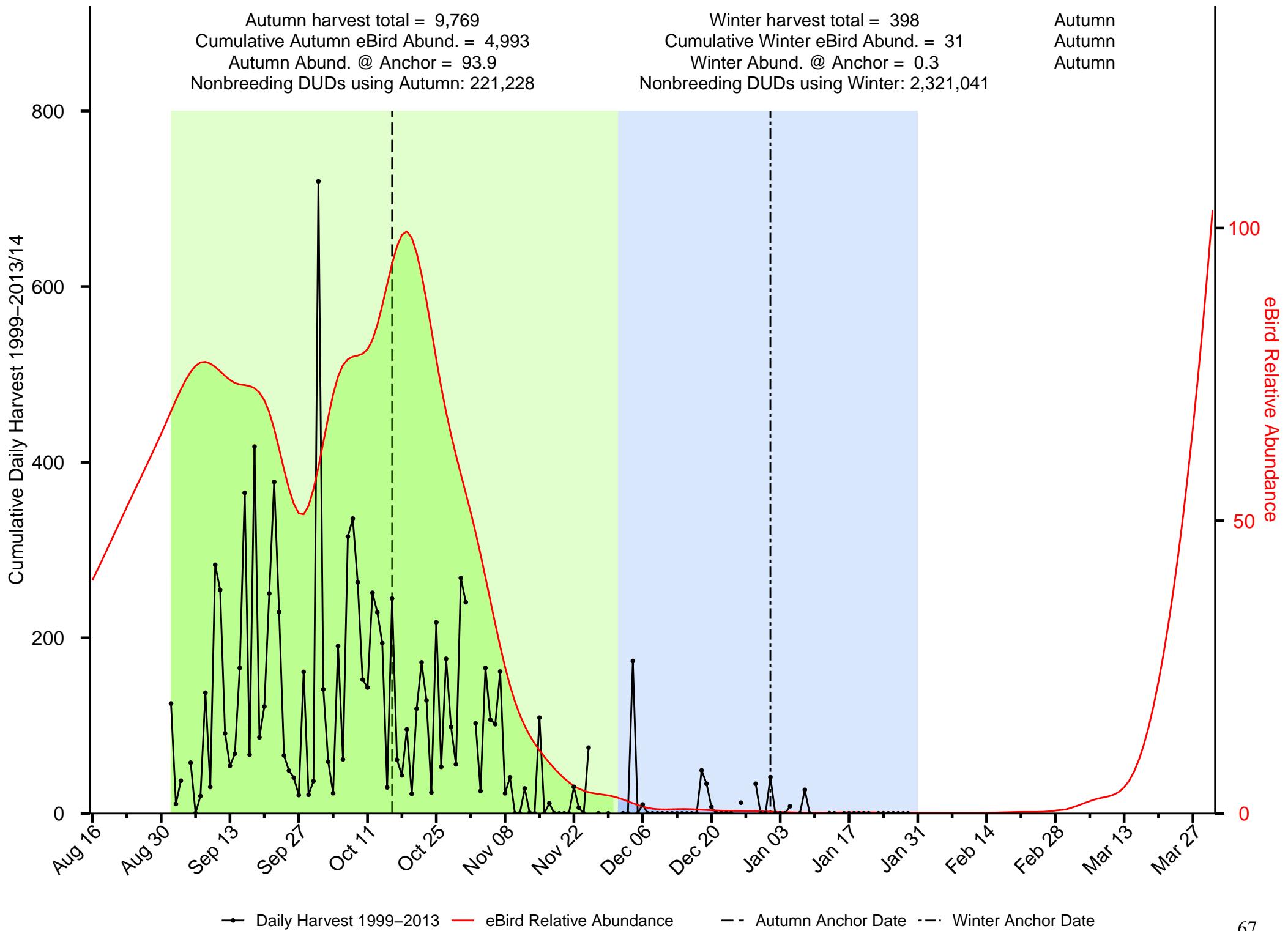
Summary of Wood Duck in the California Central Coast JV



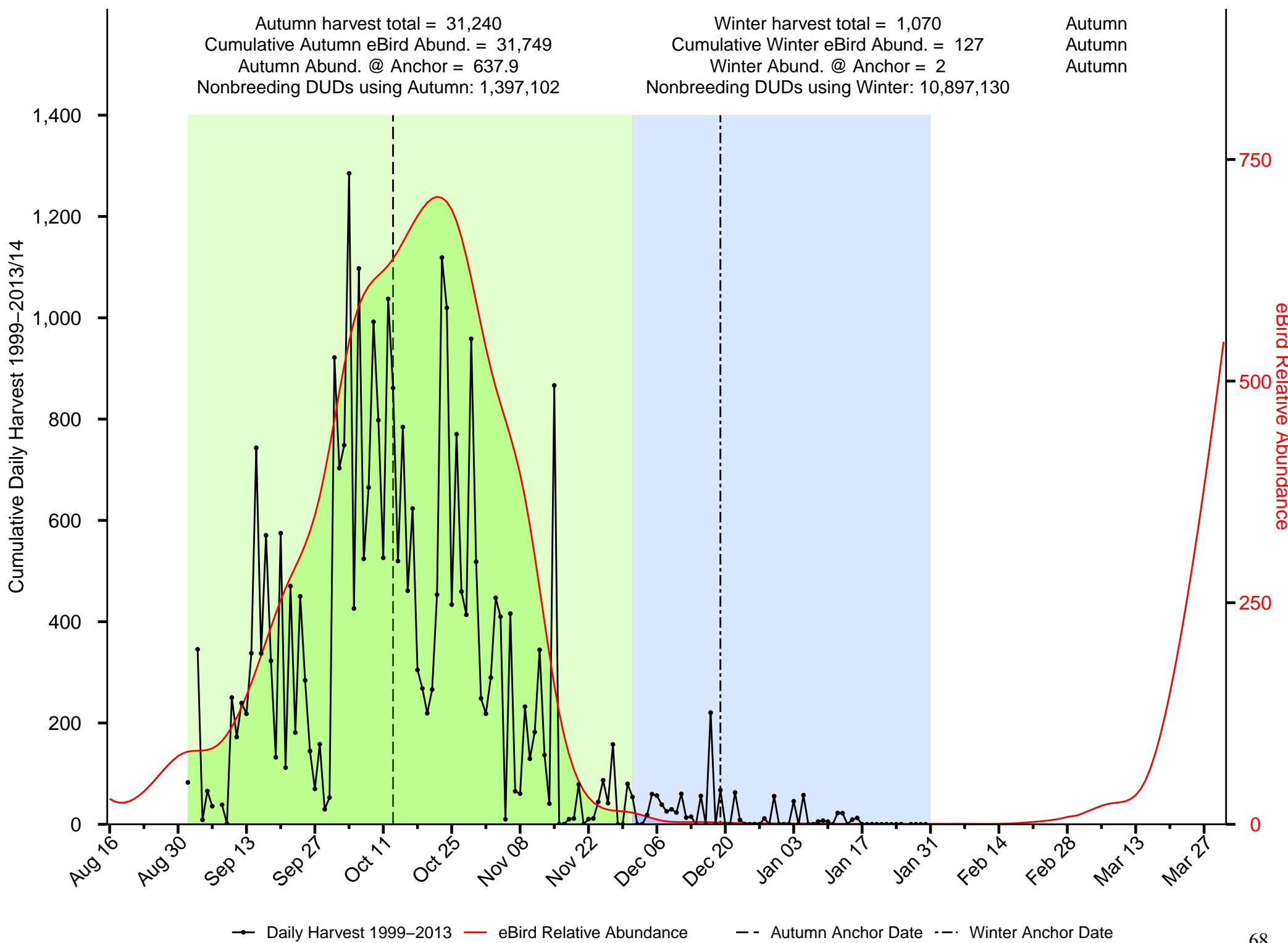
Summary of American Black Duck in the Canadian Intermountain JV



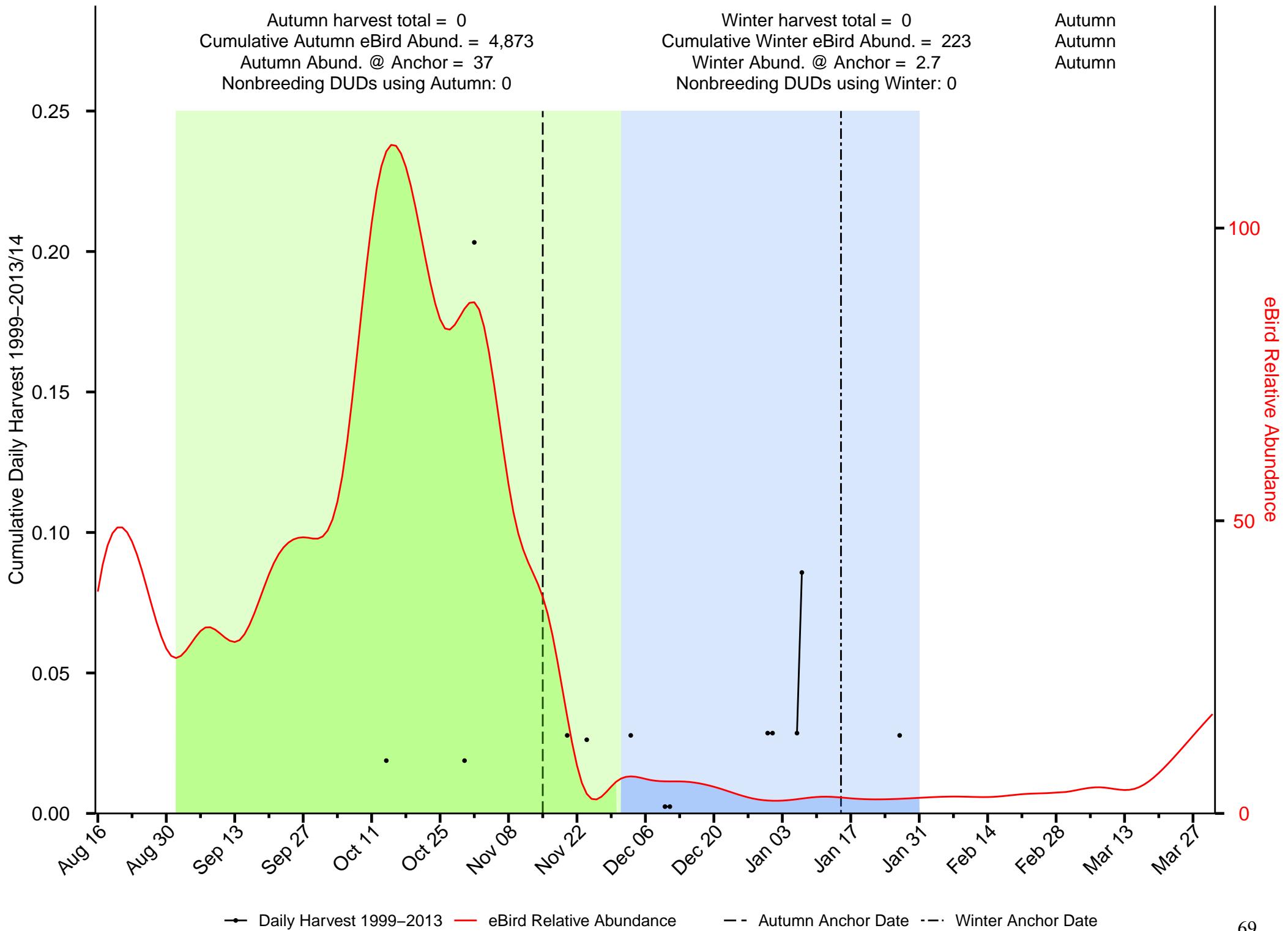
Summary of Green-winged Teal in the Canadian Intermountain JV



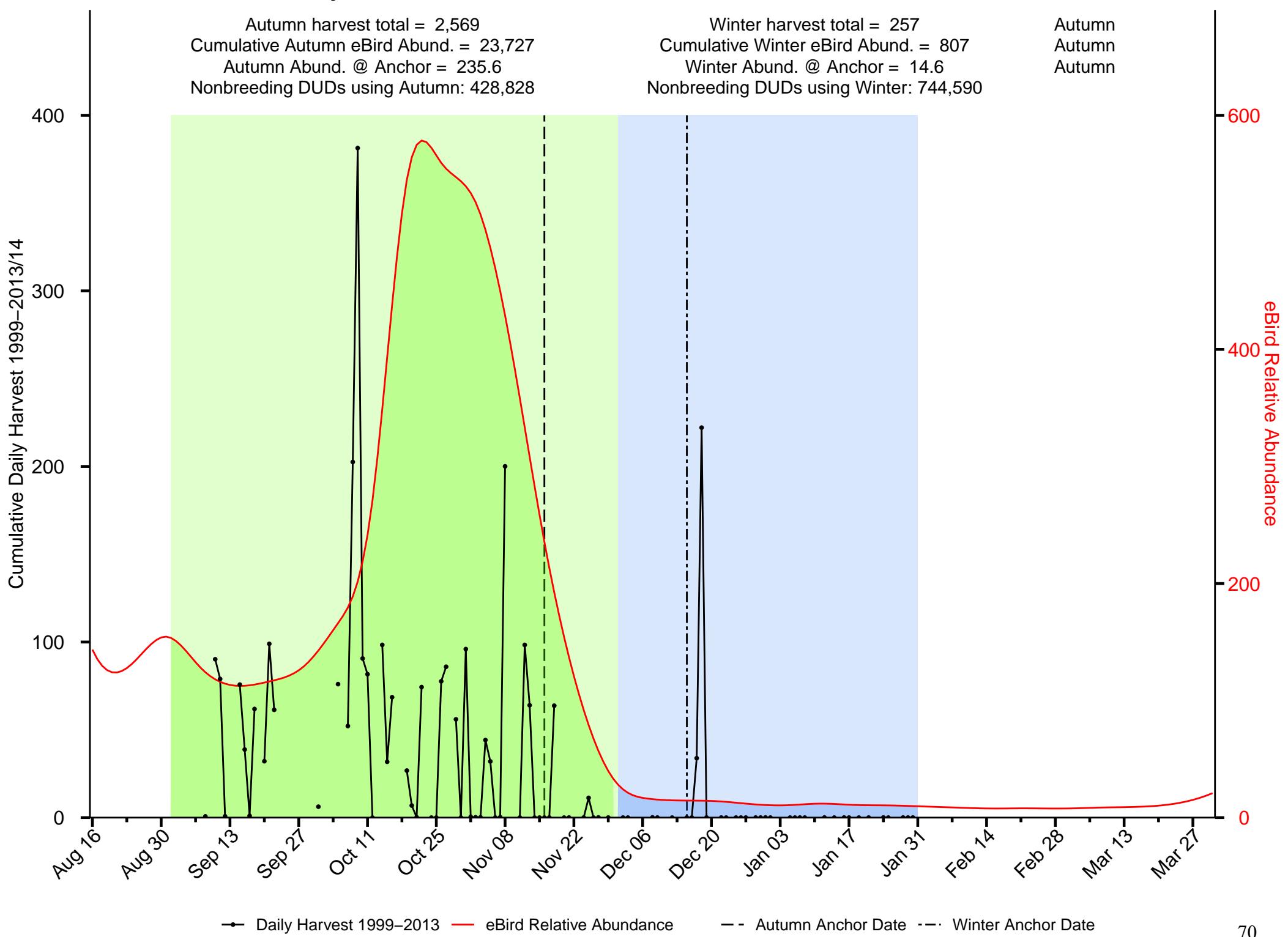
Summary of American Wigeon in the Canadian Intermountain JV



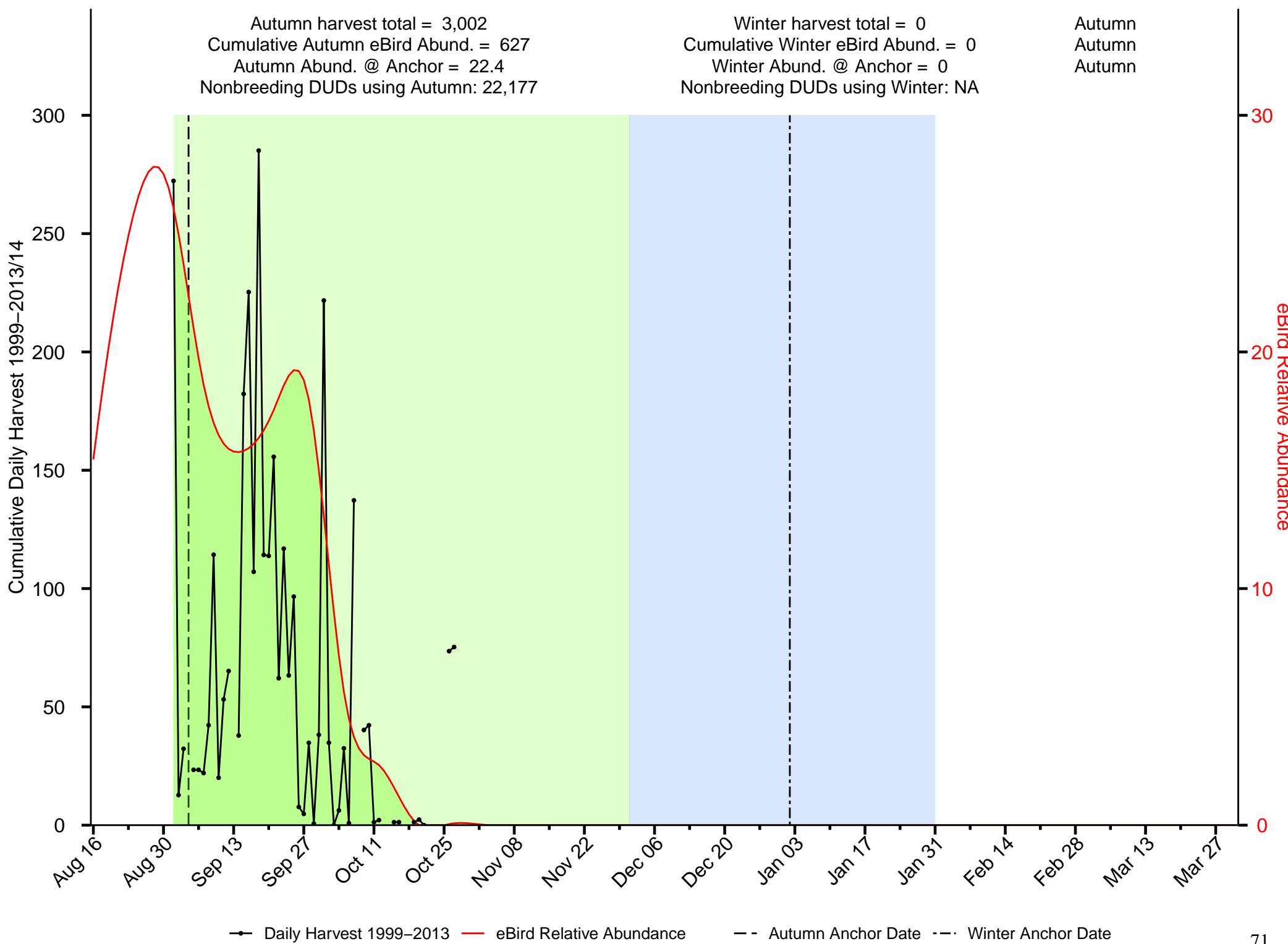
Summary of Barrow's Goldeneye in the Canadian Intermountain JV



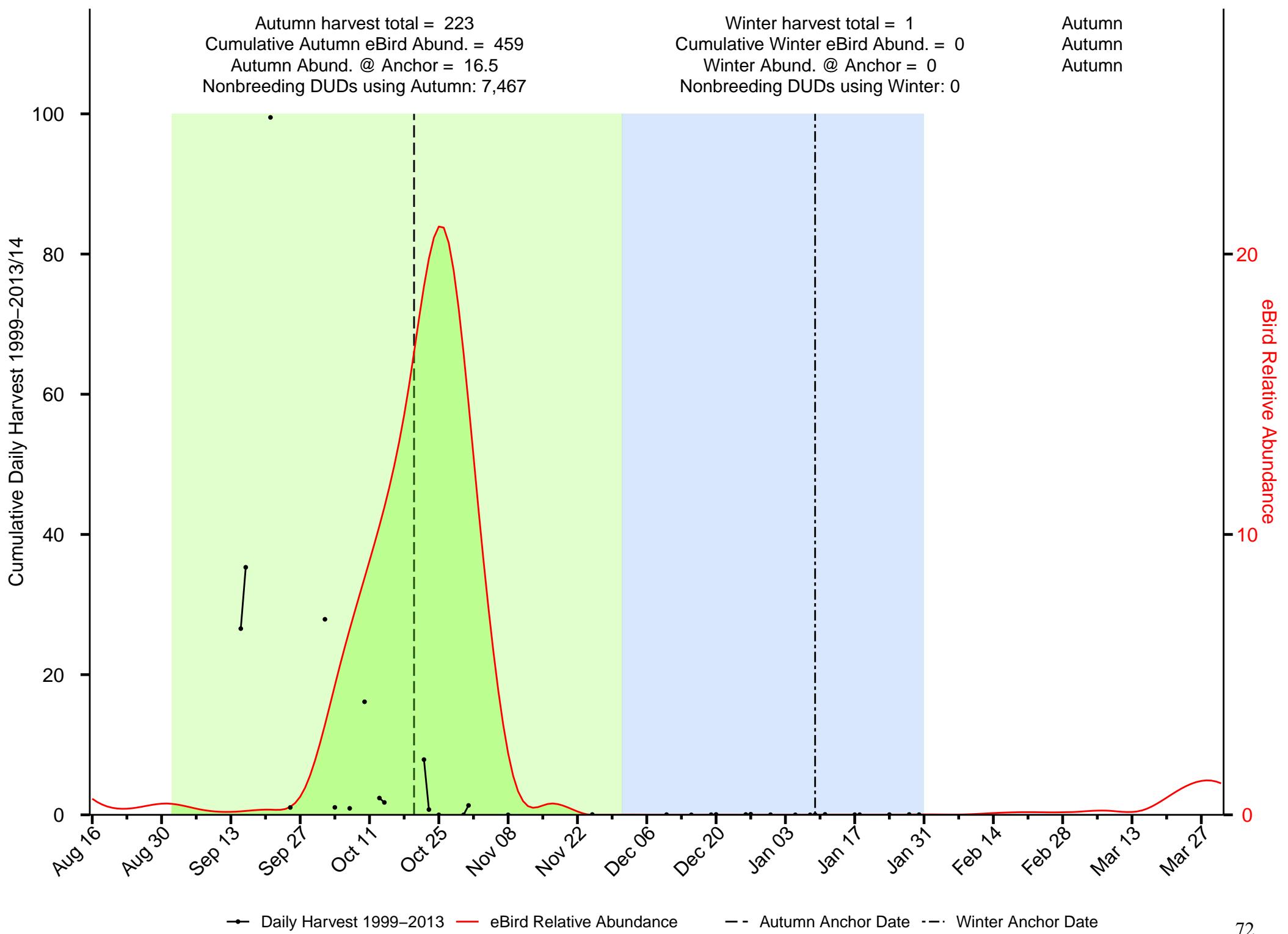
Summary of Bufflehead in the Canadian Intermountain JV



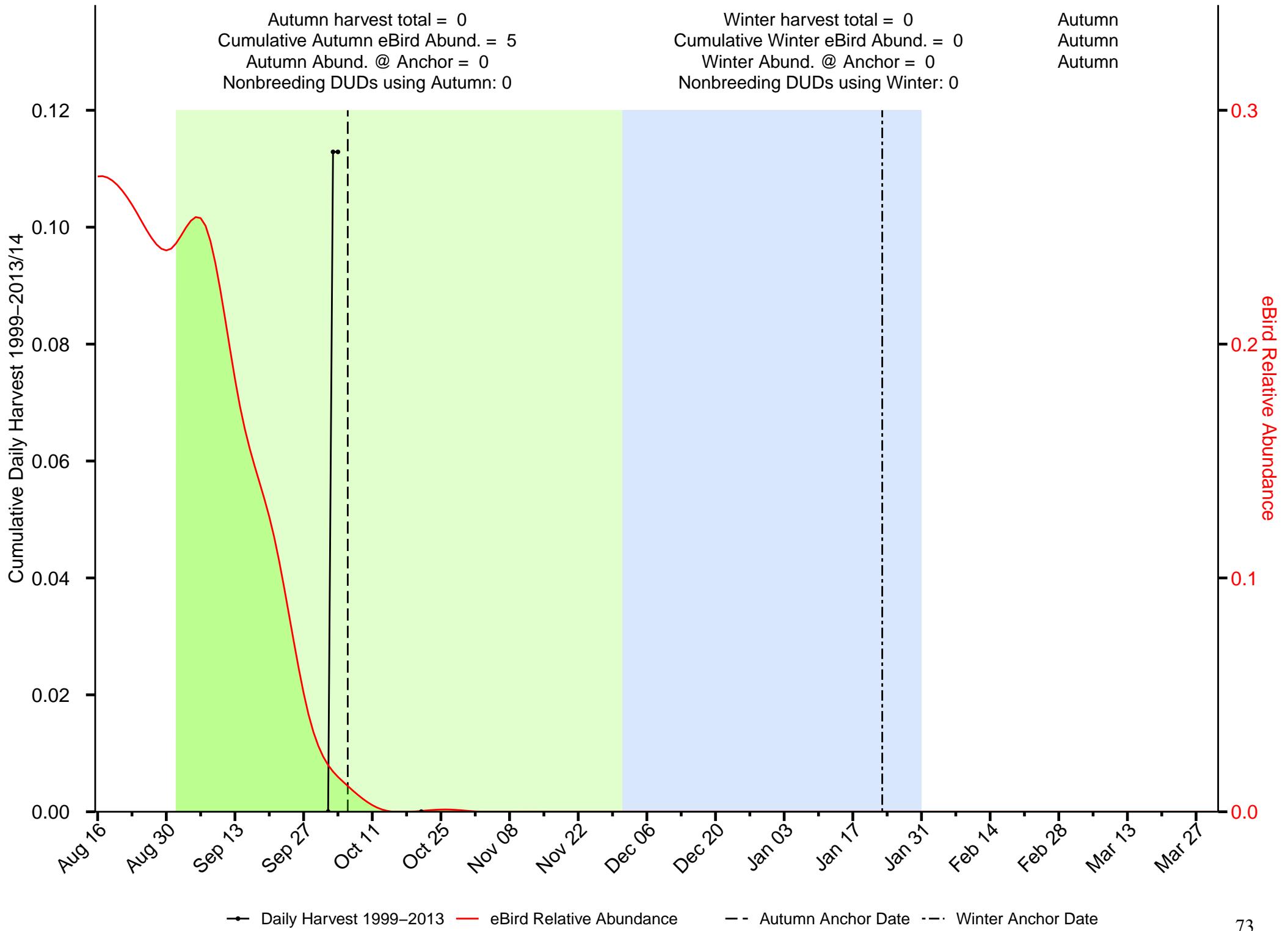
Summary of Blue-winged Teal in the Canadian Intermountain JV



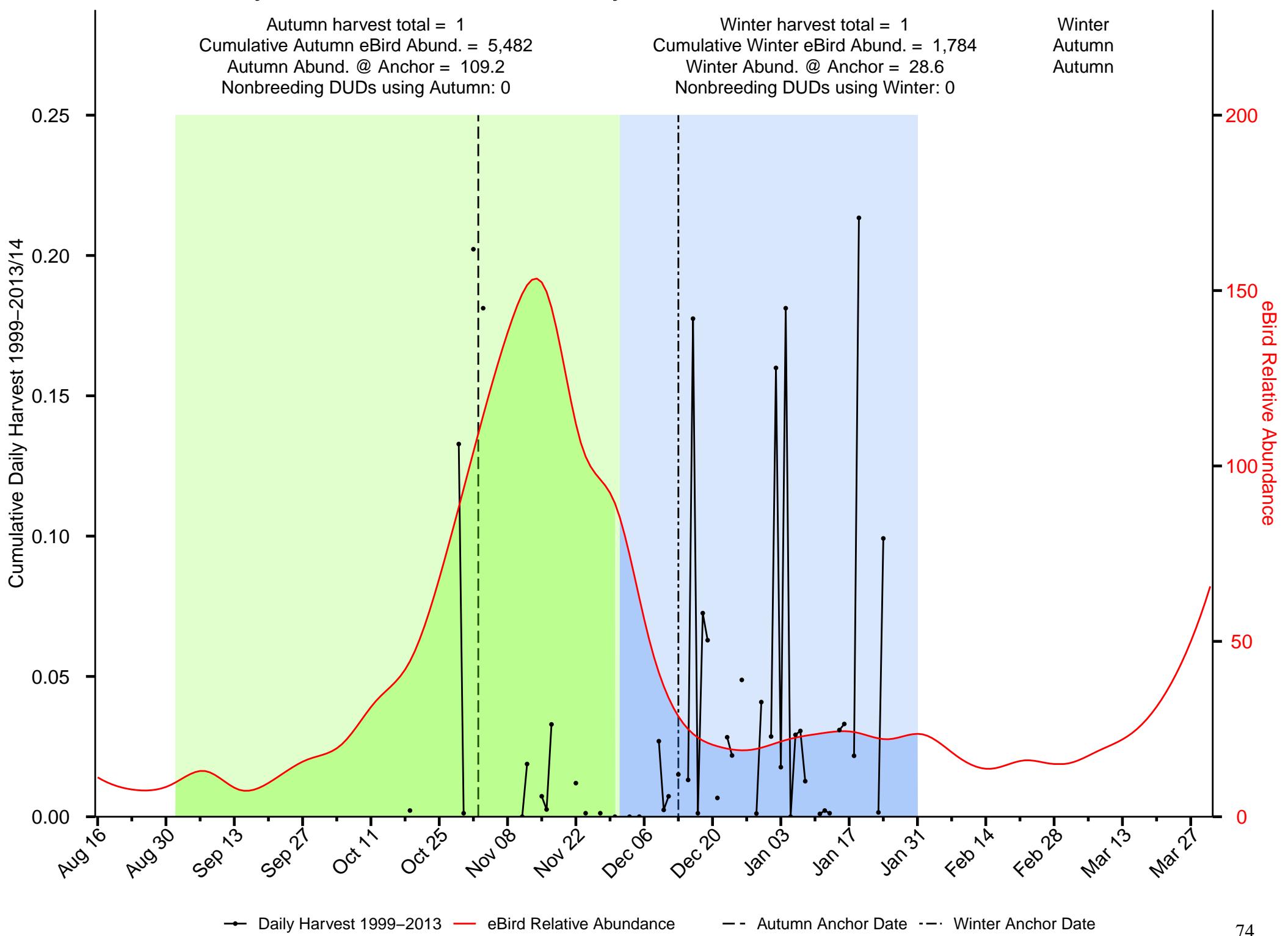
Summary of Canvasback in the Canadian Intermountain JV



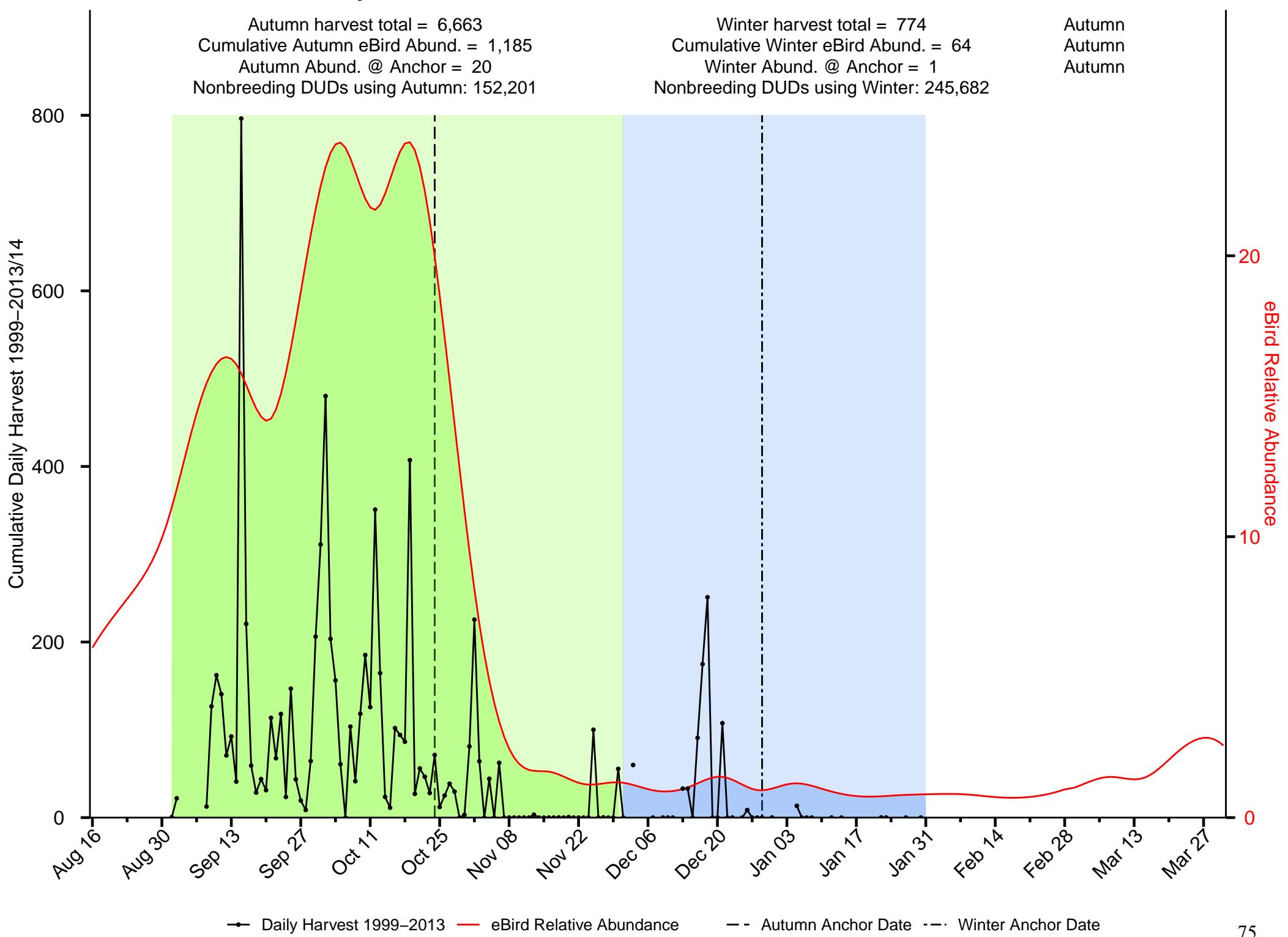
Summary of Cinnamon Teal in the Canadian Intermountain JV



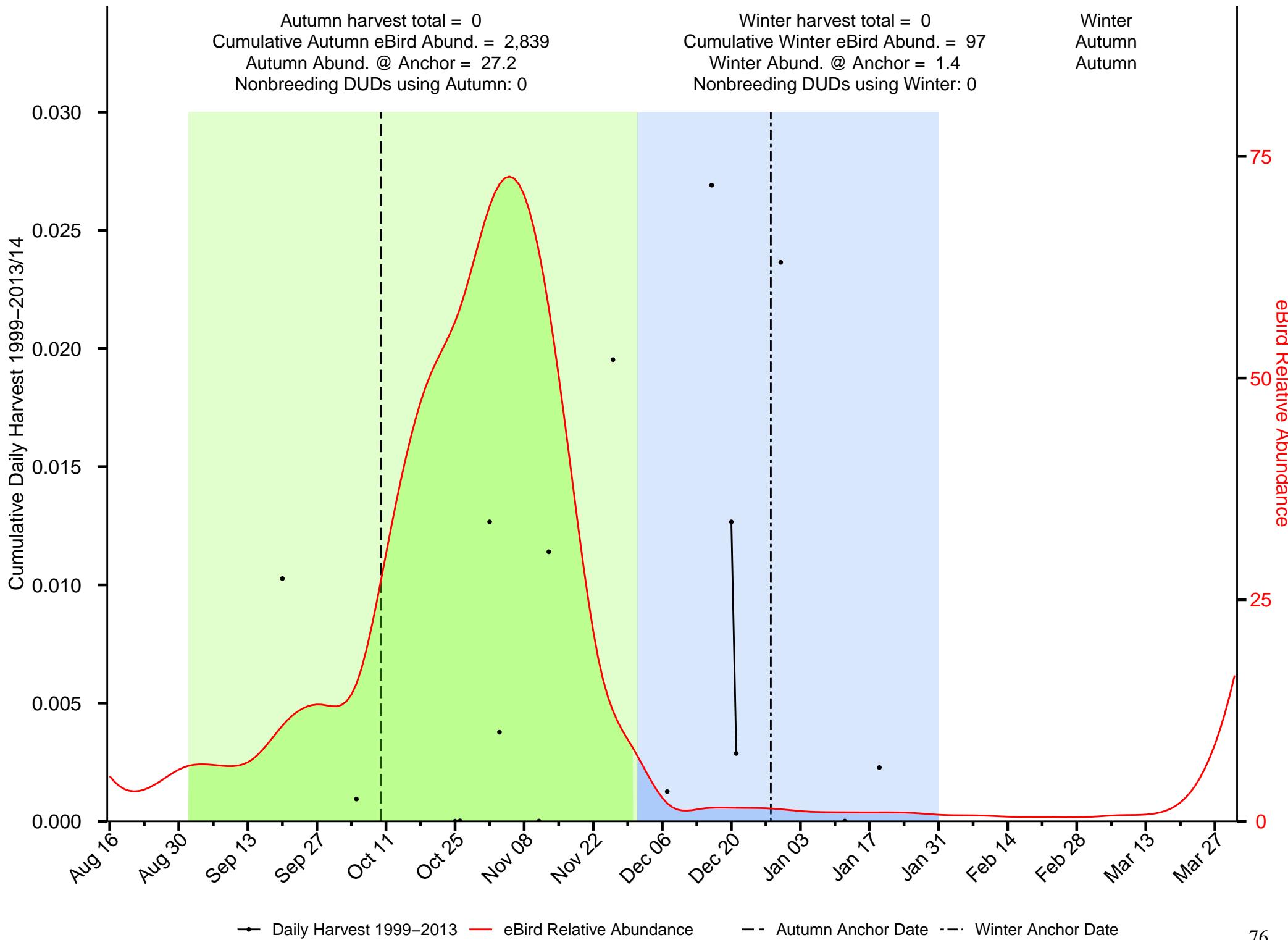
Summary of Common Goldeneye in the Canadian Intermountain JV



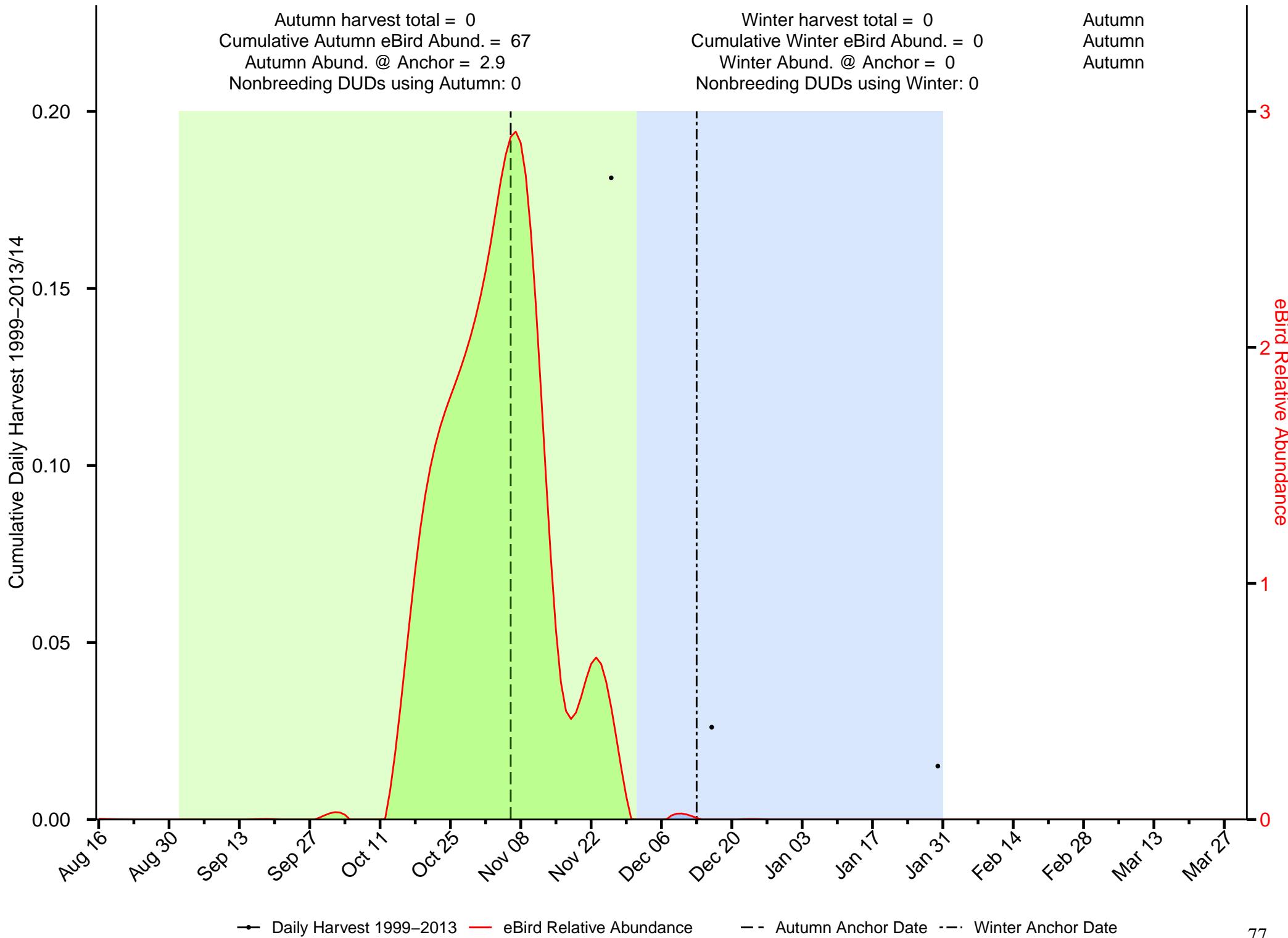
Summary of Gadwall in the Canadian Intermountain JV



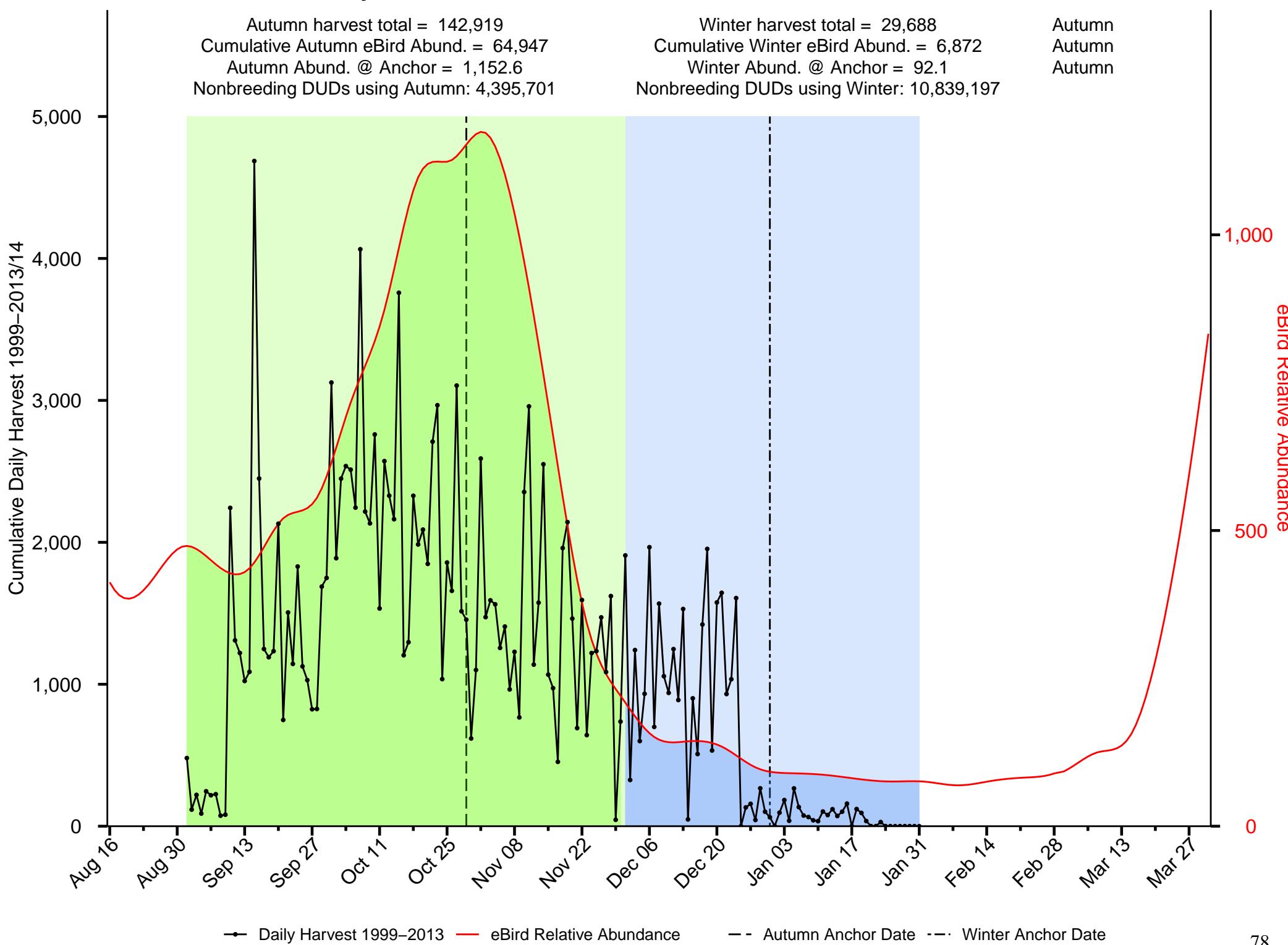
Summary of Hooded Merganser in the Canadian Intermountain JV



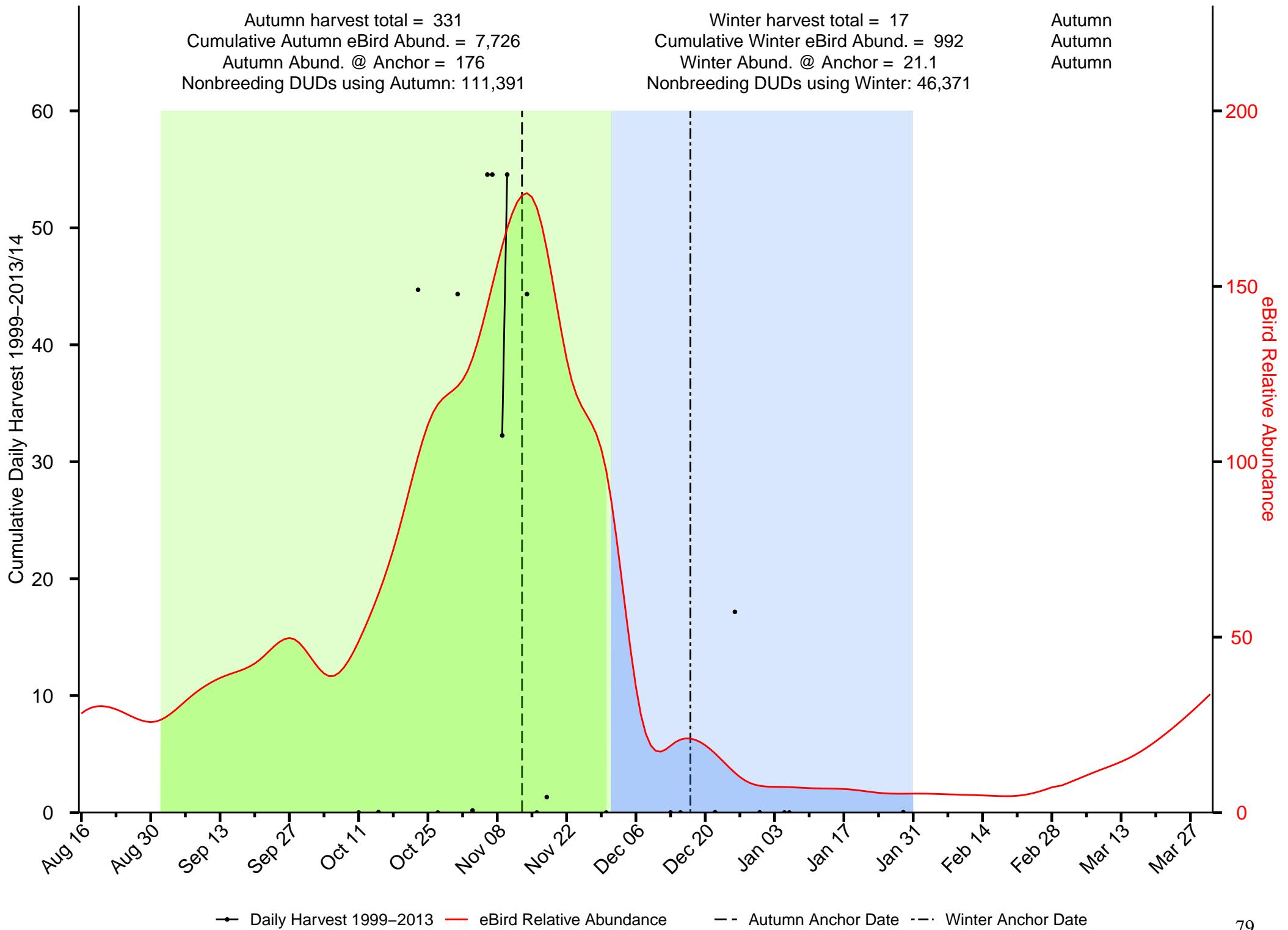
Summary of Long-tailed Duck in the Canadian Intermountain JV



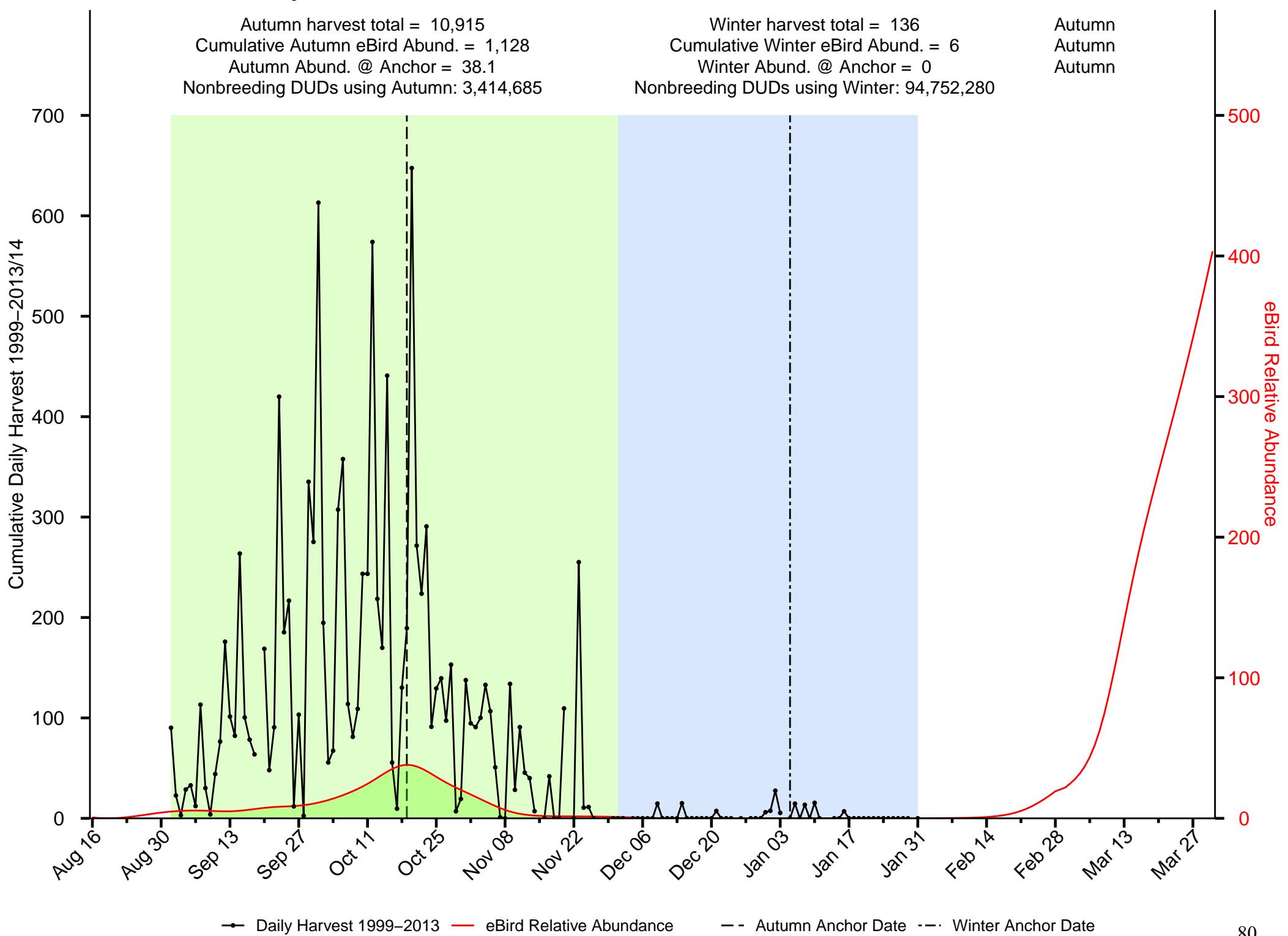
Summary of Mallard in the Canadian Intermountain JV



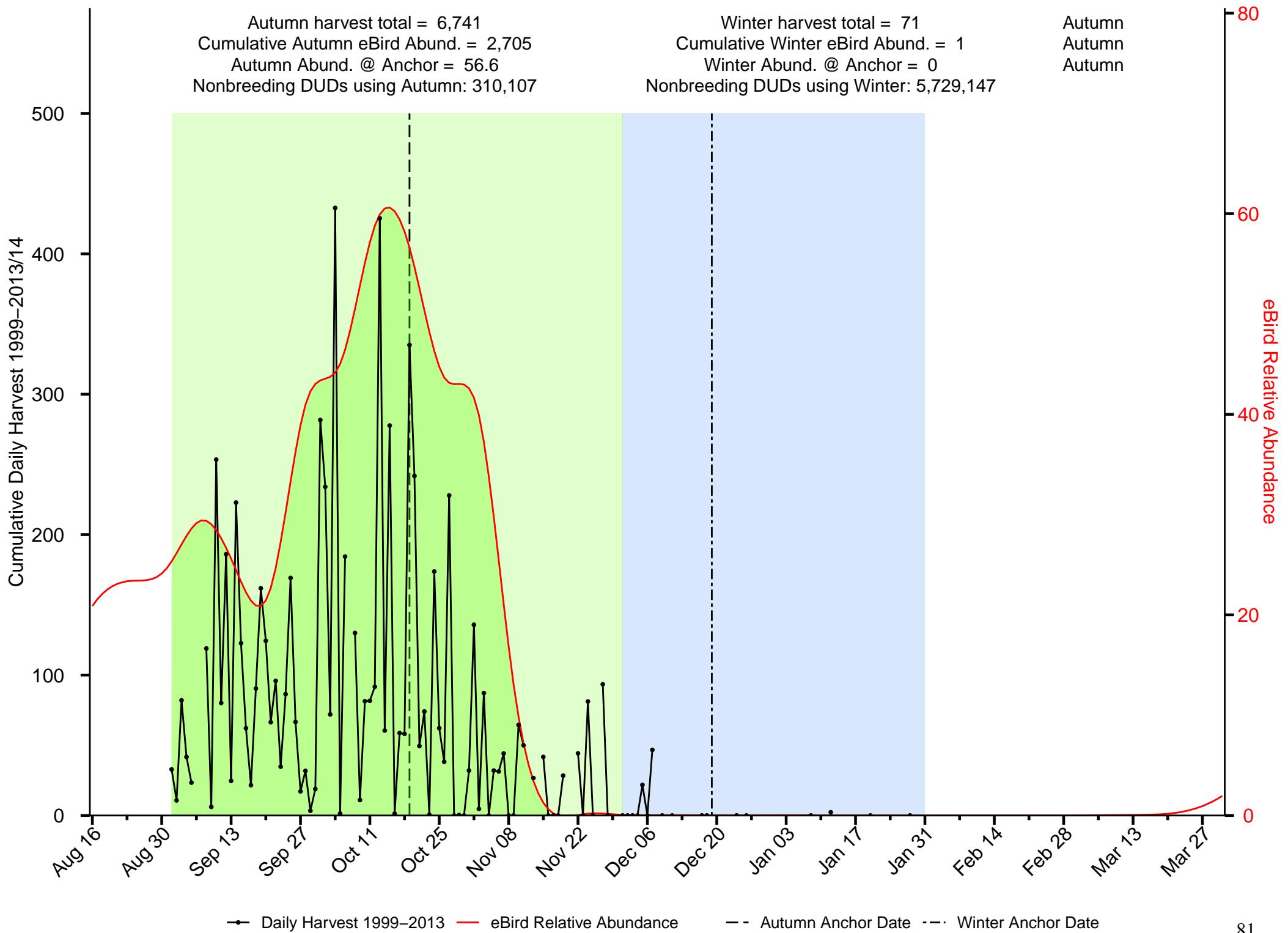
Summary of Merganser in the Canadian Intermountain JV



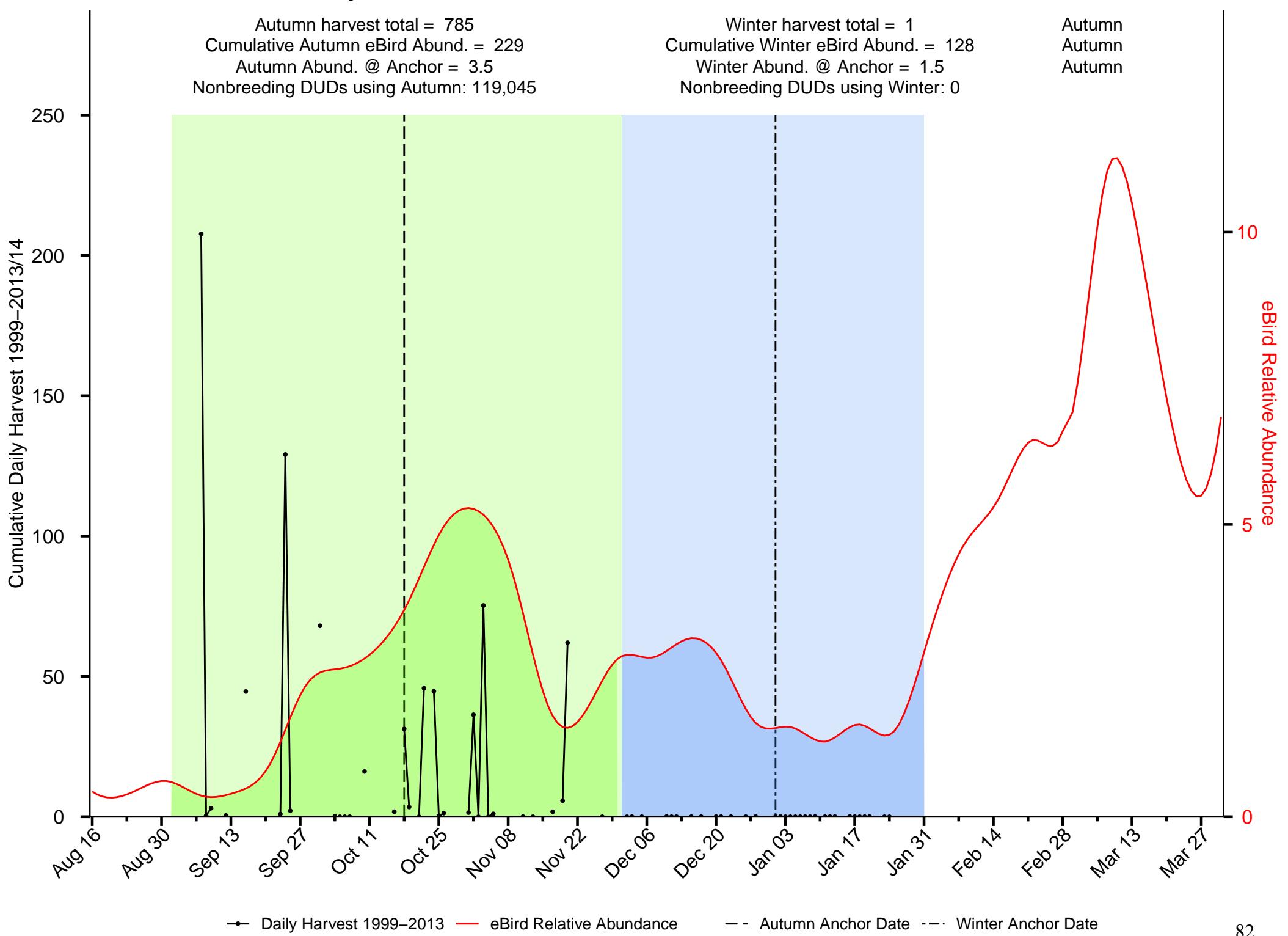
Summary of Northern Pintail in the Canadian Intermountain JV



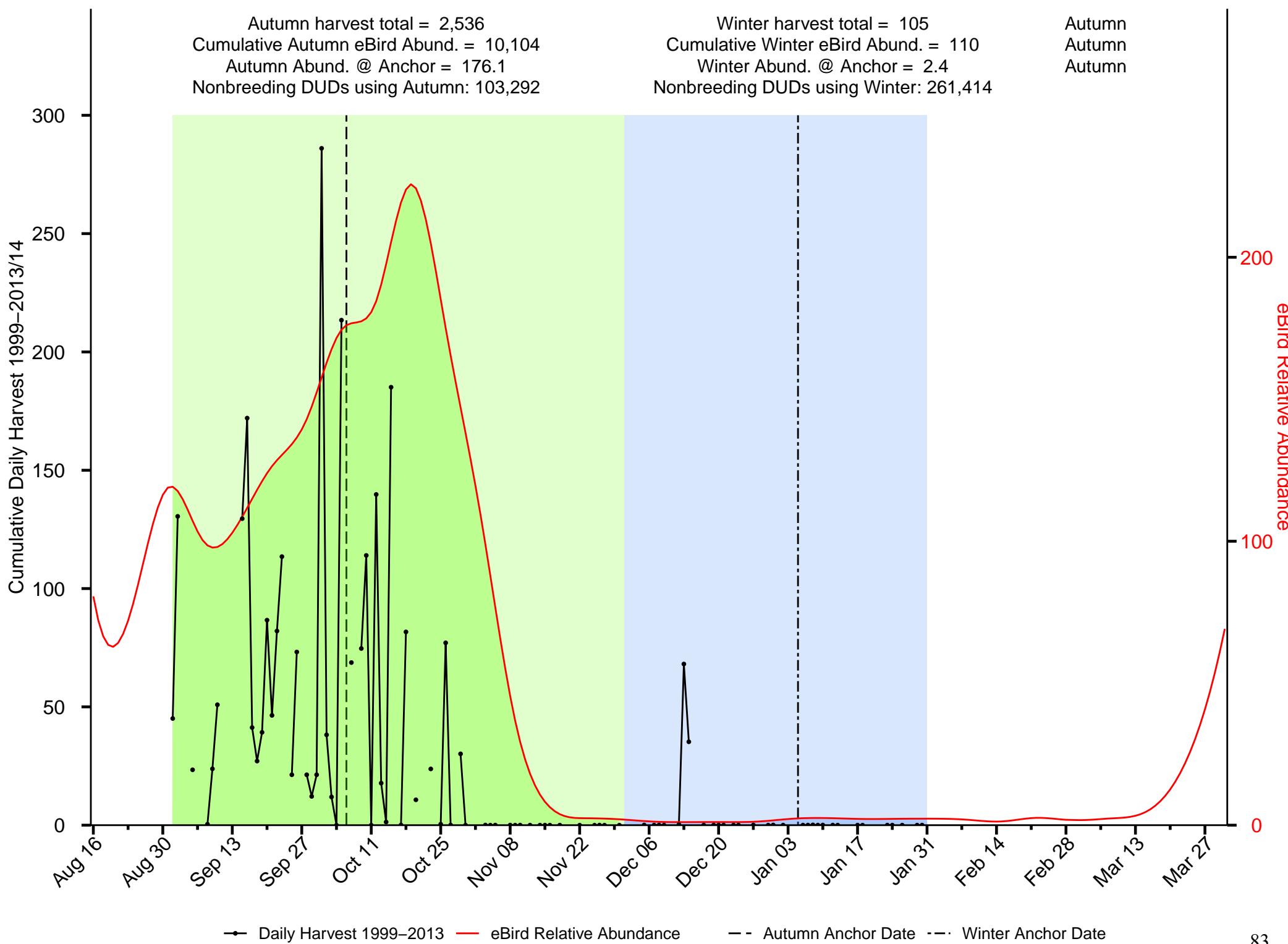
Summary of Northern Shoveler in the Canadian Intermountain JV



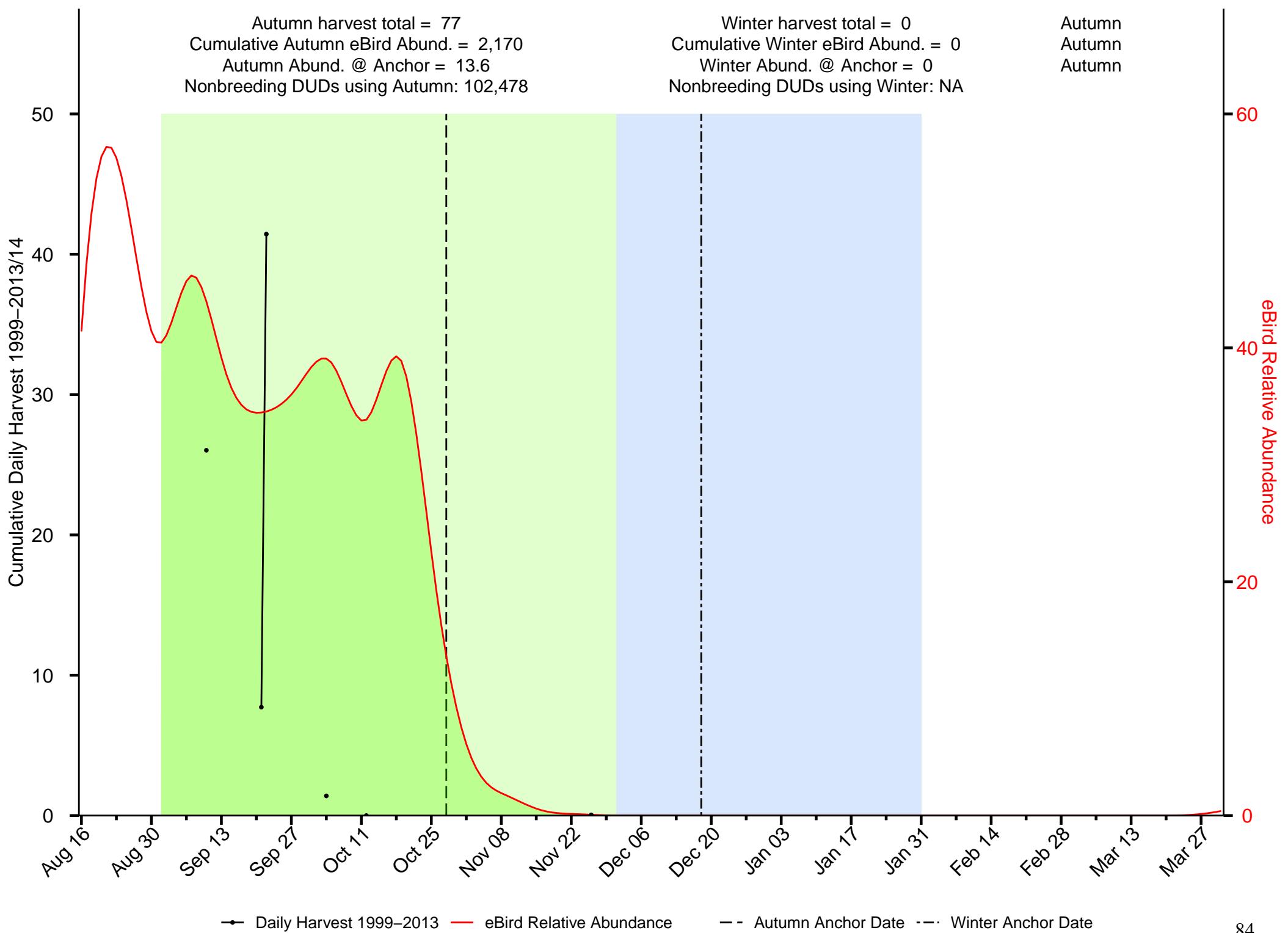
Summary of Redhead in the Canadian Intermountain JV



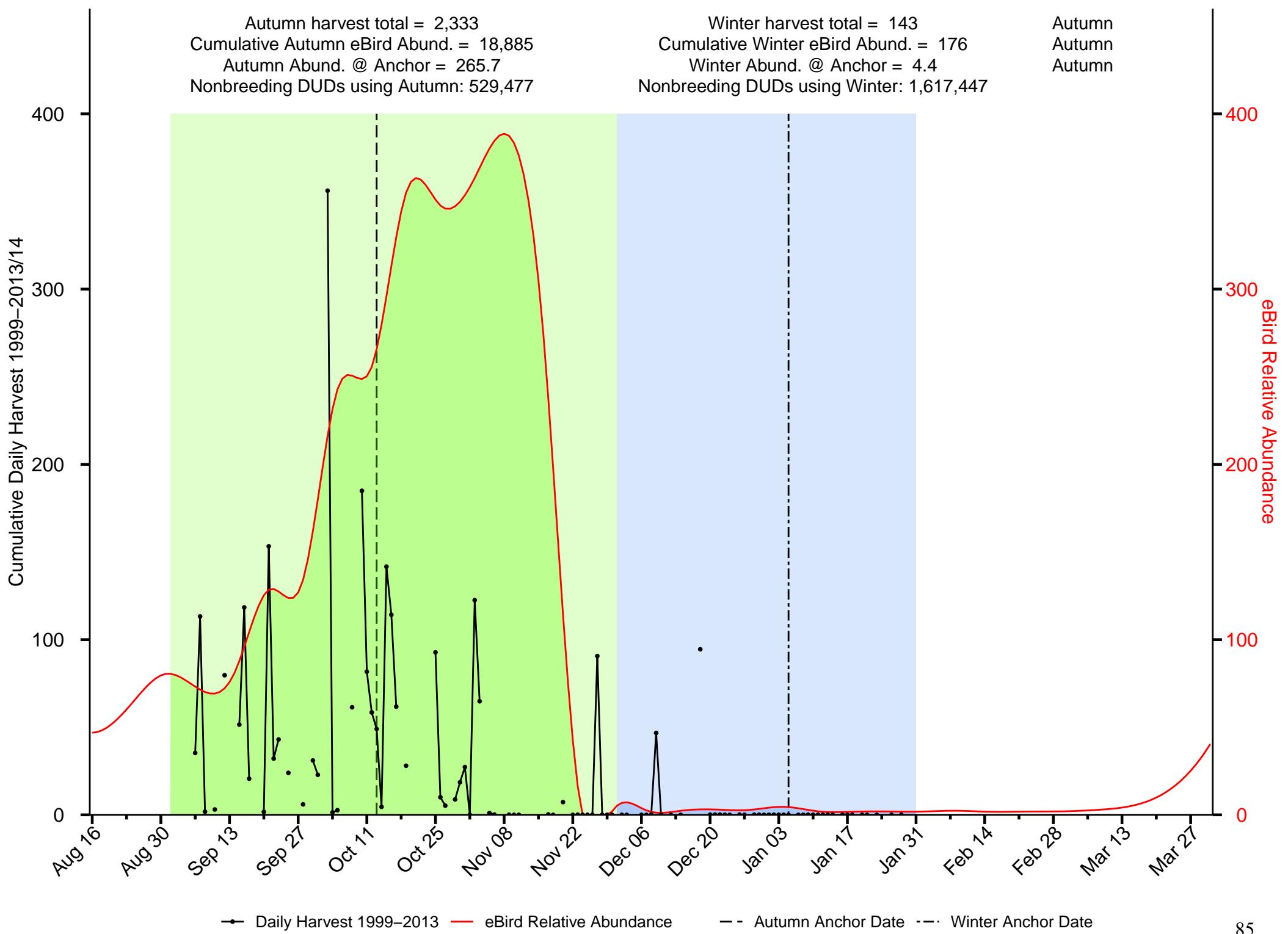
Summary of Ring-necked Duck in the Canadian Intermountain JV



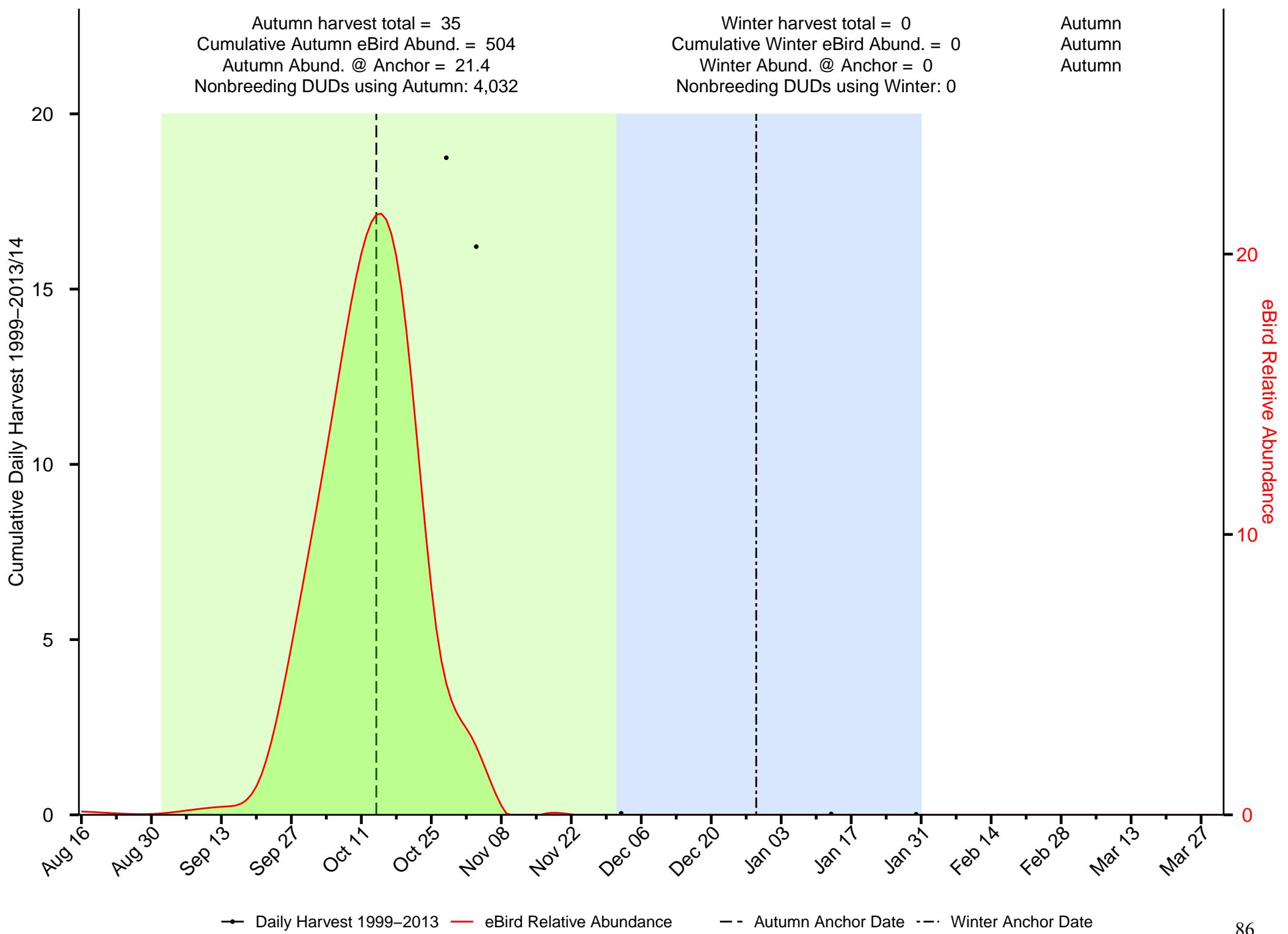
Summary of Ruddy Duck in the Canadian Intermountain JV



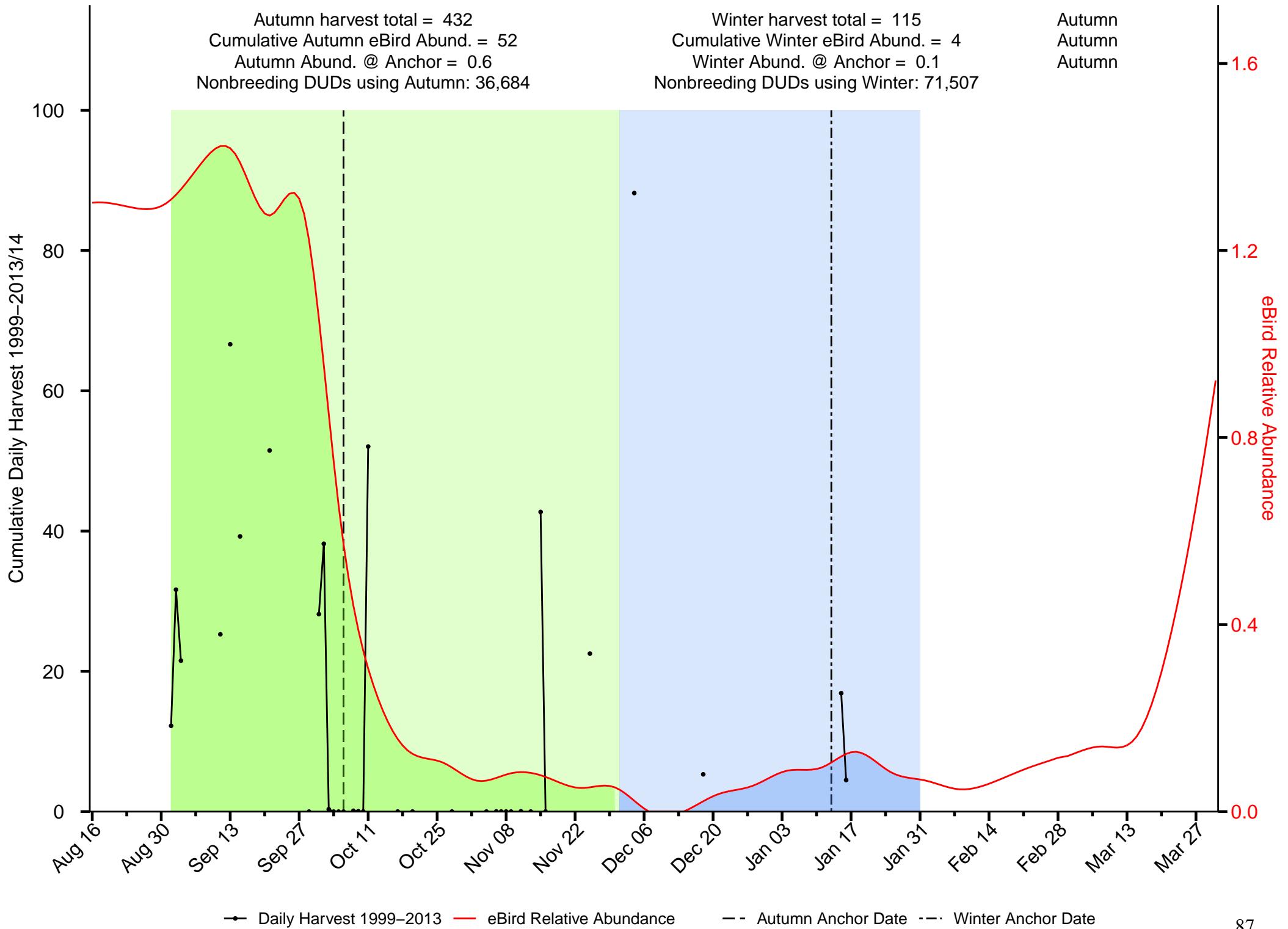
Summary of Scaup in the Canadian Intermountain JV



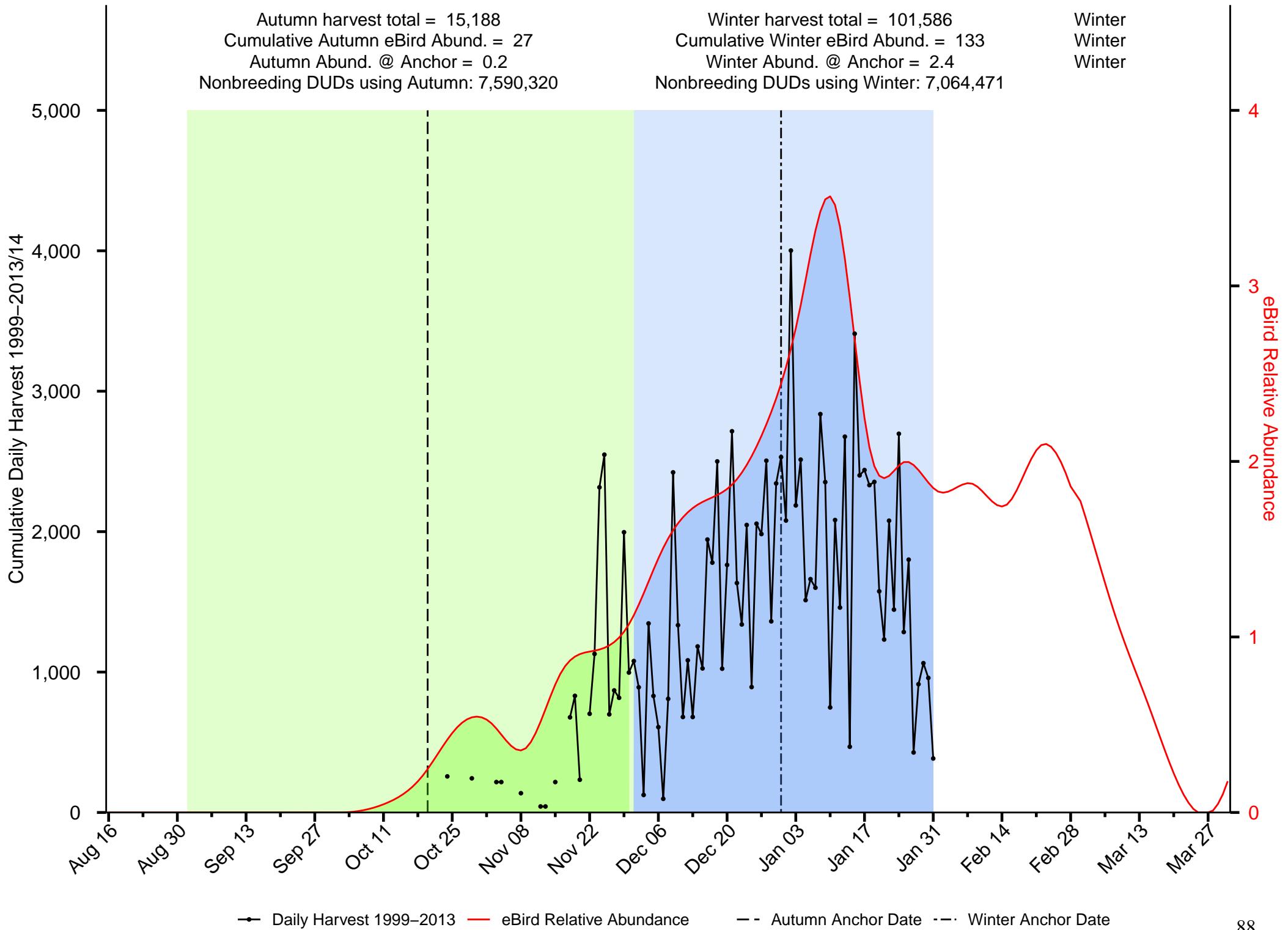
Summary of Scoter in the Canadian Intermountain JV



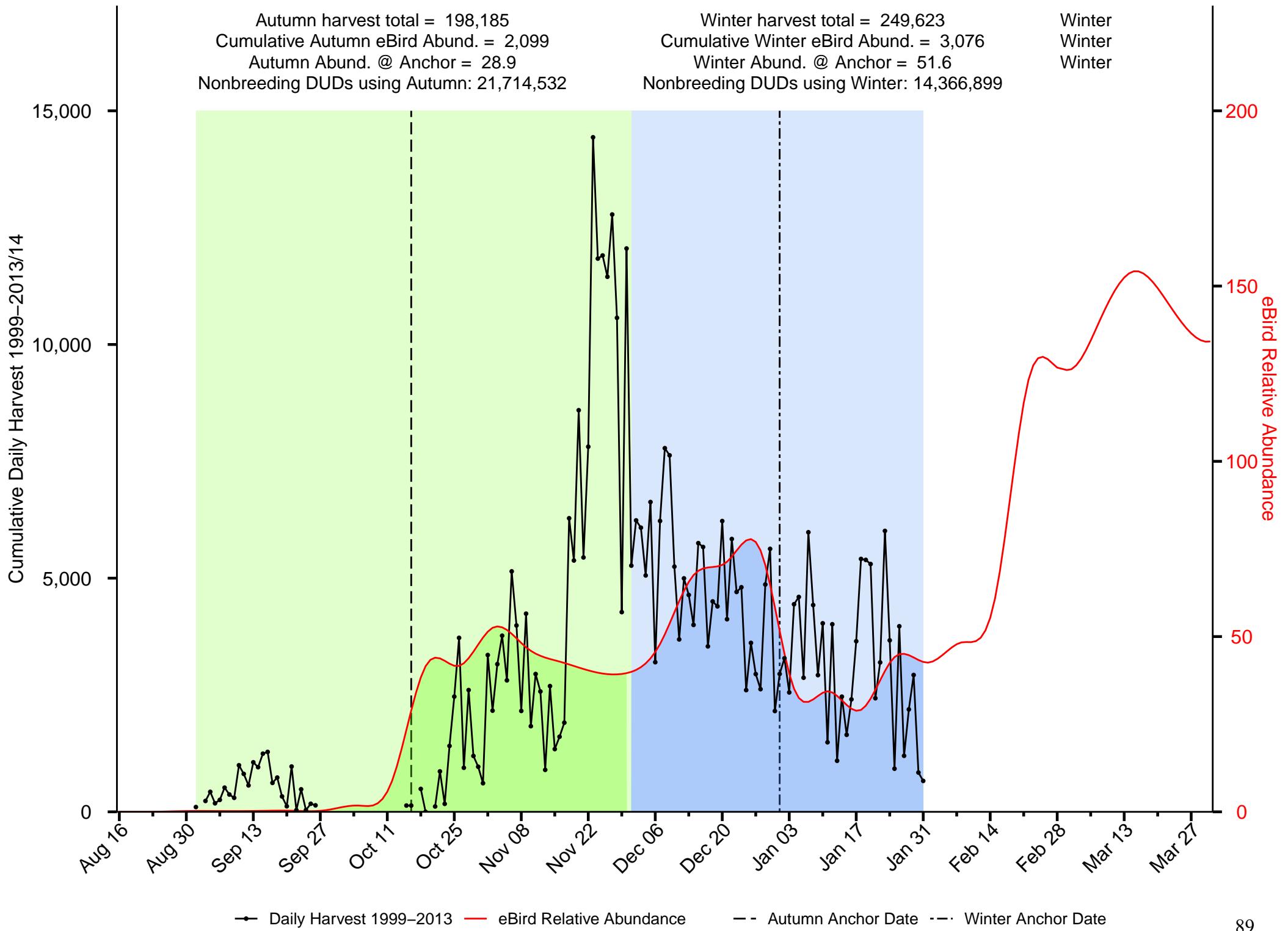
Summary of Wood Duck in the Canadian Intermountain JV



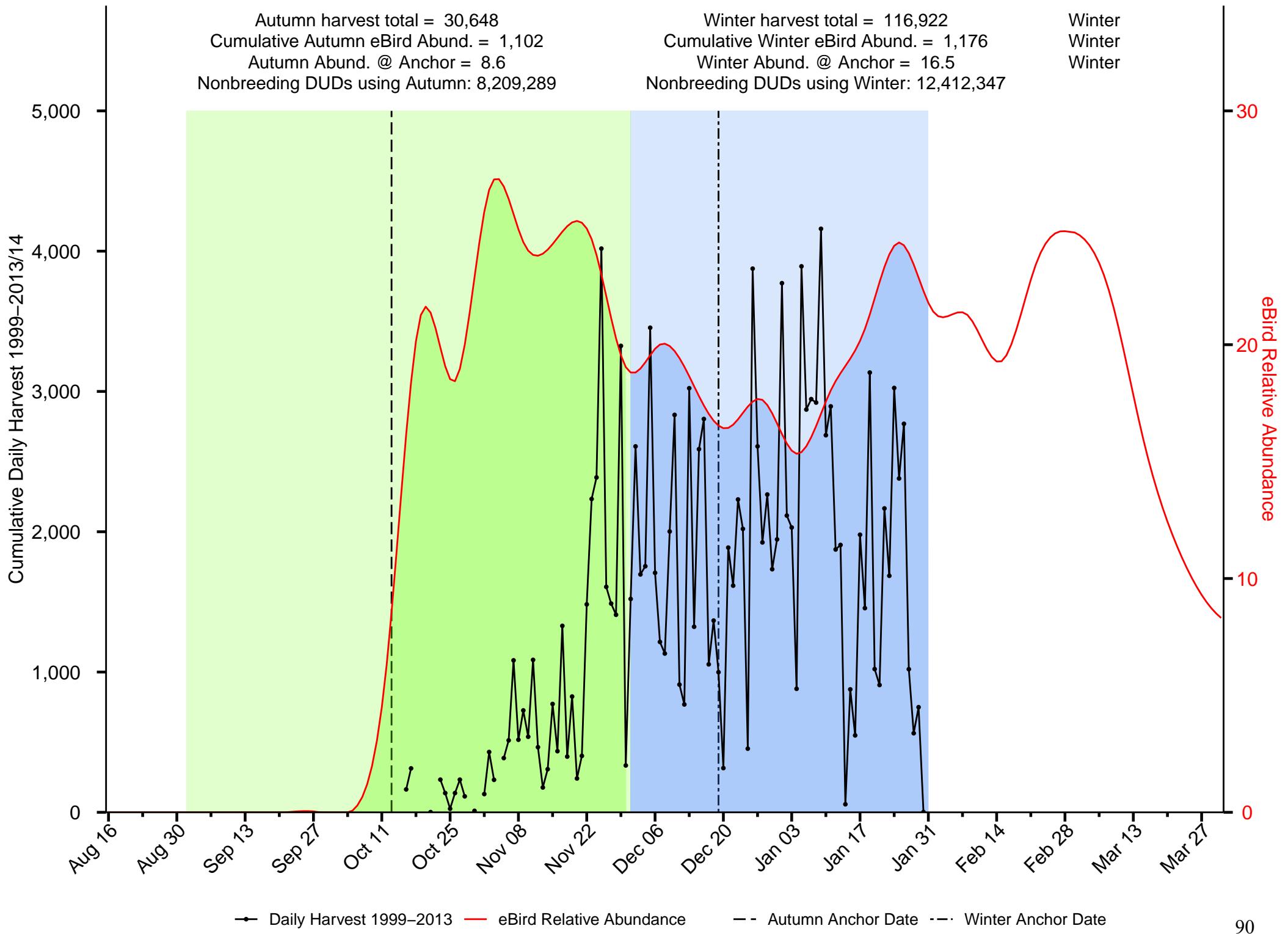
Summary of American Black Duck in the Central Hardwoods JV



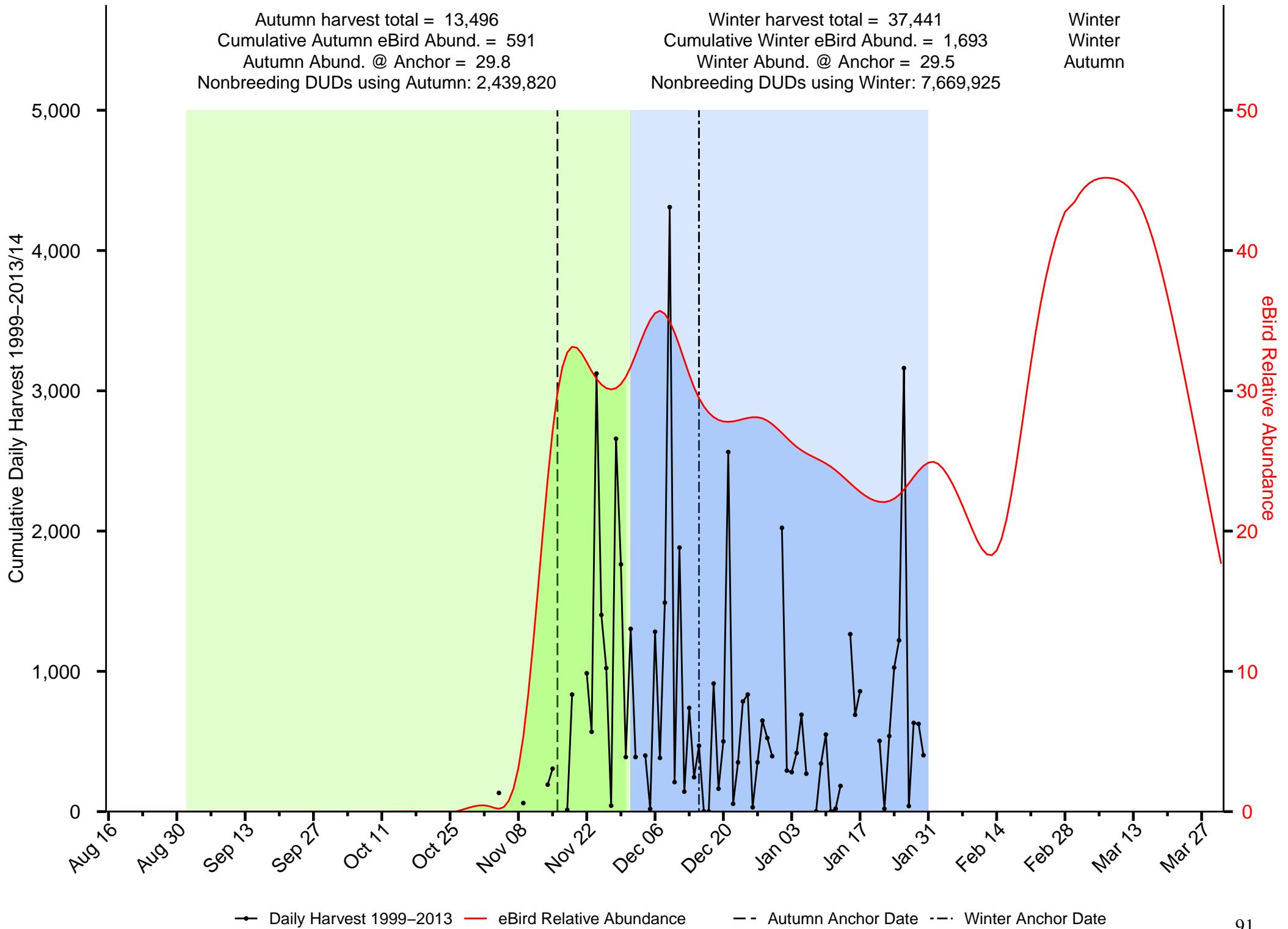
Summary of Green-winged Teal in the Central Hardwoods JV



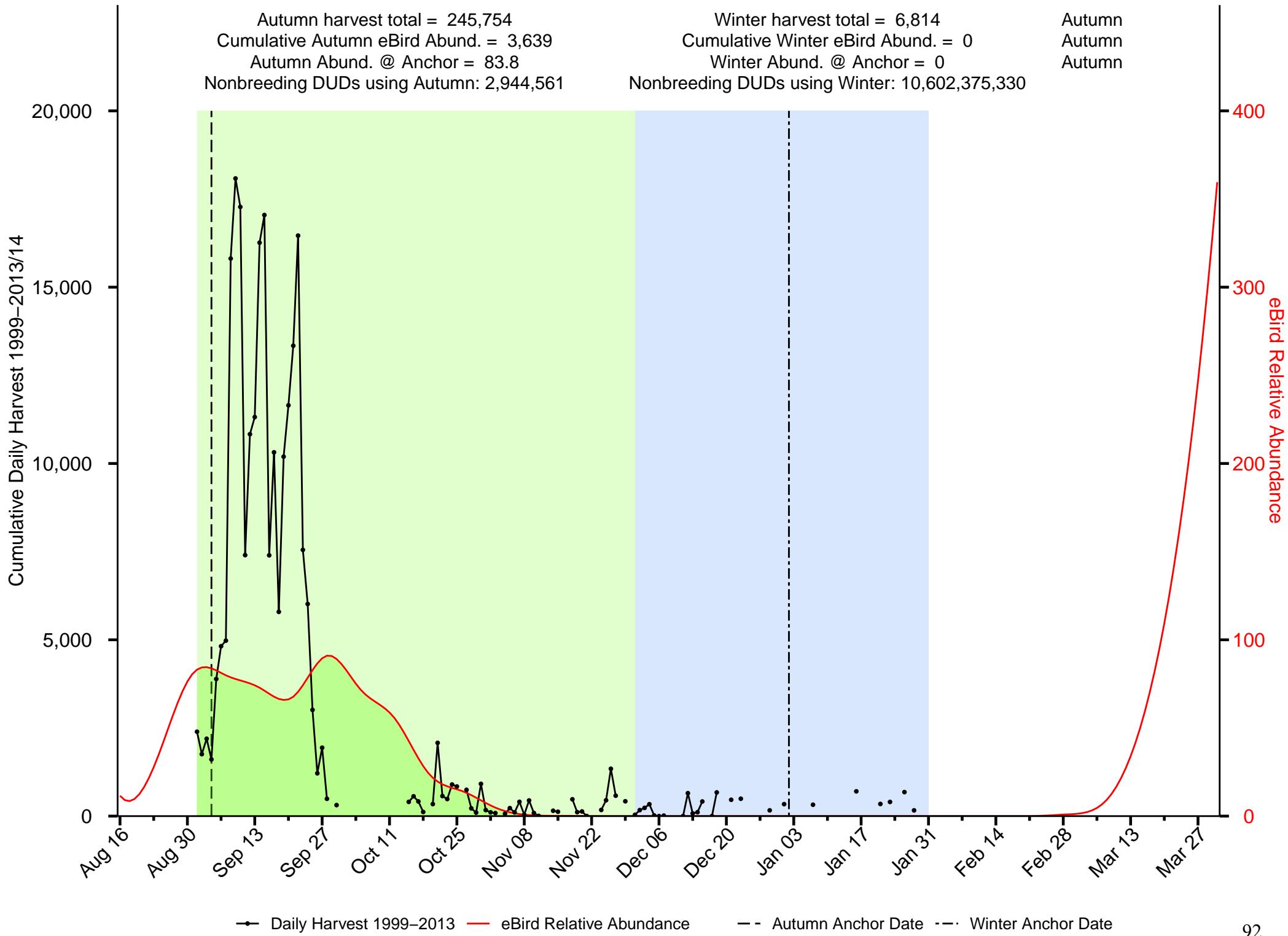
Summary of American Wigeon in the Central Hardwoods JV



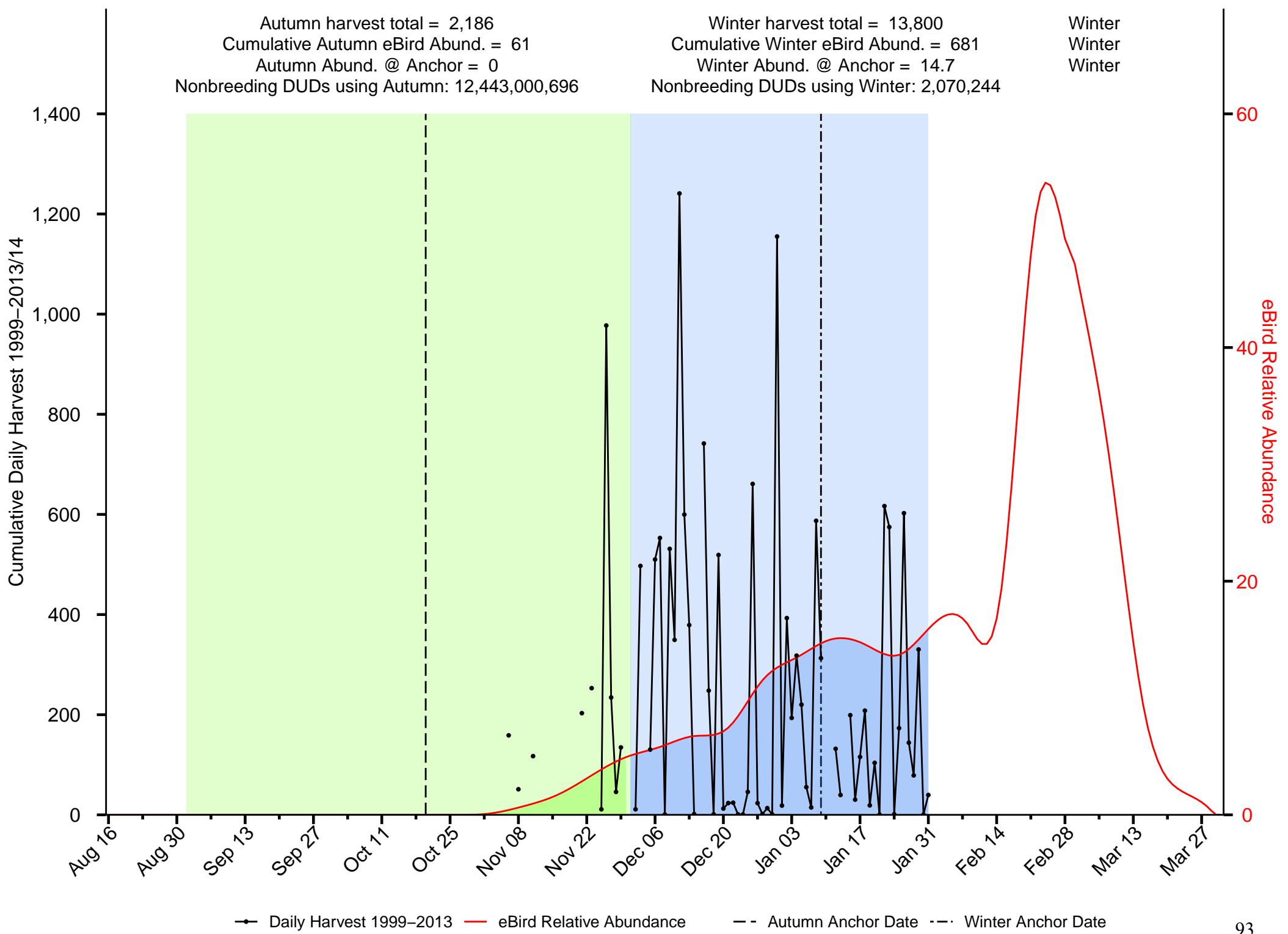
Summary of Bufflehead in the Central Hardwoods JV



Summary of Blue-winged Teal in the Central Hardwoods JV



Summary of Canvasback in the Central Hardwoods JV

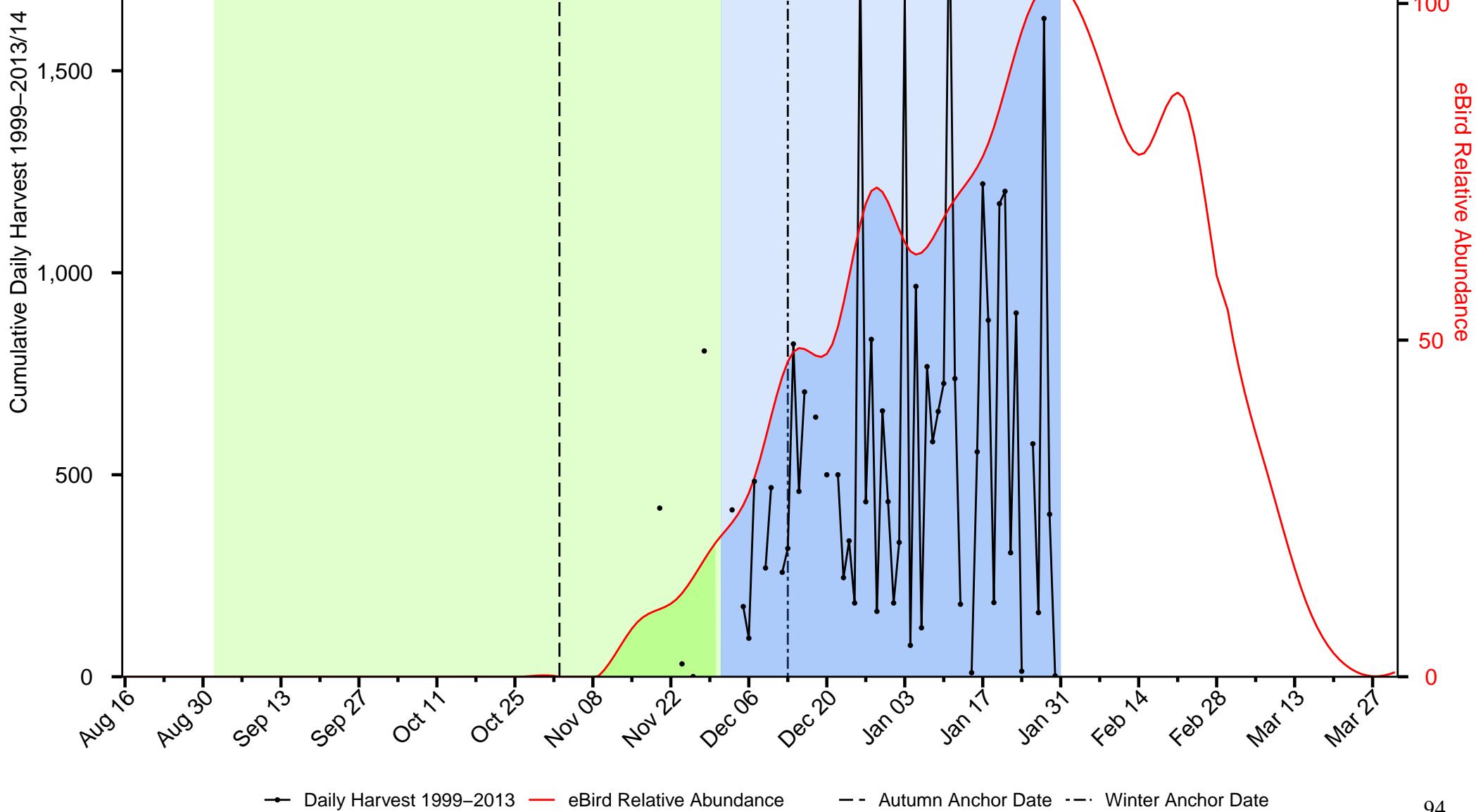


Summary of Common Goldeneye in the Central Hardwoods JV

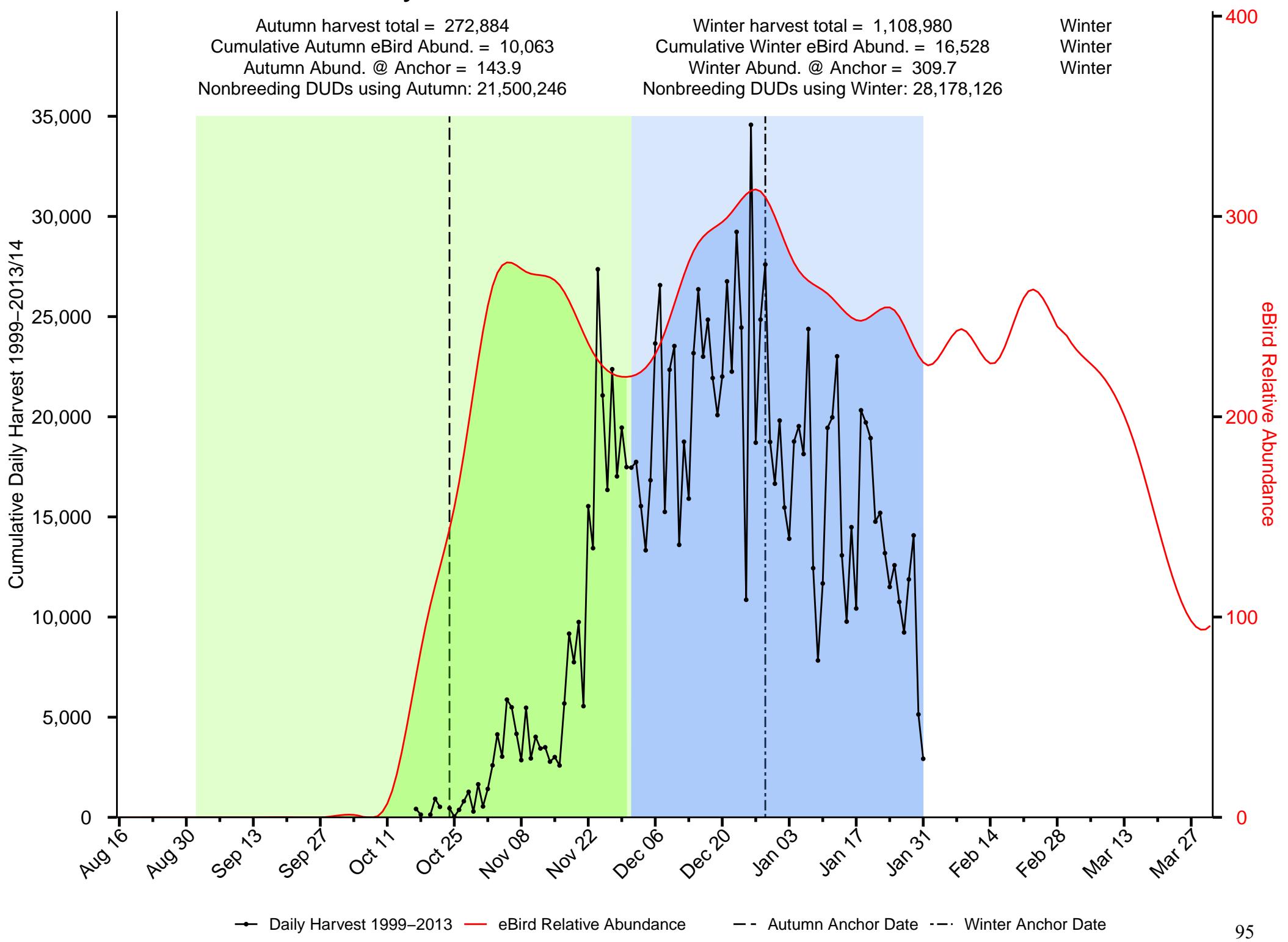
Autumn harvest total = 1,256
 Cumulative Autumn eBird Abund. = 217
 Autumn Abund. @ Anchor = 0
 Nonbreeding DUDs using Autumn: 273,789,152,502,135,704,784,800

Winter harvest total = 29,346
 Cumulative Winter eBird Abund. = 3,941
 Winter Abund. @ Anchor = 46.8
 Nonbreeding DUDs using Winter: 8,045,891

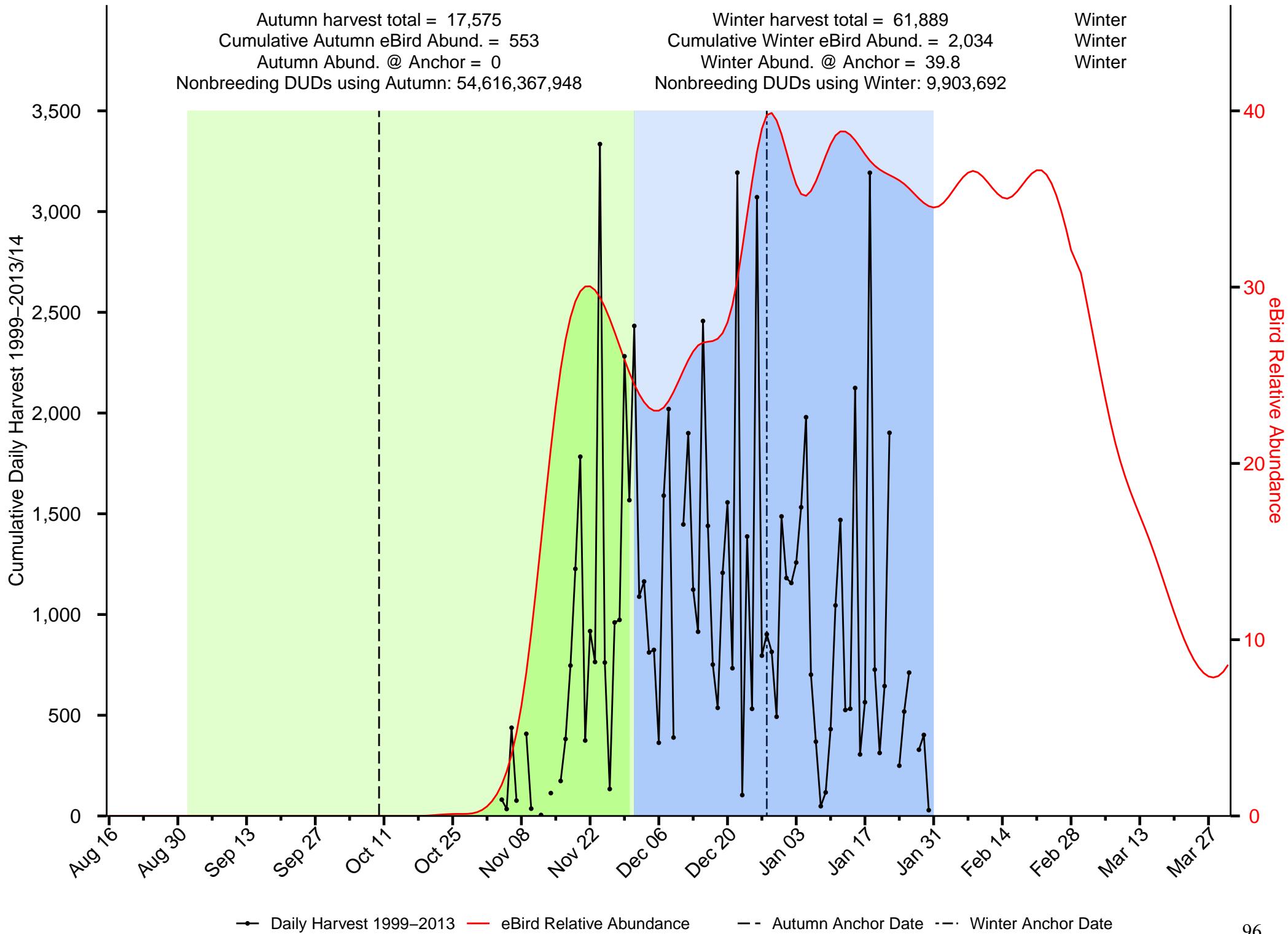
Winter
Winter
Winter



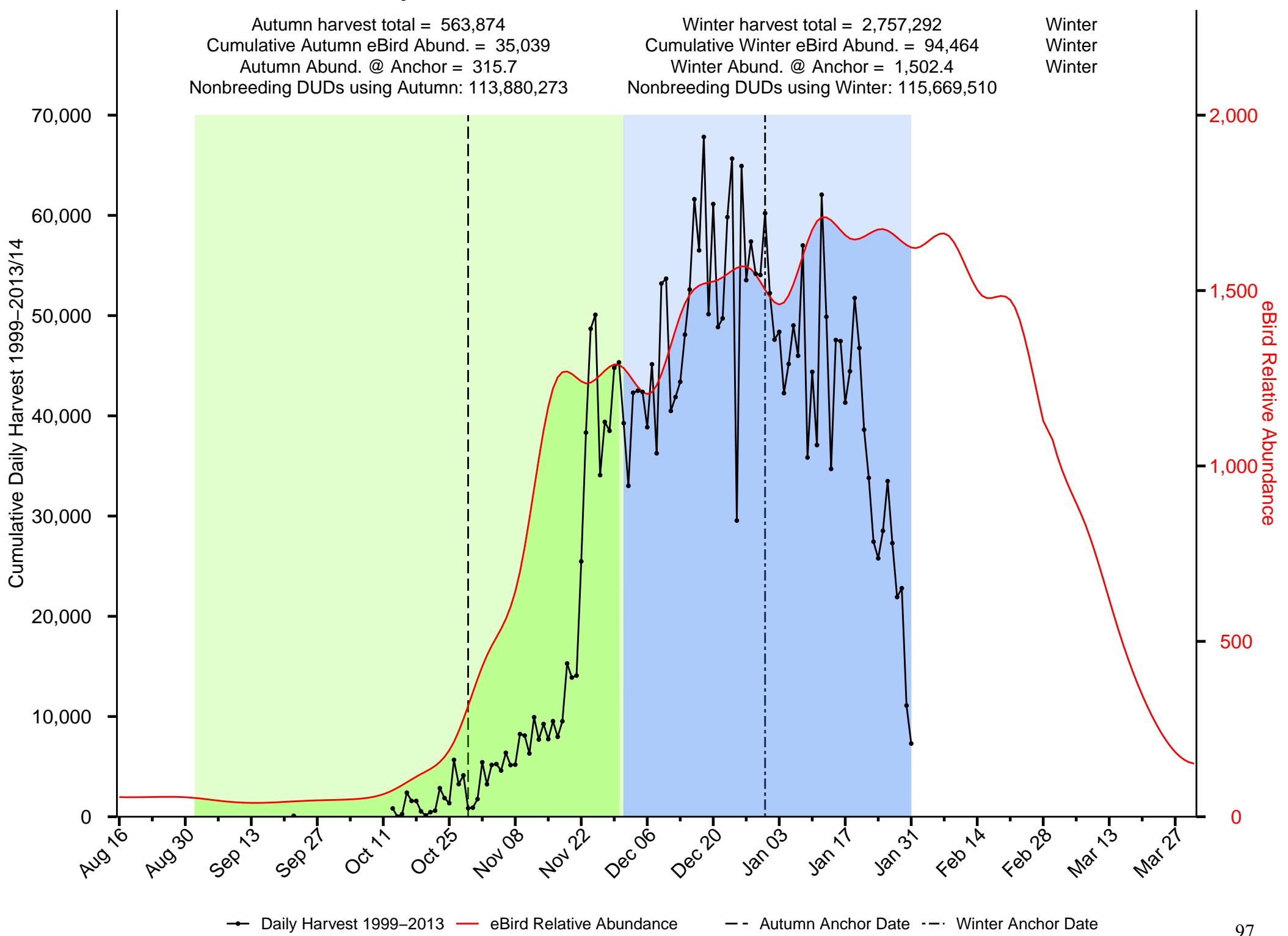
Summary of Gadwall in the Central Hardwoods JV



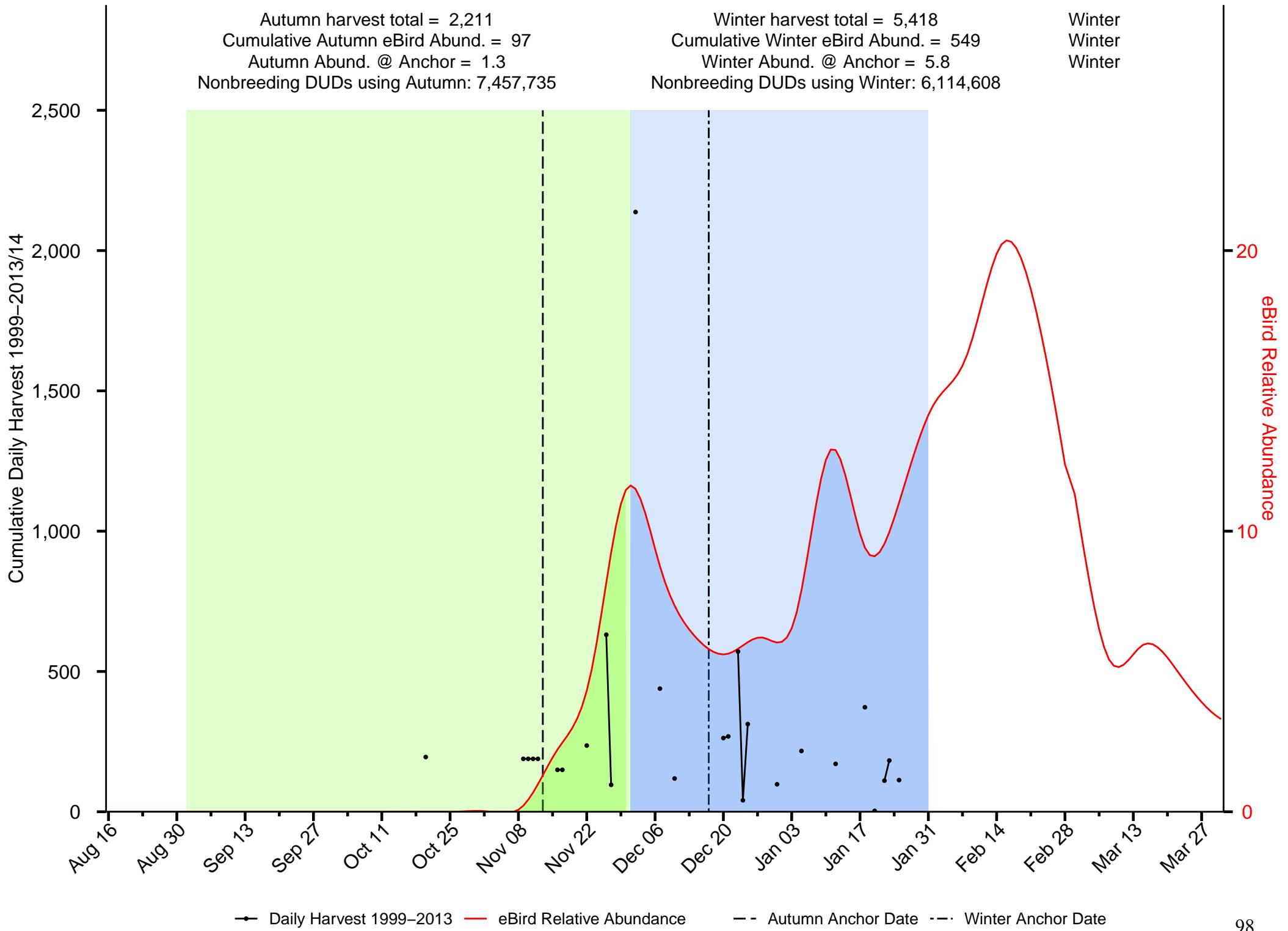
Summary of Hooded Merganser in the Central Hardwoods JV



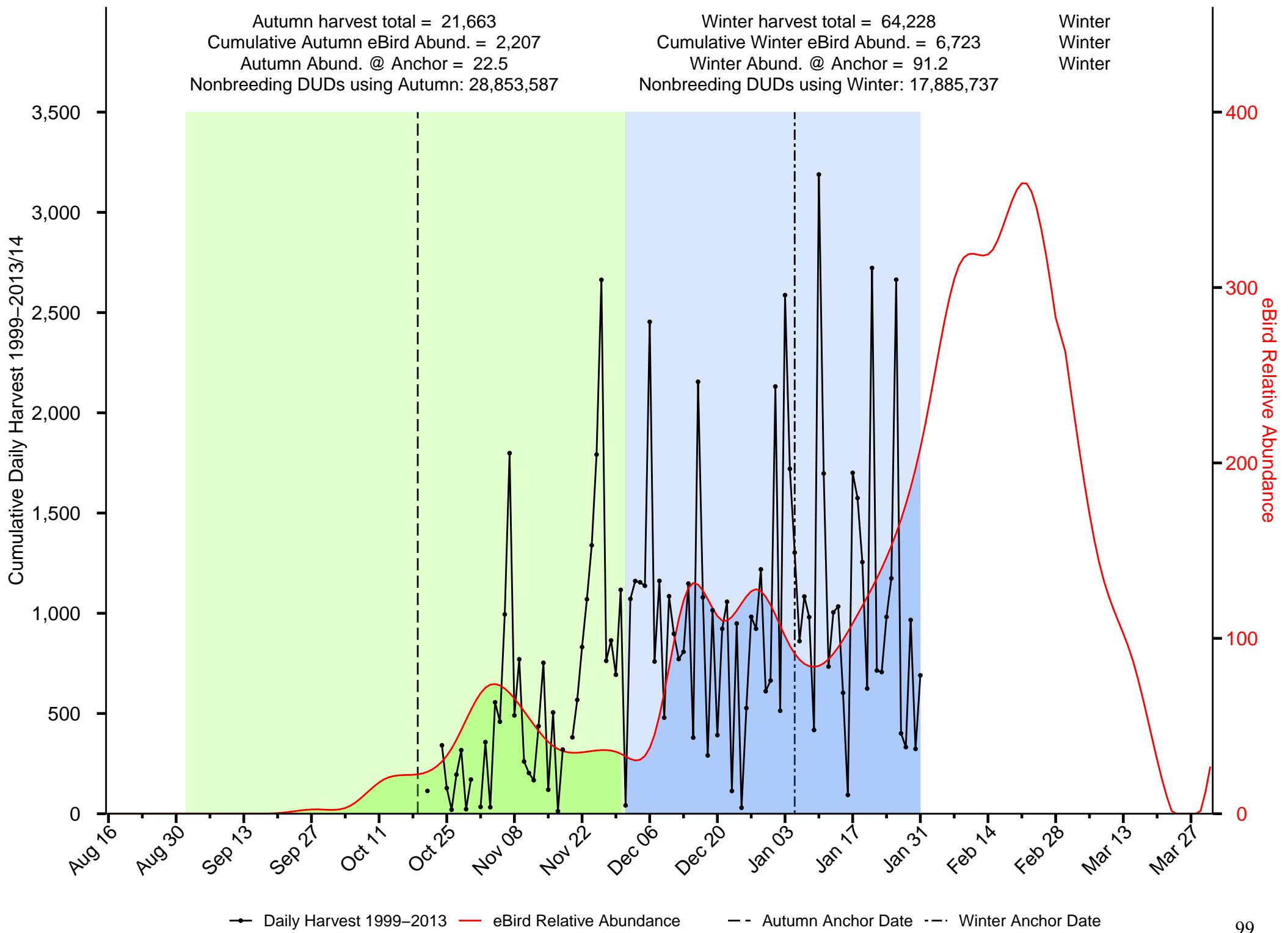
Summary of Mallard in the Central Hardwoods JV



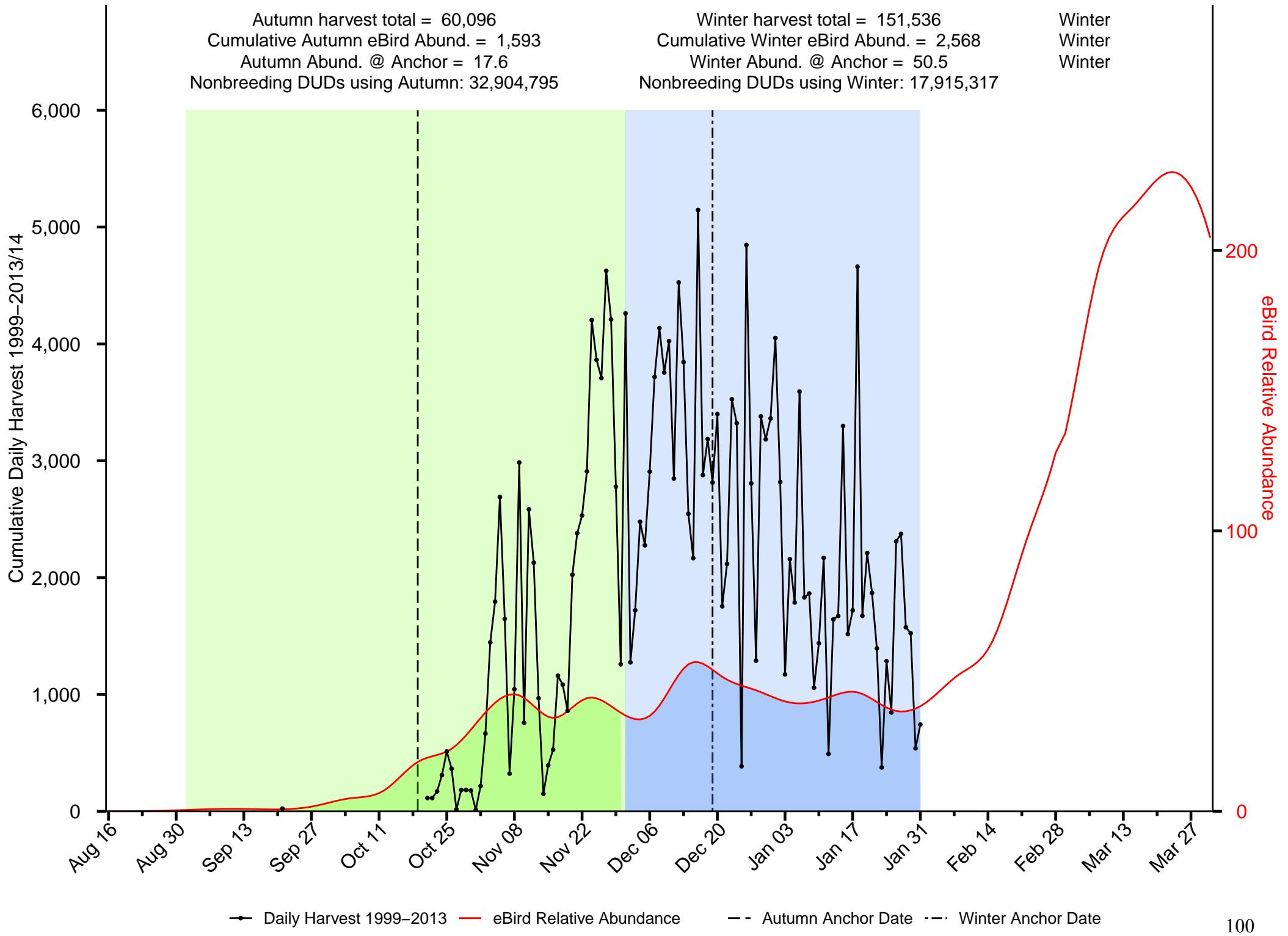
Summary of Merganser in the Central Hardwoods JV



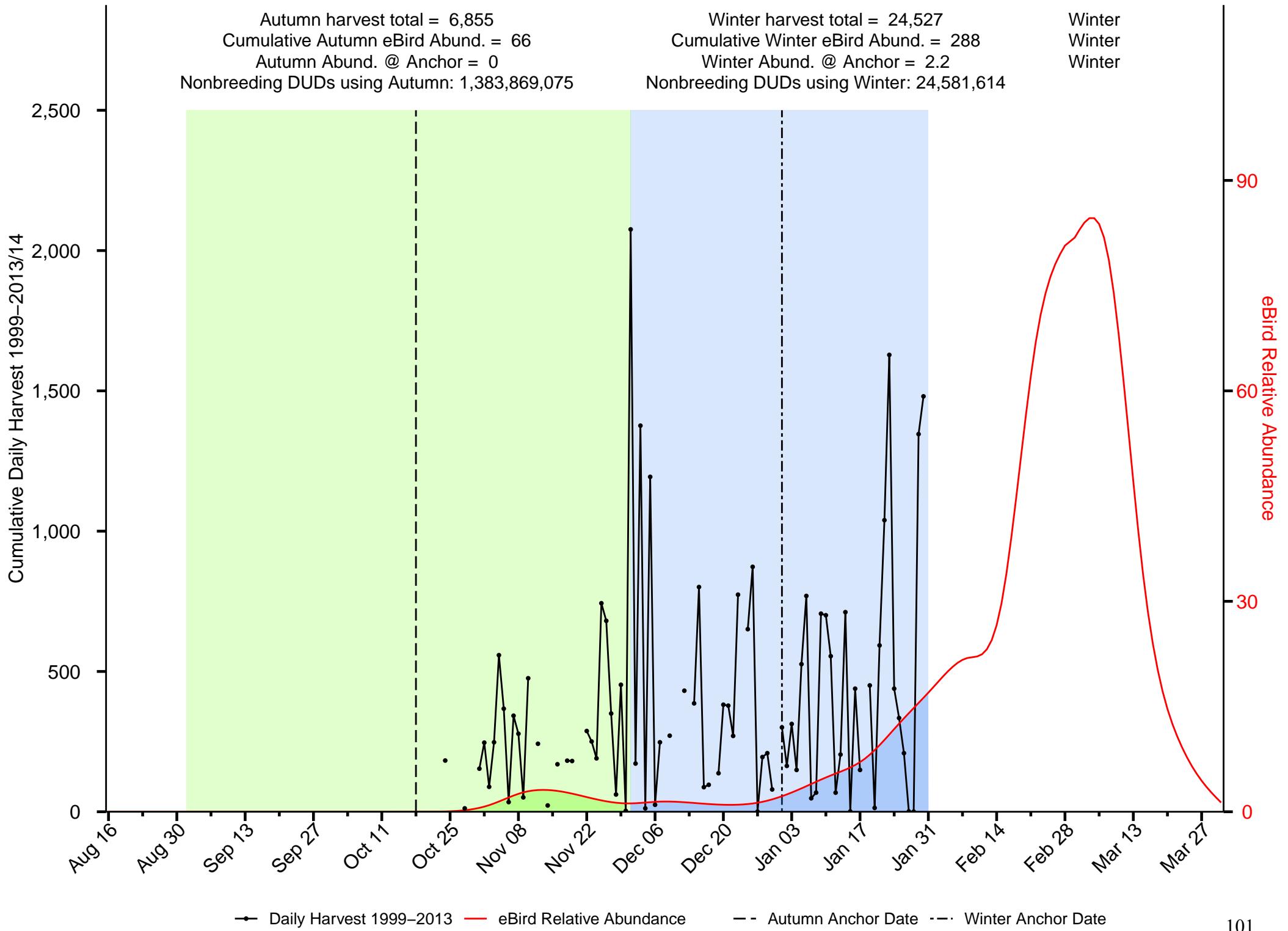
Summary of Northern Pintail in the Central Hardwoods JV



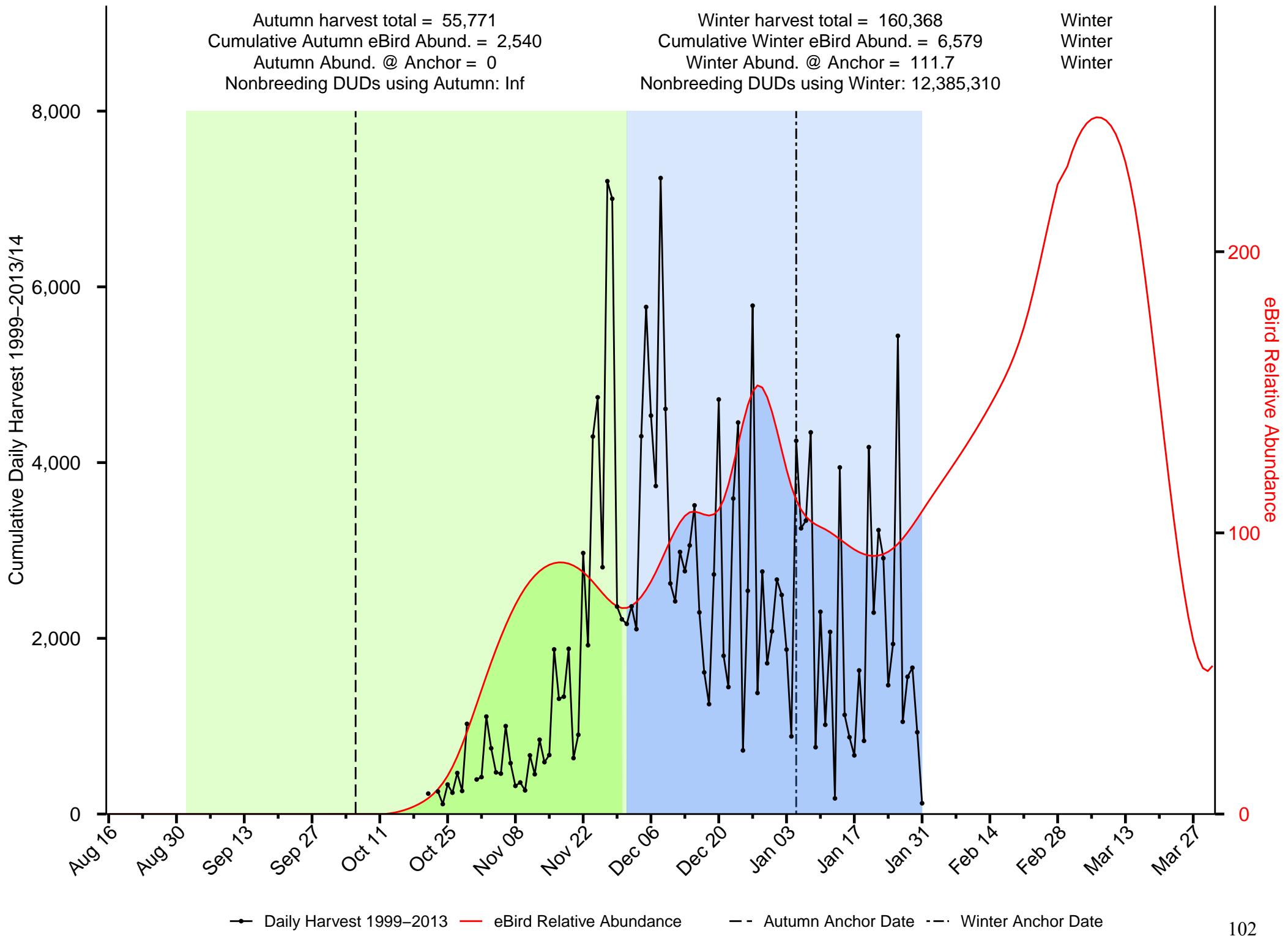
Summary of Northern Shoveler in the Central Hardwoods JV



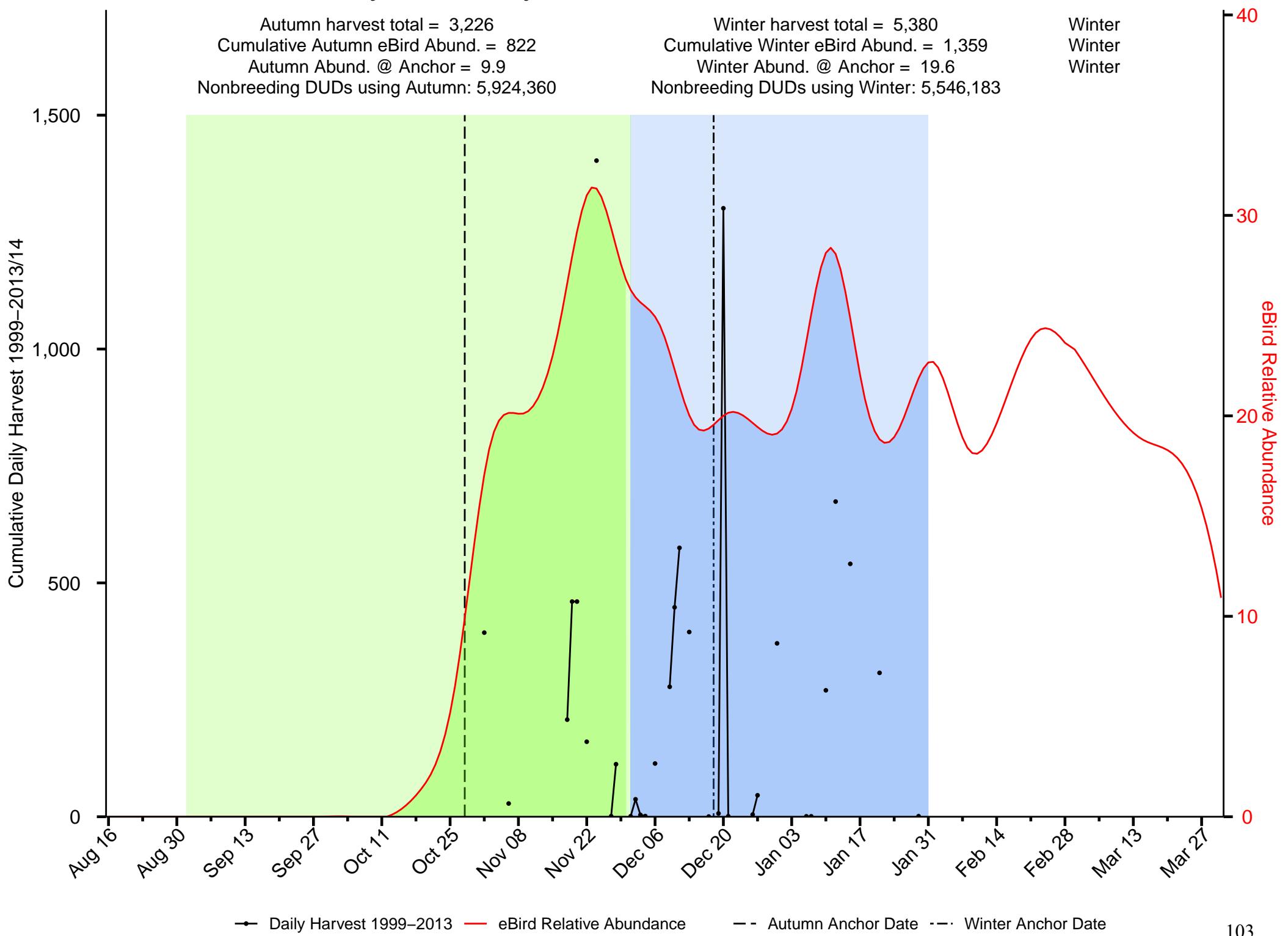
Summary of Redhead in the Central Hardwoods JV



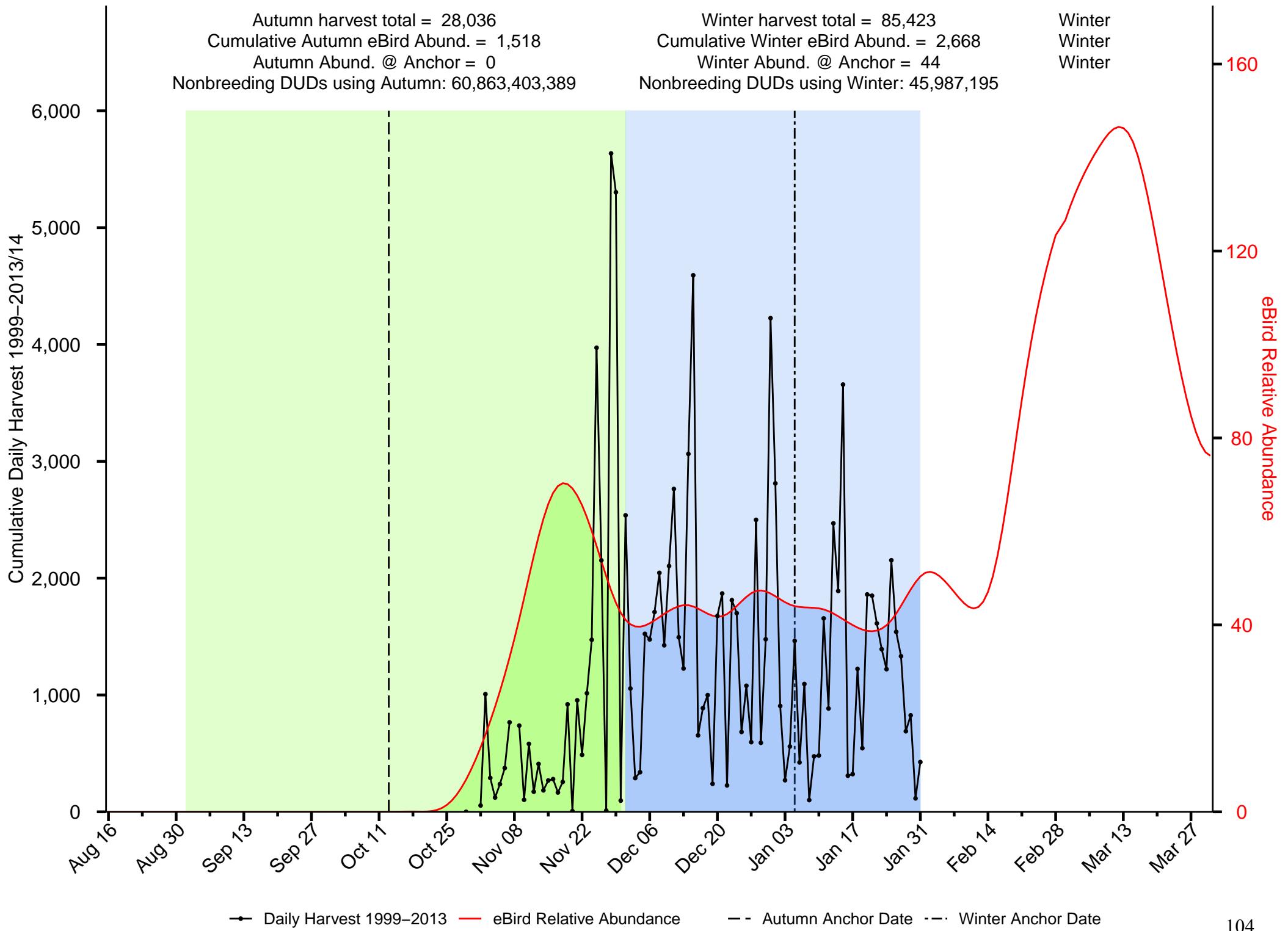
Summary of Ring-necked Duck in the Central Hardwoods JV



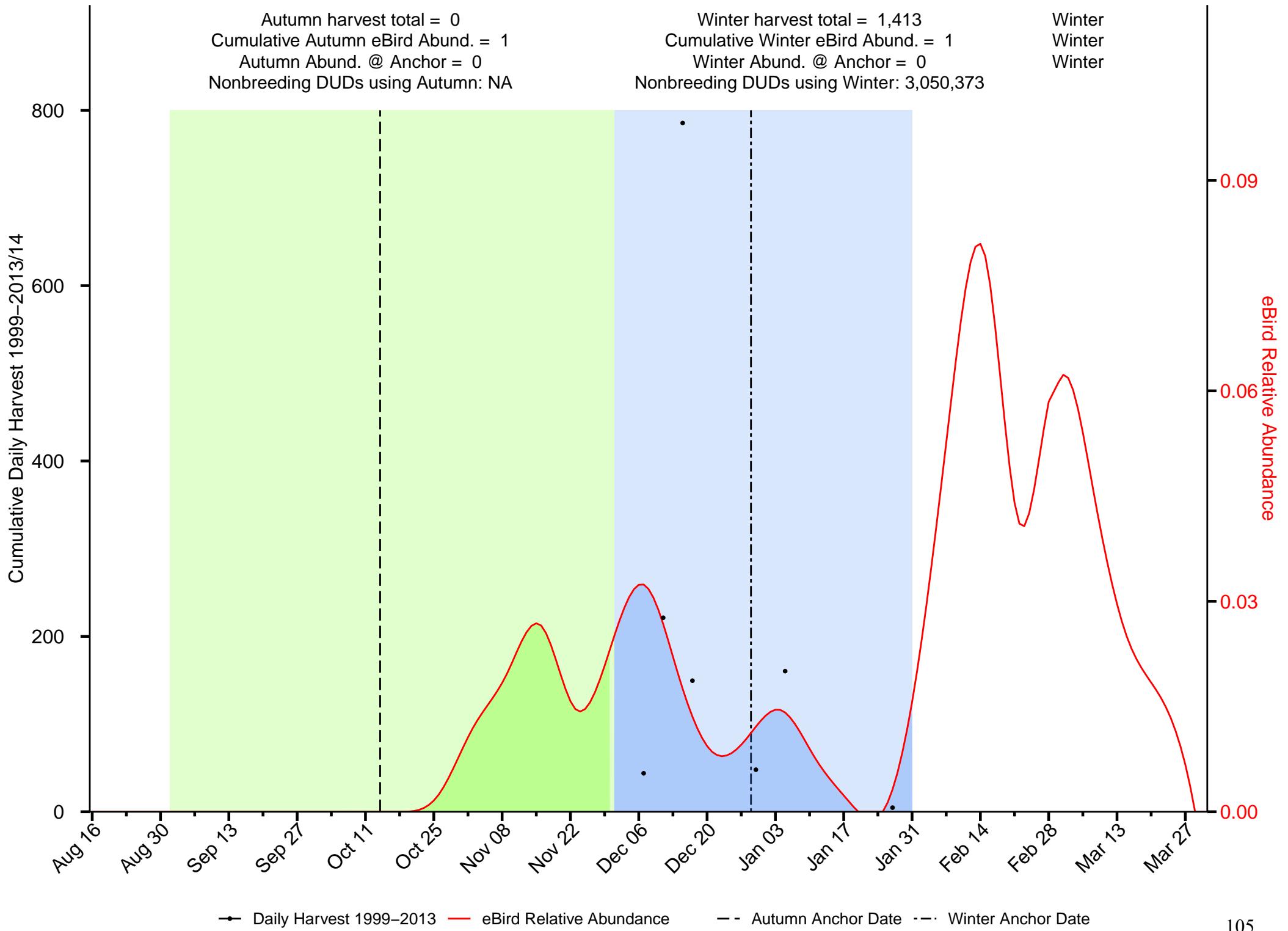
Summary of Ruddy Duck in the Central Hardwoods JV



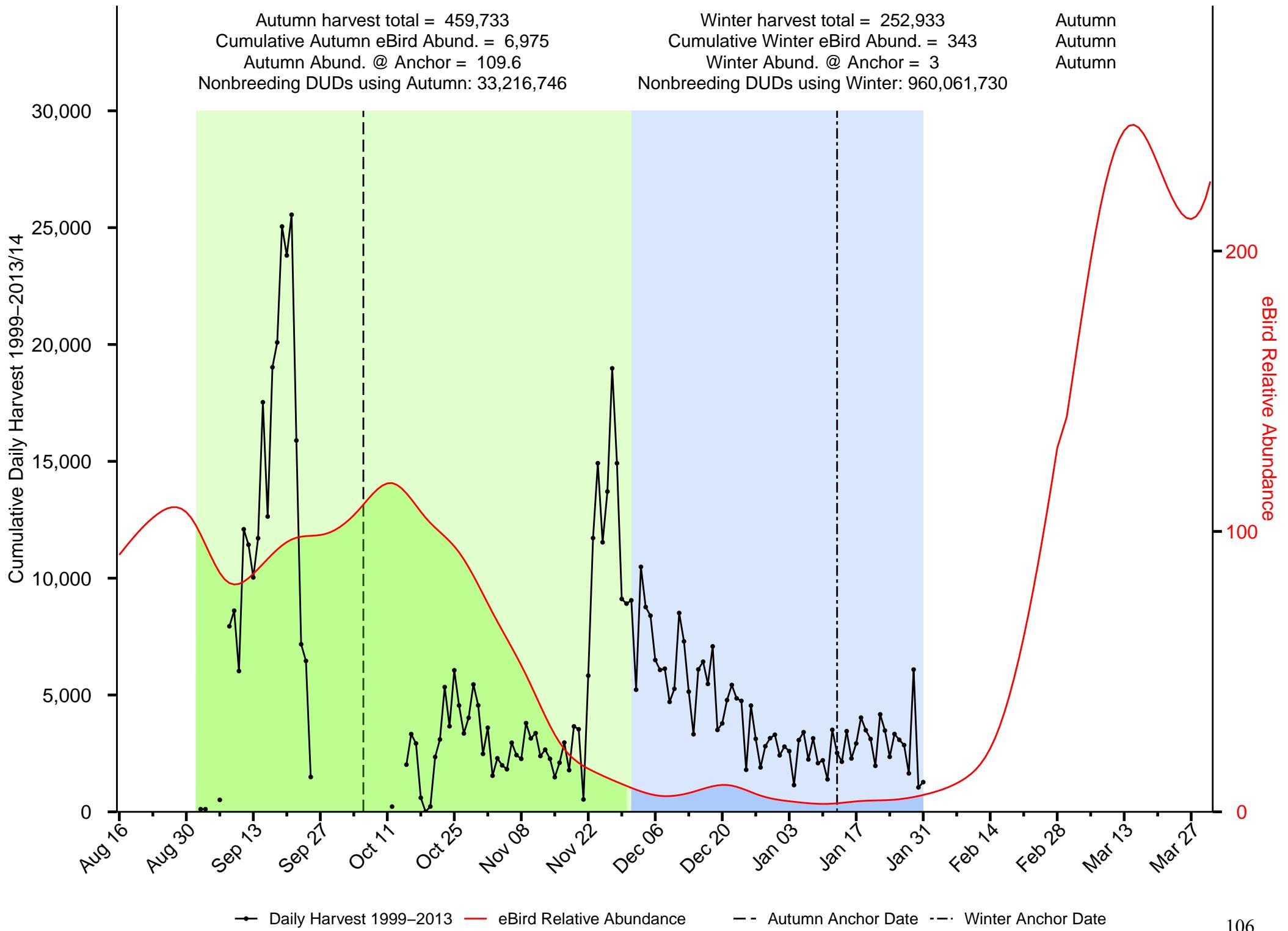
Summary of Scaup in the Central Hardwoods JV



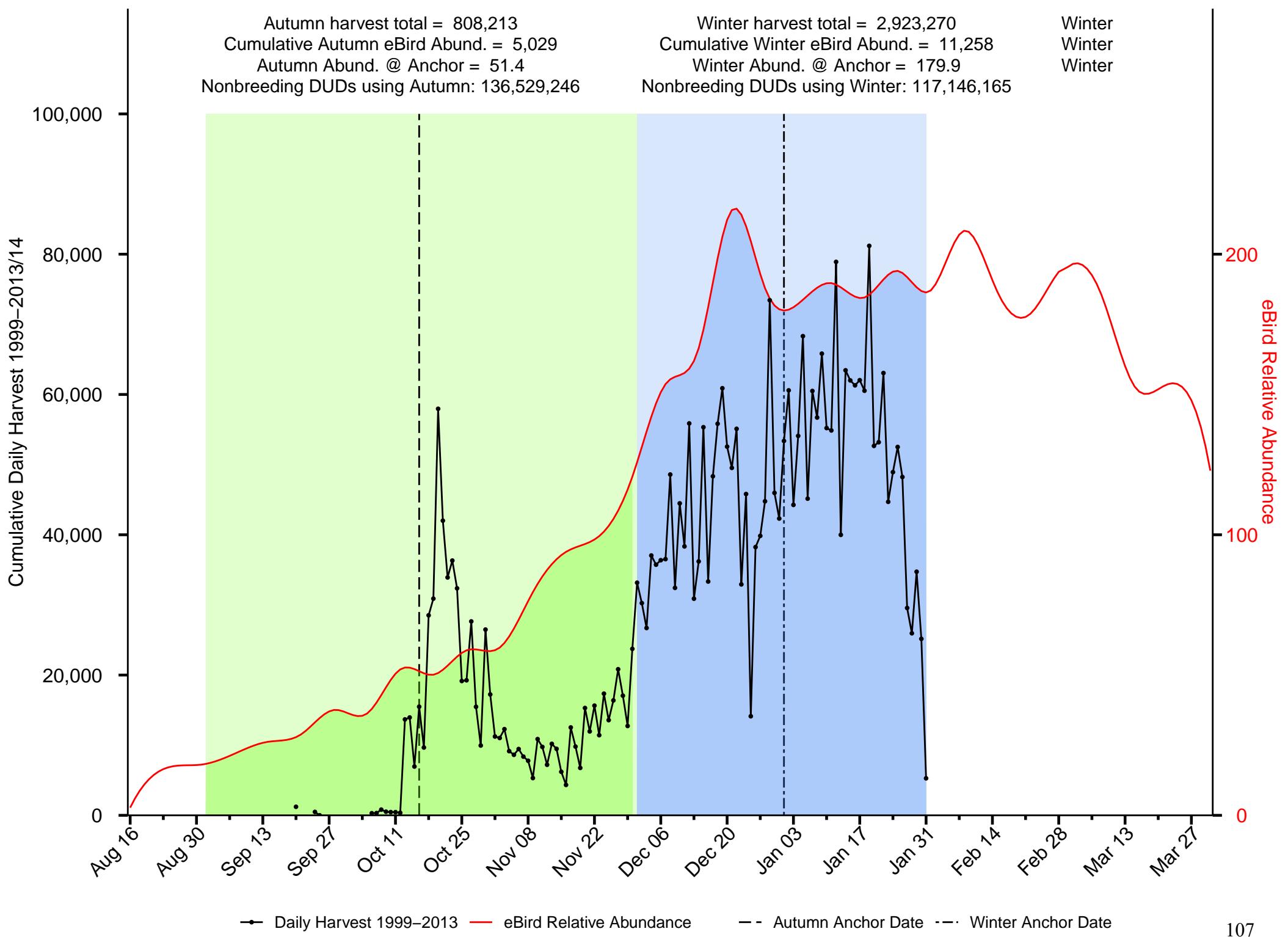
Summary of Scoter in the Central Hardwoods JV



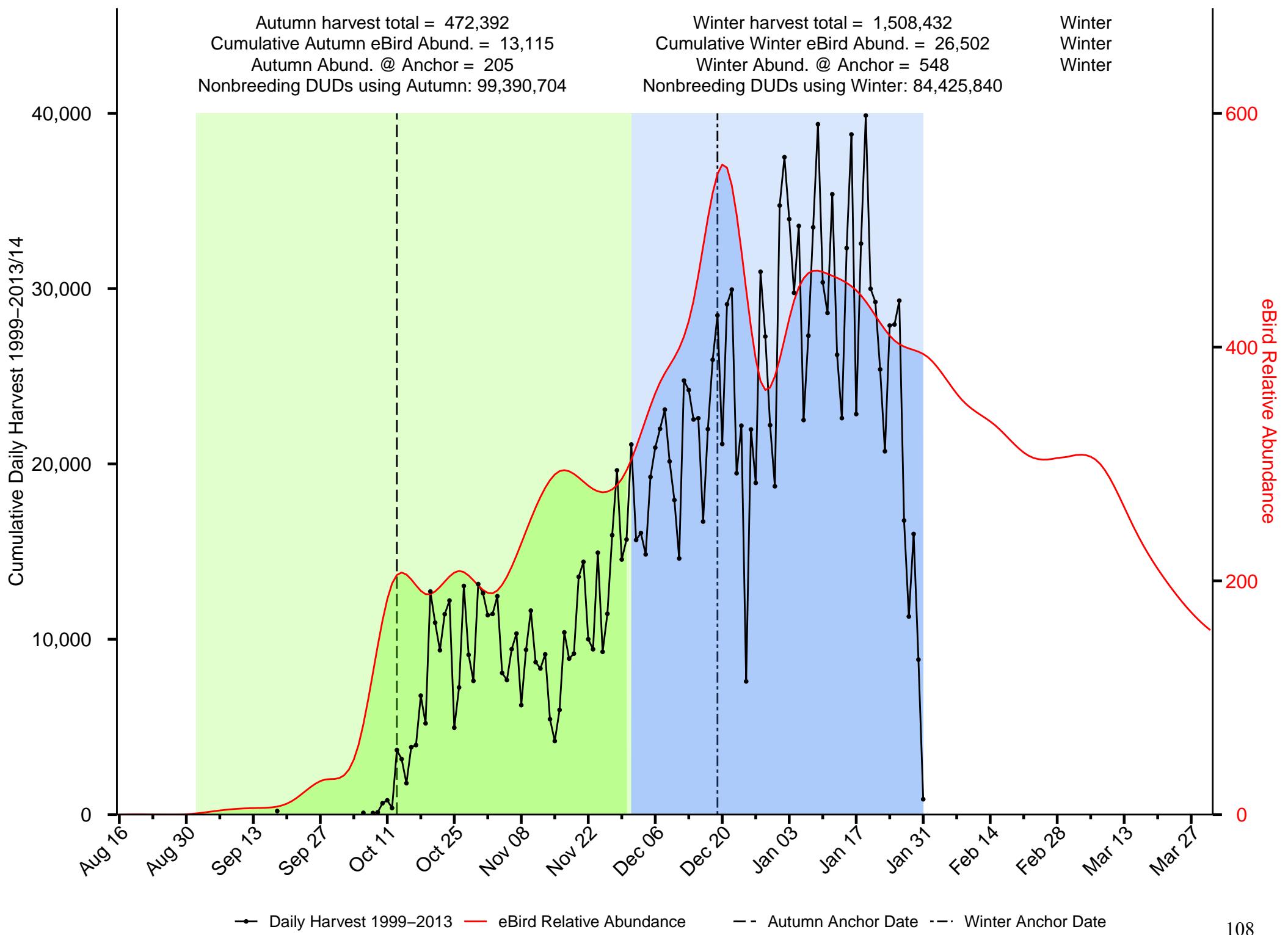
Summary of Wood Duck in the Central Hardwoods JV



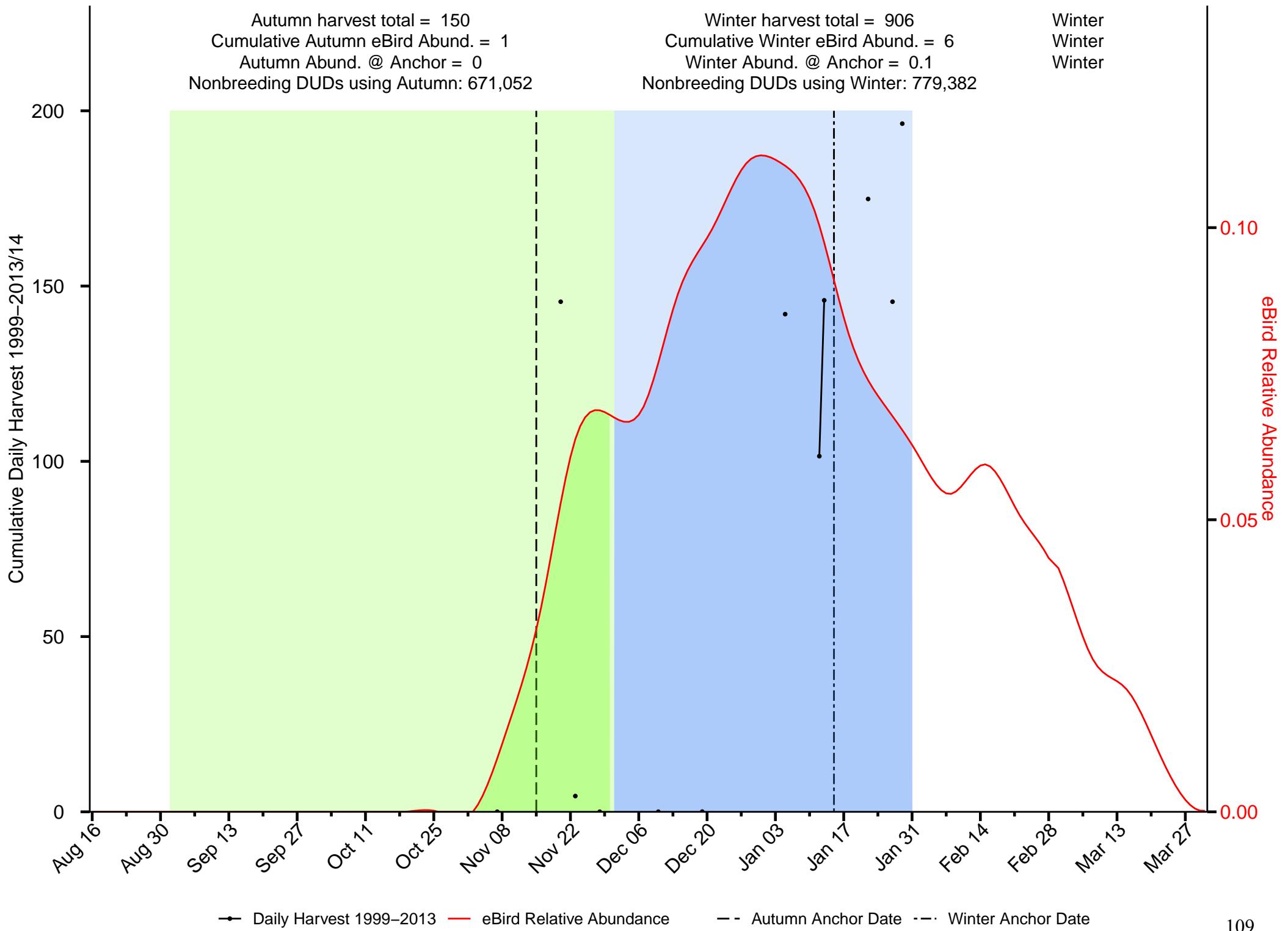
Summary of Green-winged Teal in the Central Valley JV



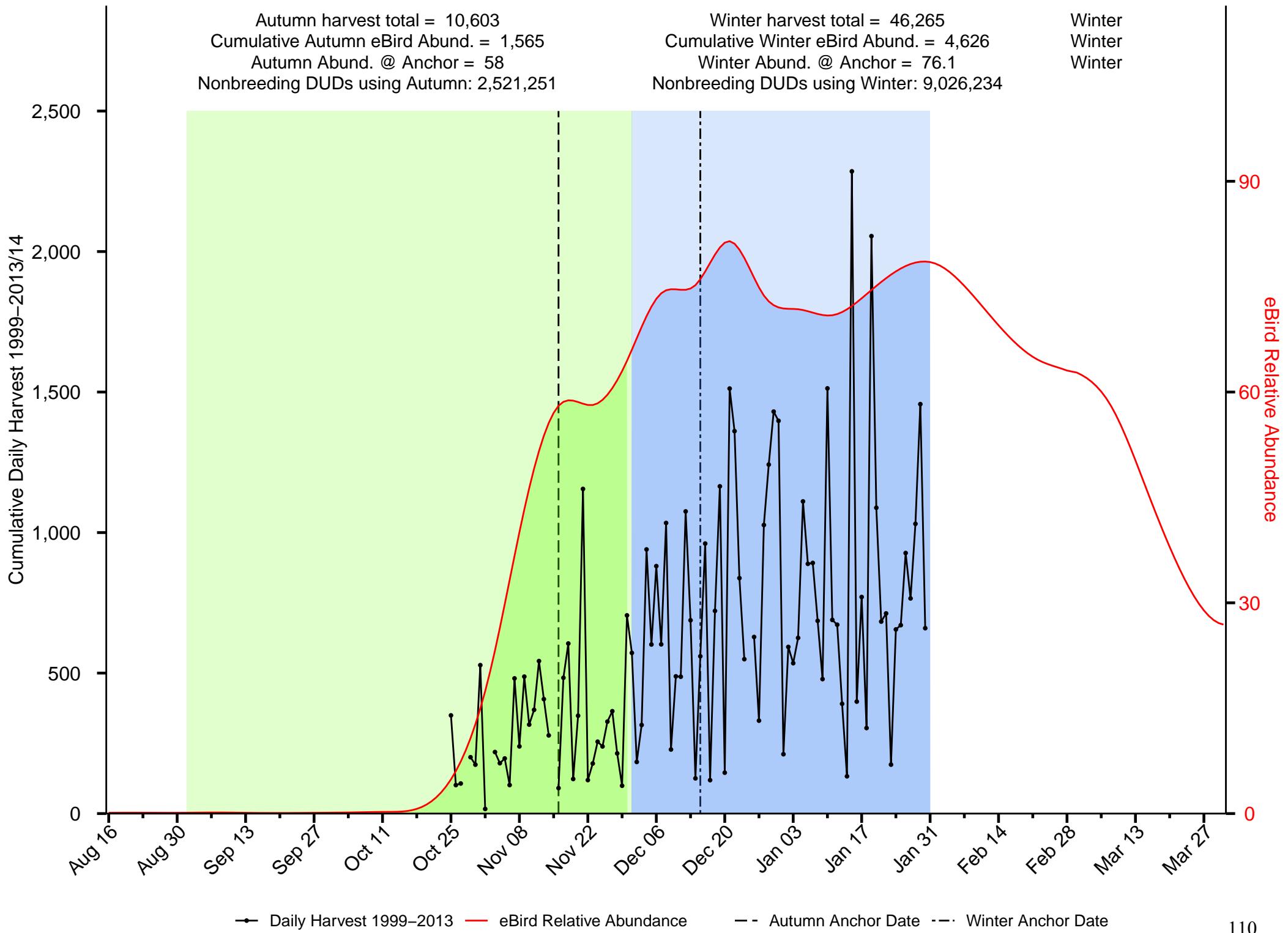
Summary of American Wigeon in the Central Valley JV



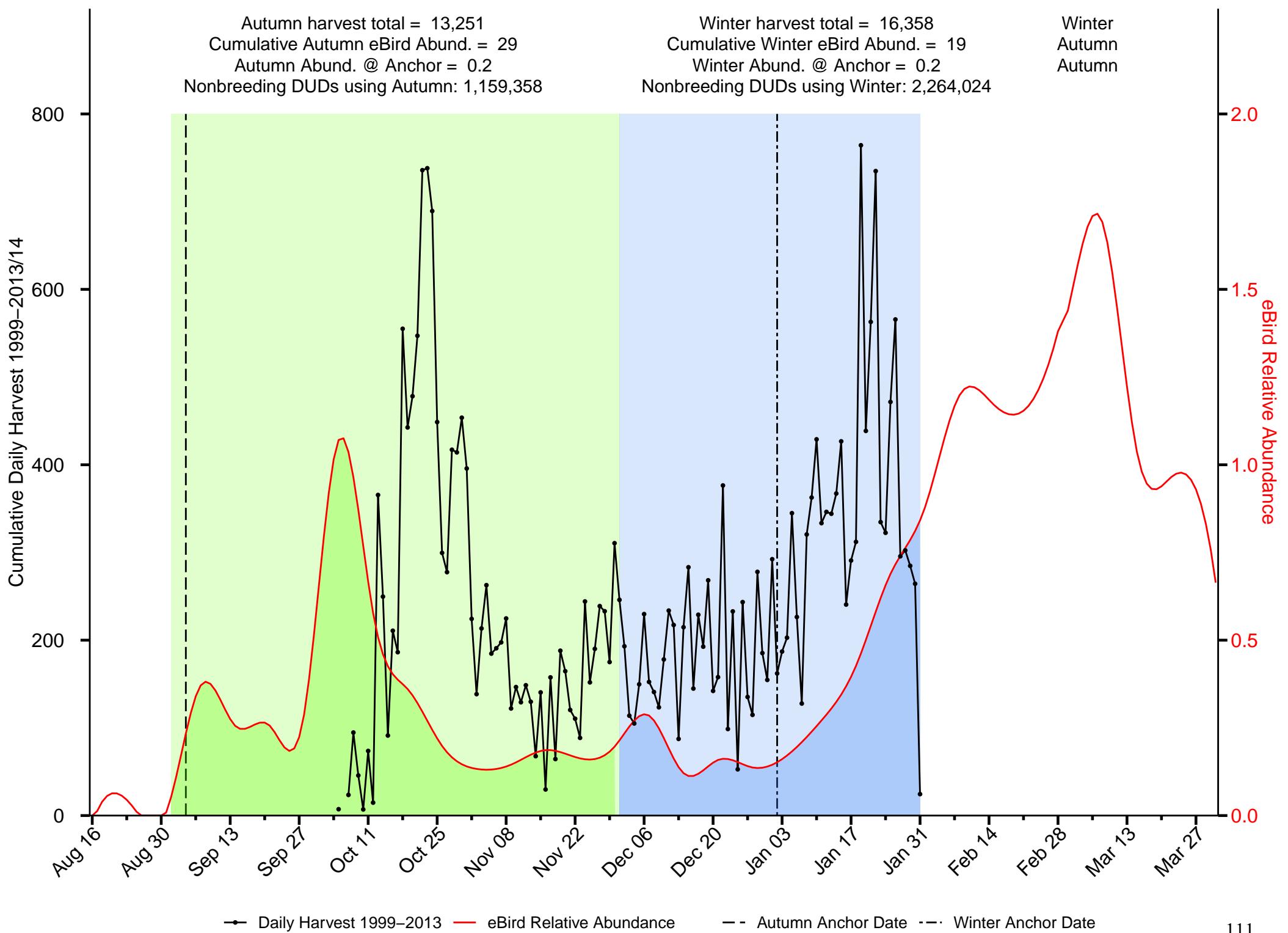
Summary of Barrow's Goldeneye in the Central Valley JV



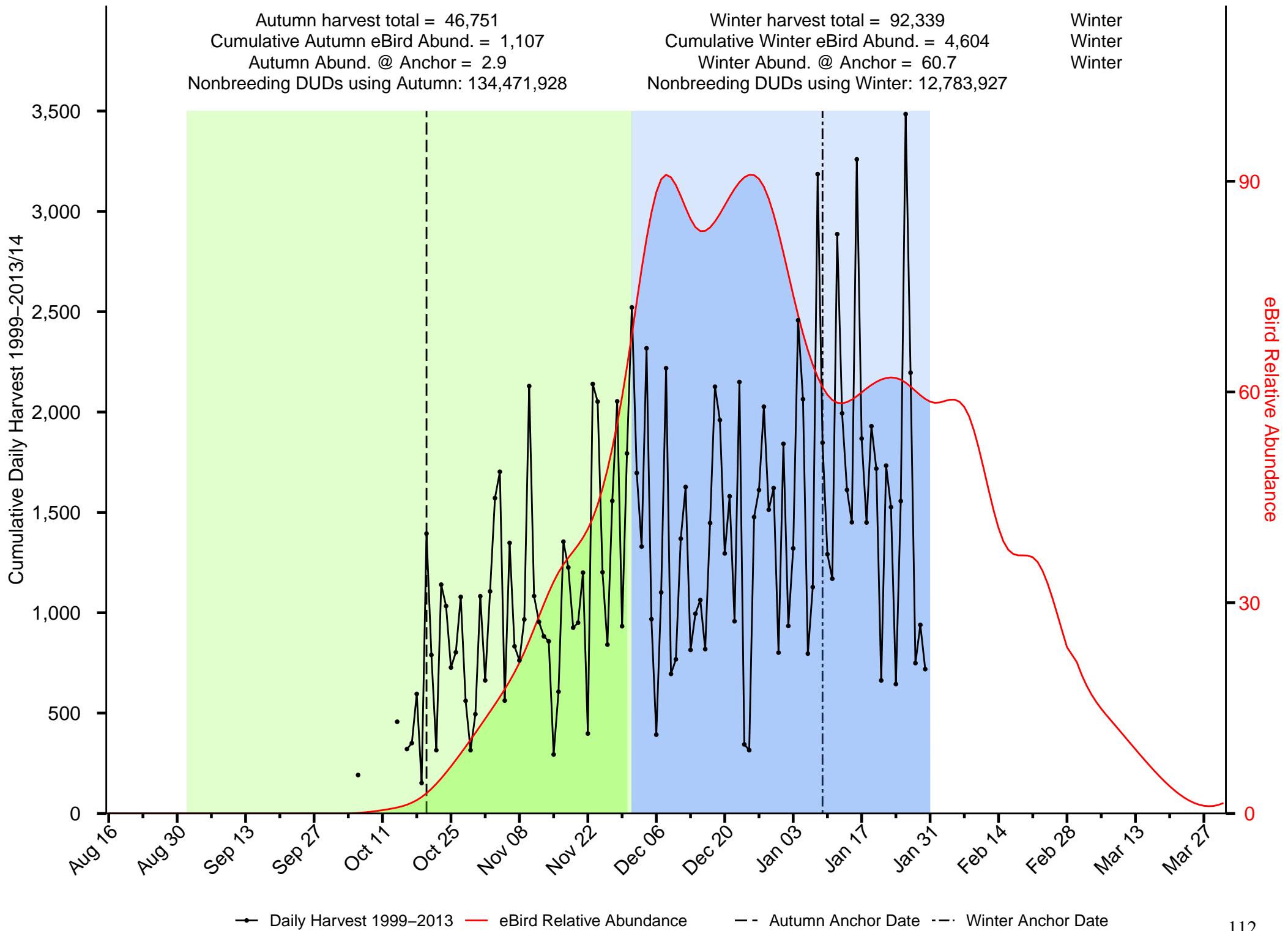
Summary of Bufflehead in the Central Valley JV



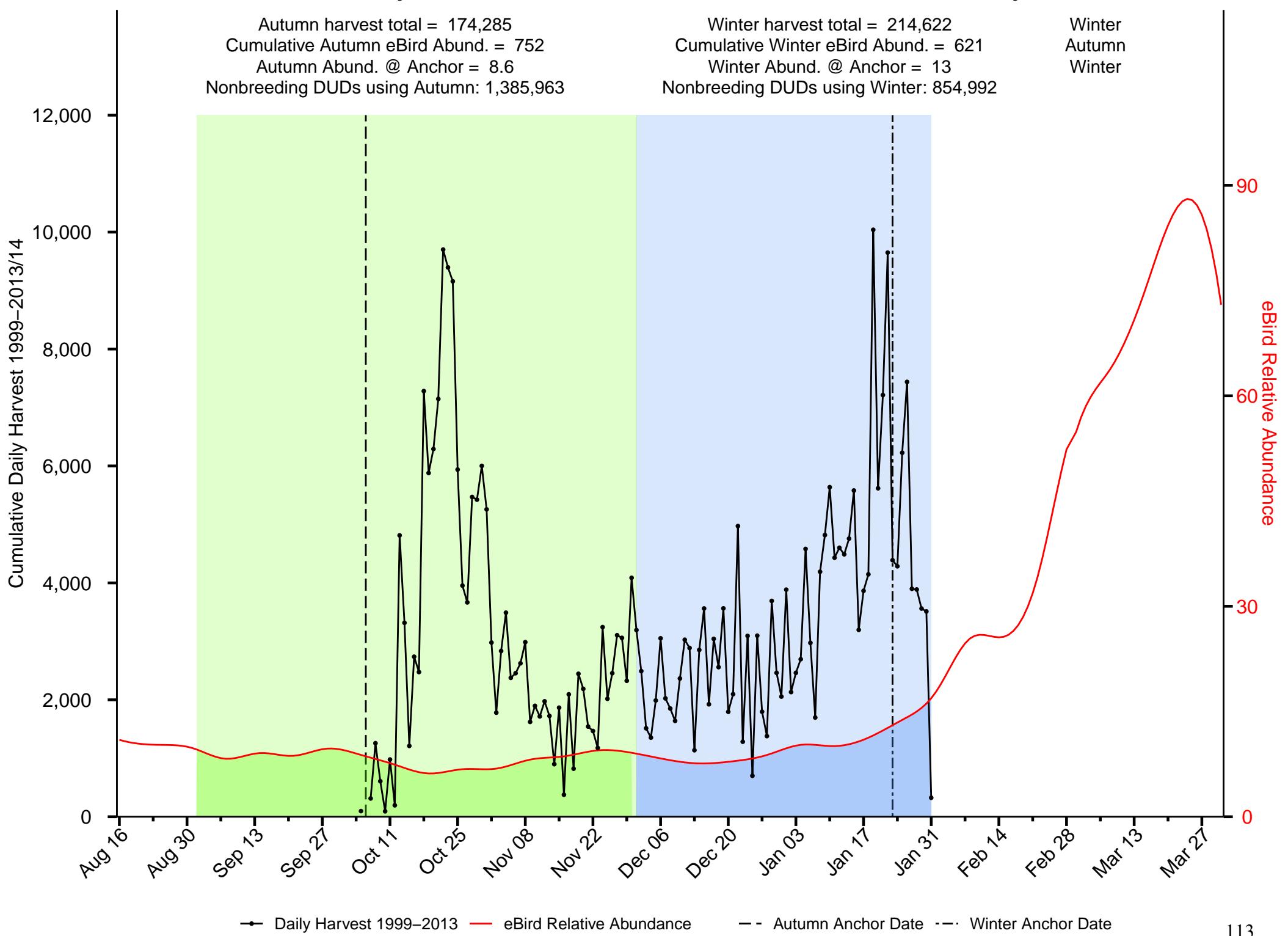
Summary of Blue-winged Teal in the Central Valley JV



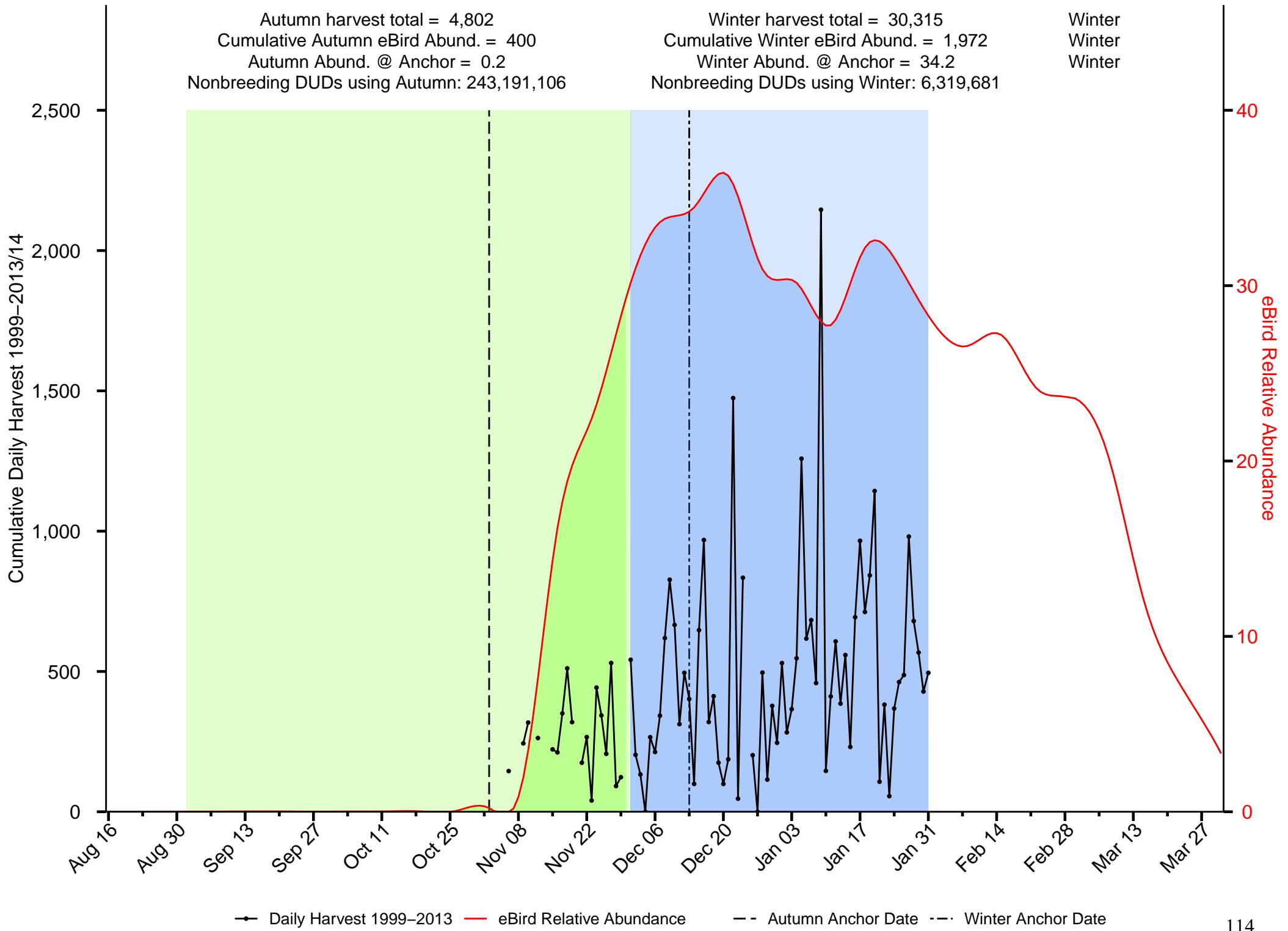
Summary of Canvasback in the Central Valley JV



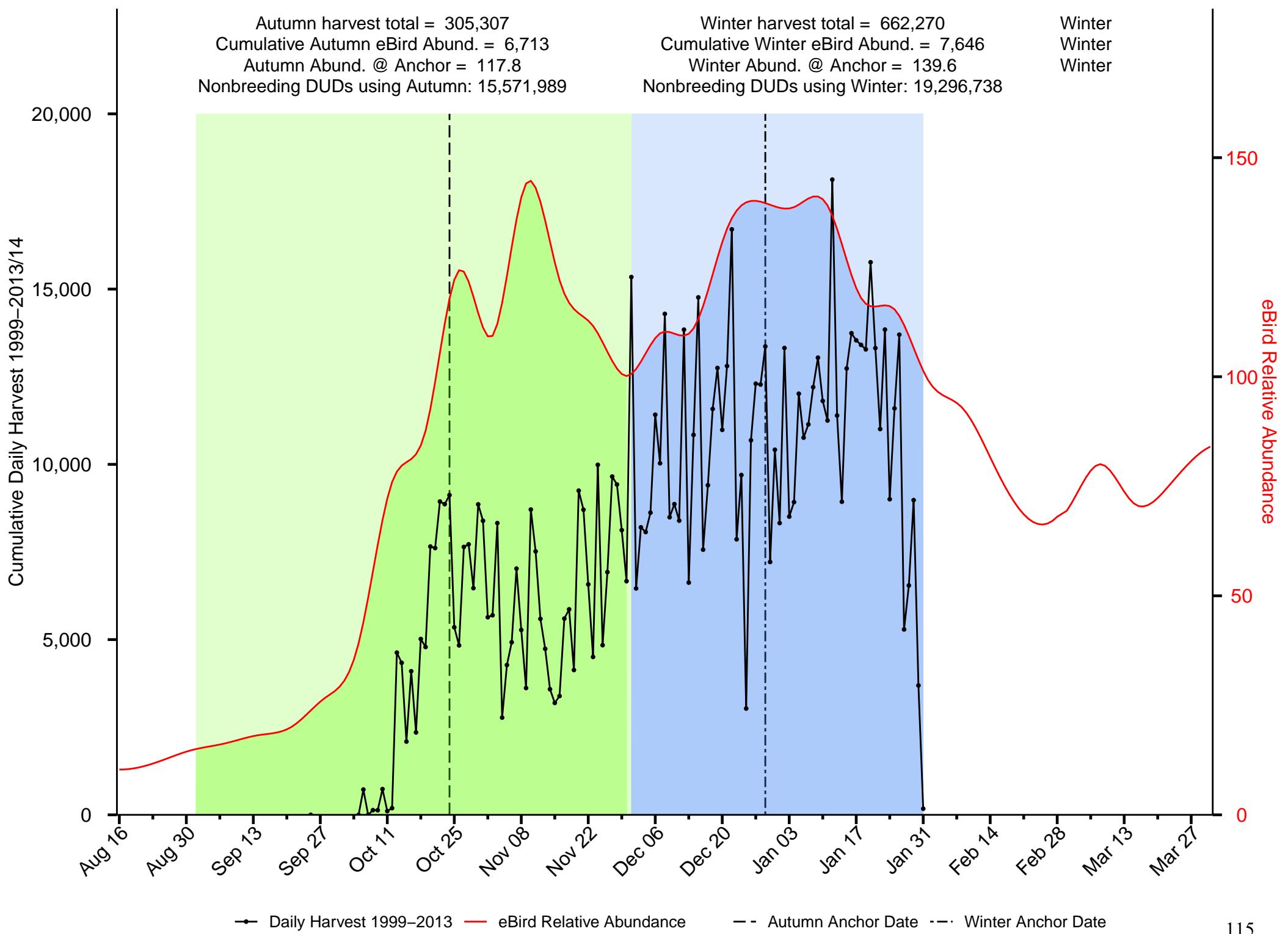
Summary of Cinnamon Teal in the Central Valley JV



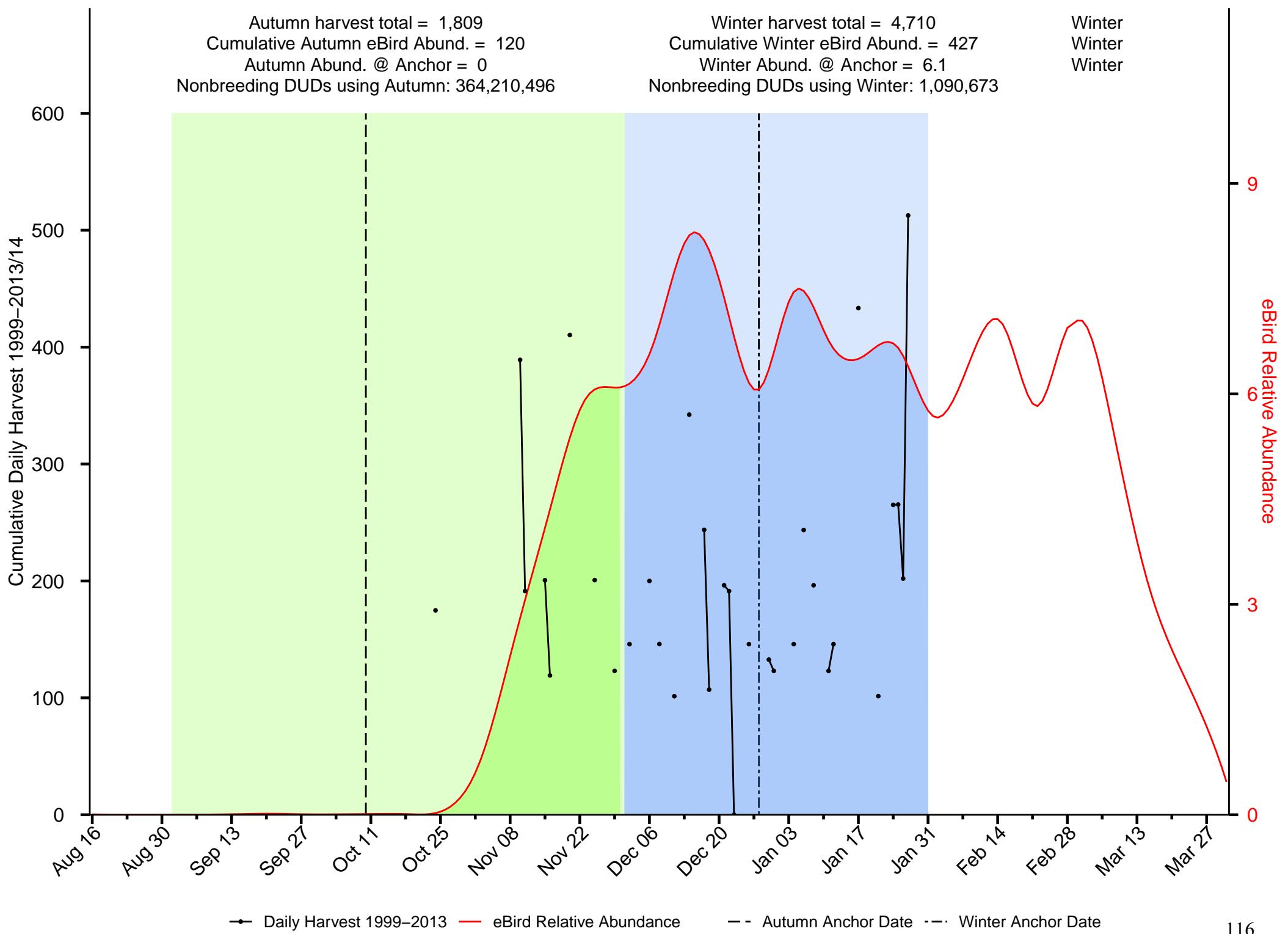
Summary of Common Goldeneye in the Central Valley JV



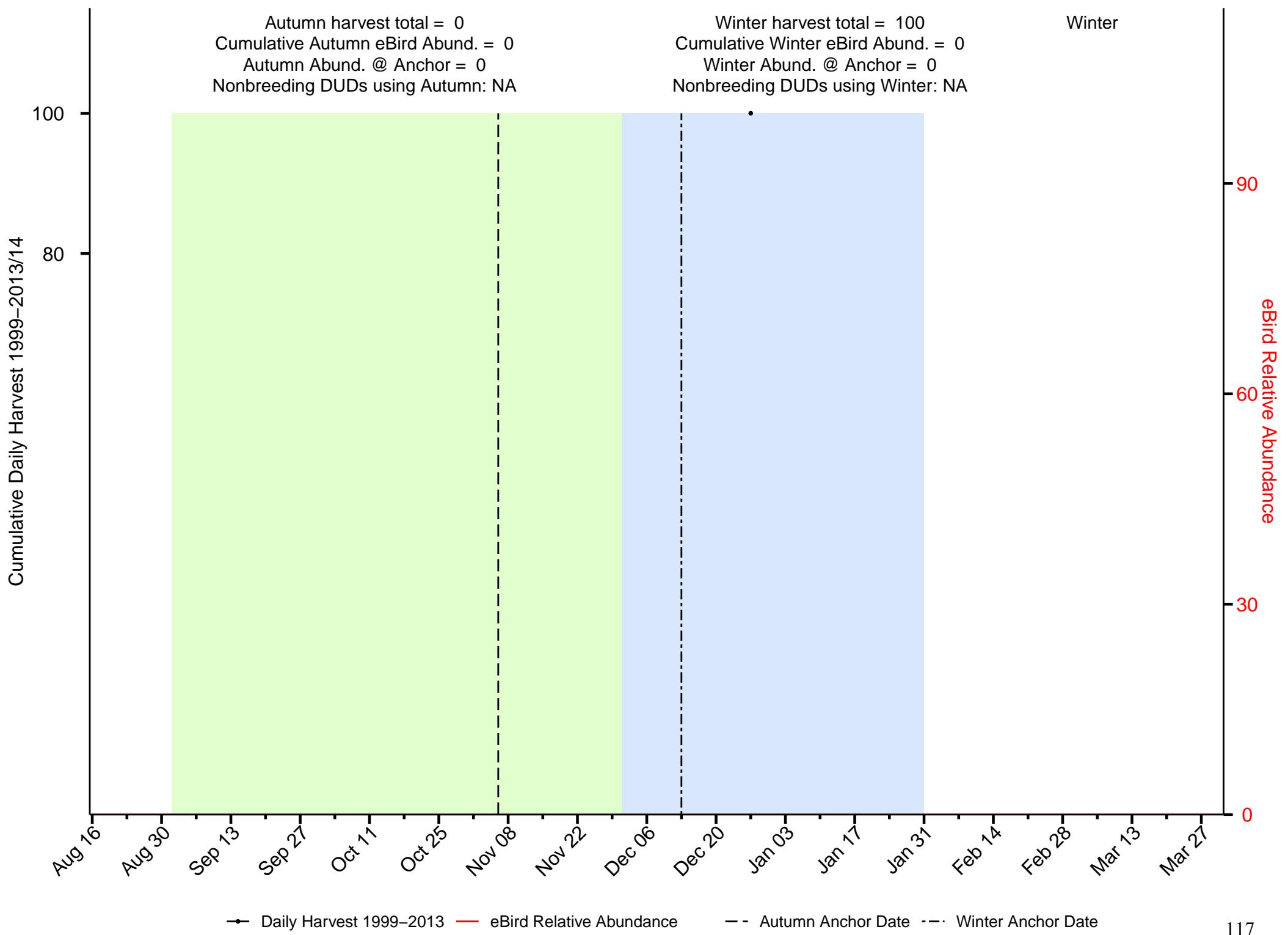
Summary of Gadwall in the Central Valley JV



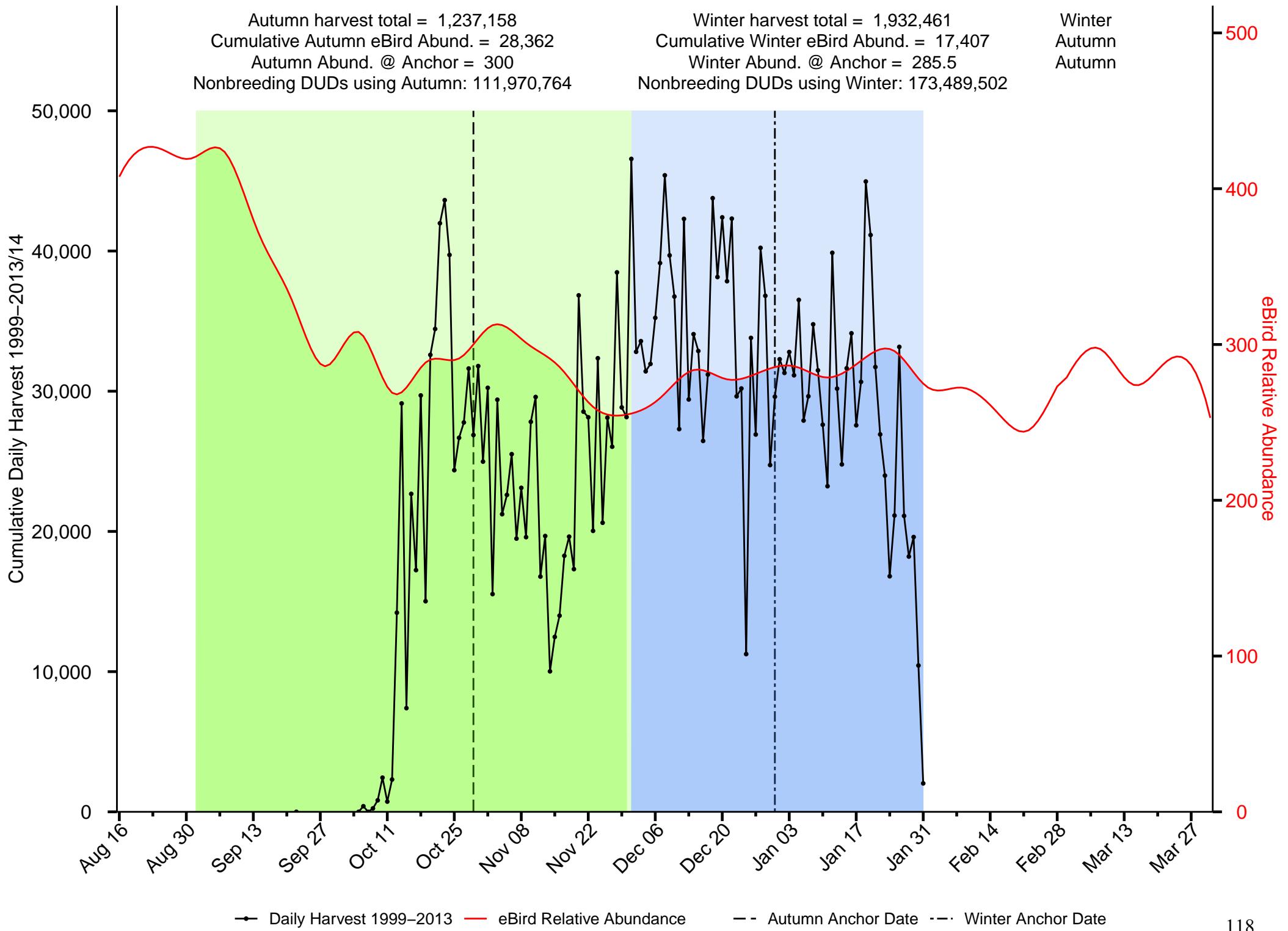
Summary of Hooded Merganser in the Central Valley JV



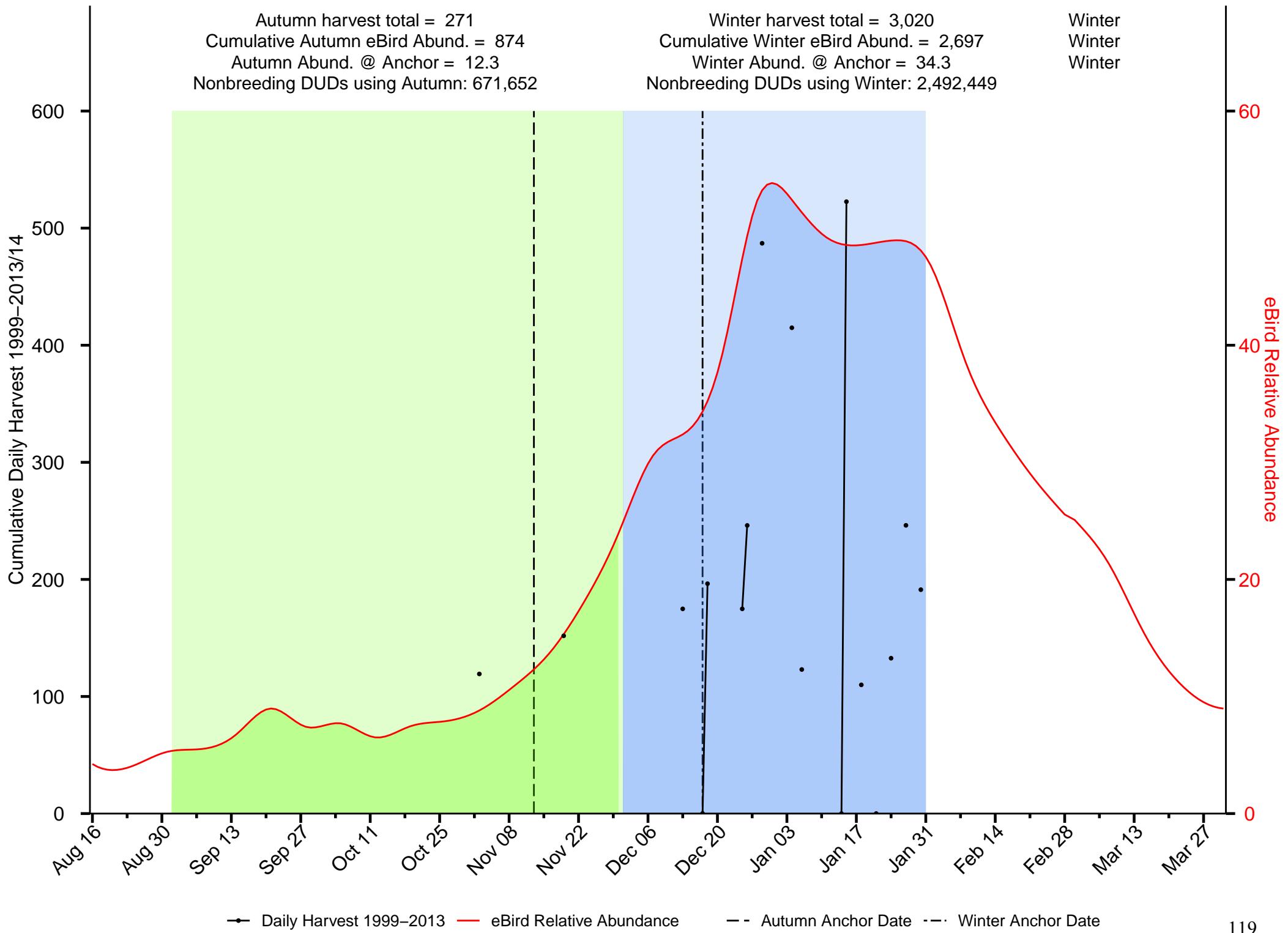
Summary of Long-tailed Duck in the Central Valley JV



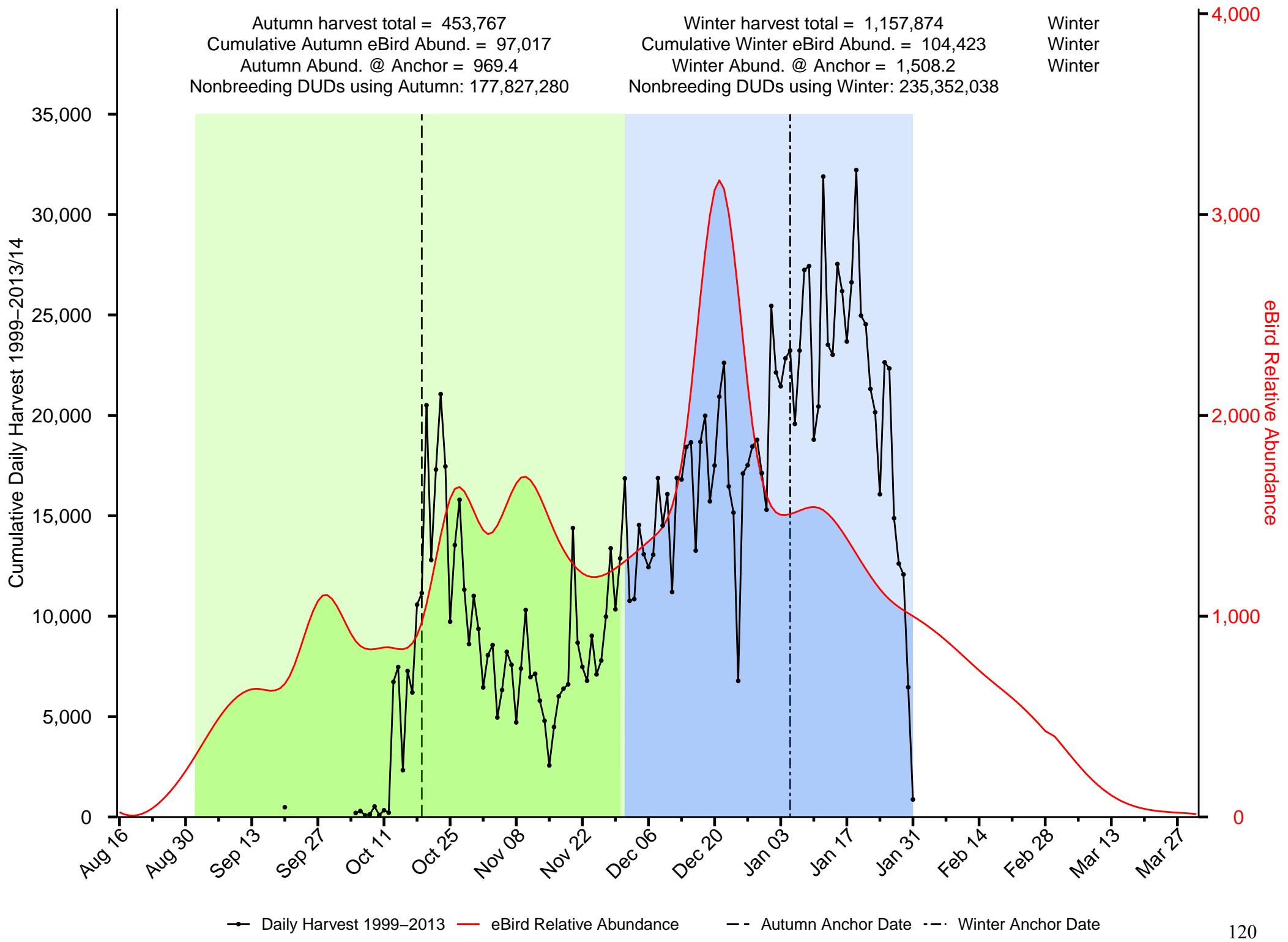
Summary of Mallard in the Central Valley JV



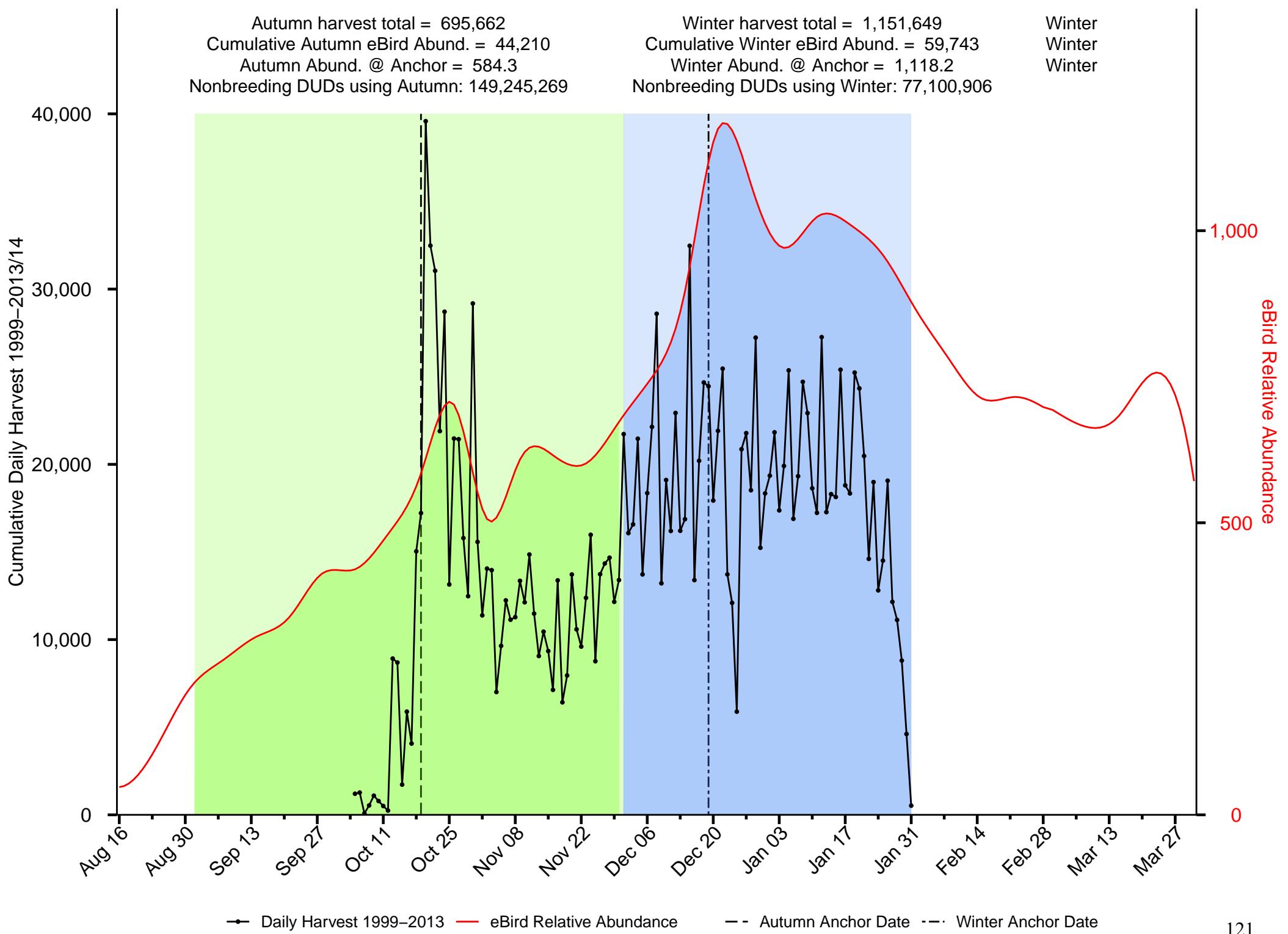
Summary of Merganser in the Central Valley JV



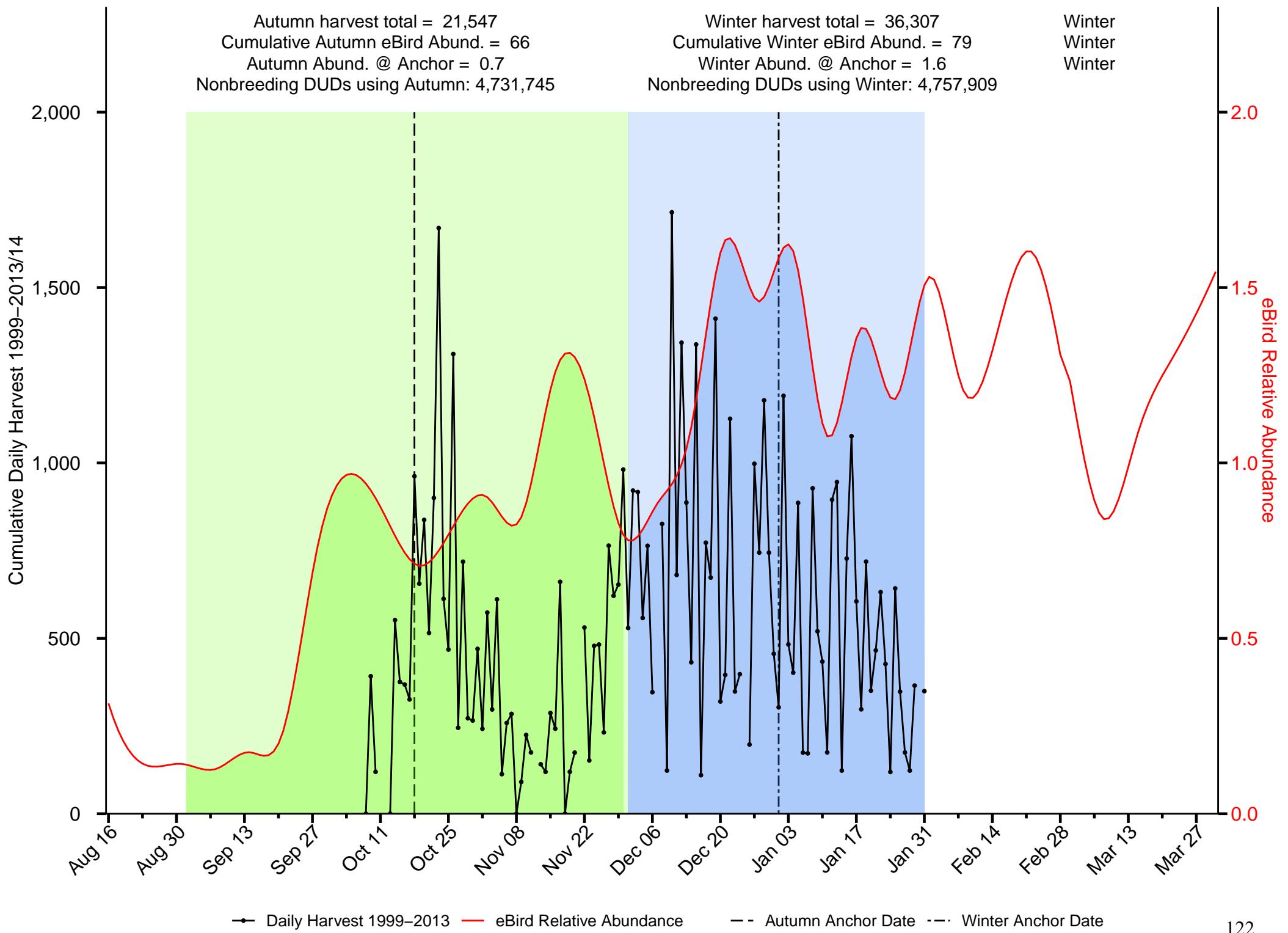
Summary of Northern Pintail in the Central Valley JV



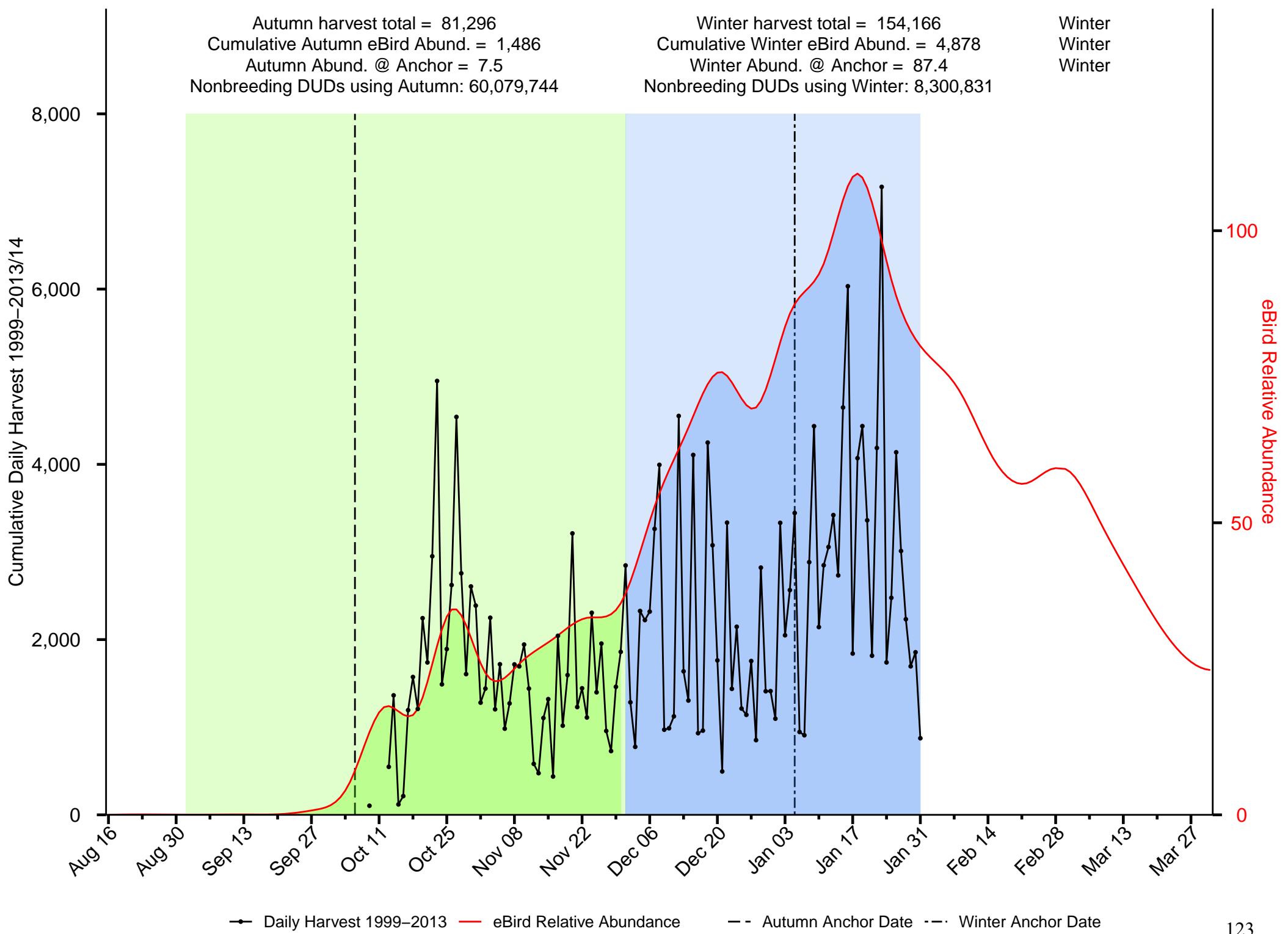
Summary of Northern Shoveler in the Central Valley JV



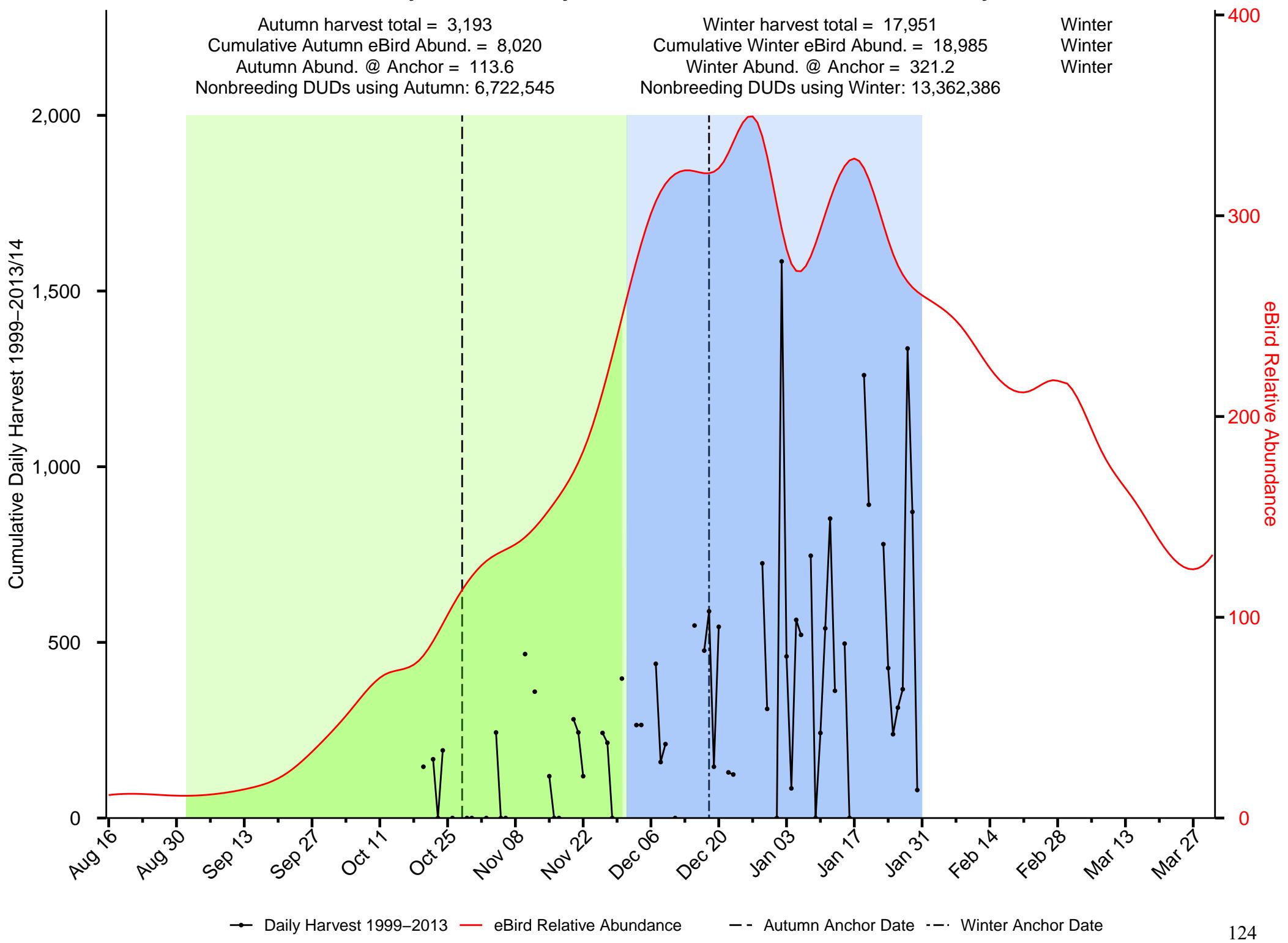
Summary of Redhead in the Central Valley JV



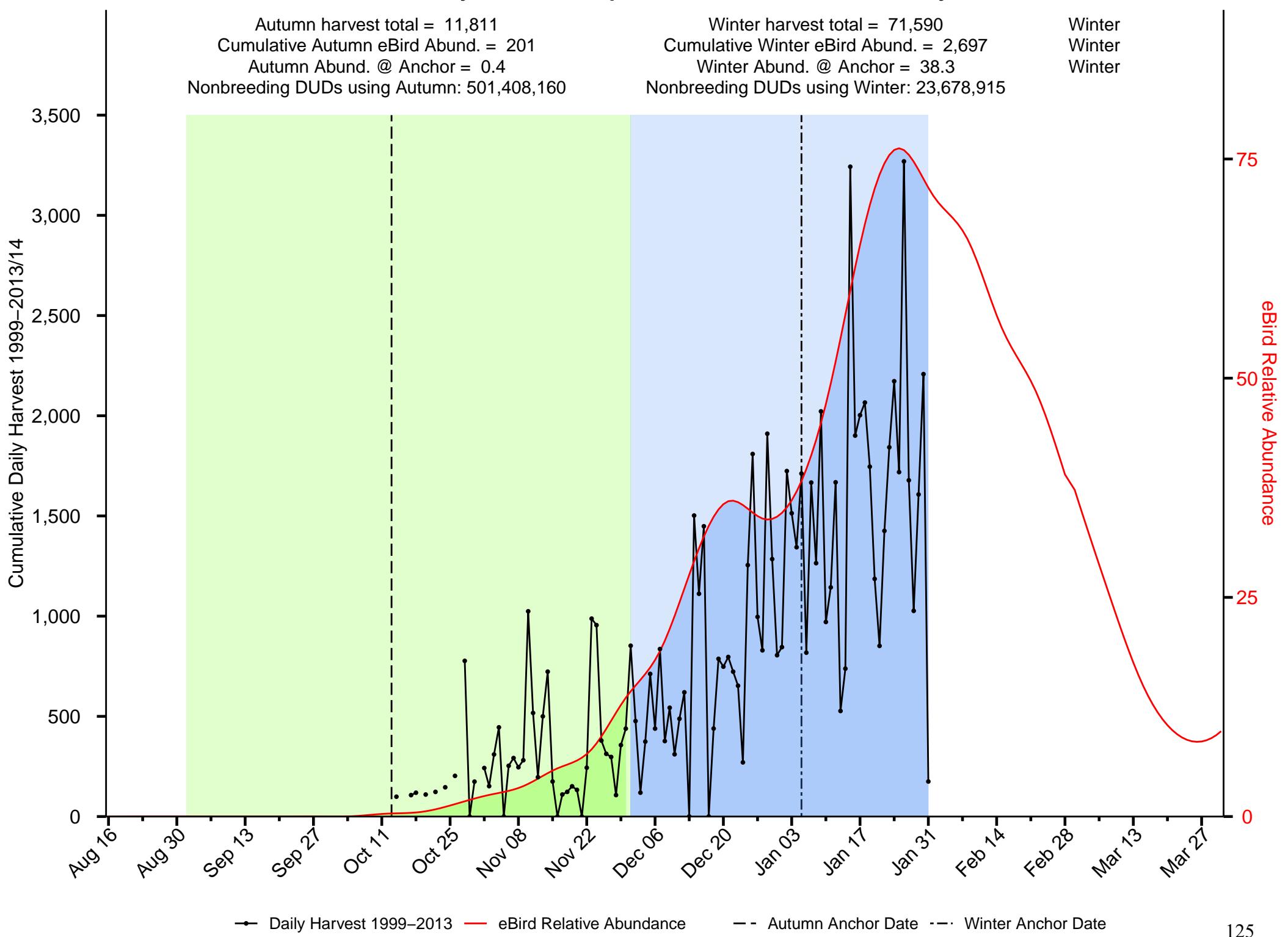
Summary of Ring-necked Duck in the Central Valley JV



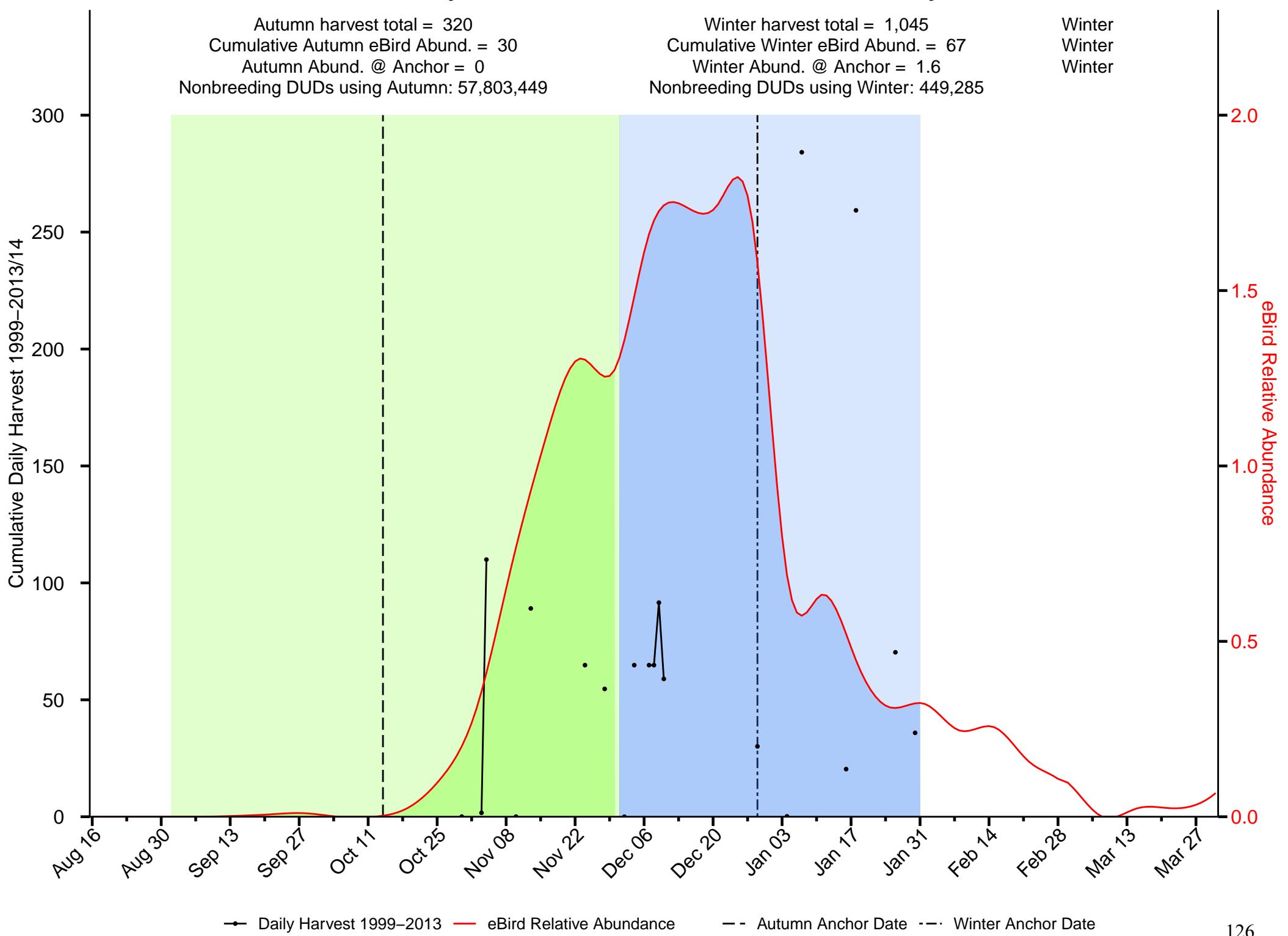
Summary of Ruddy Duck in the Central Valley JV



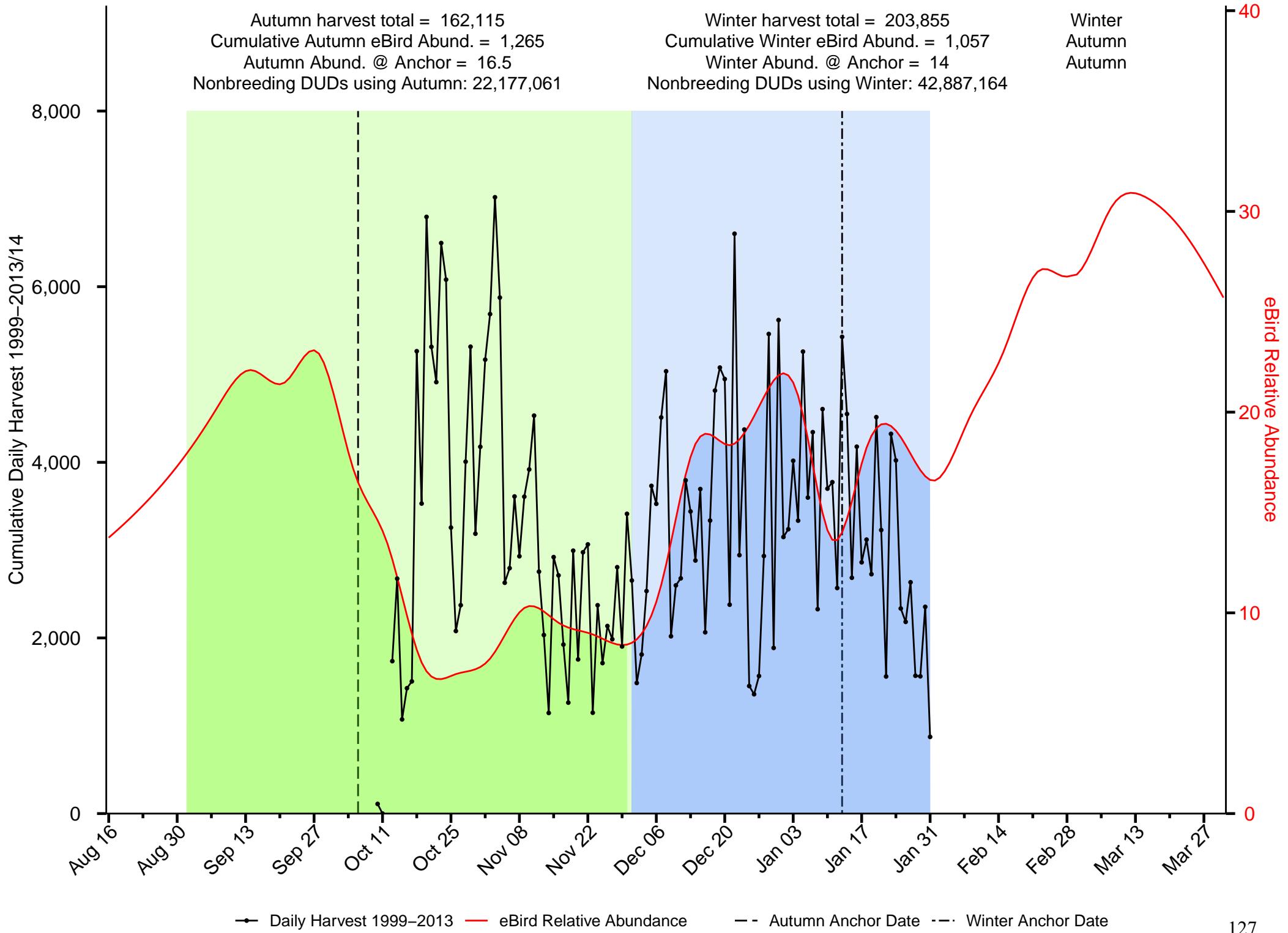
Summary of Scaup in the Central Valley JV



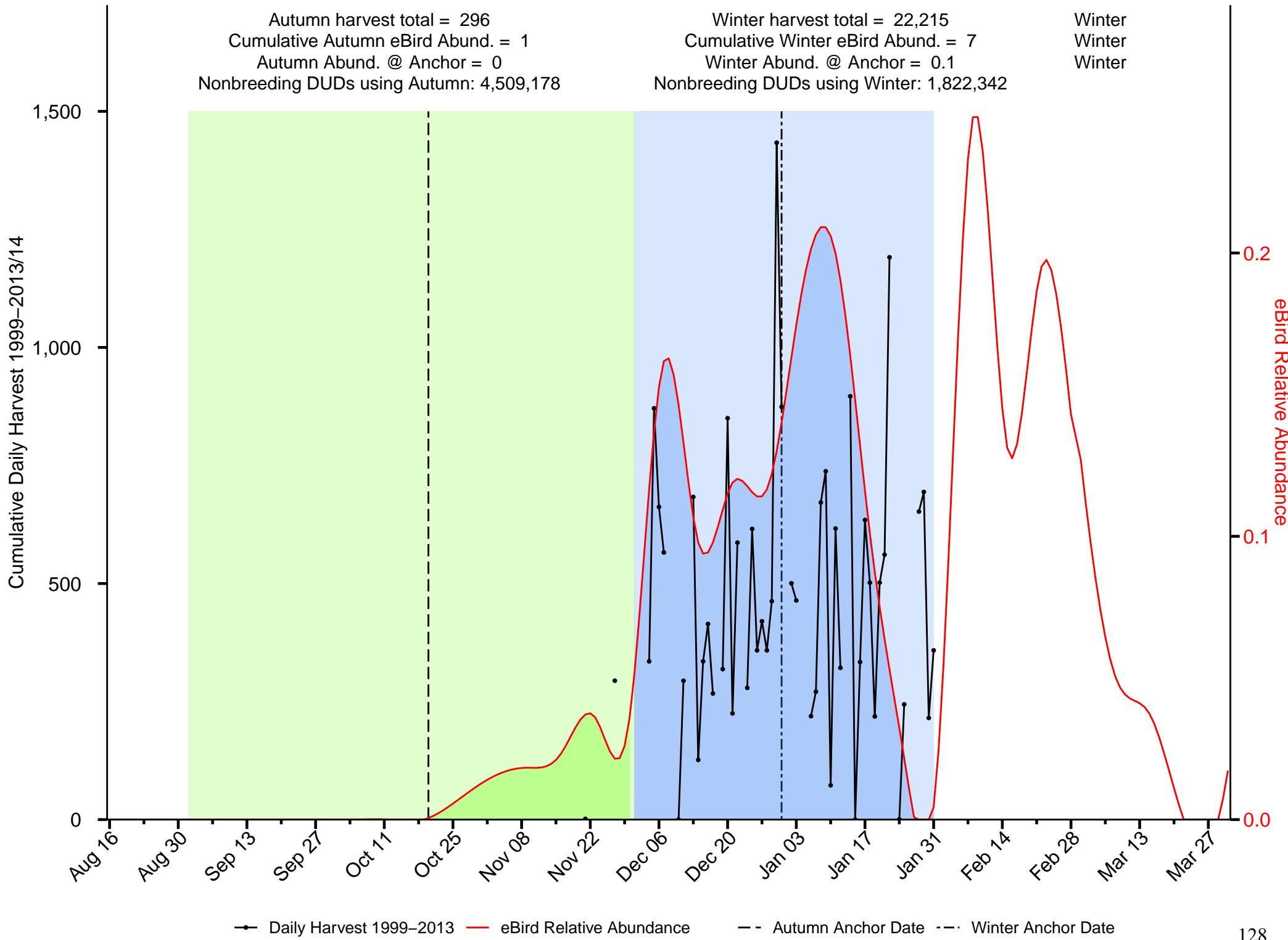
Summary of Scoter in the Central Valley JV



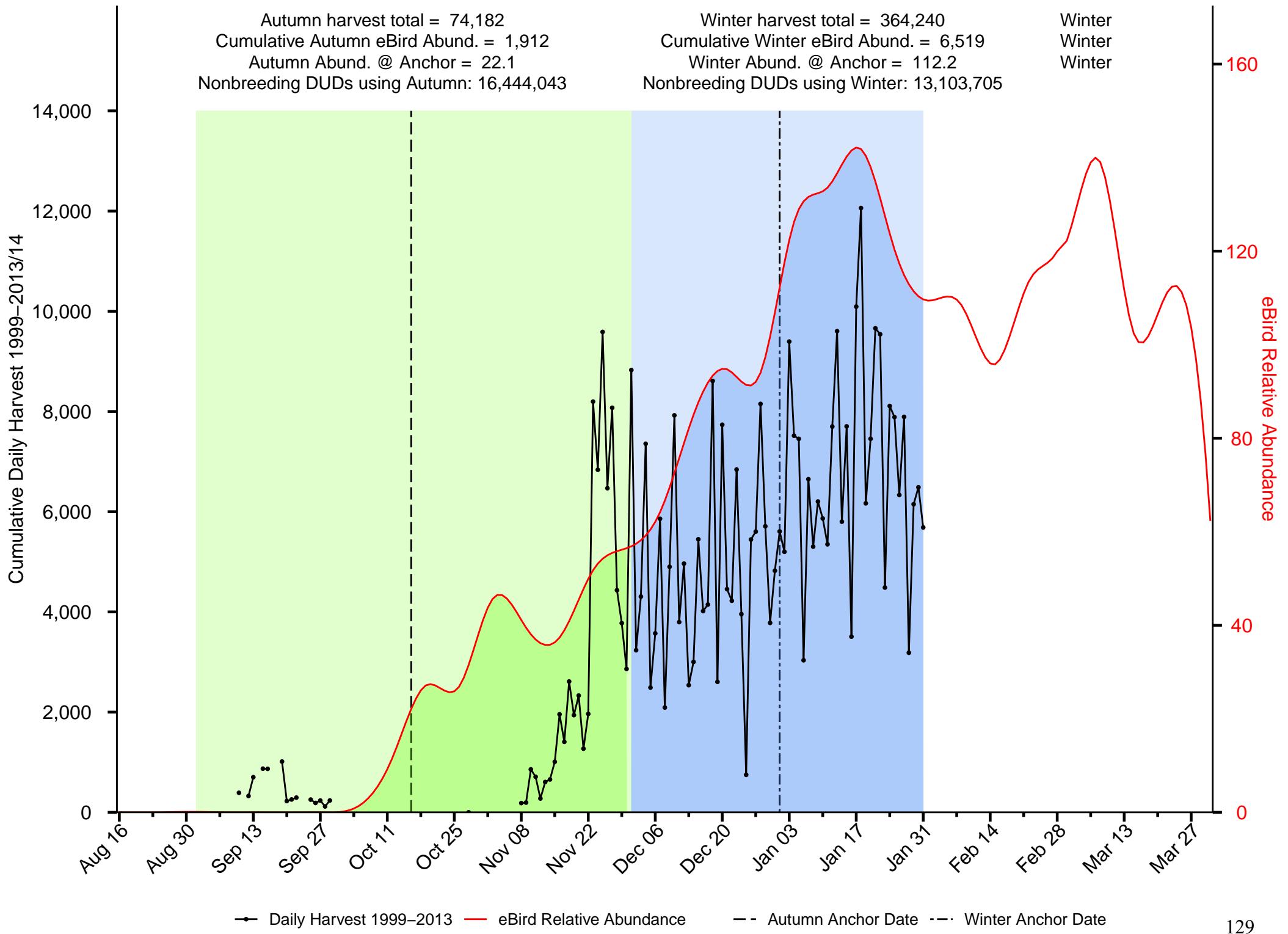
Summary of Wood Duck in the Central Valley JV



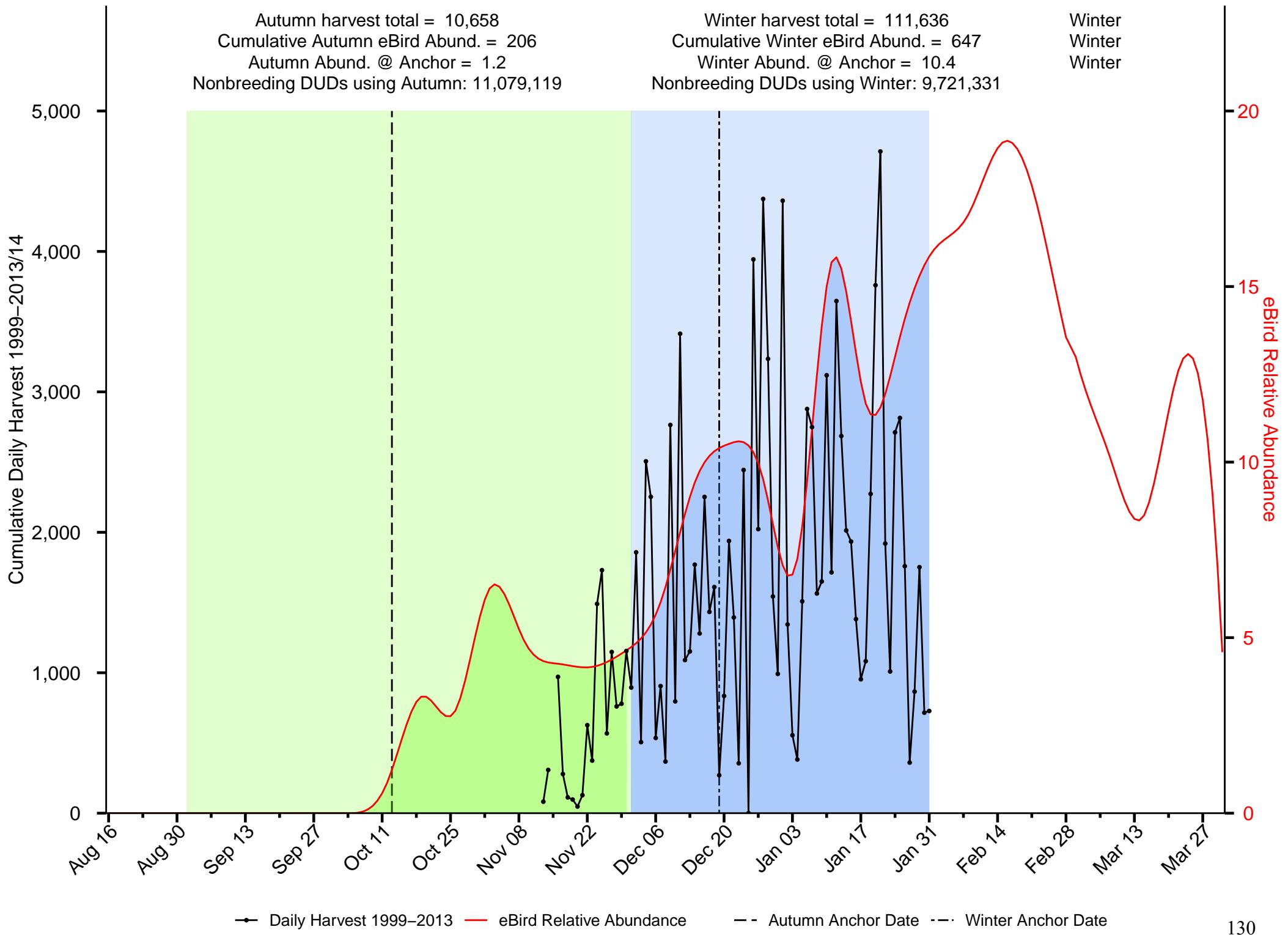
Summary of American Black Duck in the East Gulf Coastal Plain JV



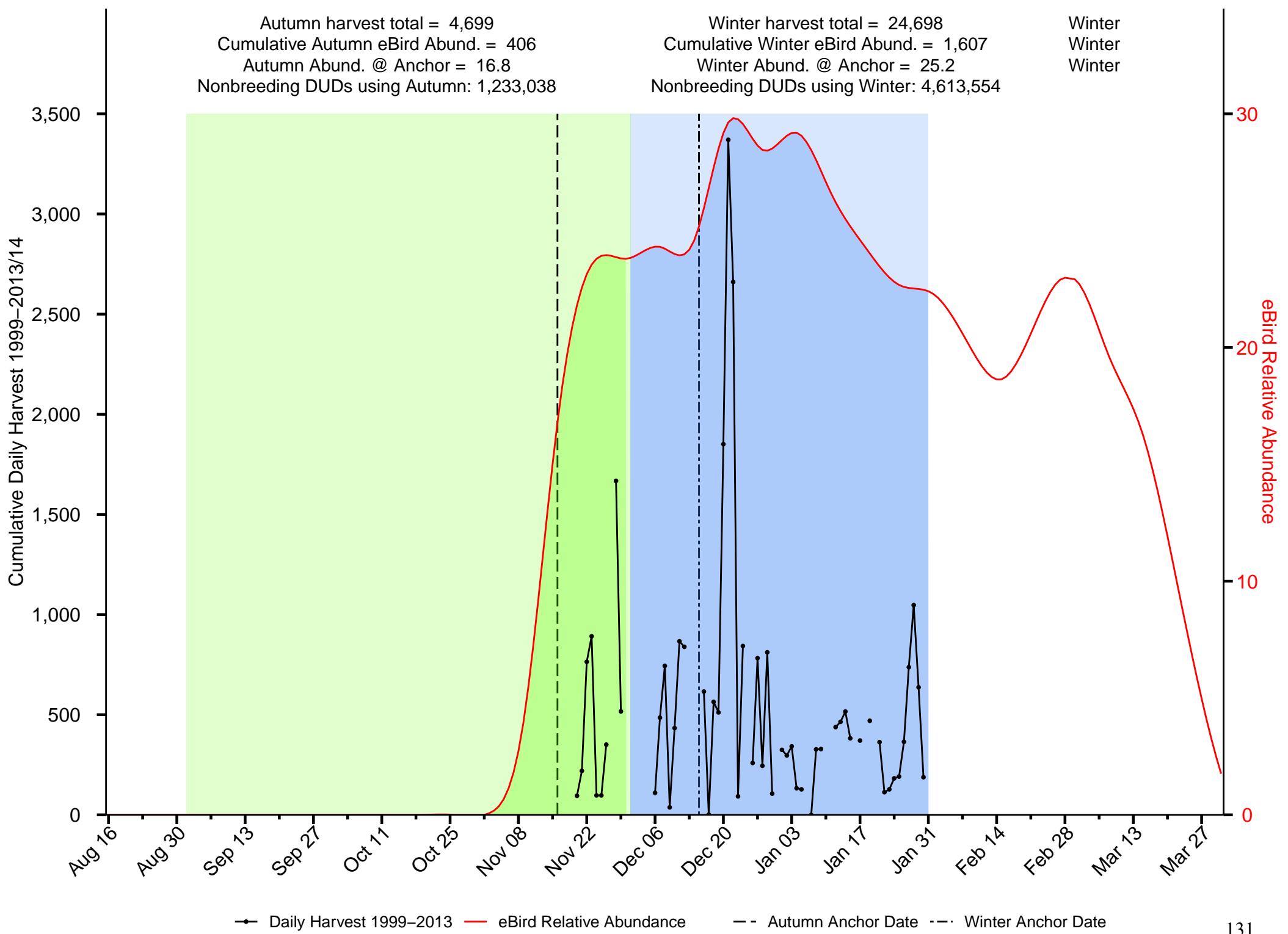
Summary of Green-winged Teal in the East Gulf Coastal Plain JV



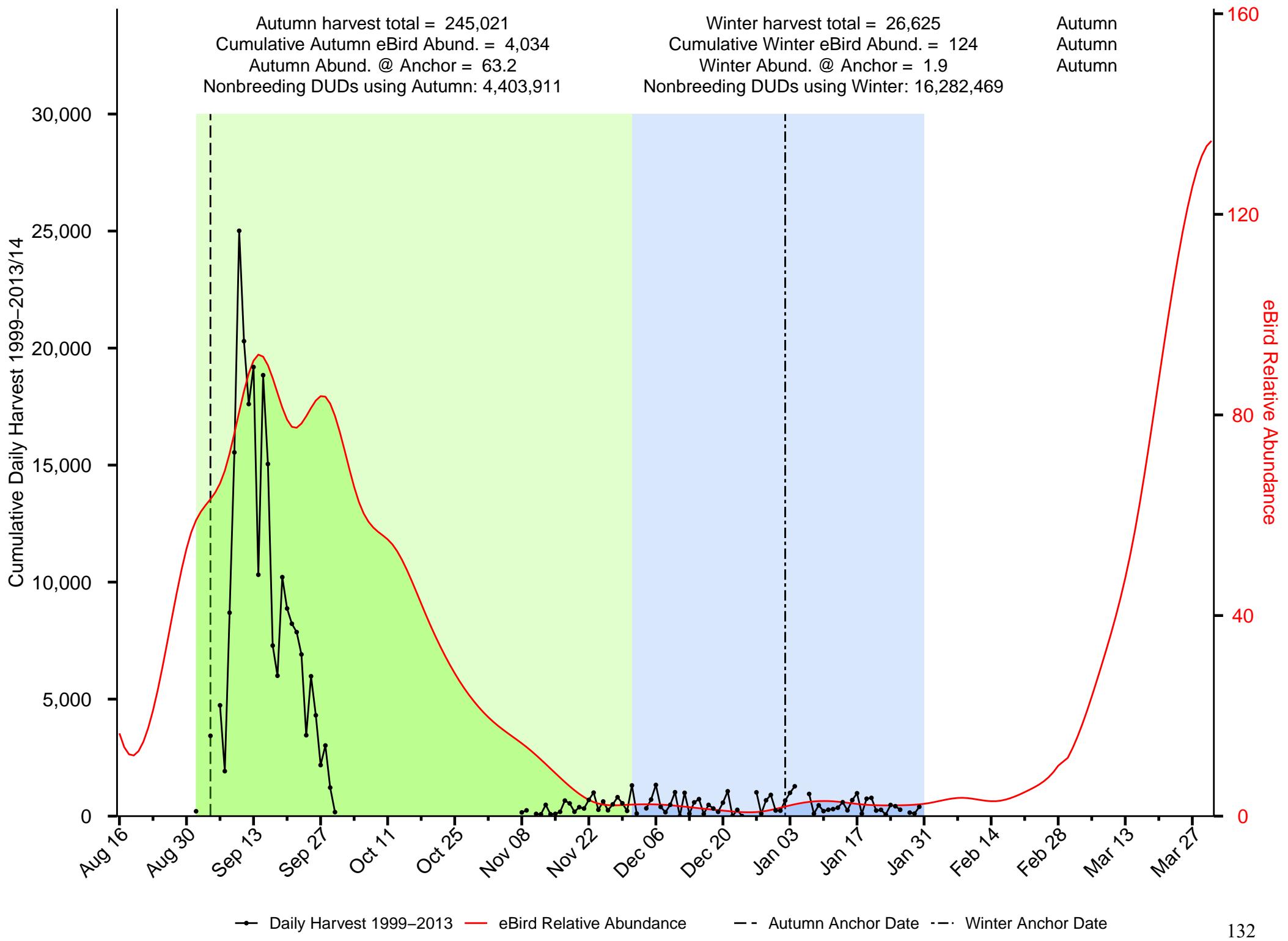
Summary of American Wigeon in the East Gulf Coastal Plain JV



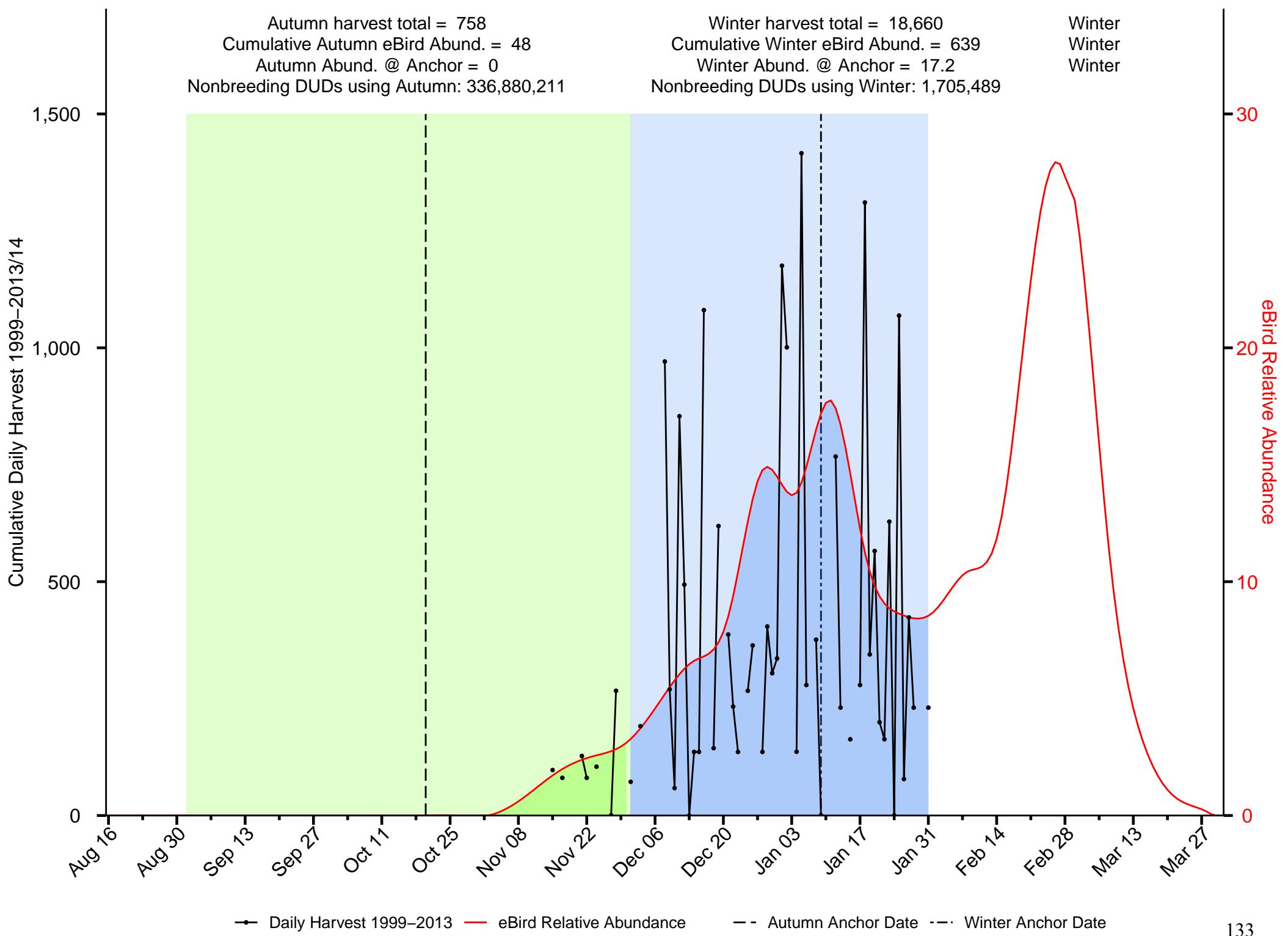
Summary of Bufflehead in the East Gulf Coastal Plain JV



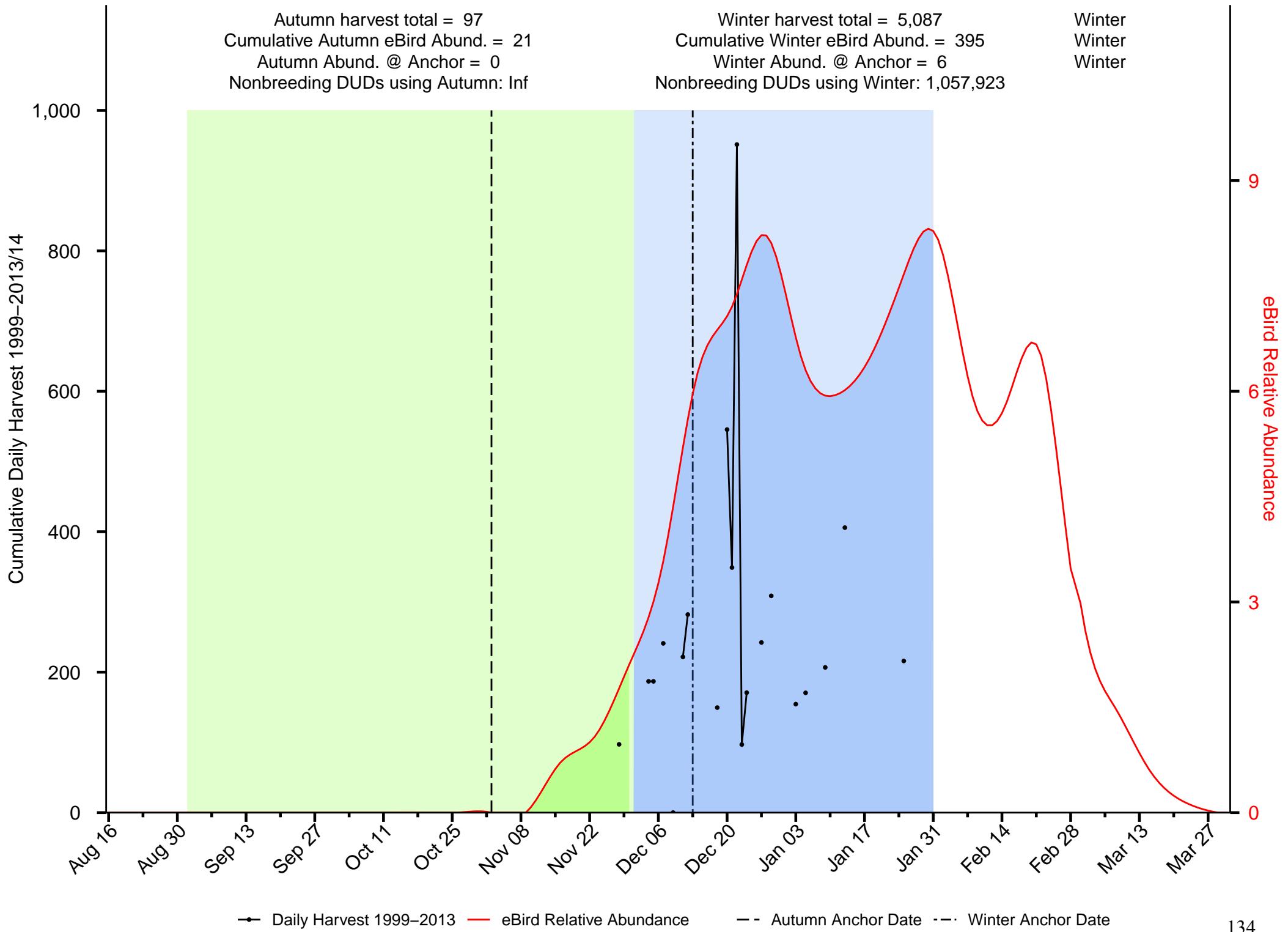
Summary of Blue-winged Teal in the East Gulf Coastal Plain JV



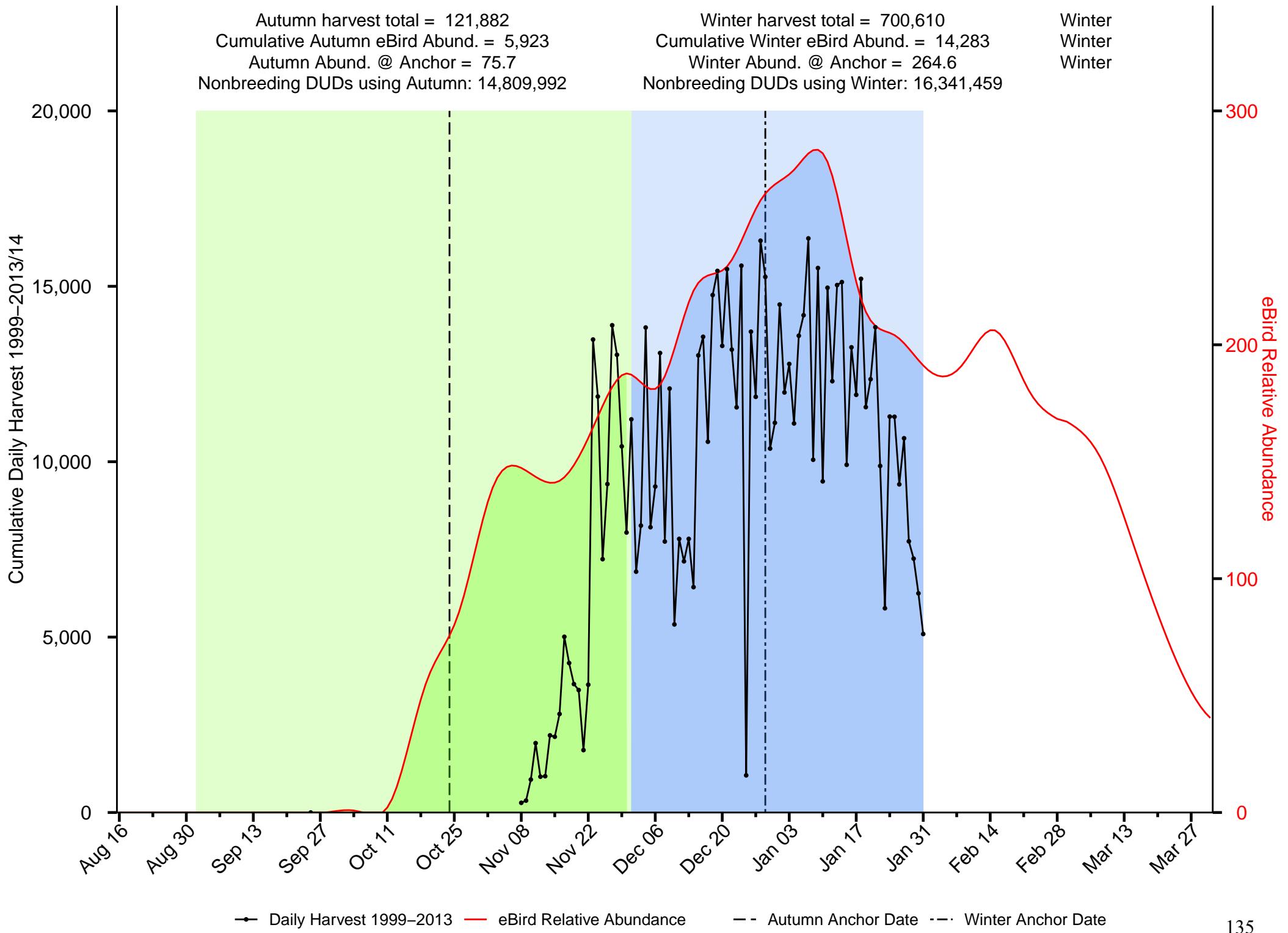
Summary of Canvasback in the East Gulf Coastal Plain JV



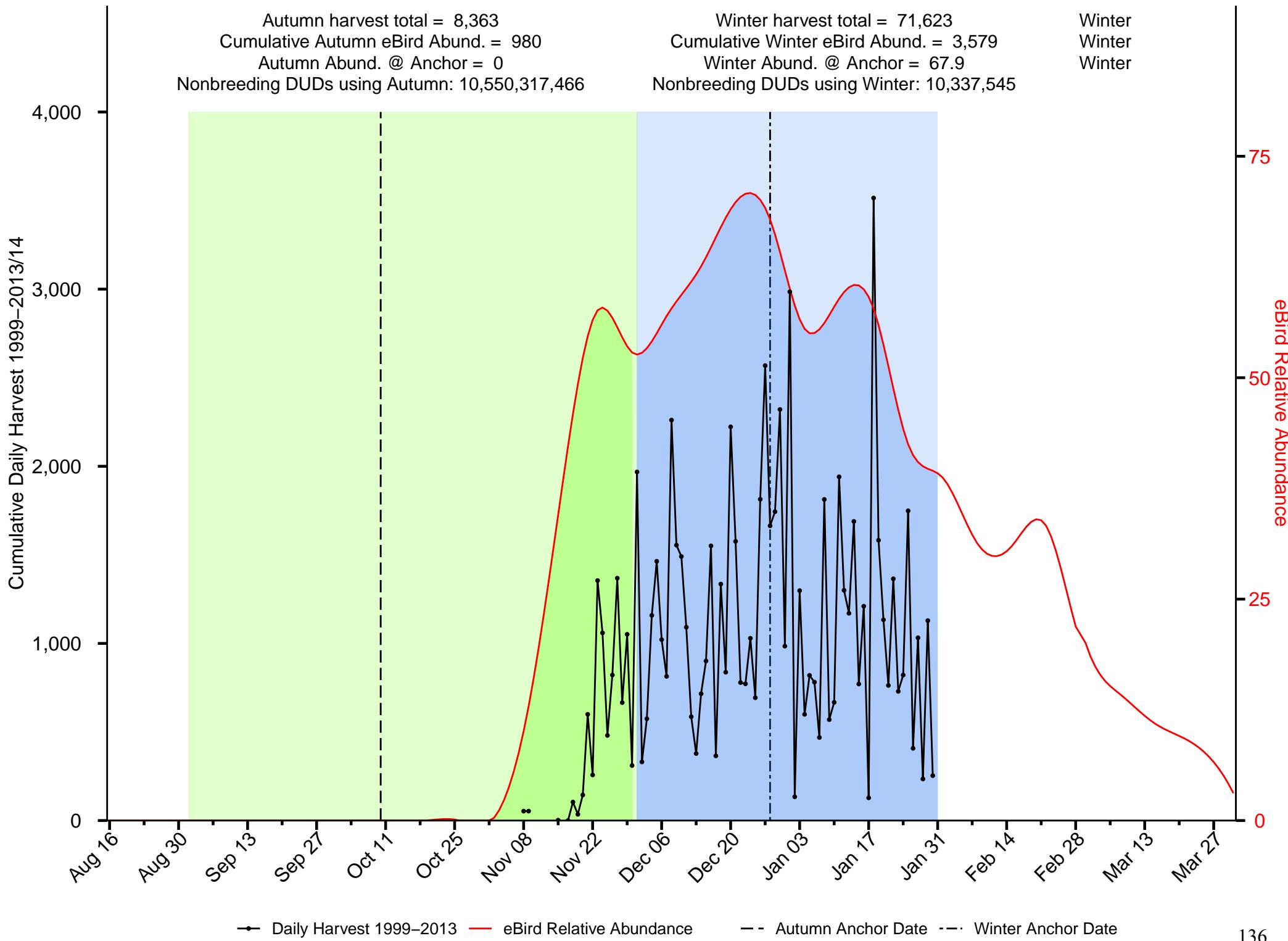
Summary of Common Goldeneye in the East Gulf Coastal Plain JV



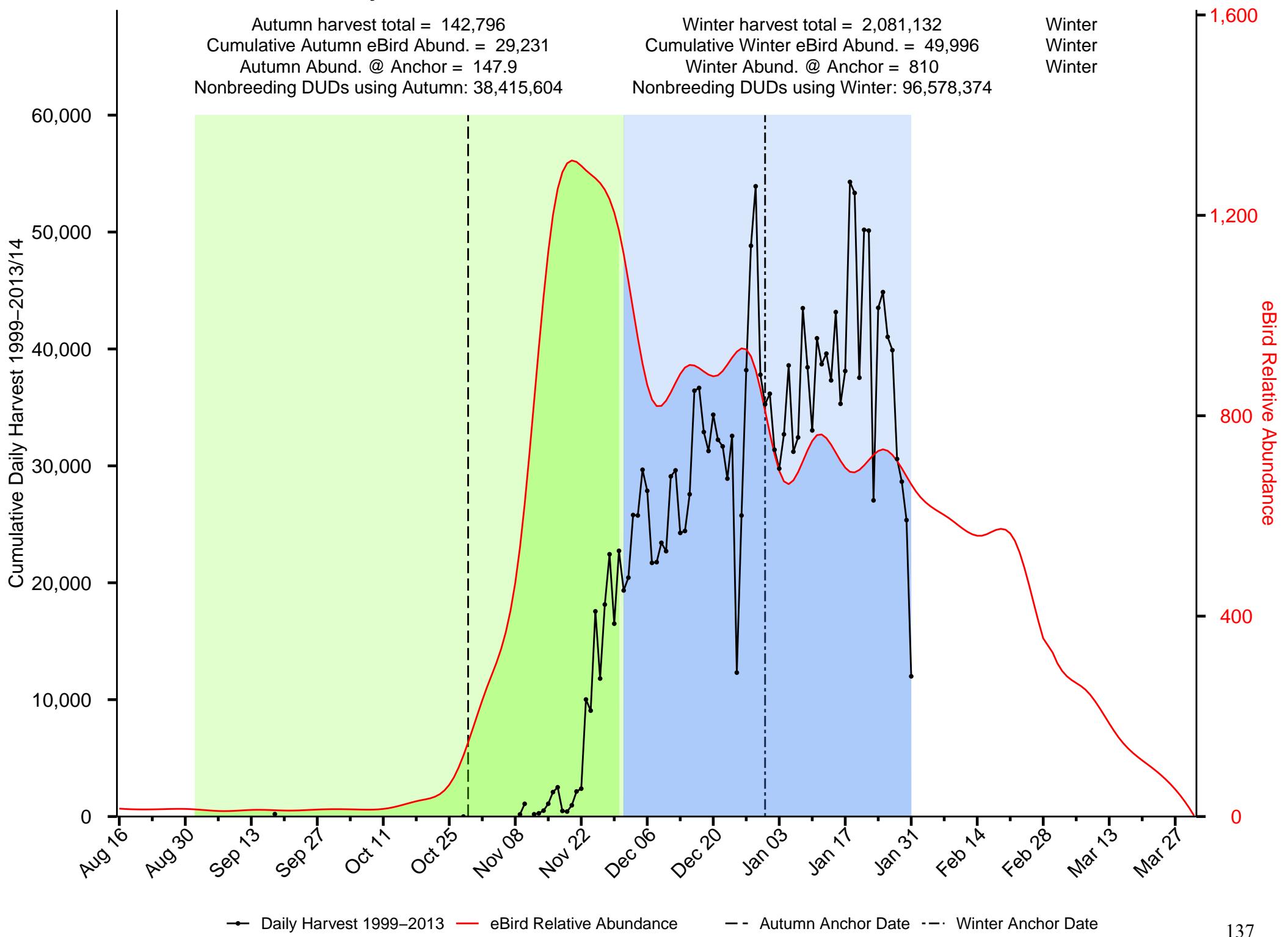
Summary of Gadwall in the East Gulf Coastal Plain JV



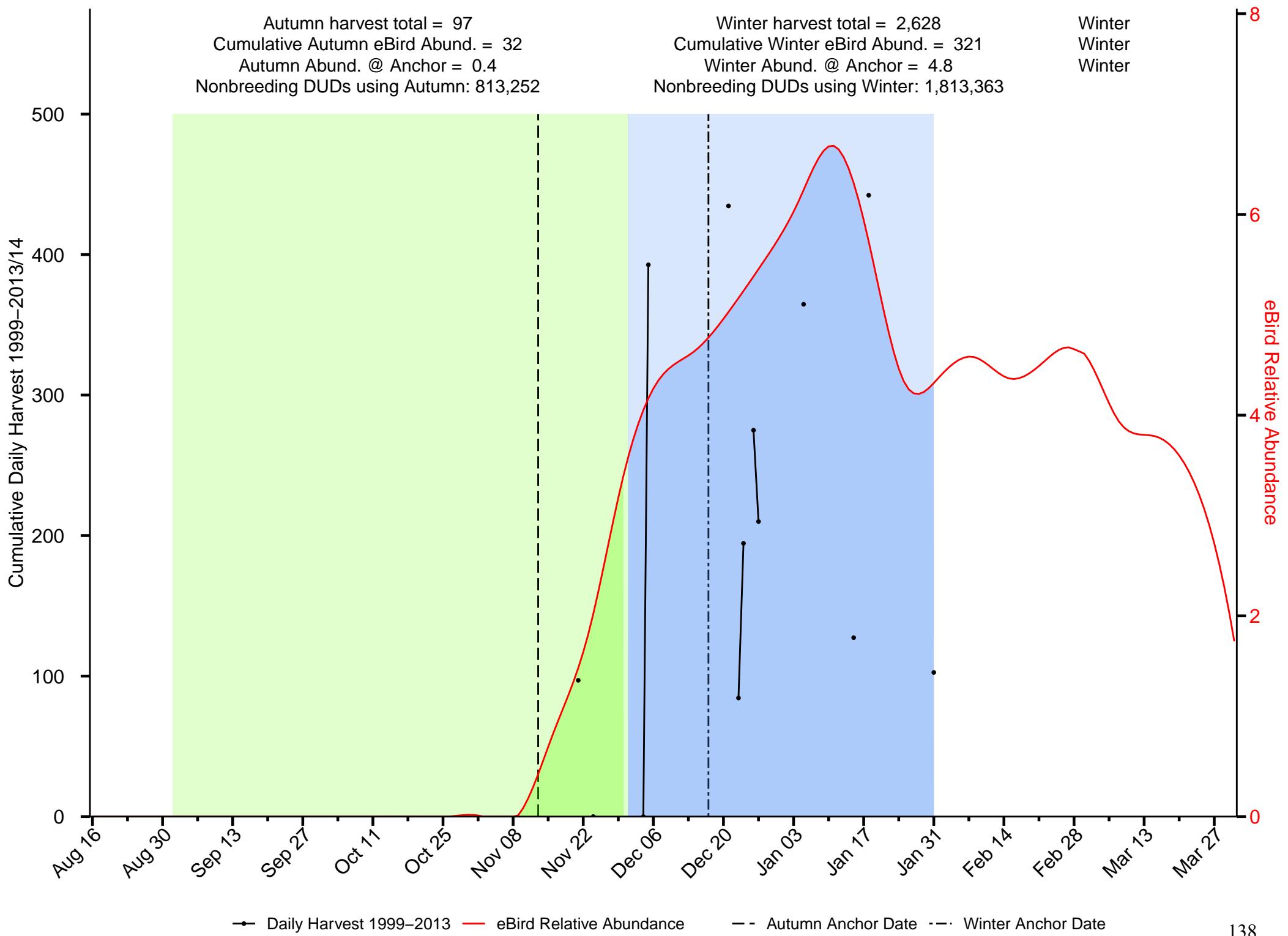
Summary of Hooded Merganser in the East Gulf Coastal Plain JV



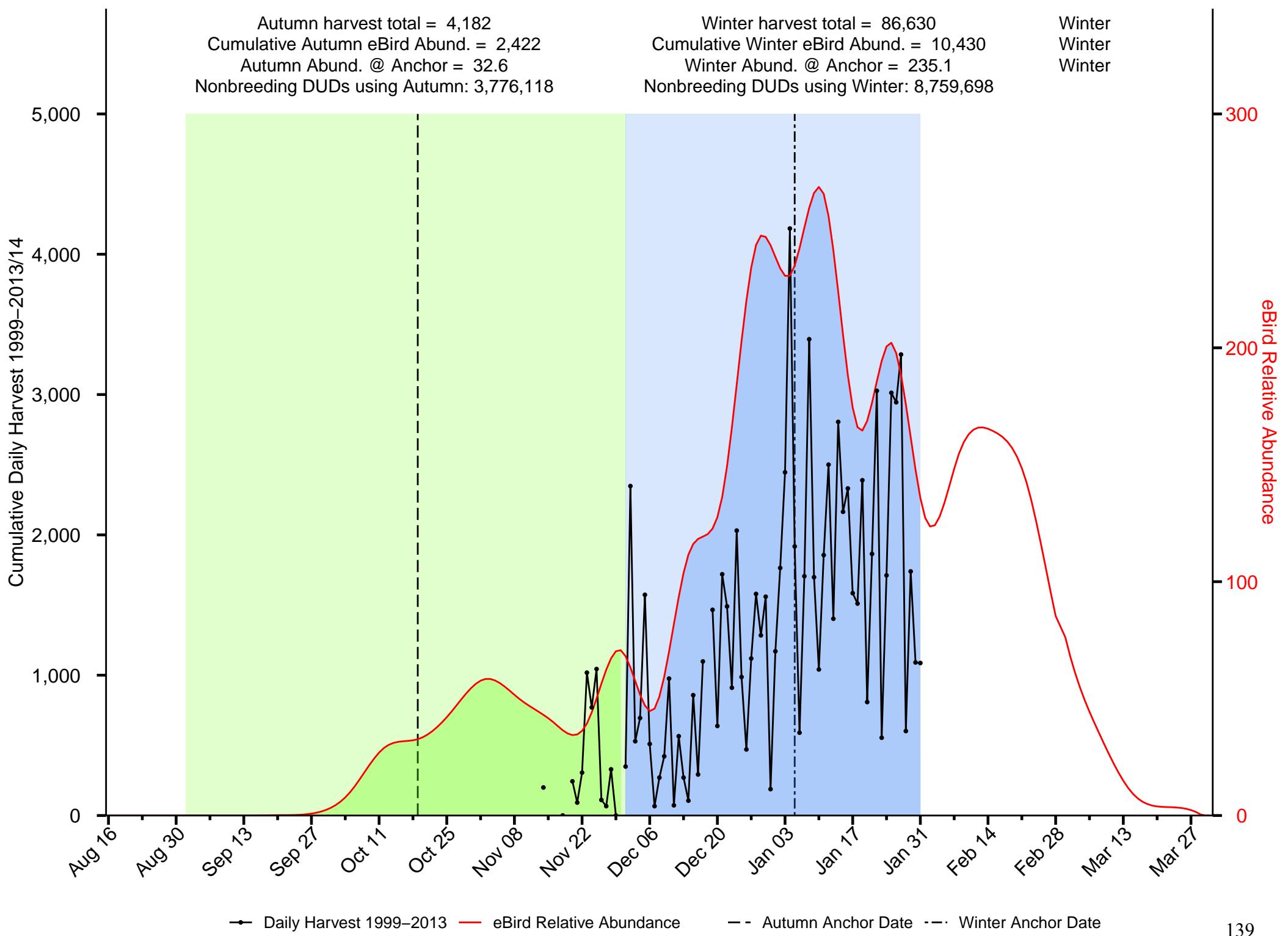
Summary of Mallard in the East Gulf Coastal Plain JV



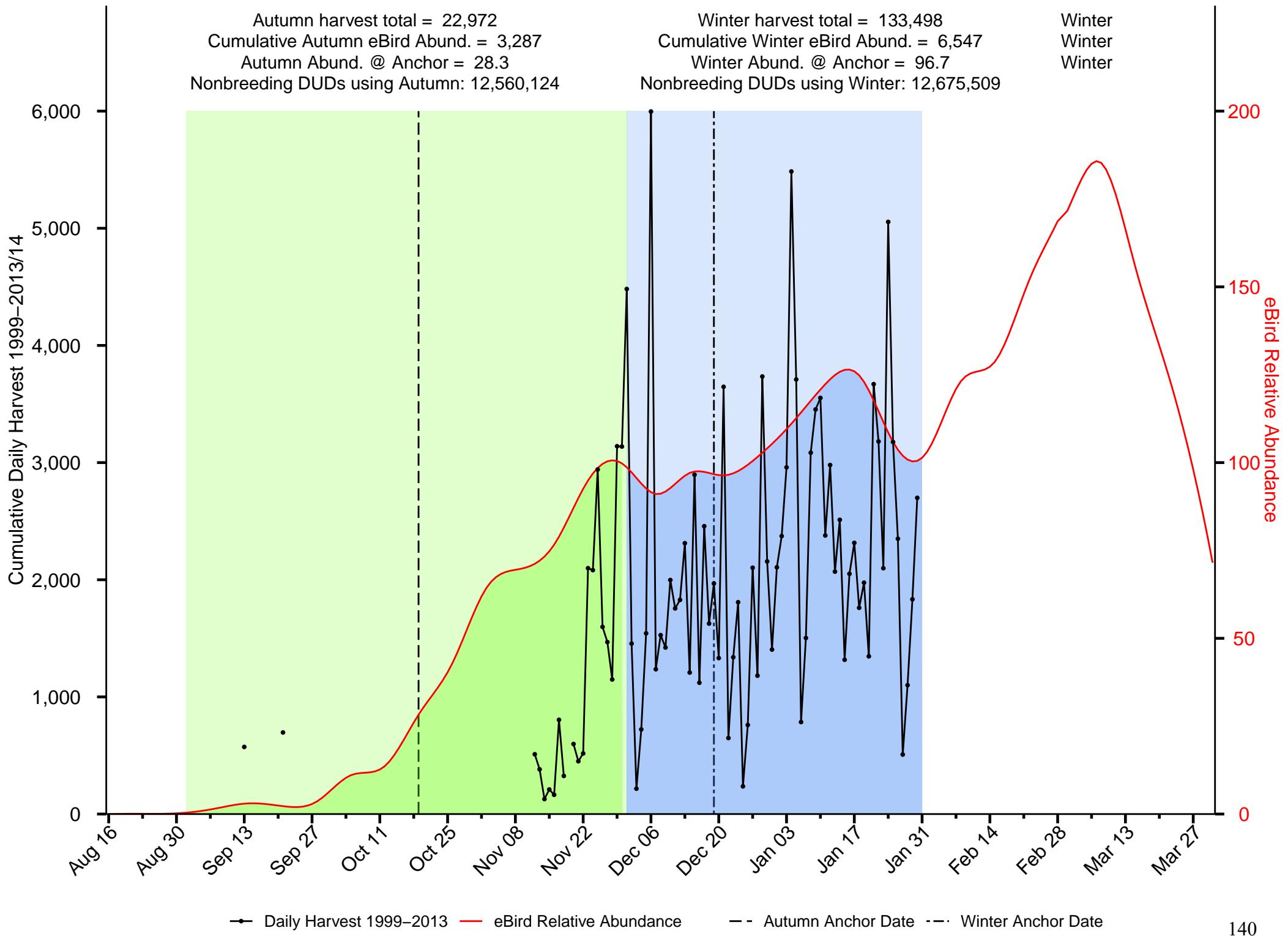
Summary of Merganser in the East Gulf Coastal Plain JV



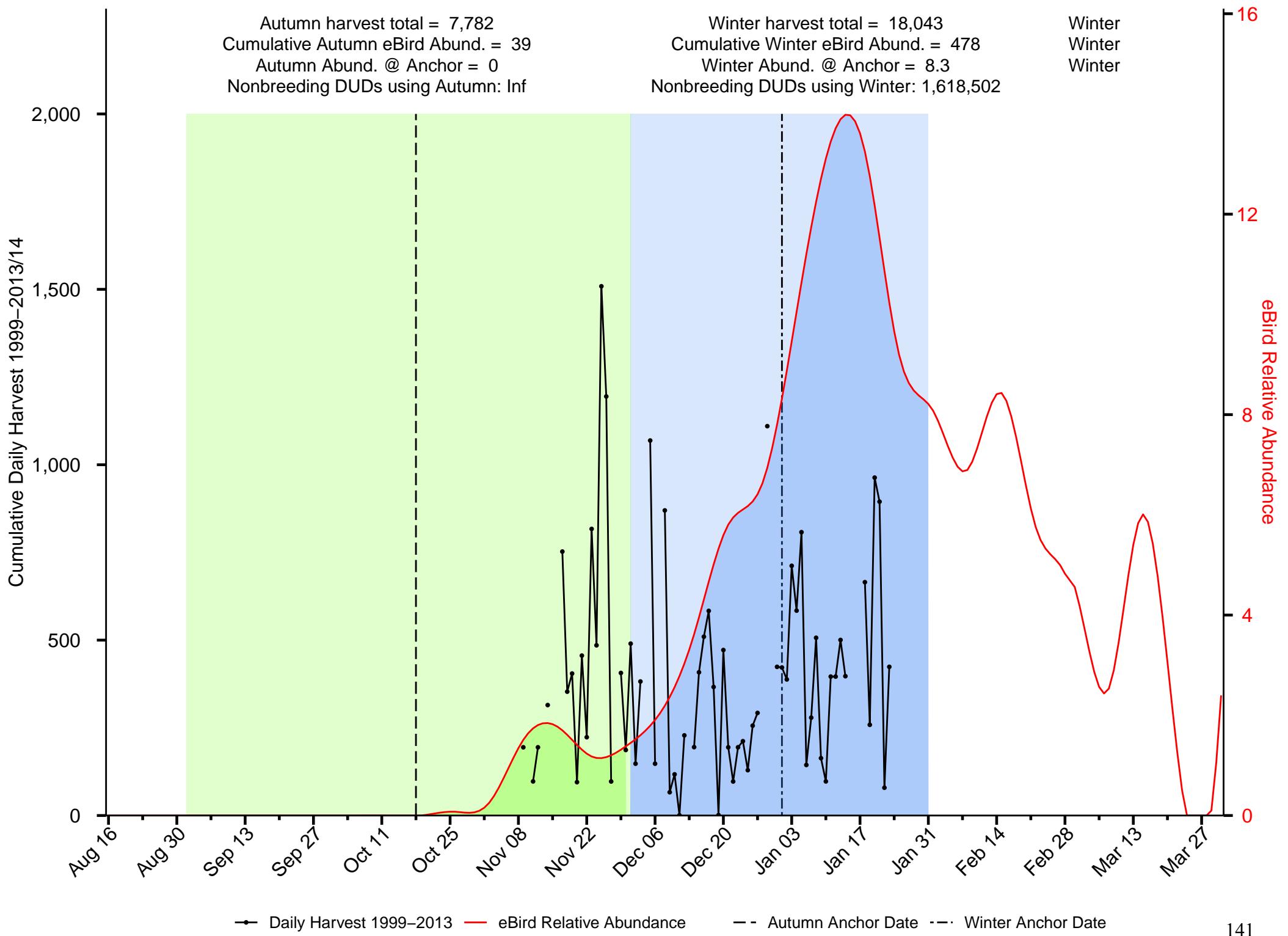
Summary of Northern Pintail in the East Gulf Coastal Plain JV



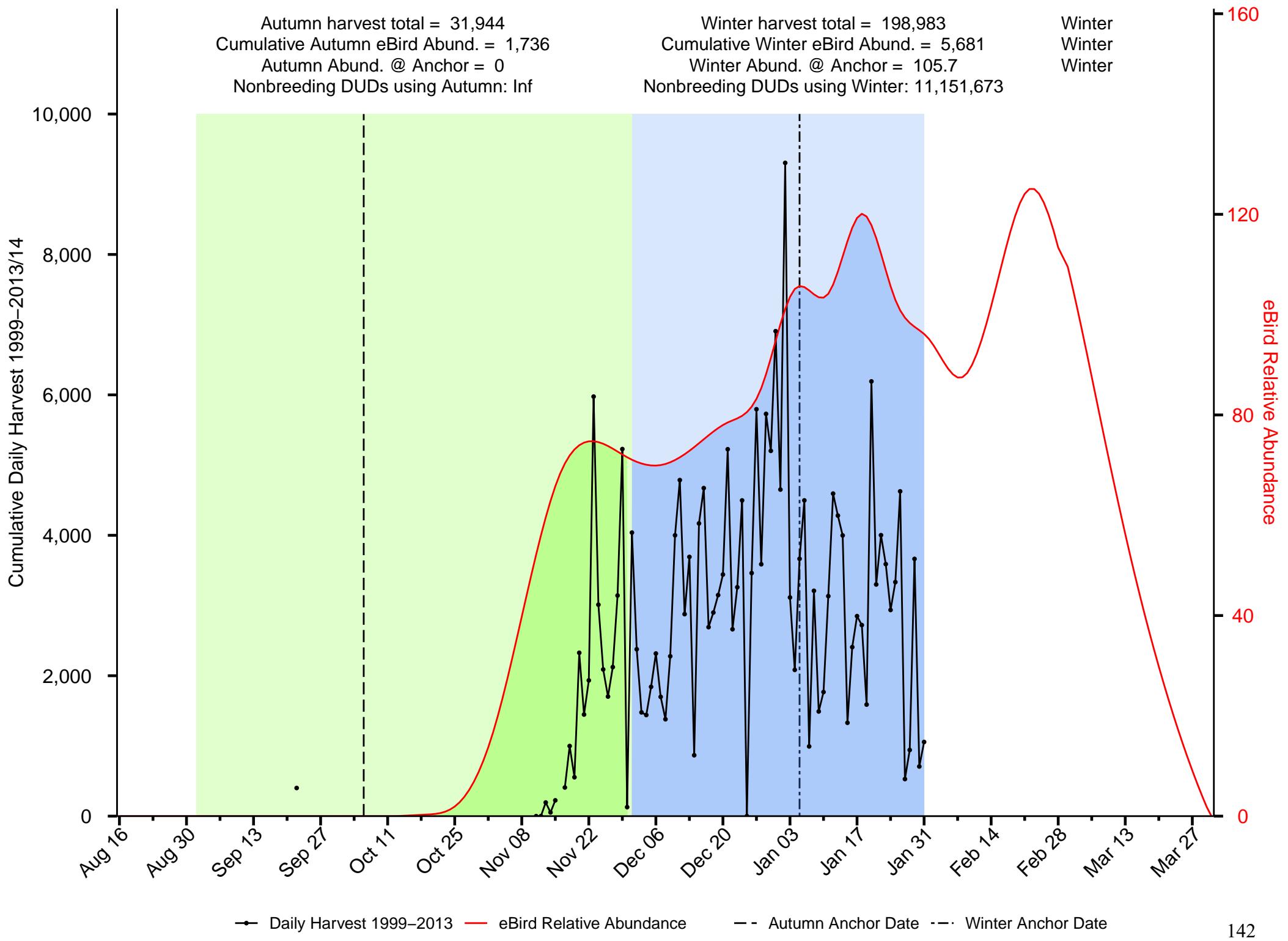
Summary of Northern Shoveler in the East Gulf Coastal Plain JV



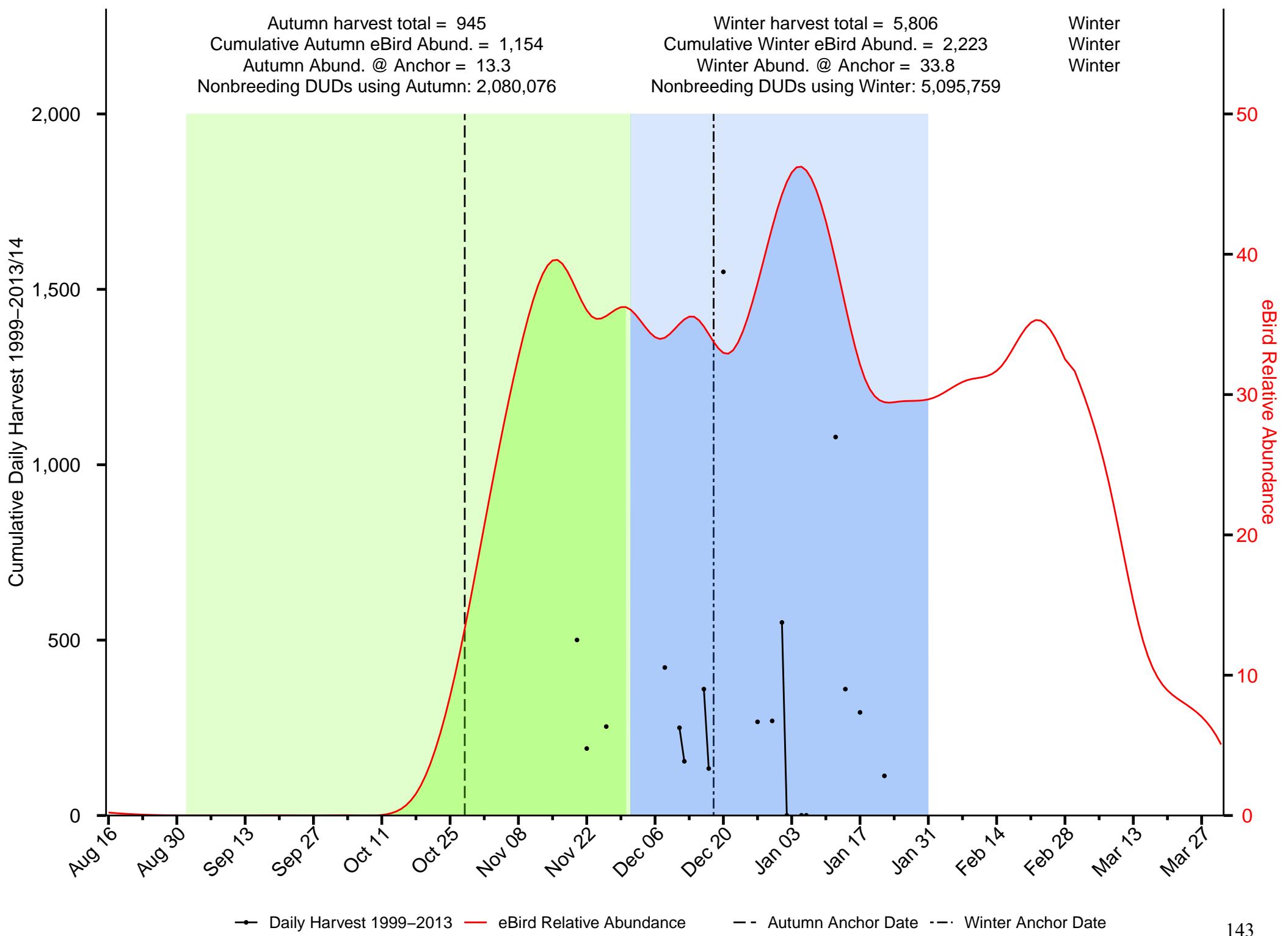
Summary of Redhead in the East Gulf Coastal Plain JV



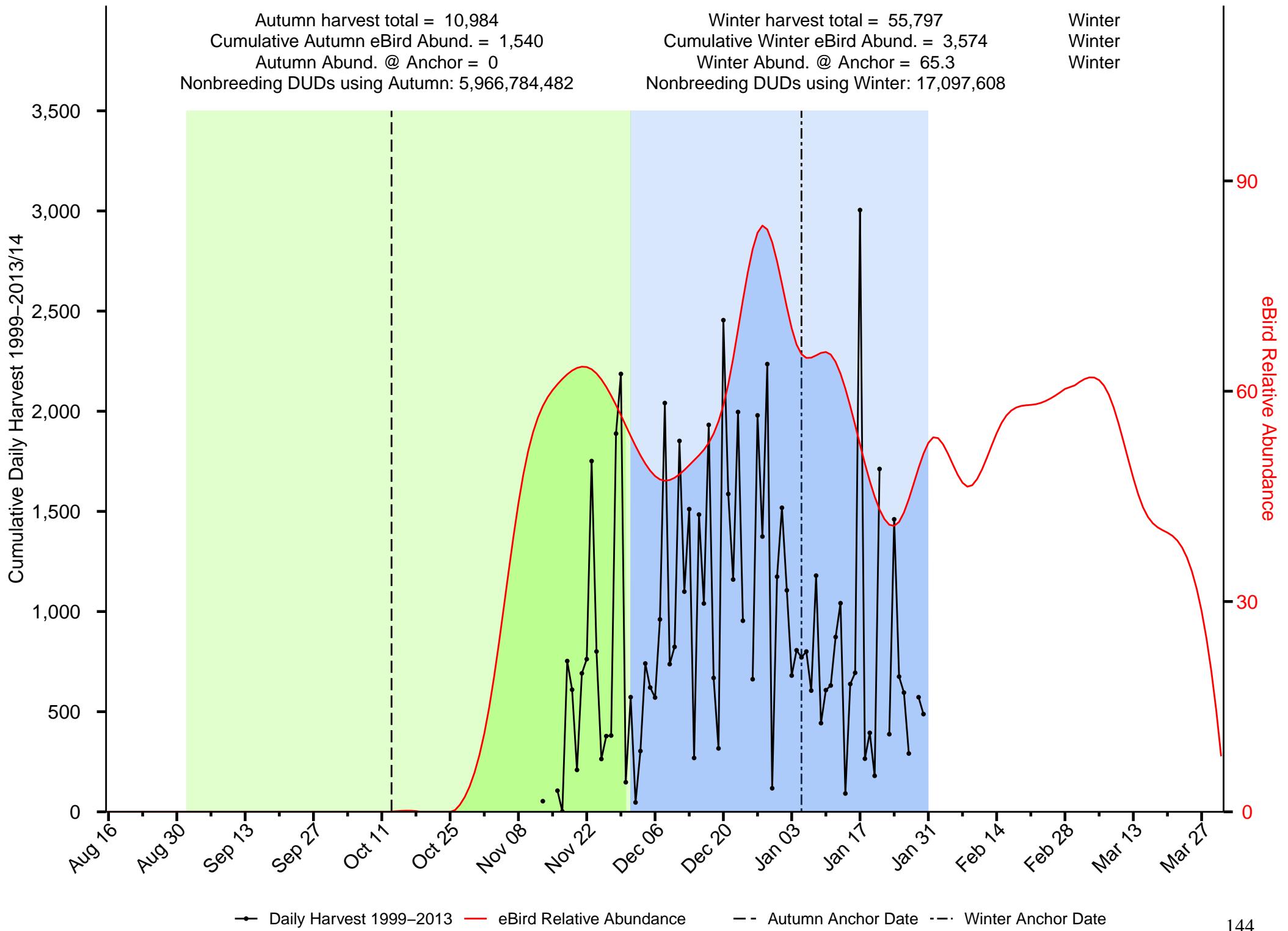
Summary of Ring-necked Duck in the East Gulf Coastal Plain JV



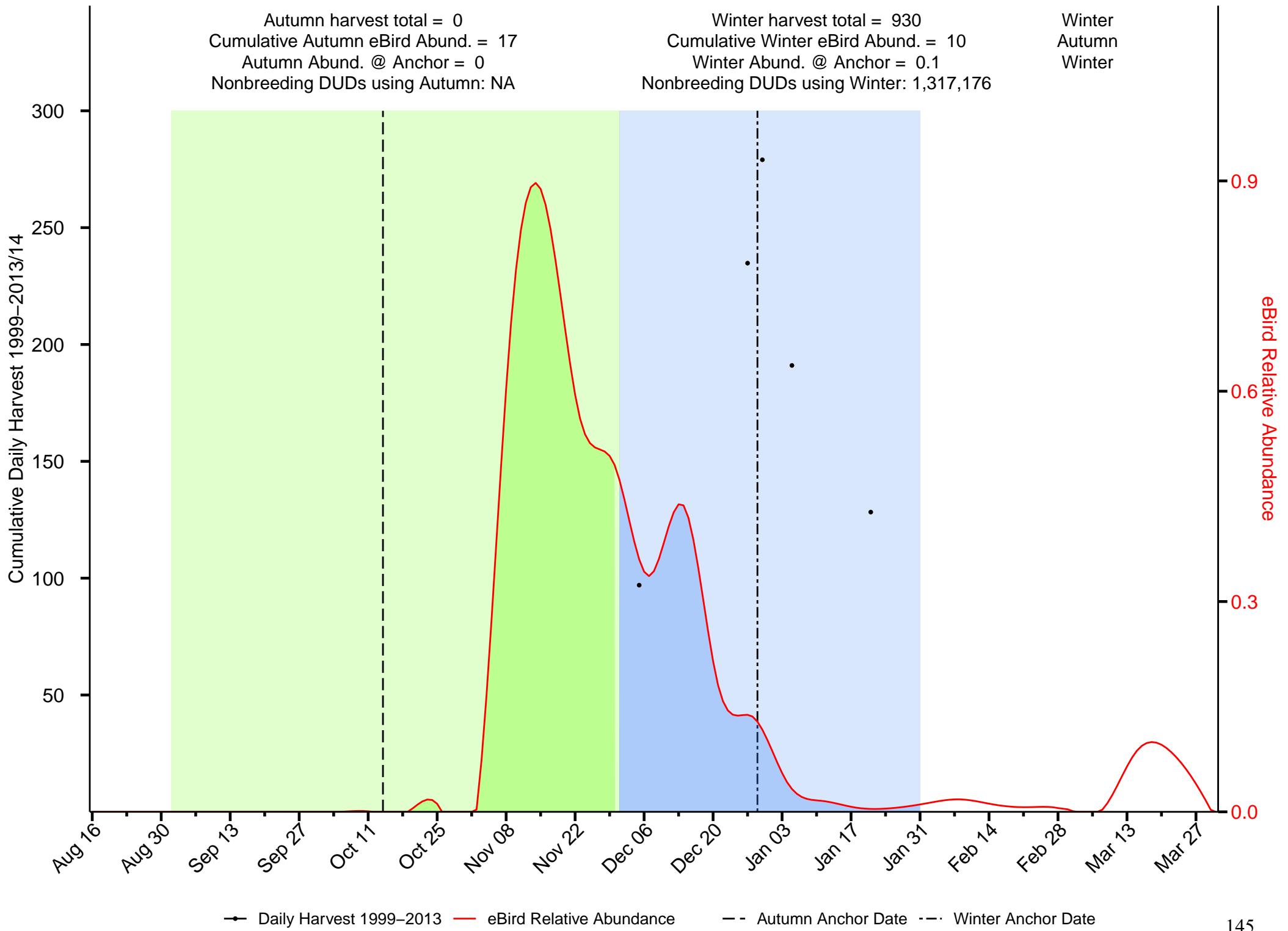
Summary of Ruddy Duck in the East Gulf Coastal Plain JV



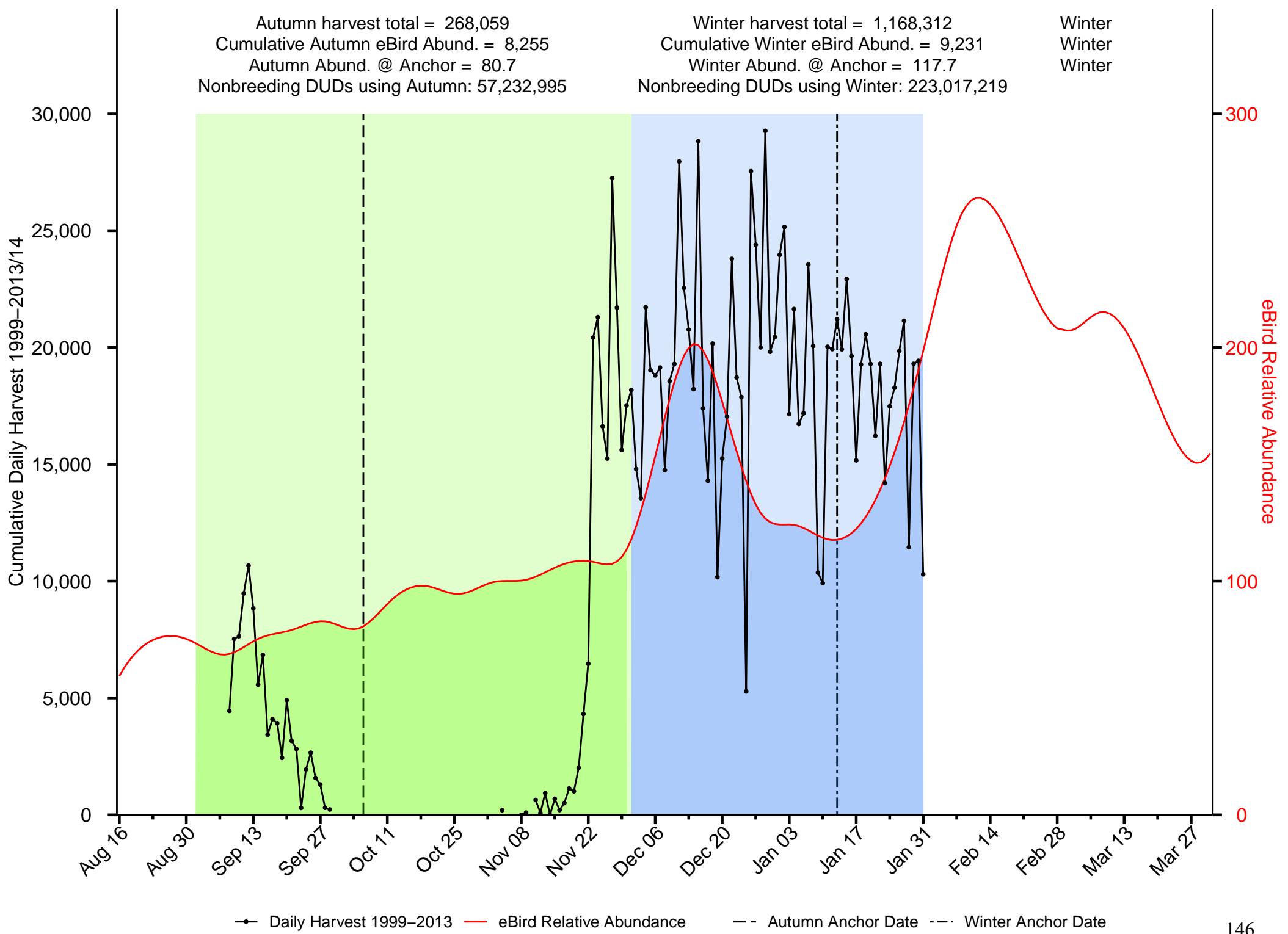
Summary of Scaup in the East Gulf Coastal Plain JV



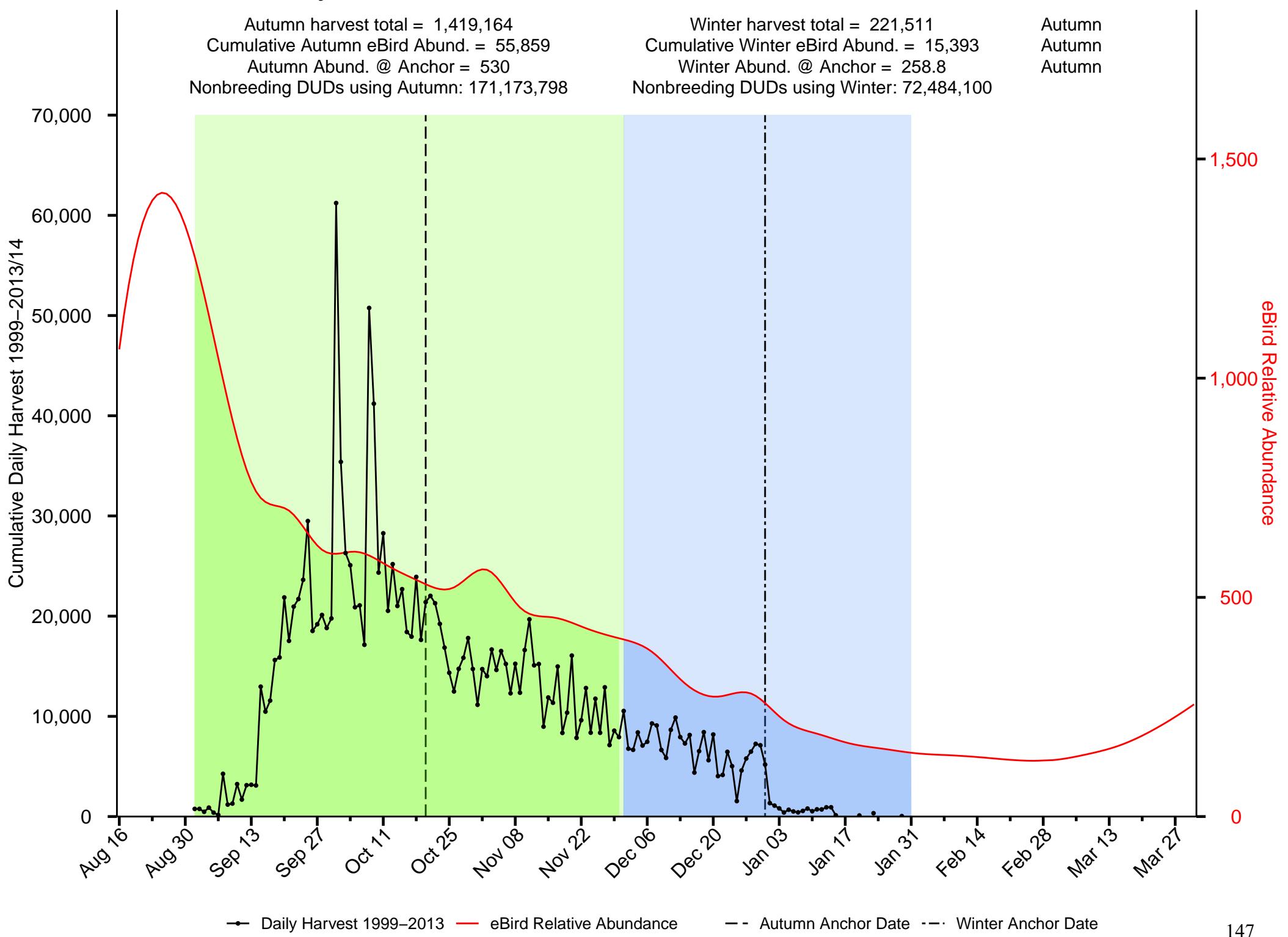
Summary of Scoter in the East Gulf Coastal Plain JV



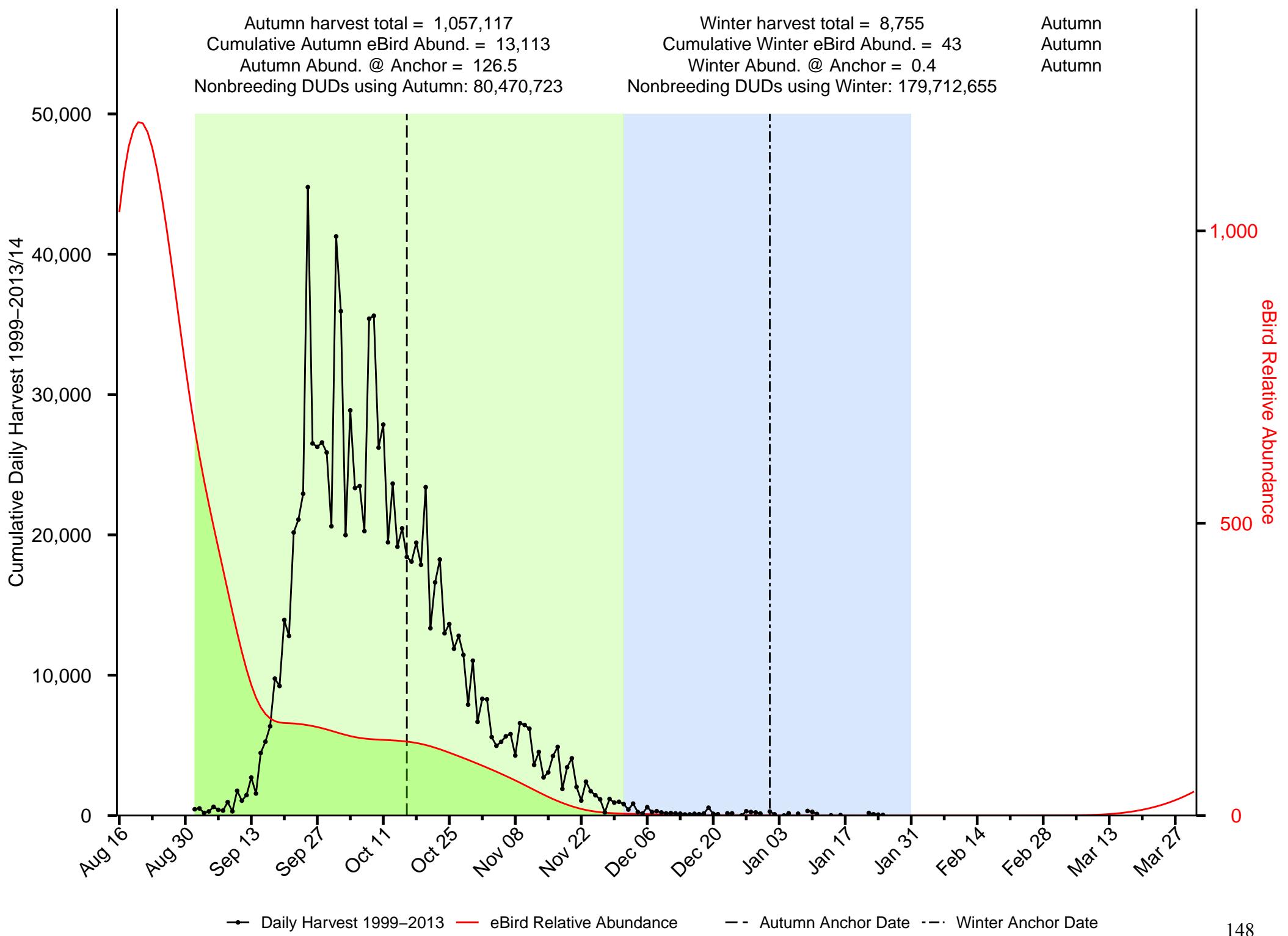
Summary of Wood Duck in the East Gulf Coastal Plain JV



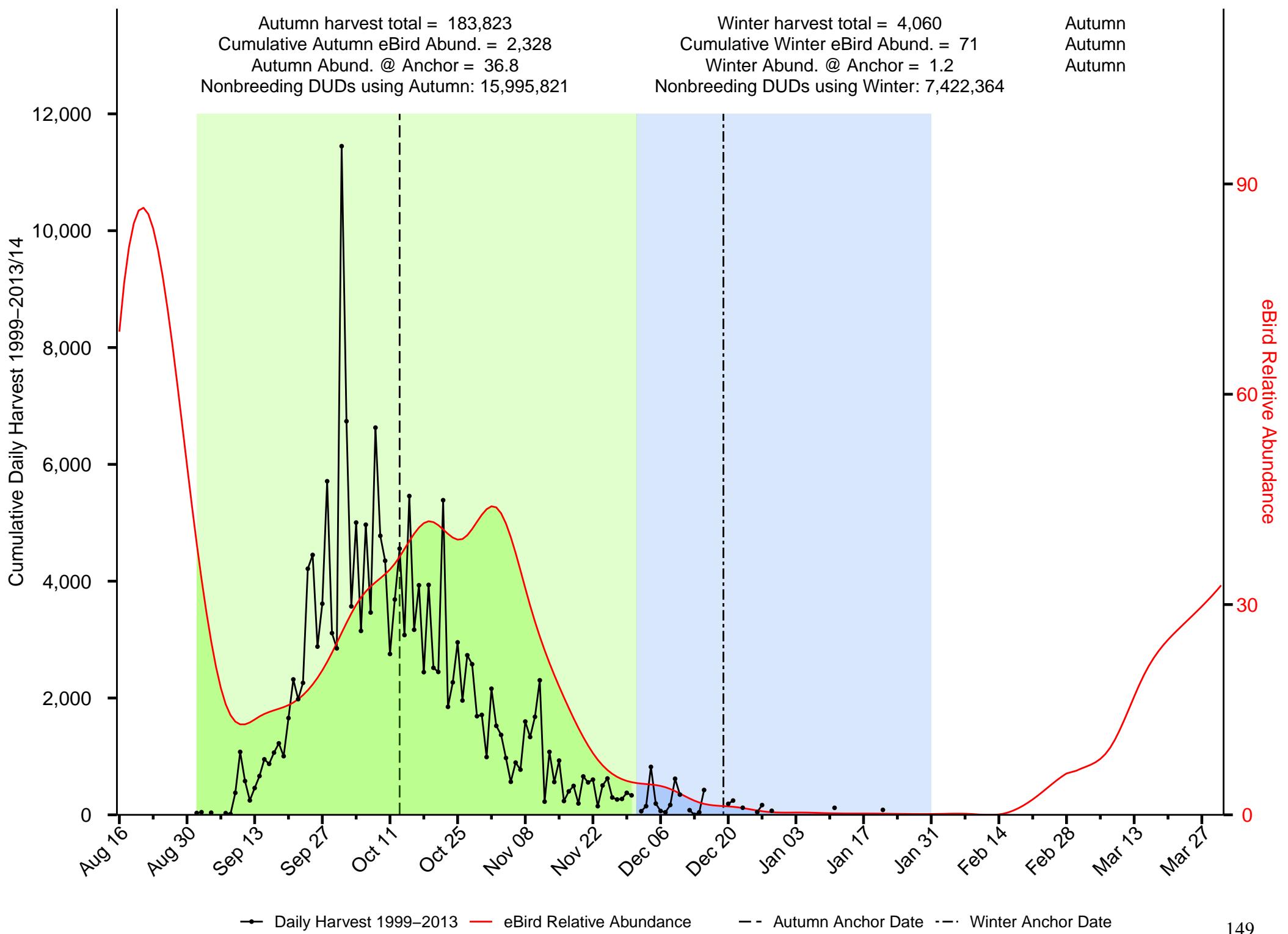
Summary of American Black Duck in the Eastern Habitat JV



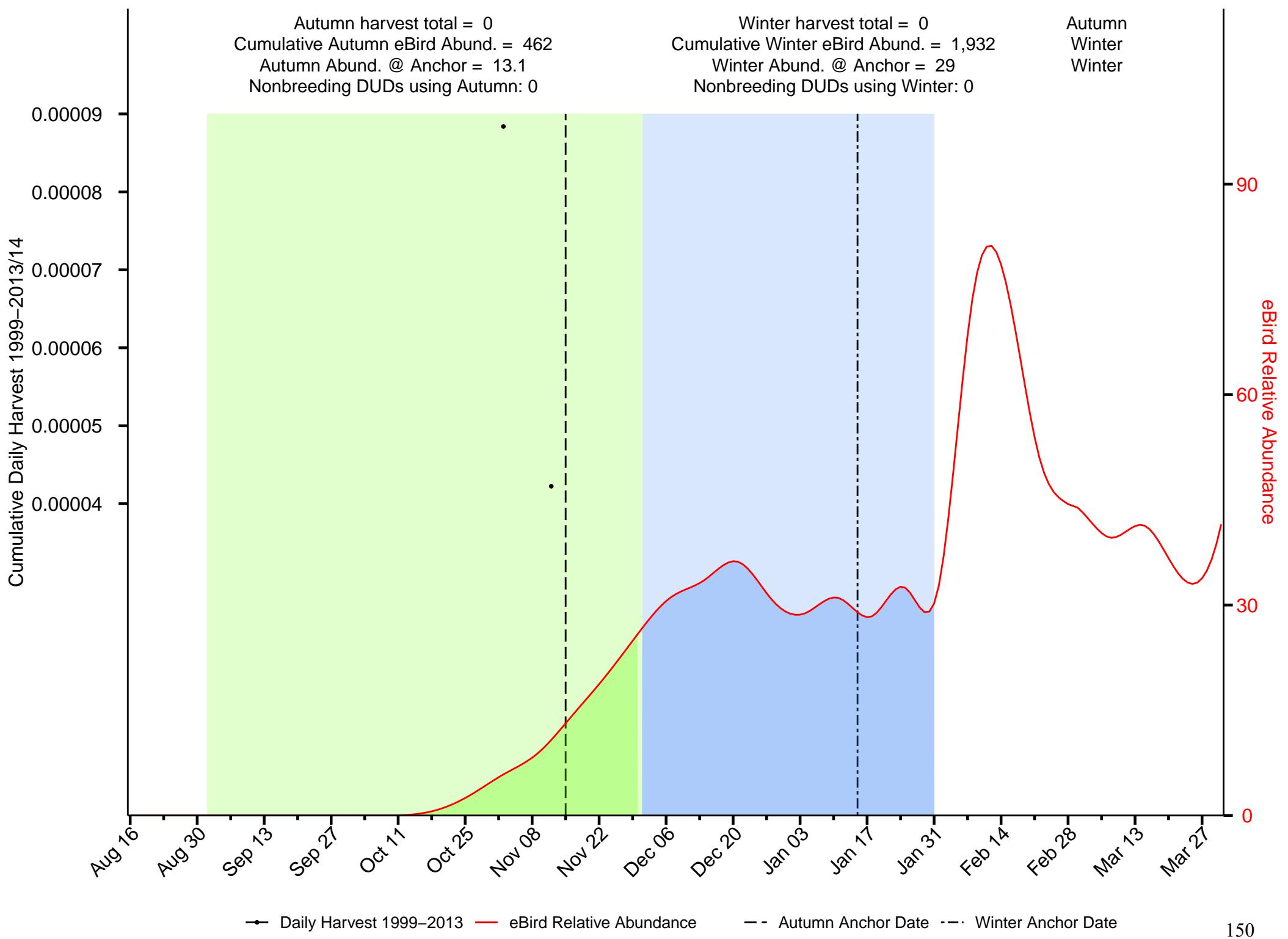
Summary of Green-winged Teal in the Eastern Habitat JV



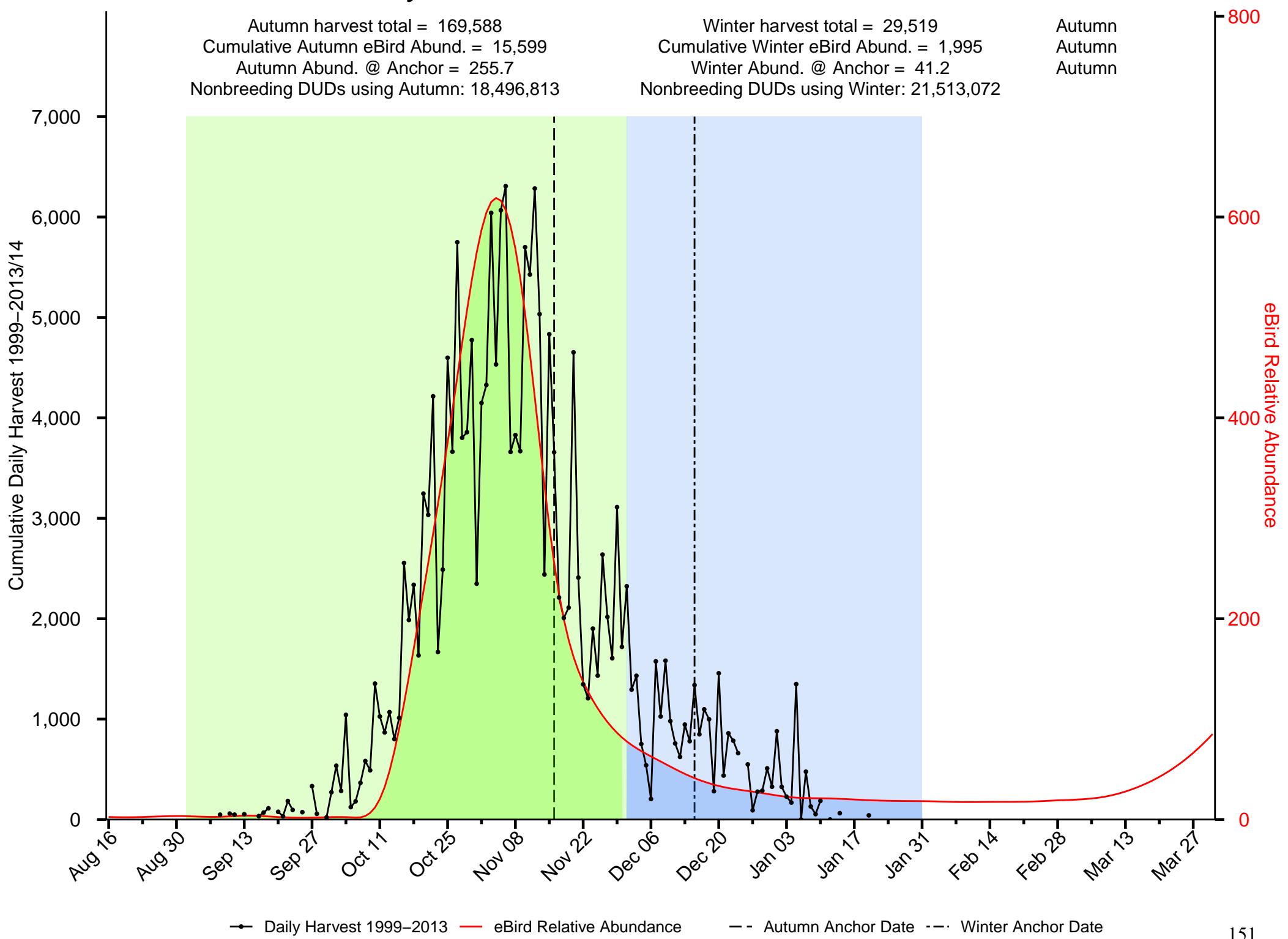
Summary of American Wigeon in the Eastern Habitat JV



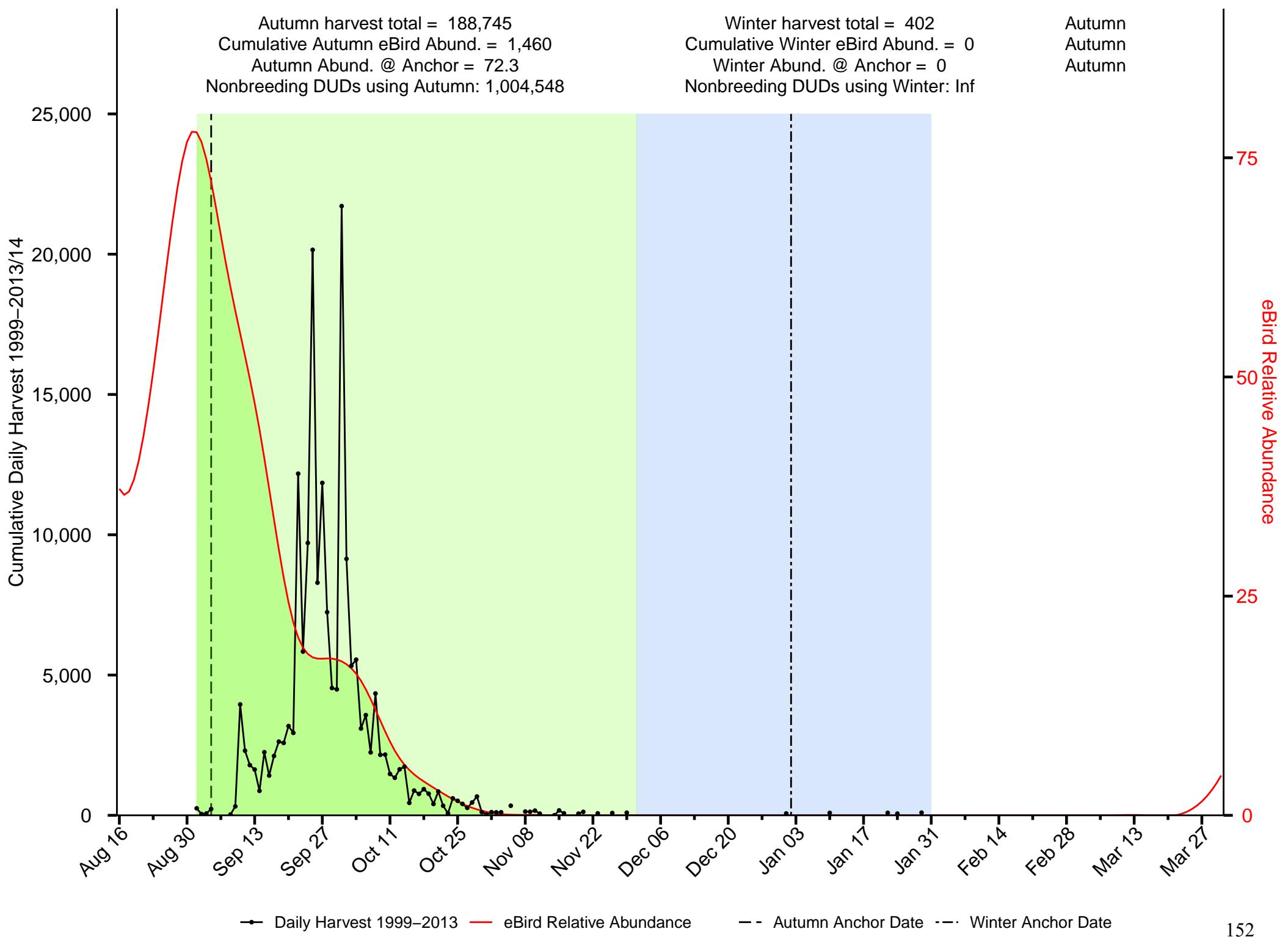
Summary of Barrow's Goldeneye in the Eastern Habitat JV



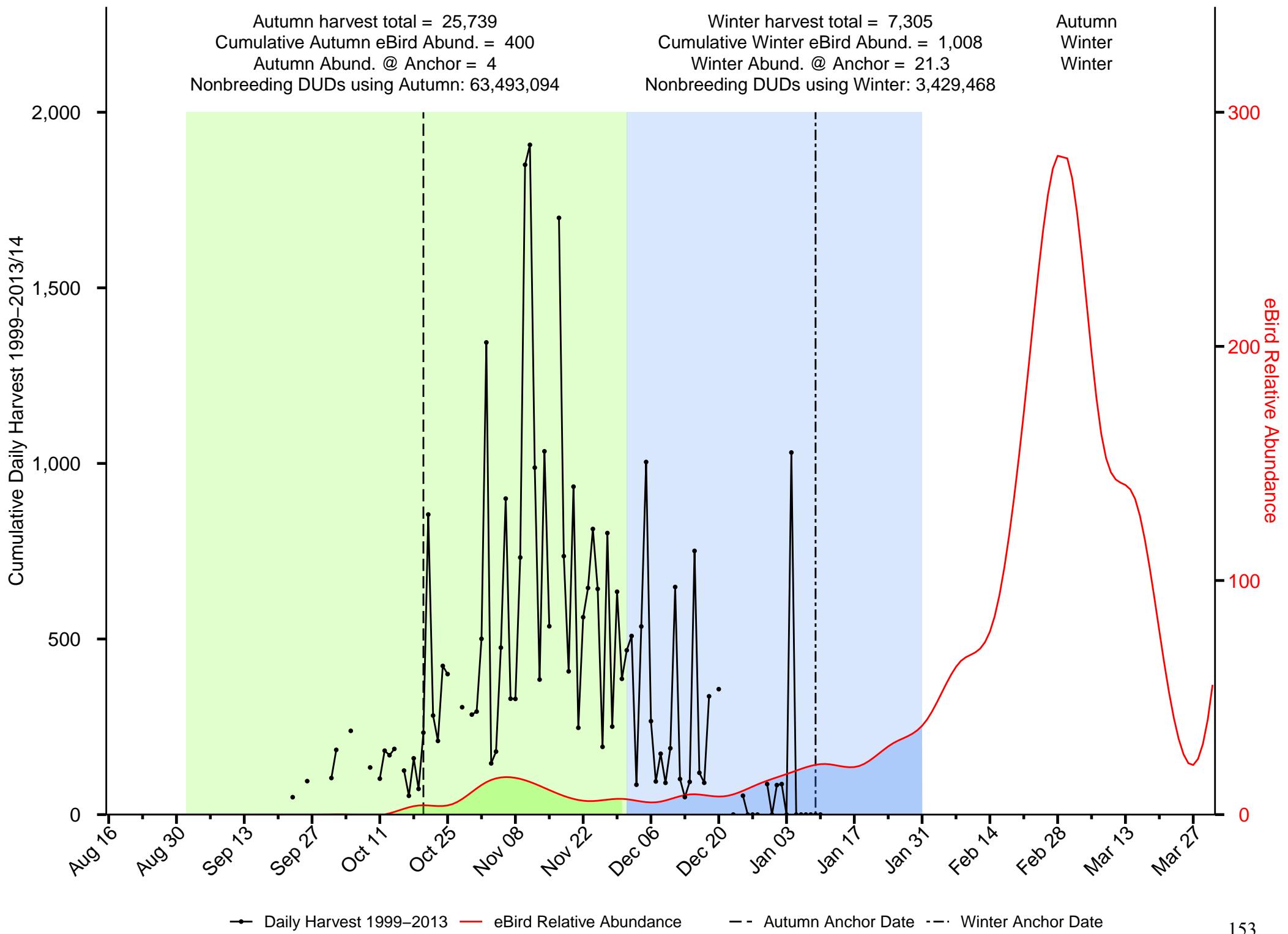
Summary of Bufflehead in the Eastern Habitat JV



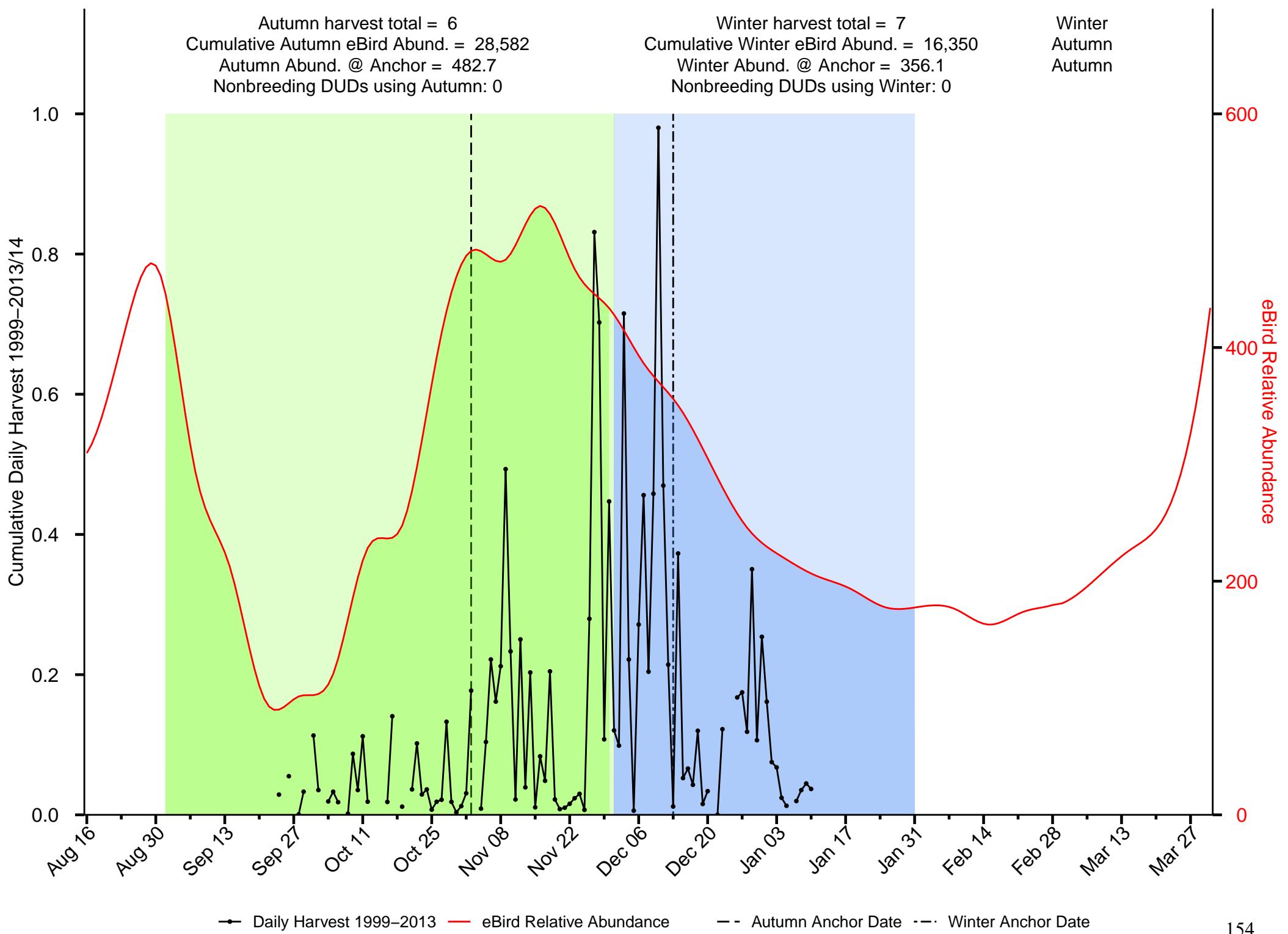
Summary of Blue-winged Teal in the Eastern Habitat JV



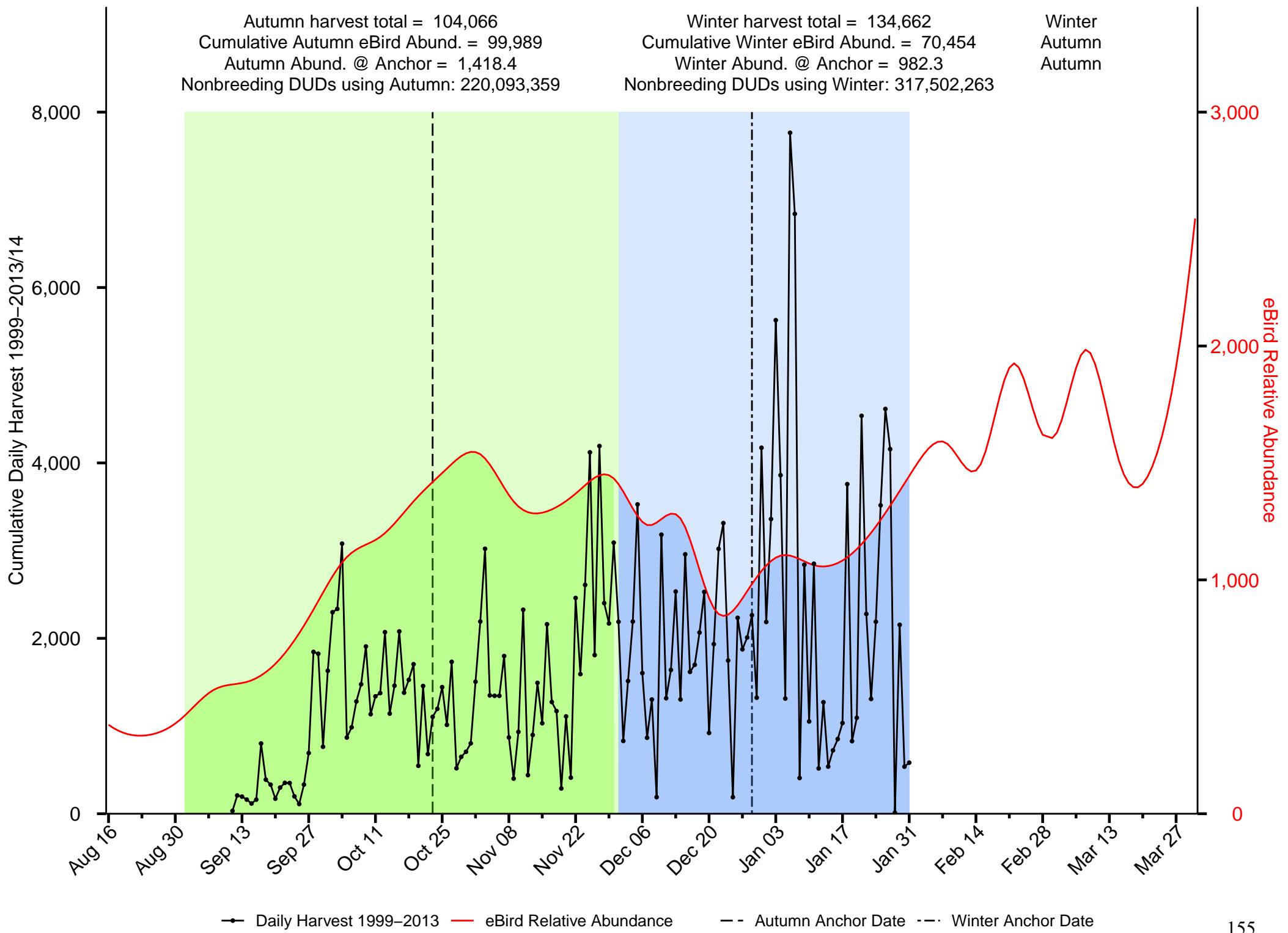
Summary of Canvasback in the Eastern Habitat JV



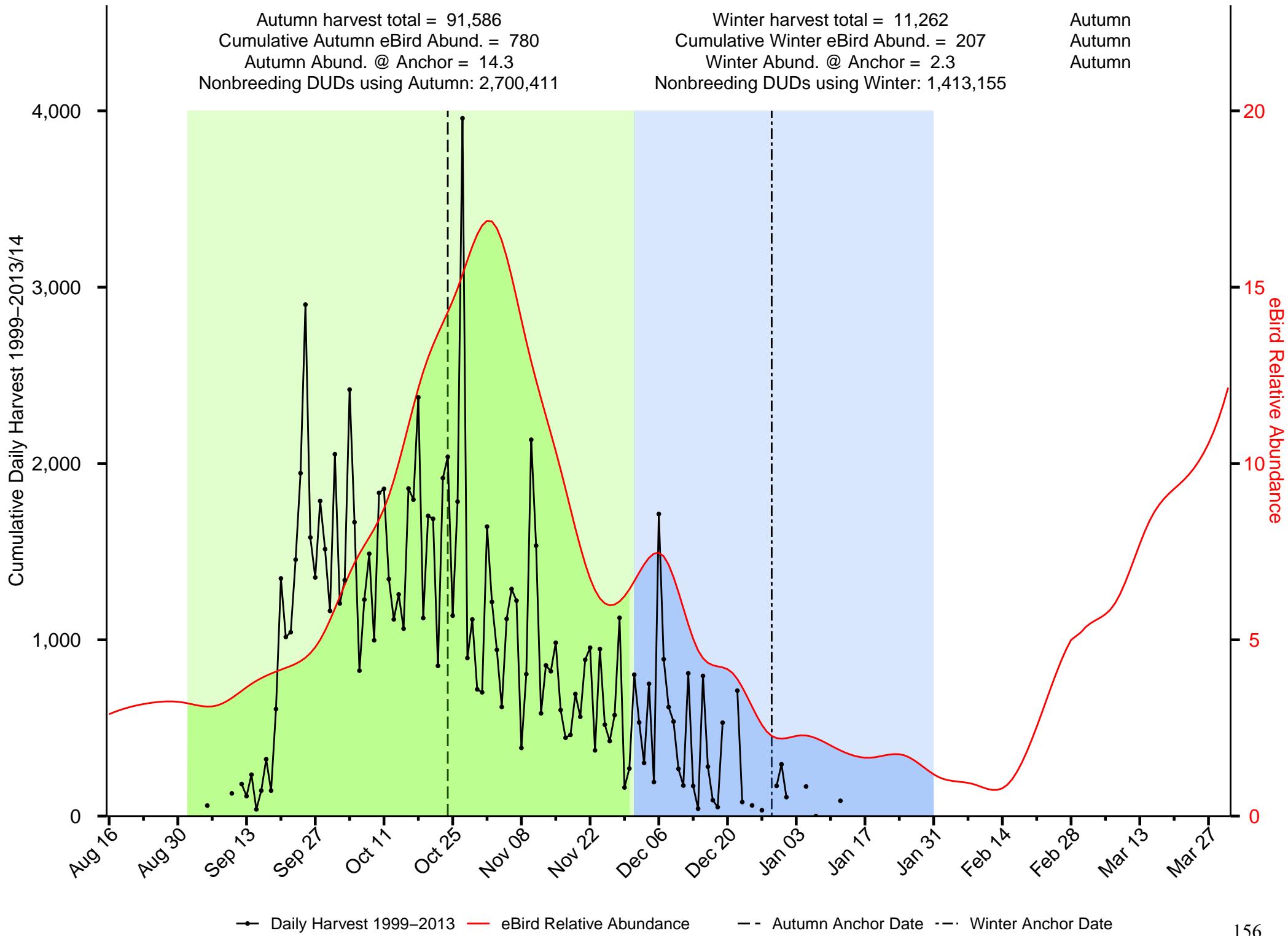
Summary of Common Goldeneye in the Eastern Habitat JV



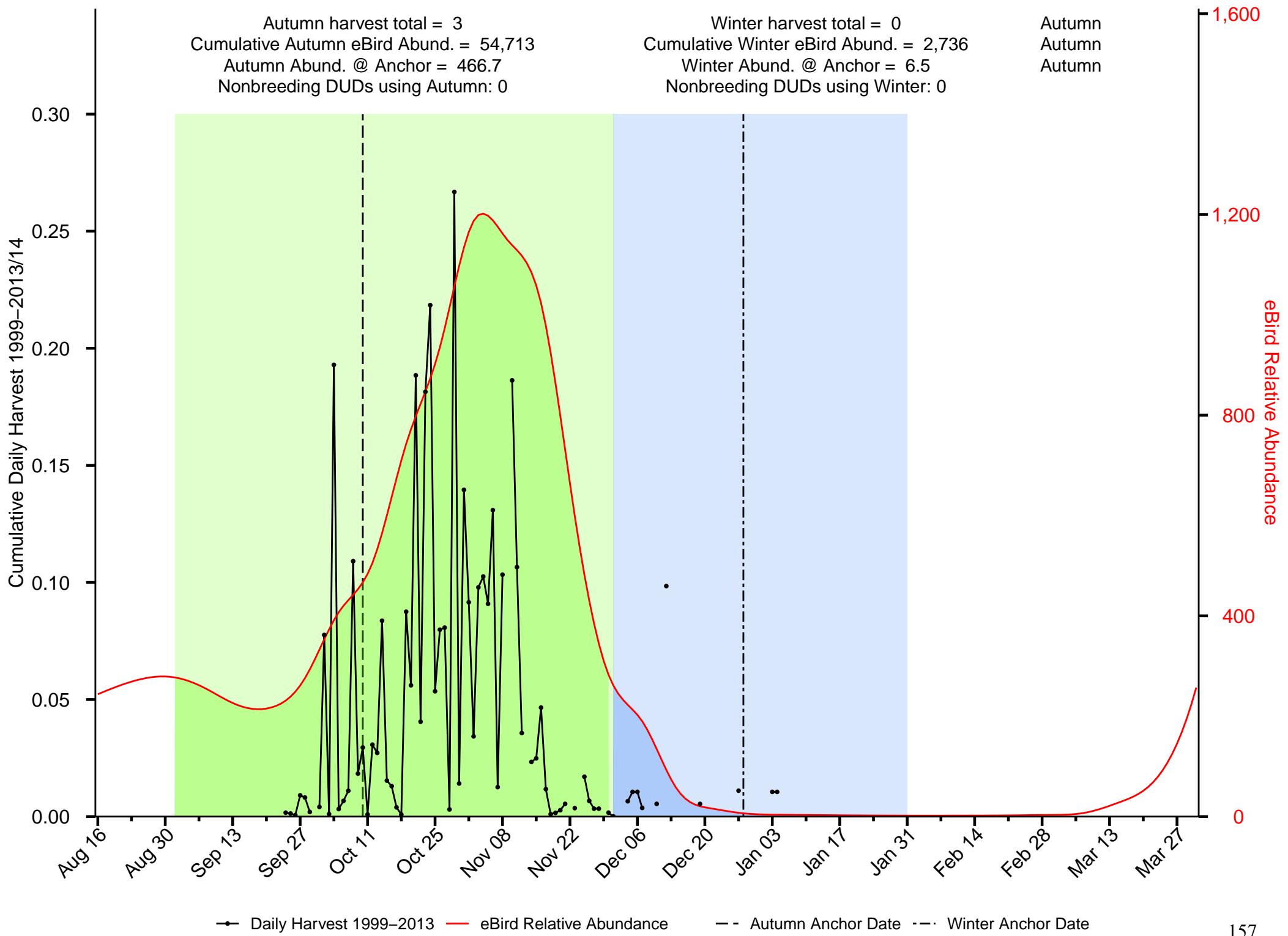
Summary of Eider in the Eastern Habitat JV



Summary of Gadwall in the Eastern Habitat JV



Summary of Hooded Merganser in the Eastern Habitat JV

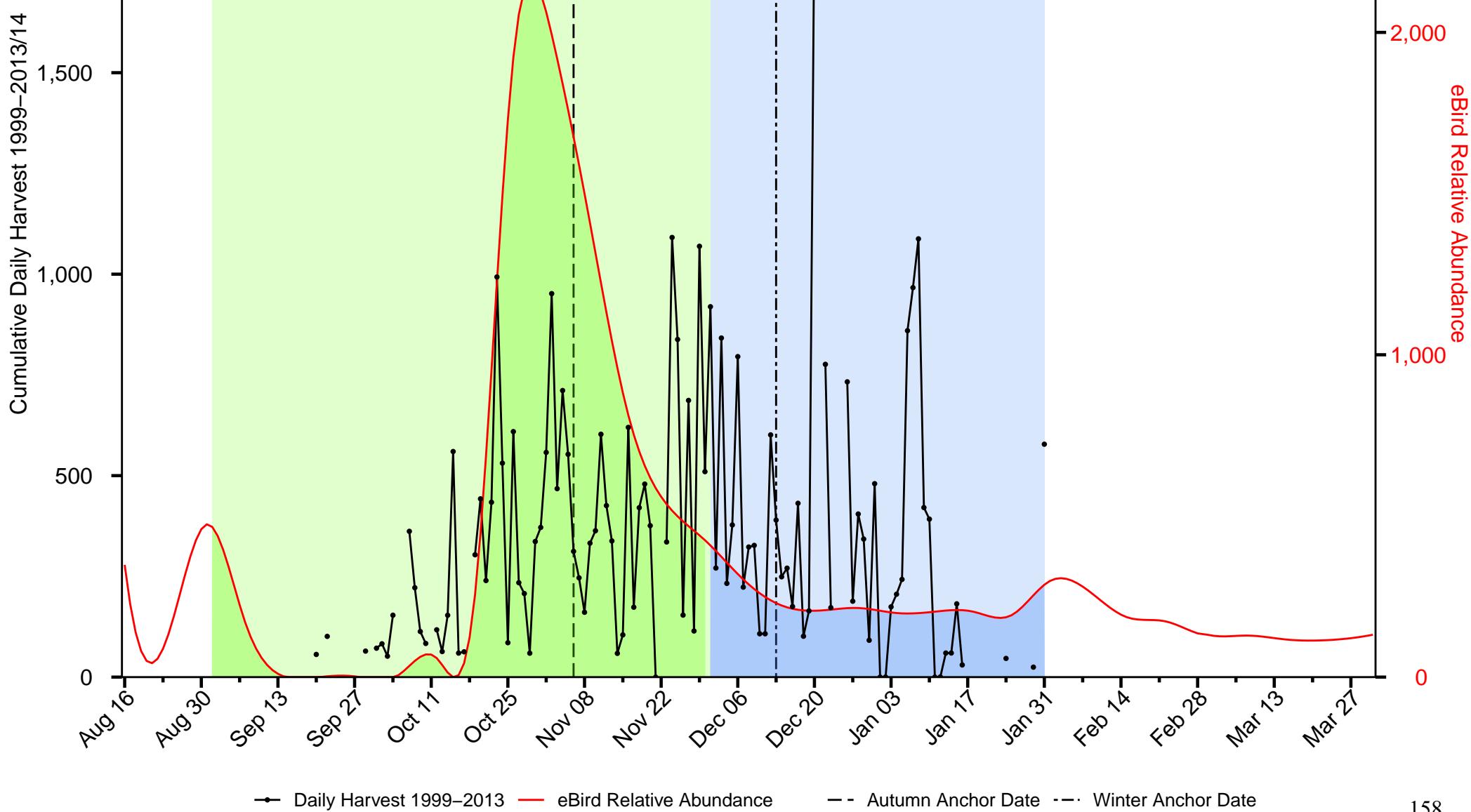


Summary of Long-tailed Duck in the Eastern Habitat JV

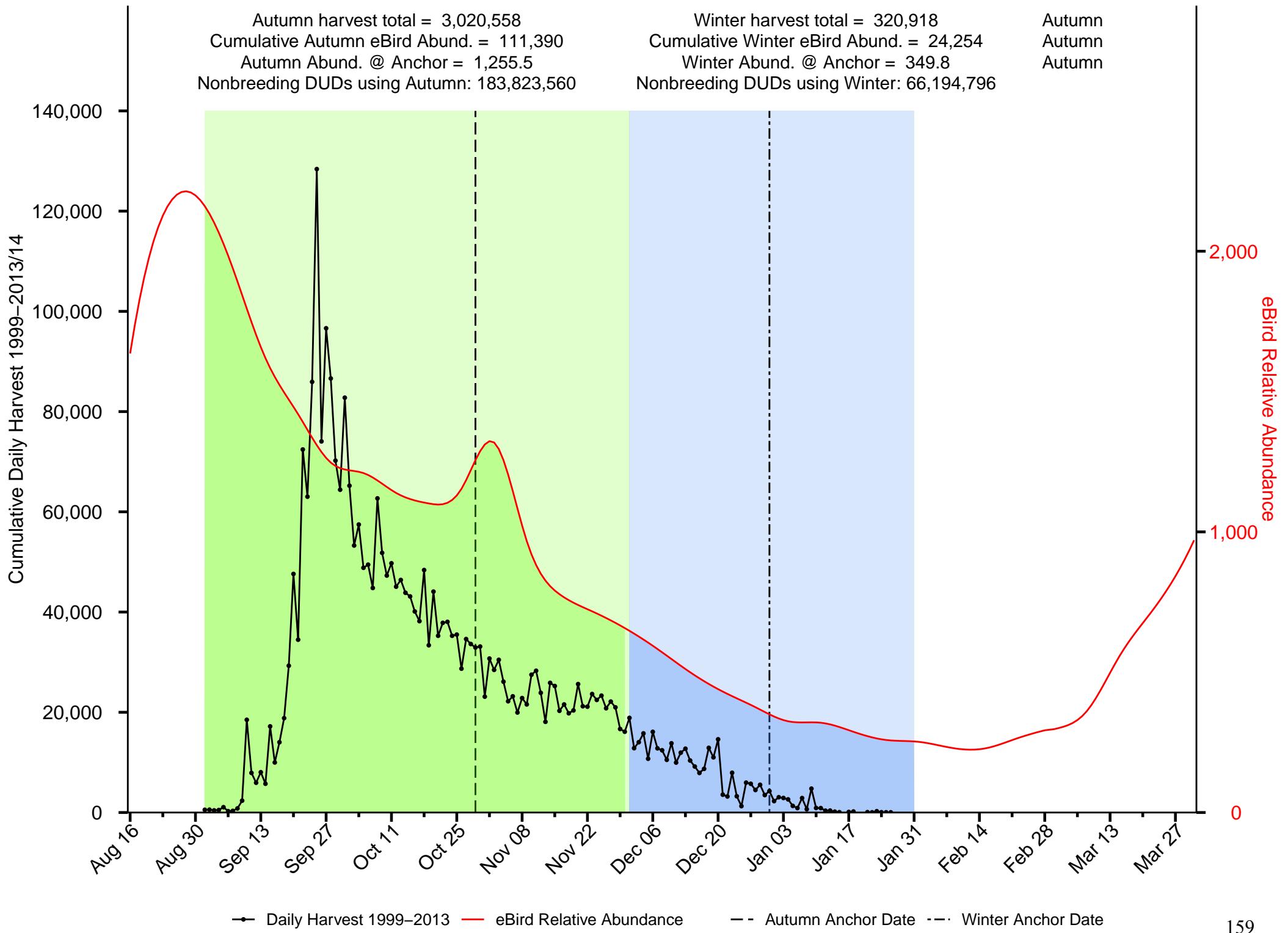
Autumn harvest total = 20,281
 Cumulative Autumn eBird Abund. = 53,433
 Autumn Abund. @ Anchor = 1,675.7
 Nonbreeding DUDs using Autumn: 11,452,941

Winter harvest total = 17,338
 Cumulative Winter eBird Abund. = 14,271
 Winter Abund. @ Anchor = 229.6
 Nonbreeding DUDs using Winter: 32,021,235

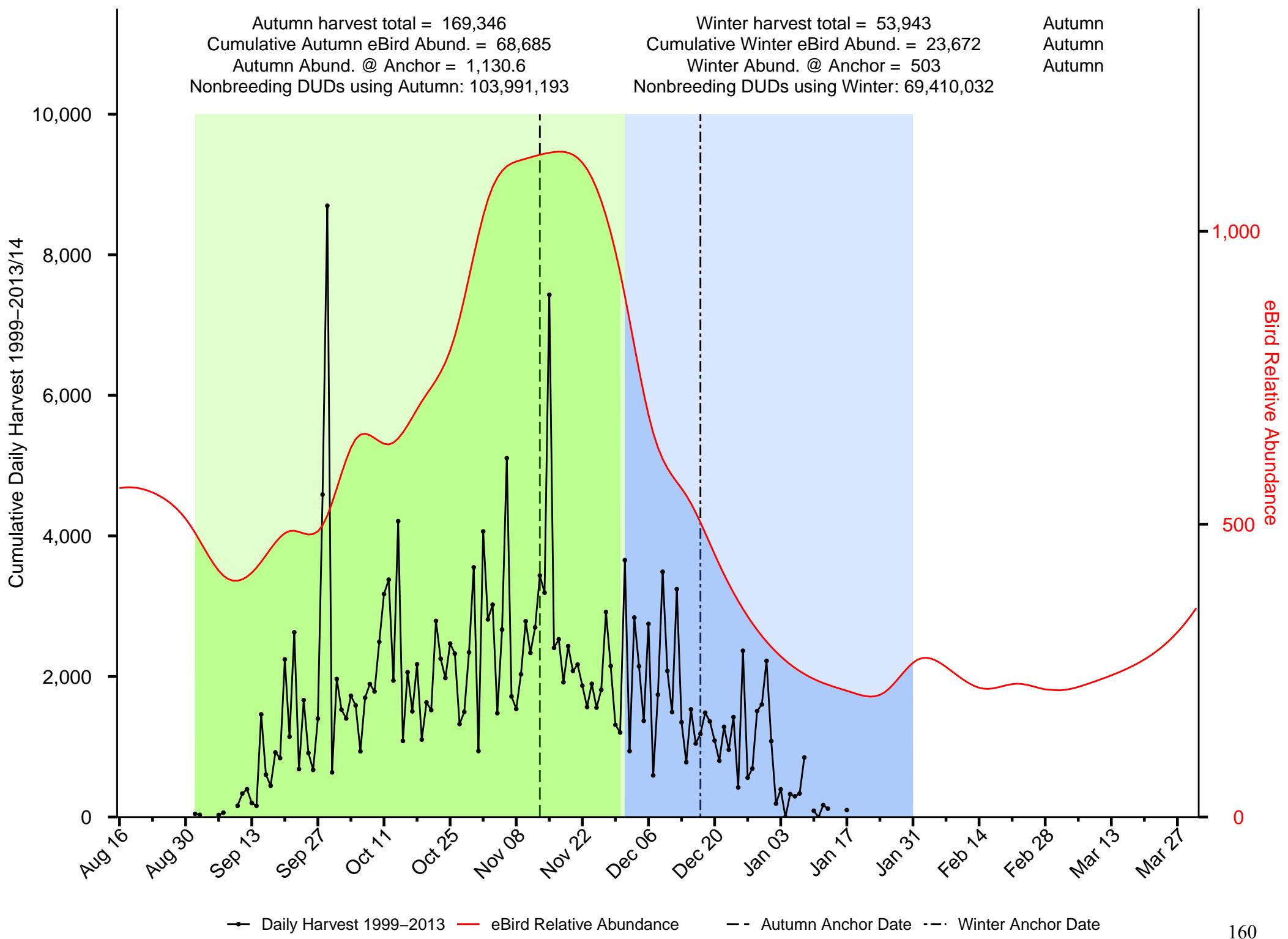
Autumn
 Autumn
 Autumn



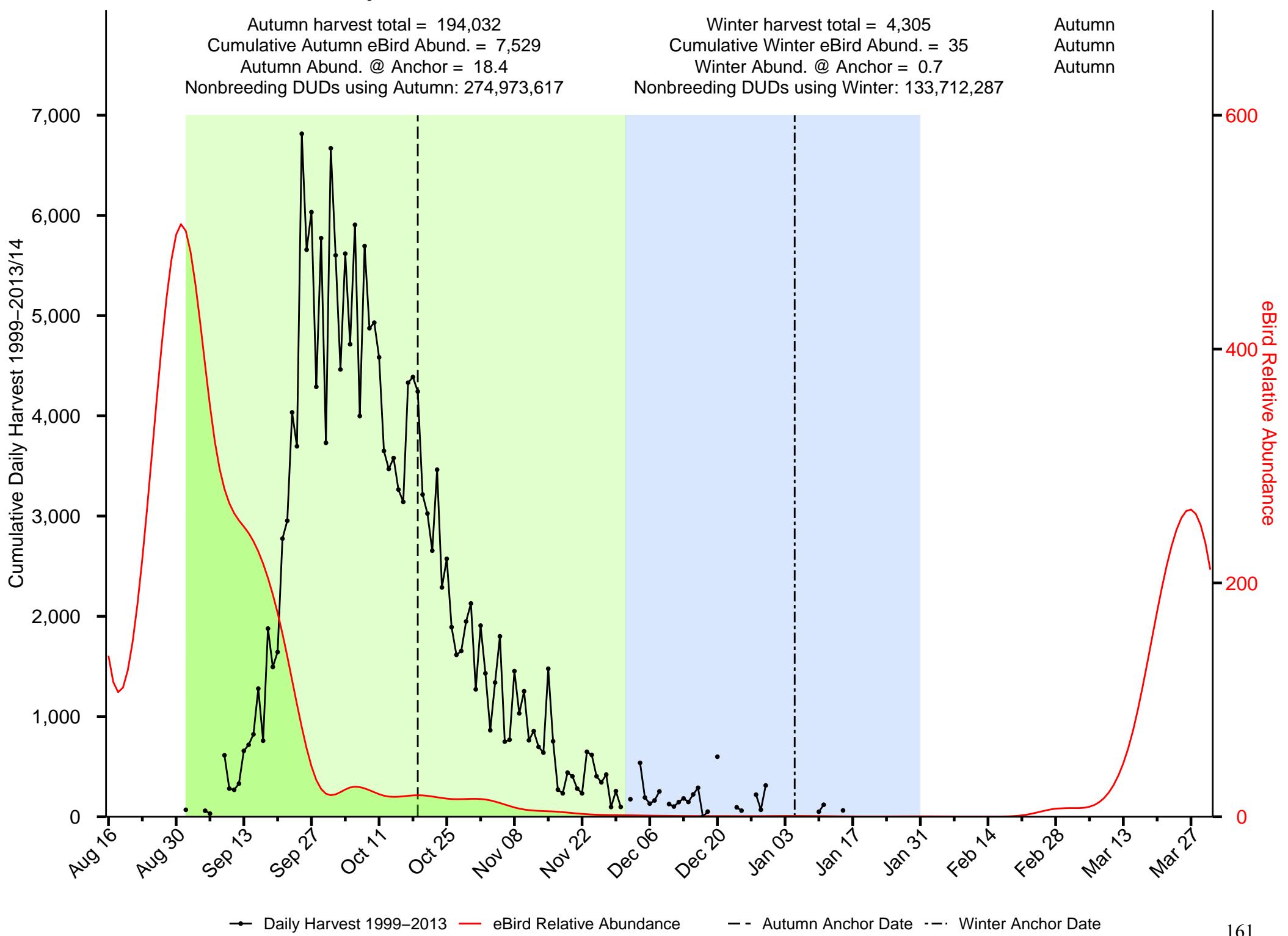
Summary of Mallard in the Eastern Habitat JV



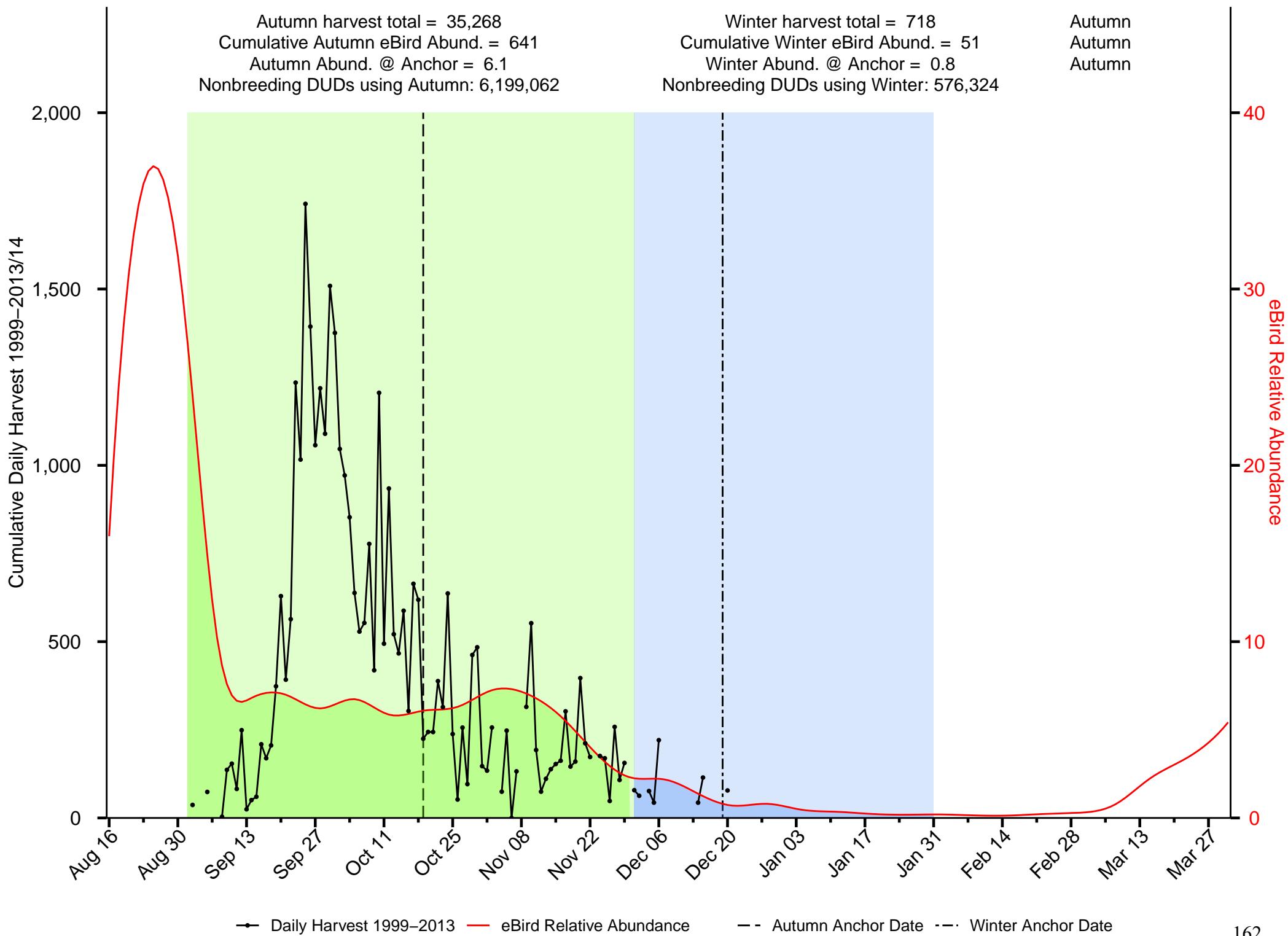
Summary of Merganser in the Eastern Habitat JV



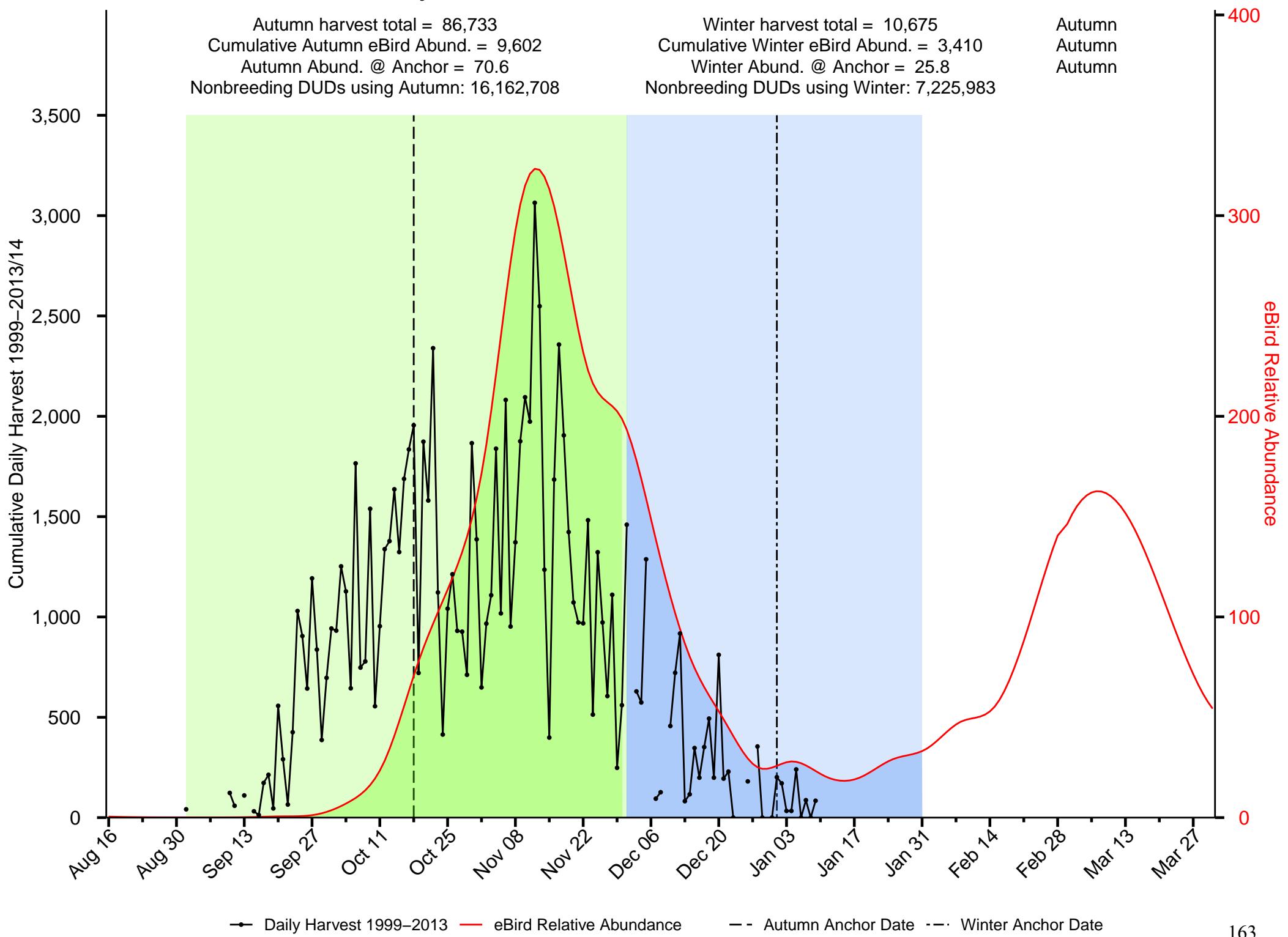
Summary of Northern Pintail in the Eastern Habitat JV



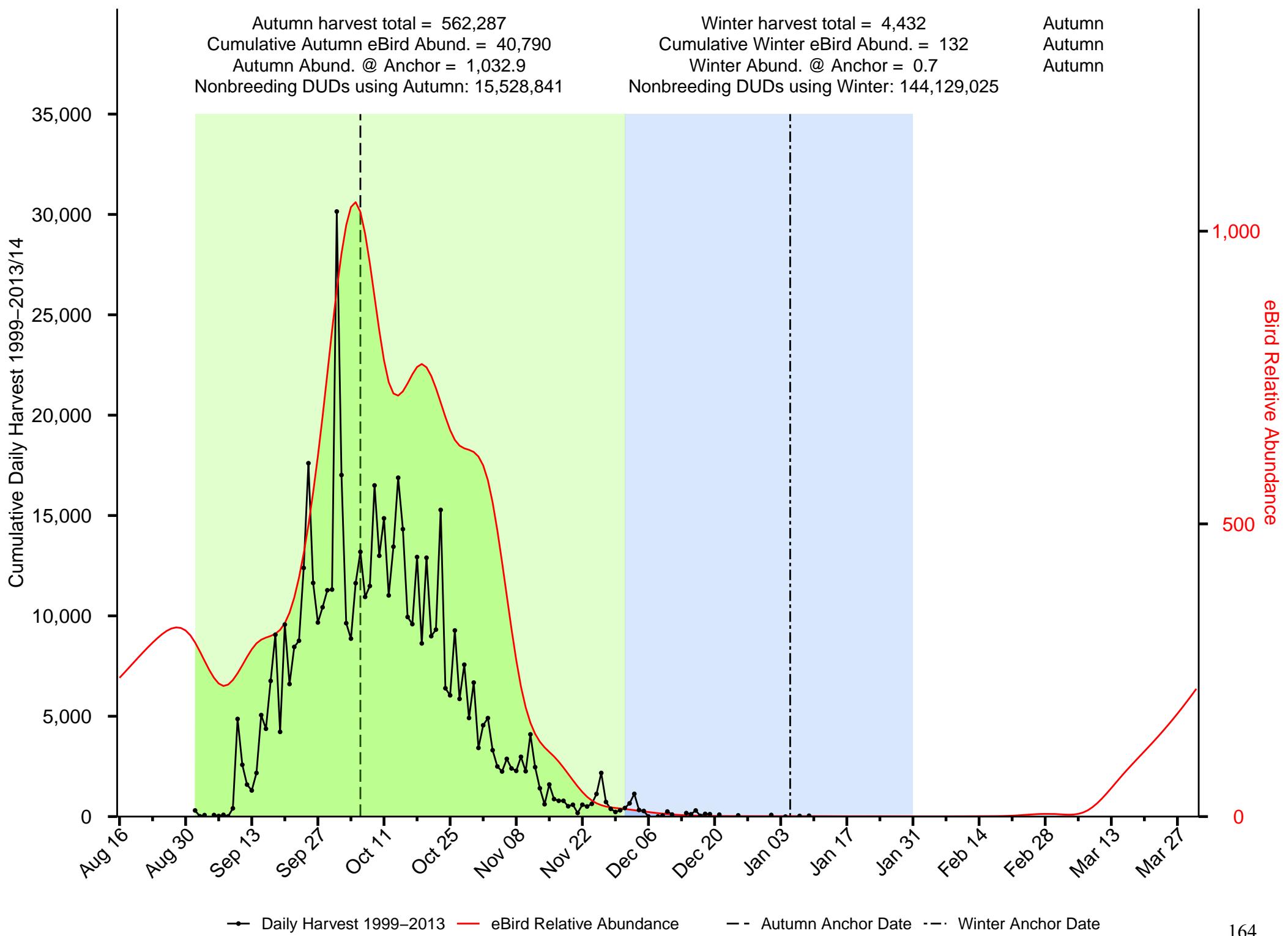
Summary of Northern Shoveler in the Eastern Habitat JV



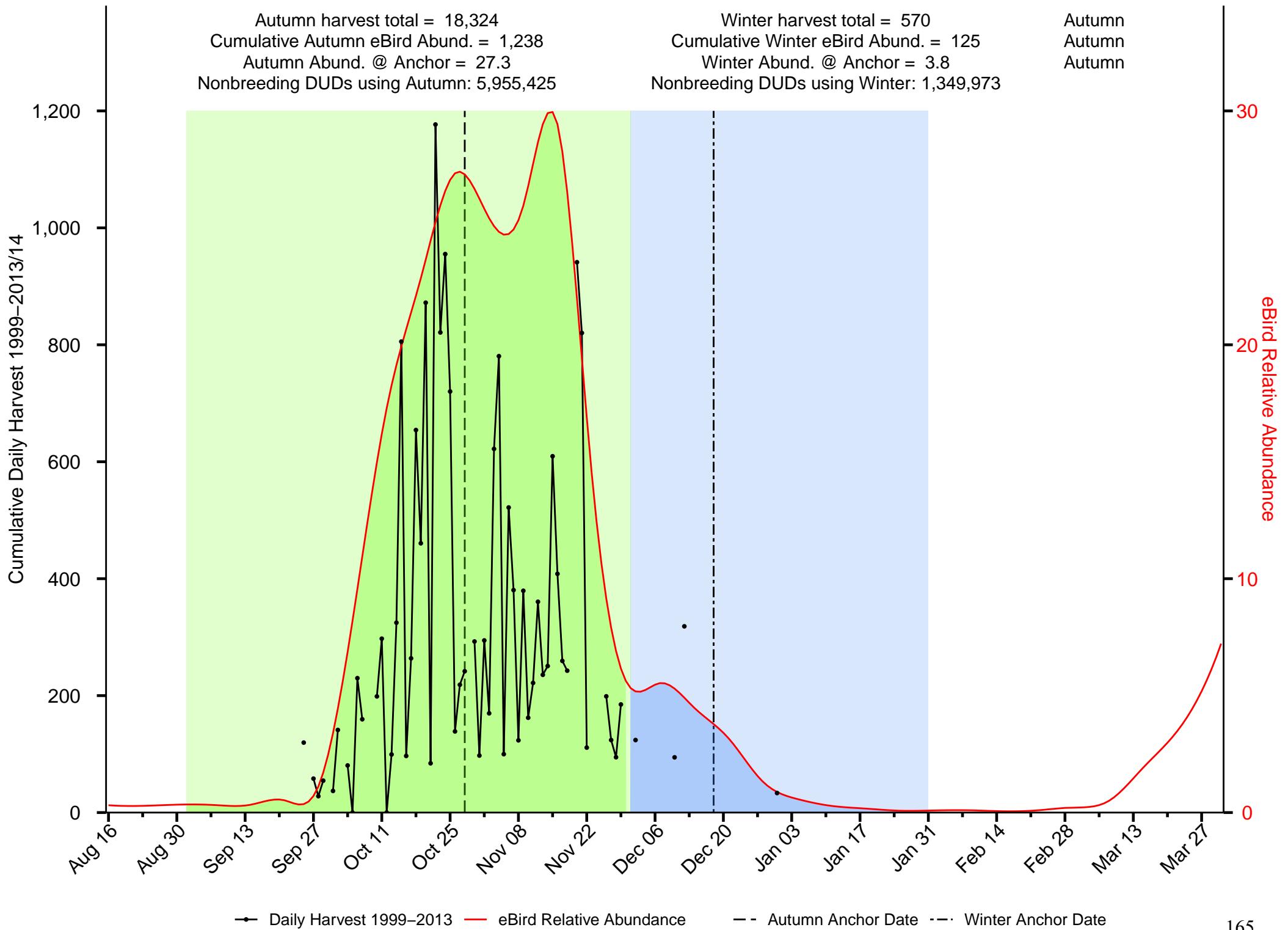
Summary of Redhead in the Eastern Habitat JV



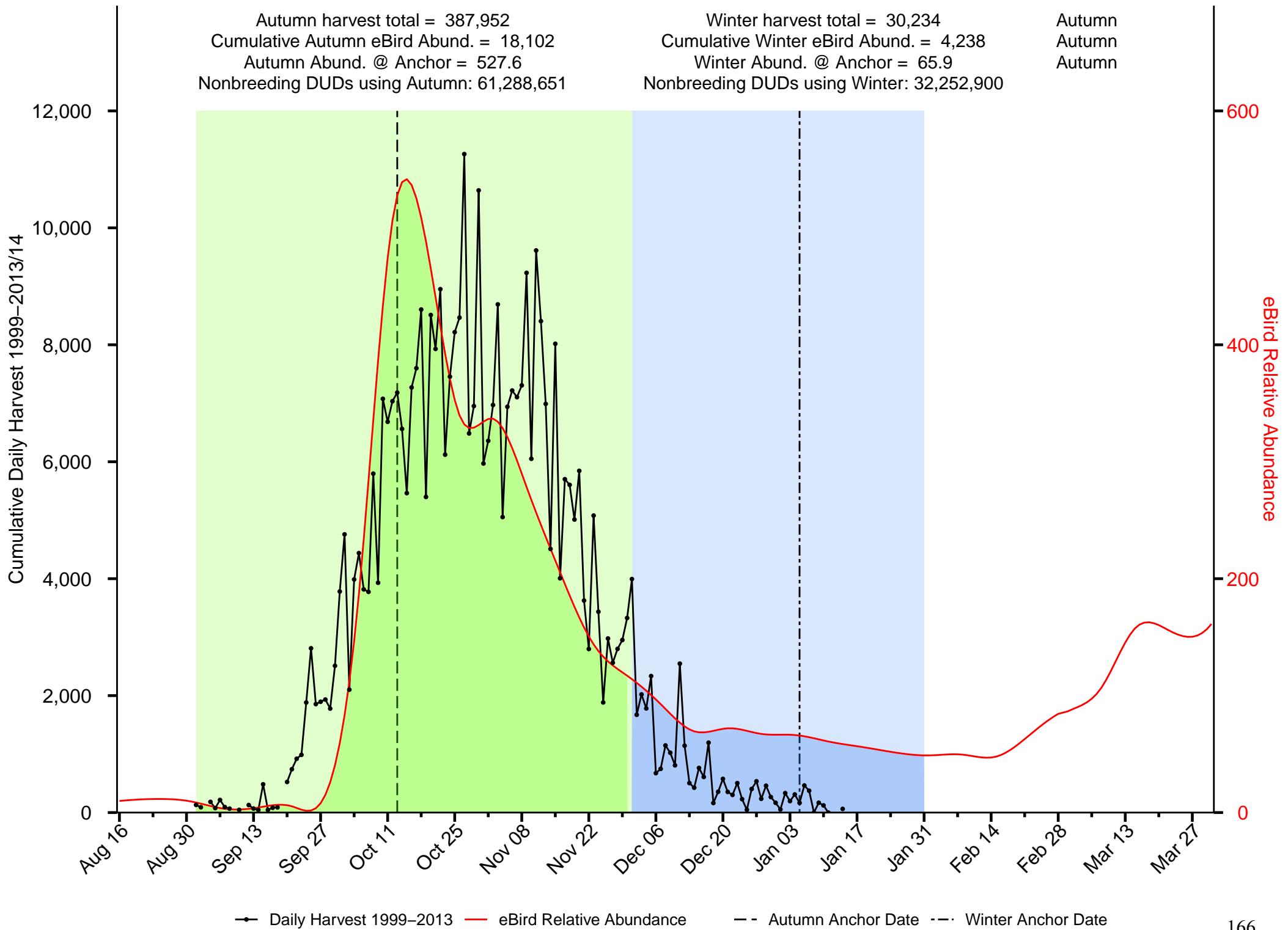
Summary of Ring-necked Duck in the Eastern Habitat JV



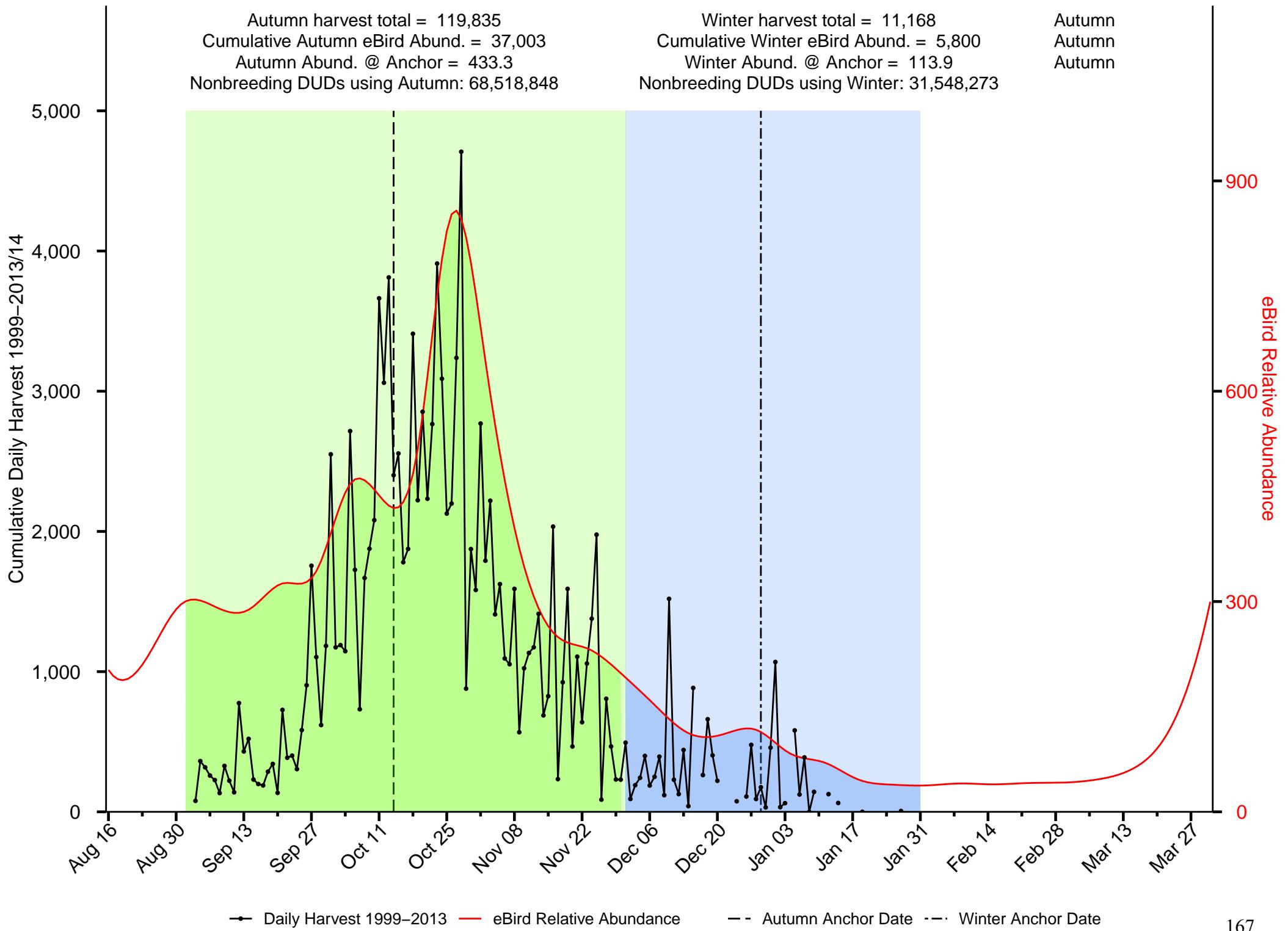
Summary of Ruddy Duck in the Eastern Habitat JV



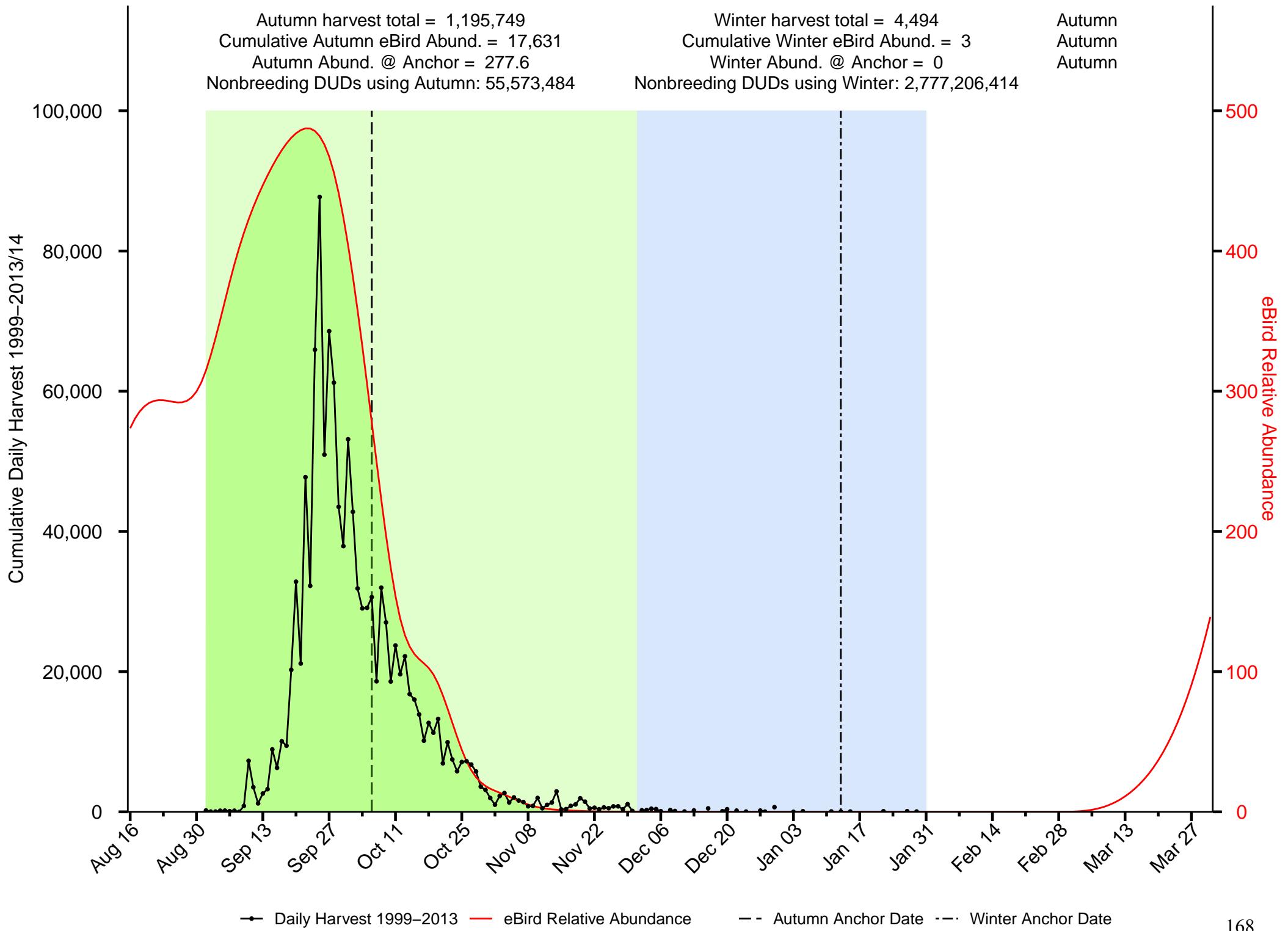
Summary of Scaup in the Eastern Habitat JV



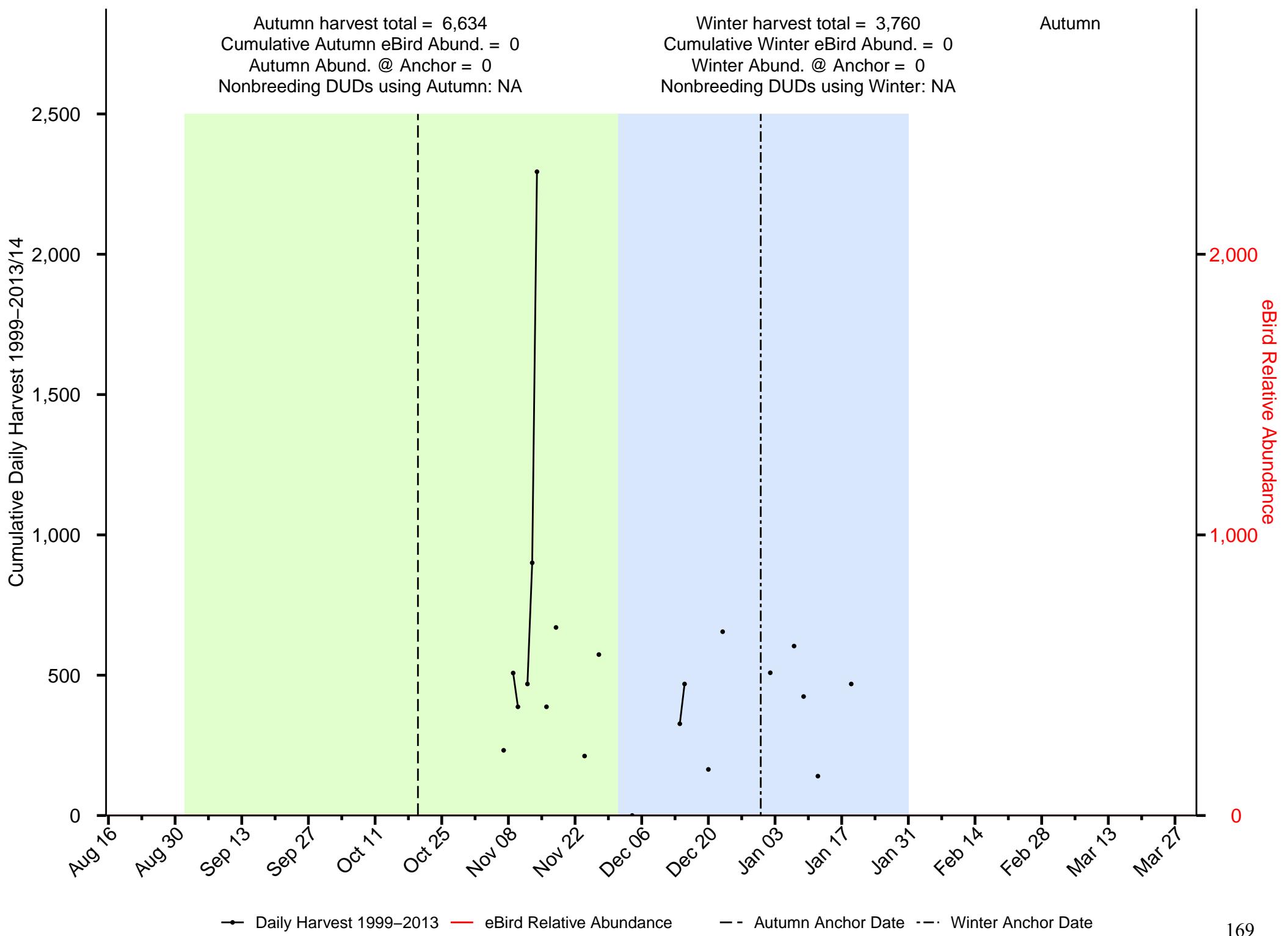
Summary of Scoter in the Eastern Habitat JV



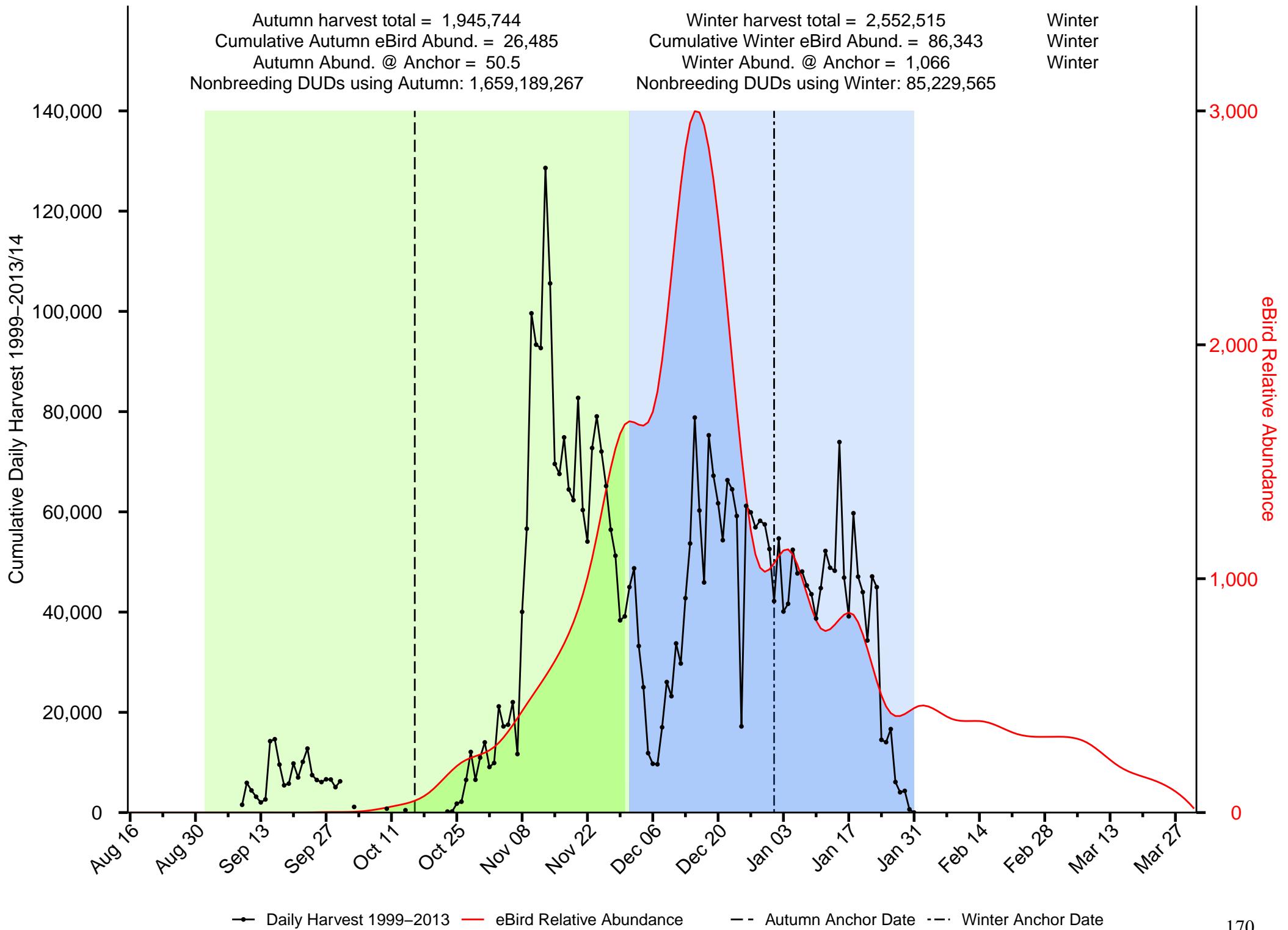
Summary of Wood Duck in the Eastern Habitat JV



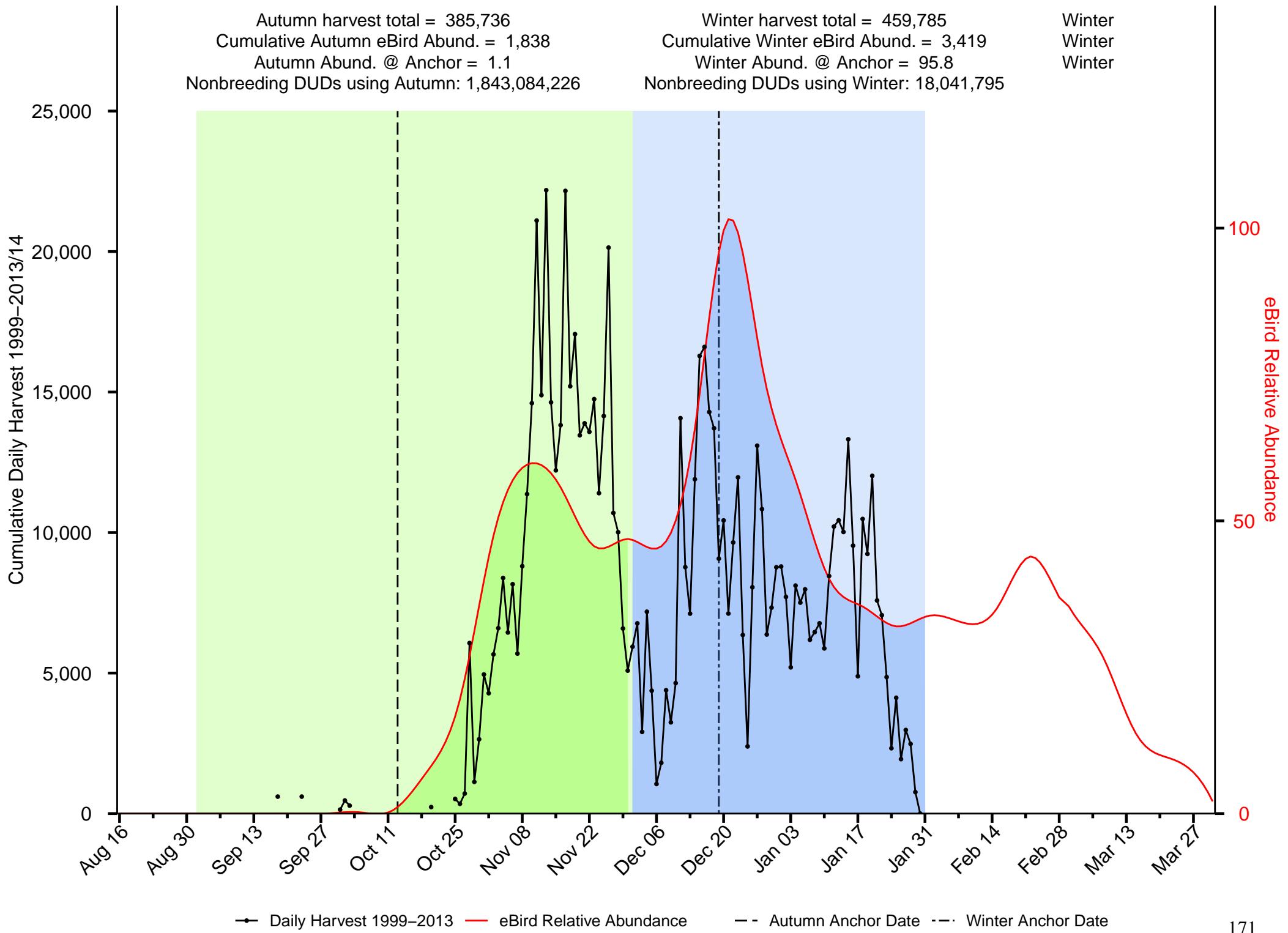
Summary of American Black Duck in the Gulf Coast JV



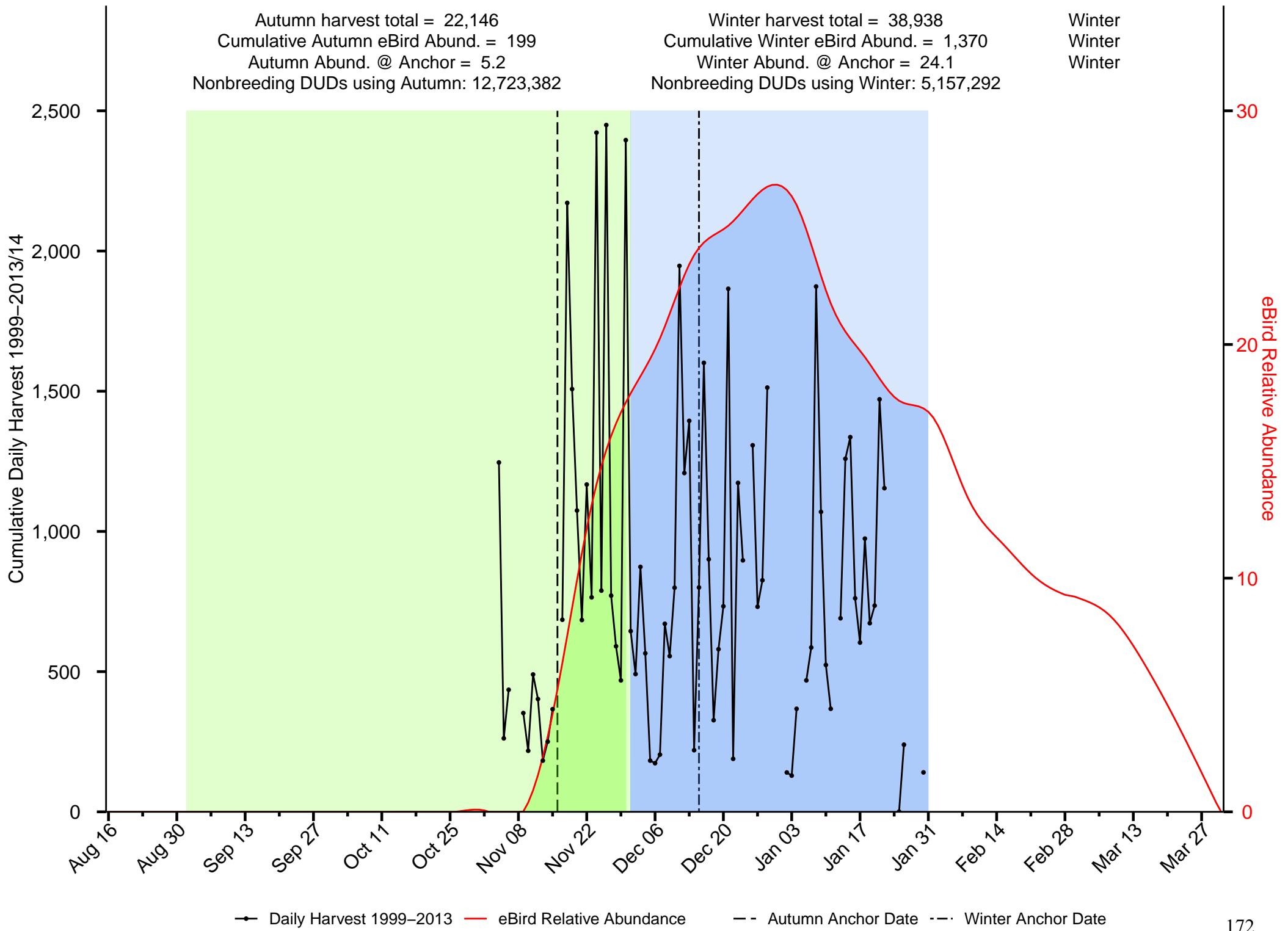
Summary of Green-winged Teal in the Gulf Coast JV



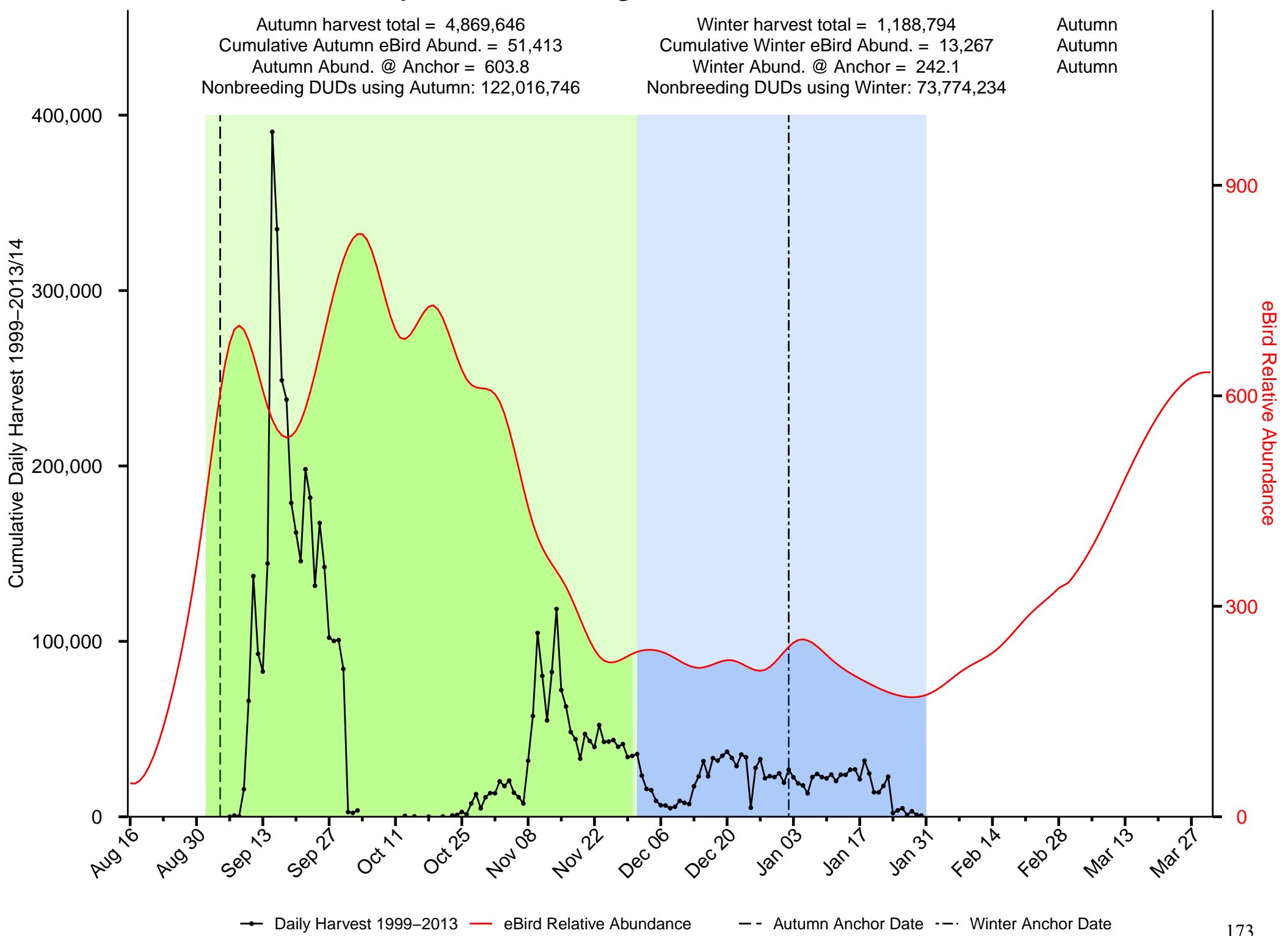
Summary of American Wigeon in the Gulf Coast JV



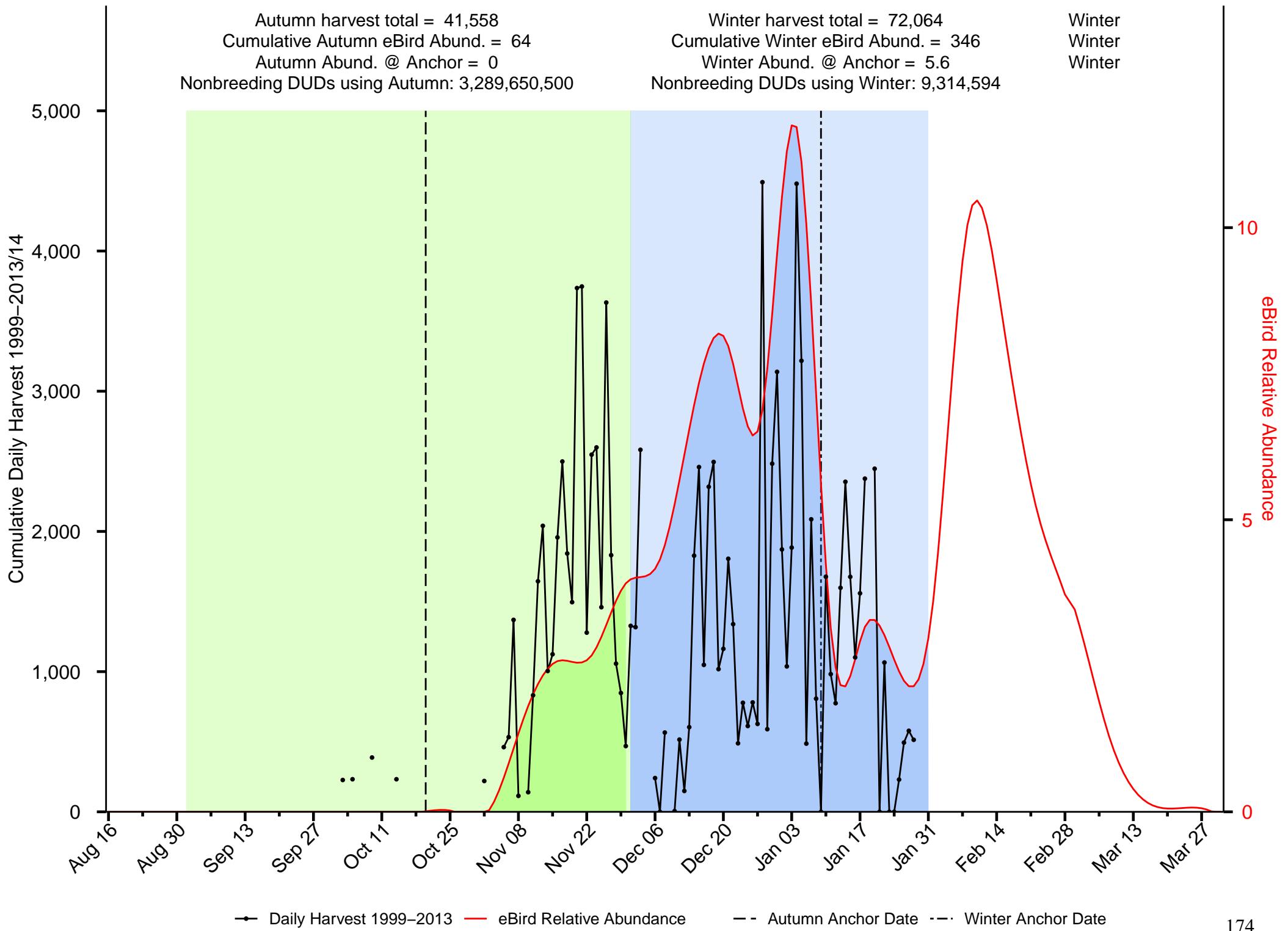
Summary of Bufflehead in the Gulf Coast JV



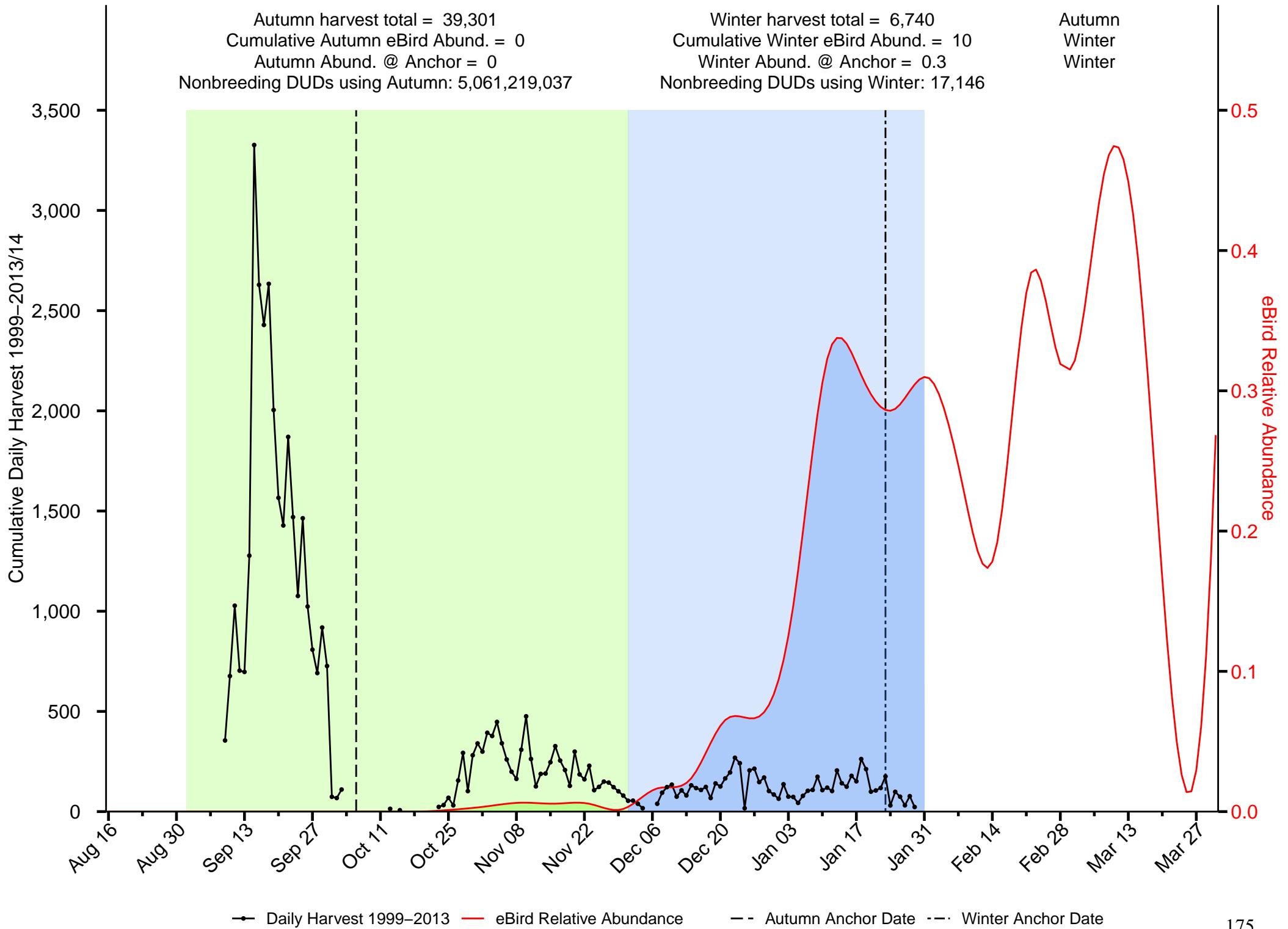
Summary of Blue-winged Teal in the Gulf Coast JV



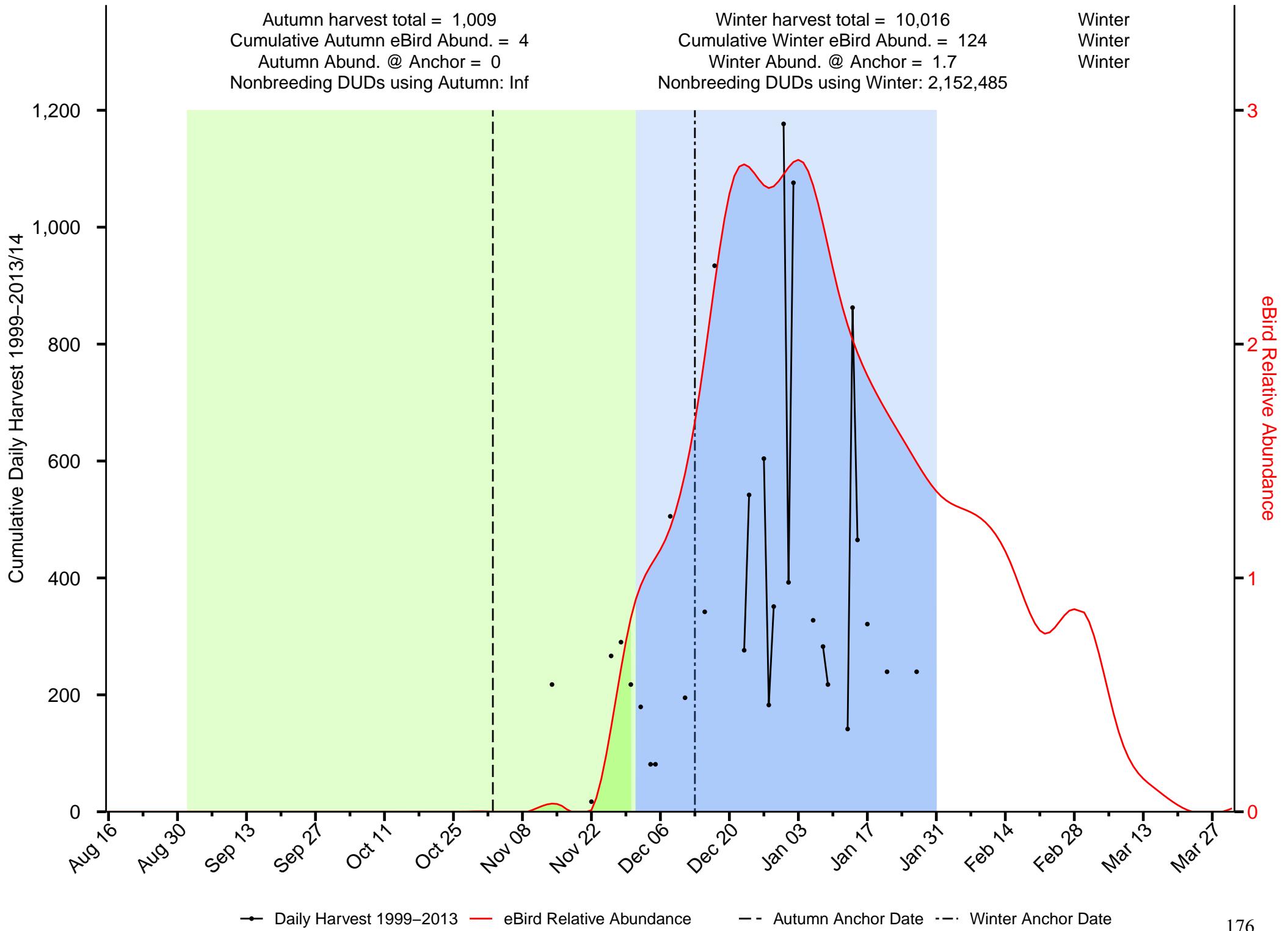
Summary of Canvasback in the Gulf Coast JV



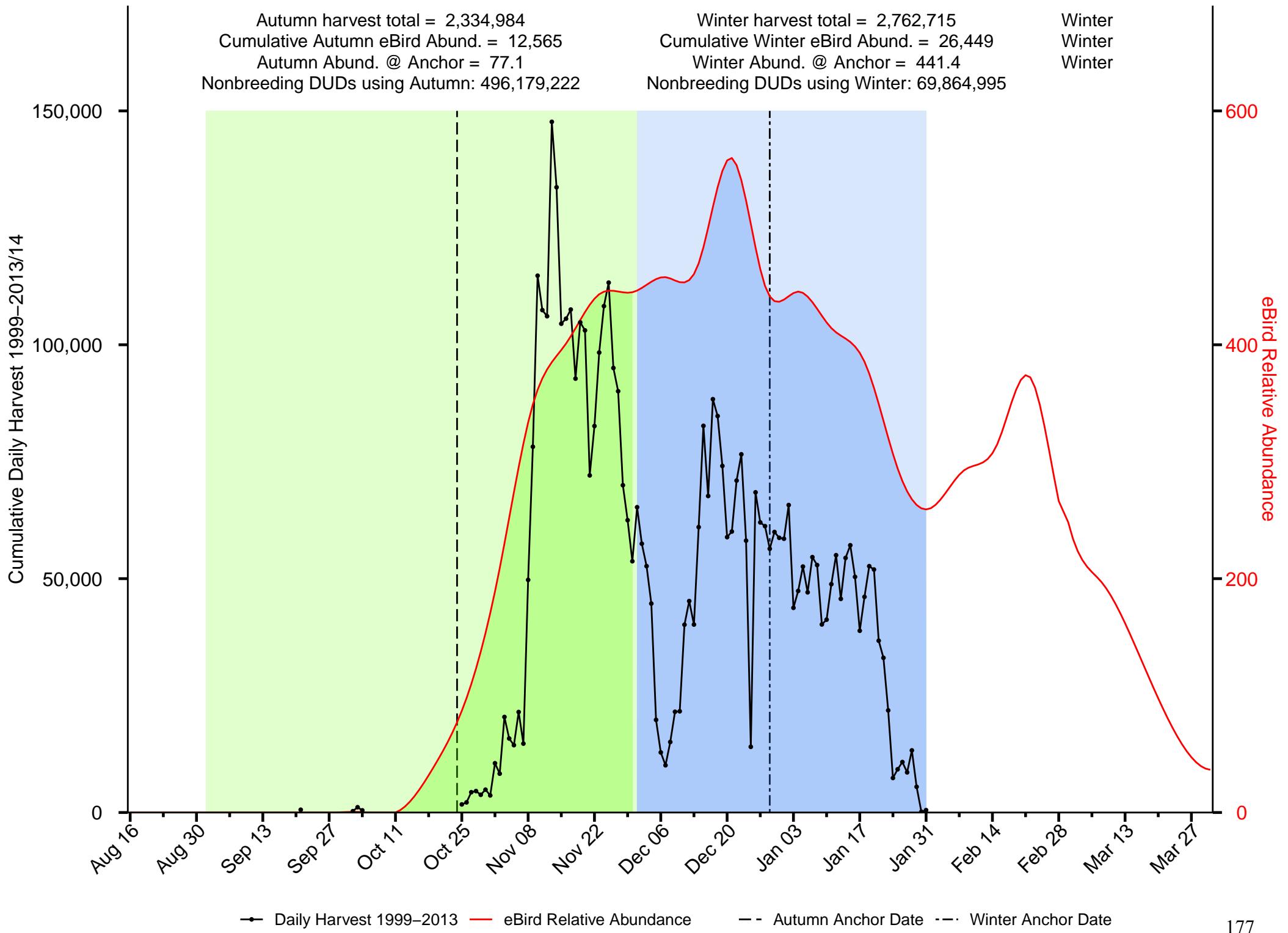
Summary of Cinnamon Teal in the Gulf Coast JV



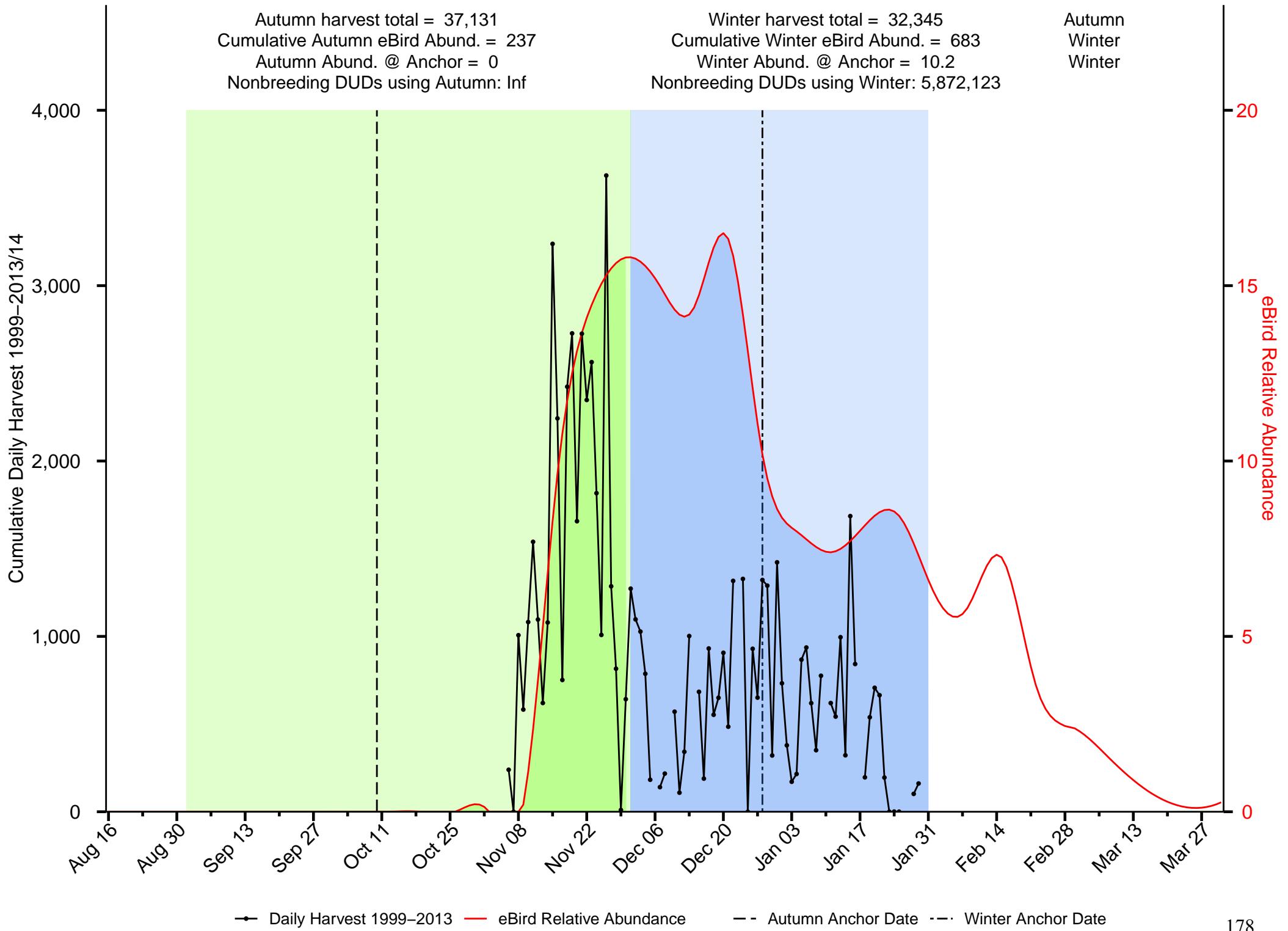
Summary of Common Goldeneye in the Gulf Coast JV



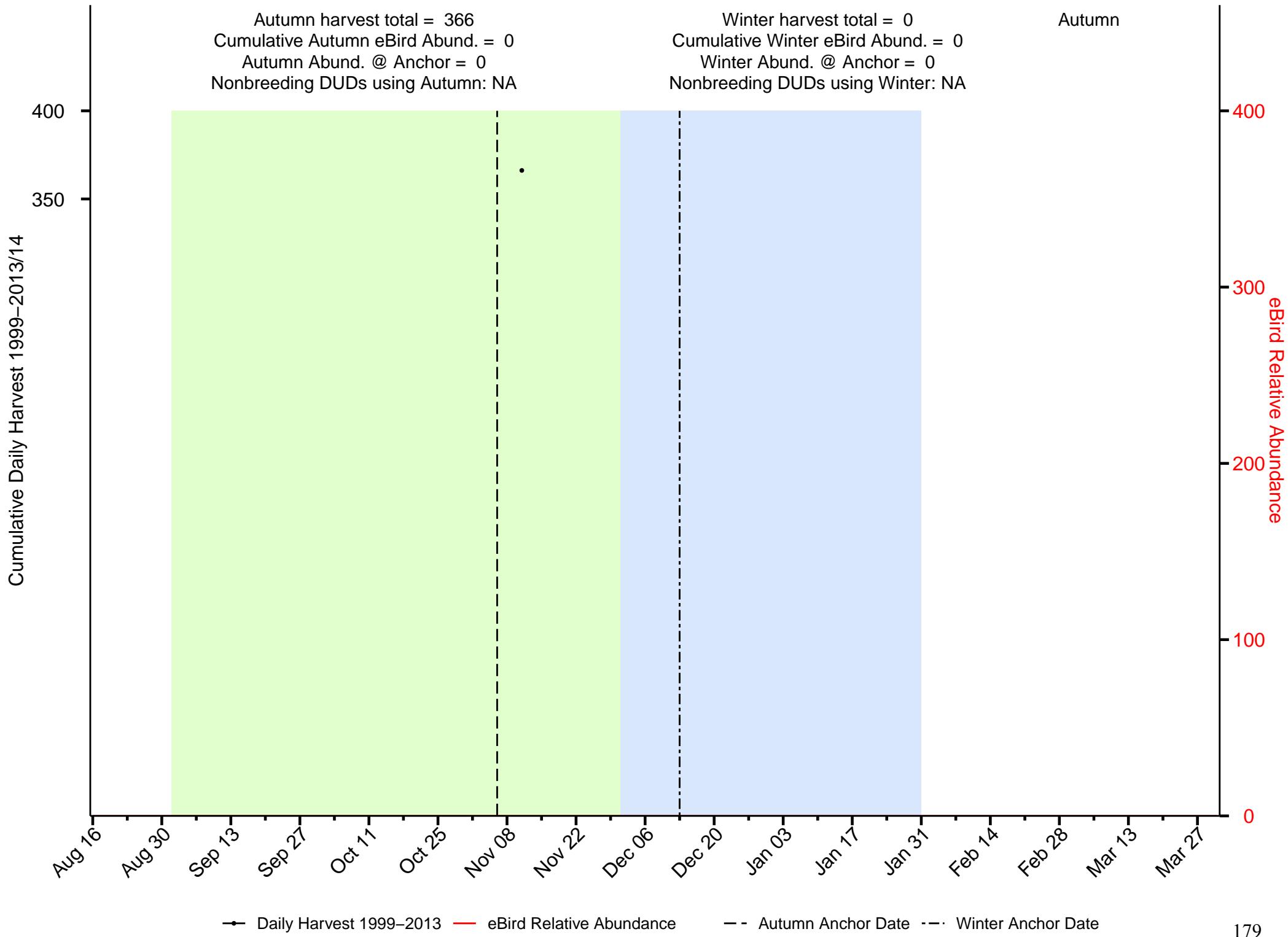
Summary of Gadwall in the Gulf Coast JV



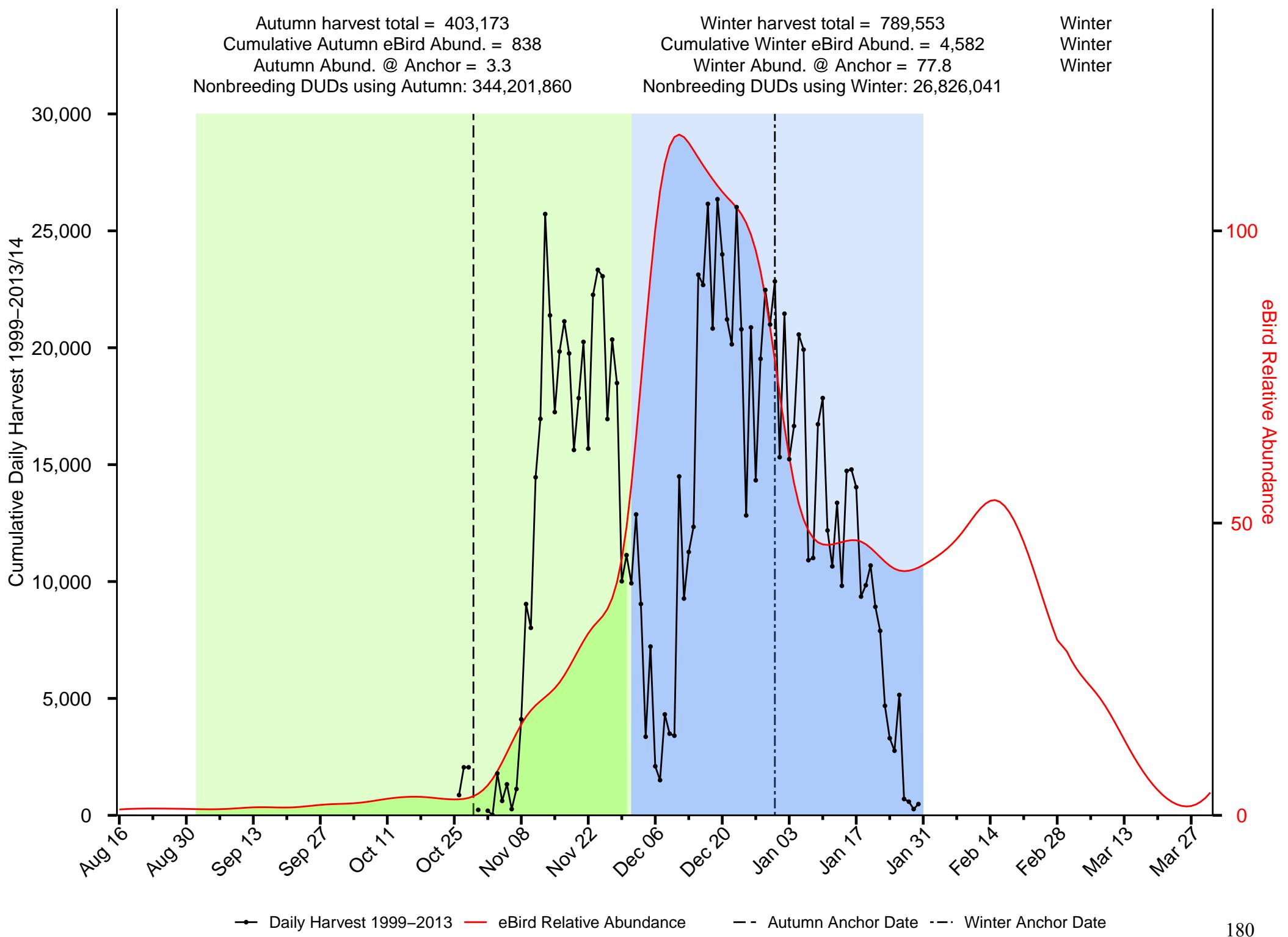
Summary of Hooded Merganser in the Gulf Coast JV



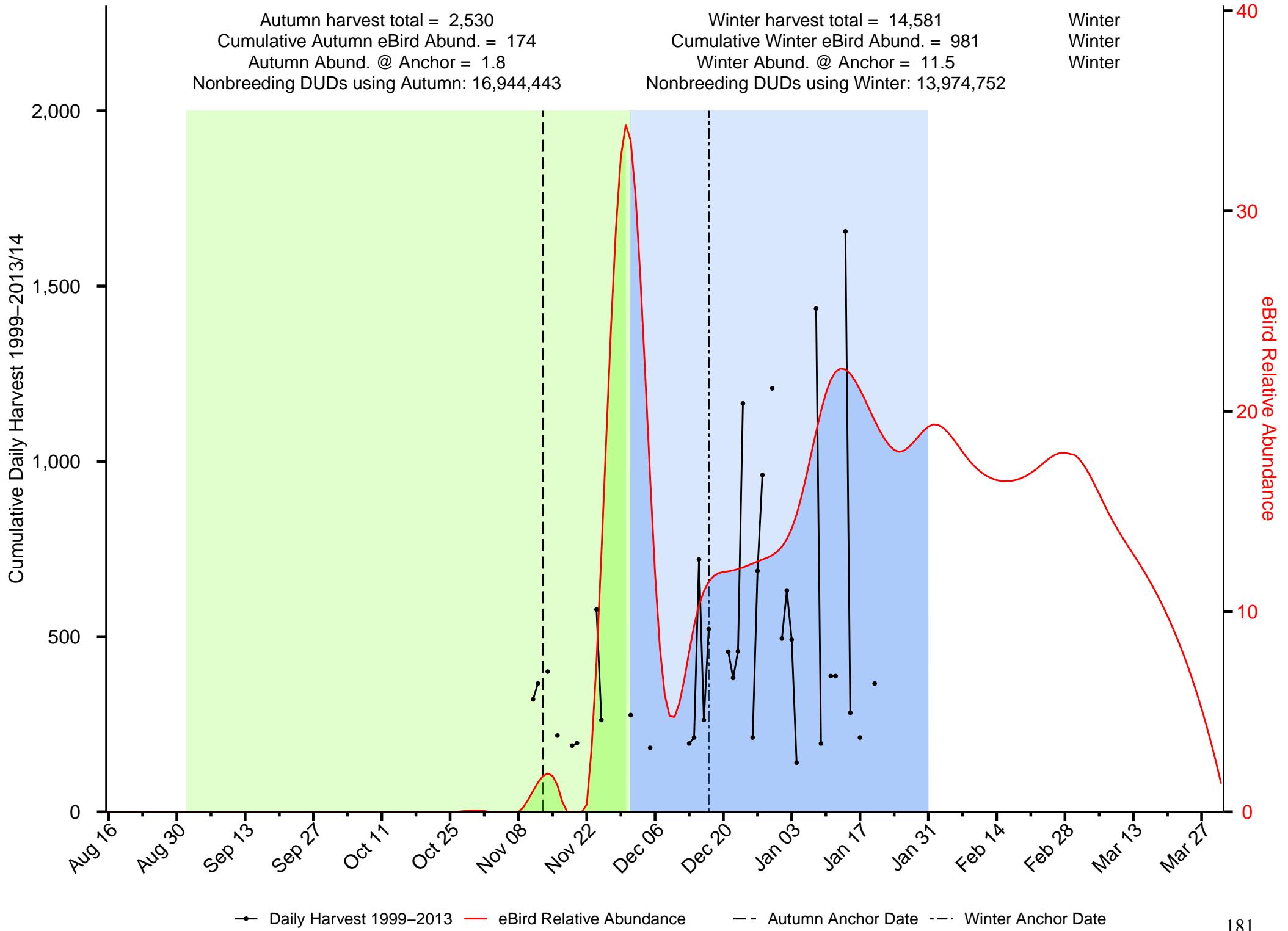
Summary of Long-tailed Duck in the Gulf Coast JV



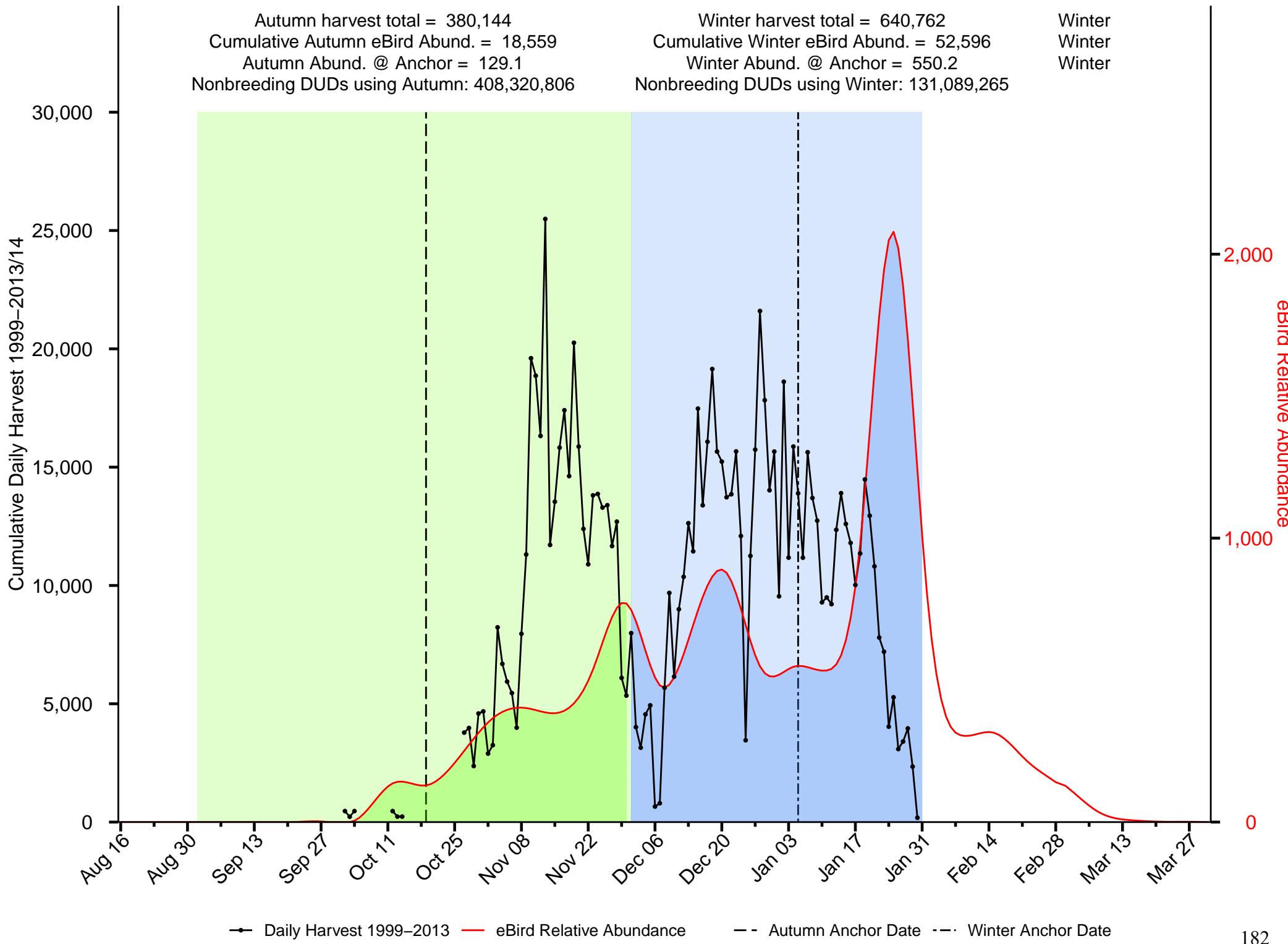
Summary of Mallard in the Gulf Coast JV



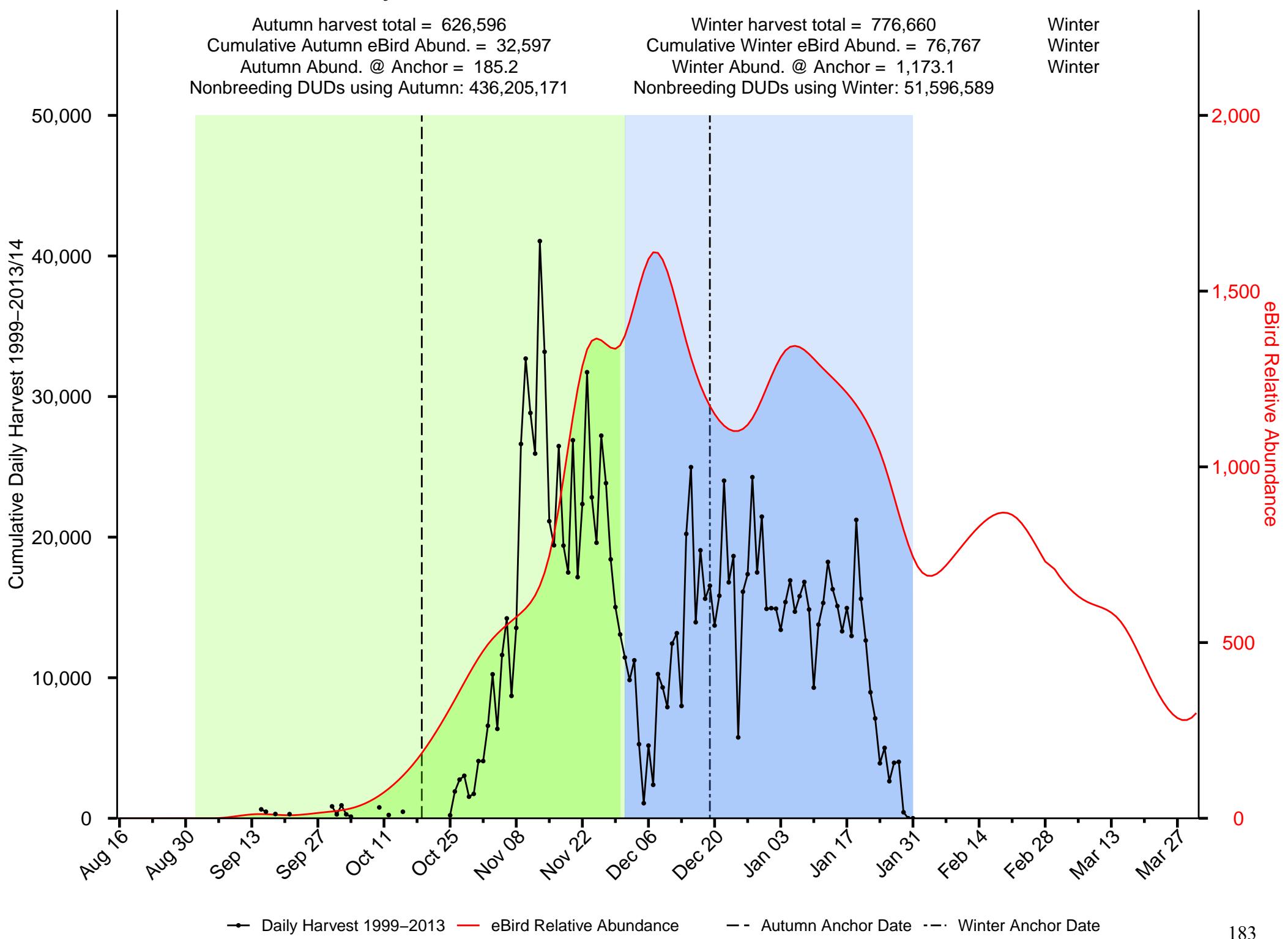
Summary of Merganser in the Gulf Coast JV



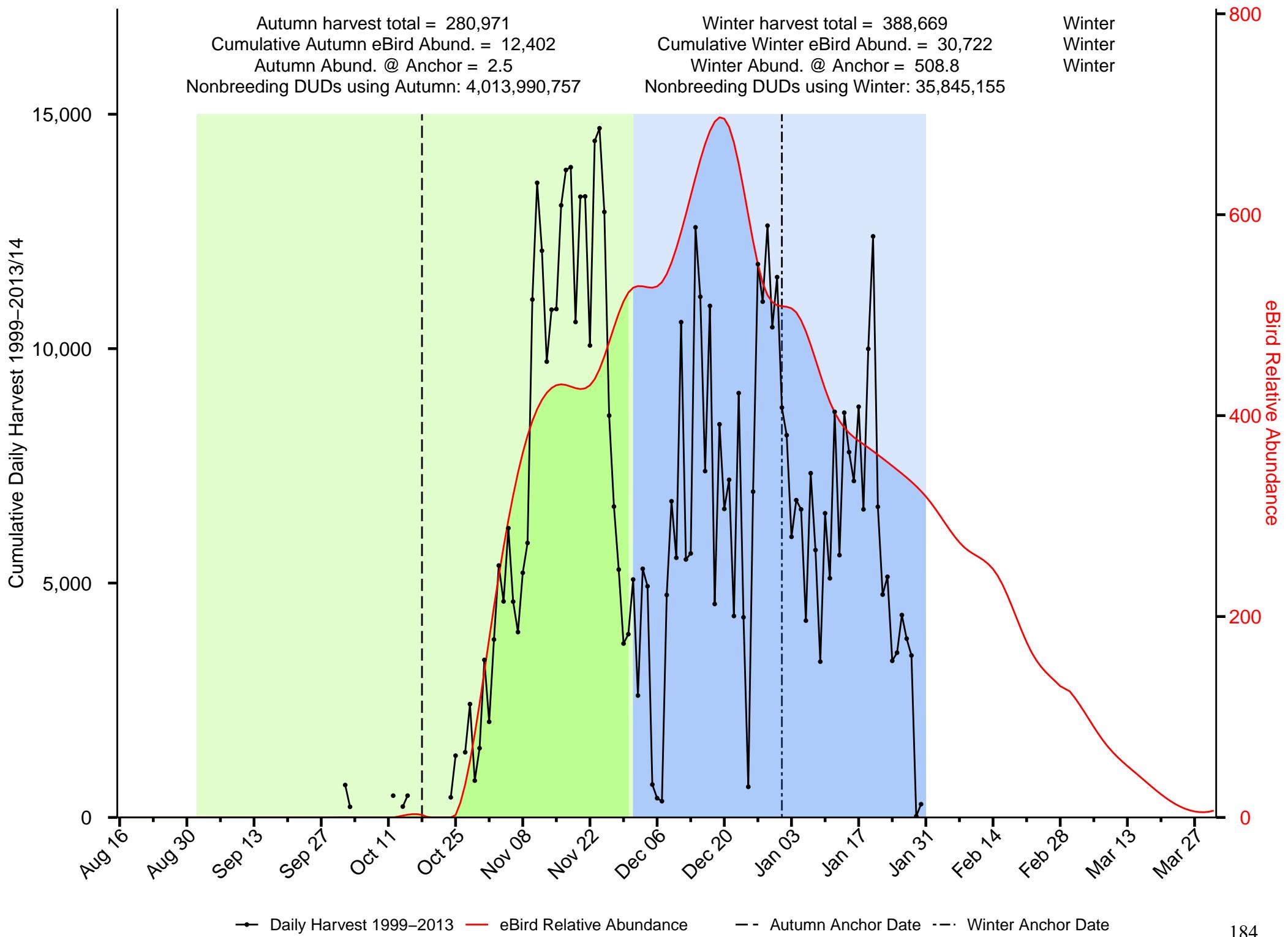
Summary of Northern Pintail in the Gulf Coast JV



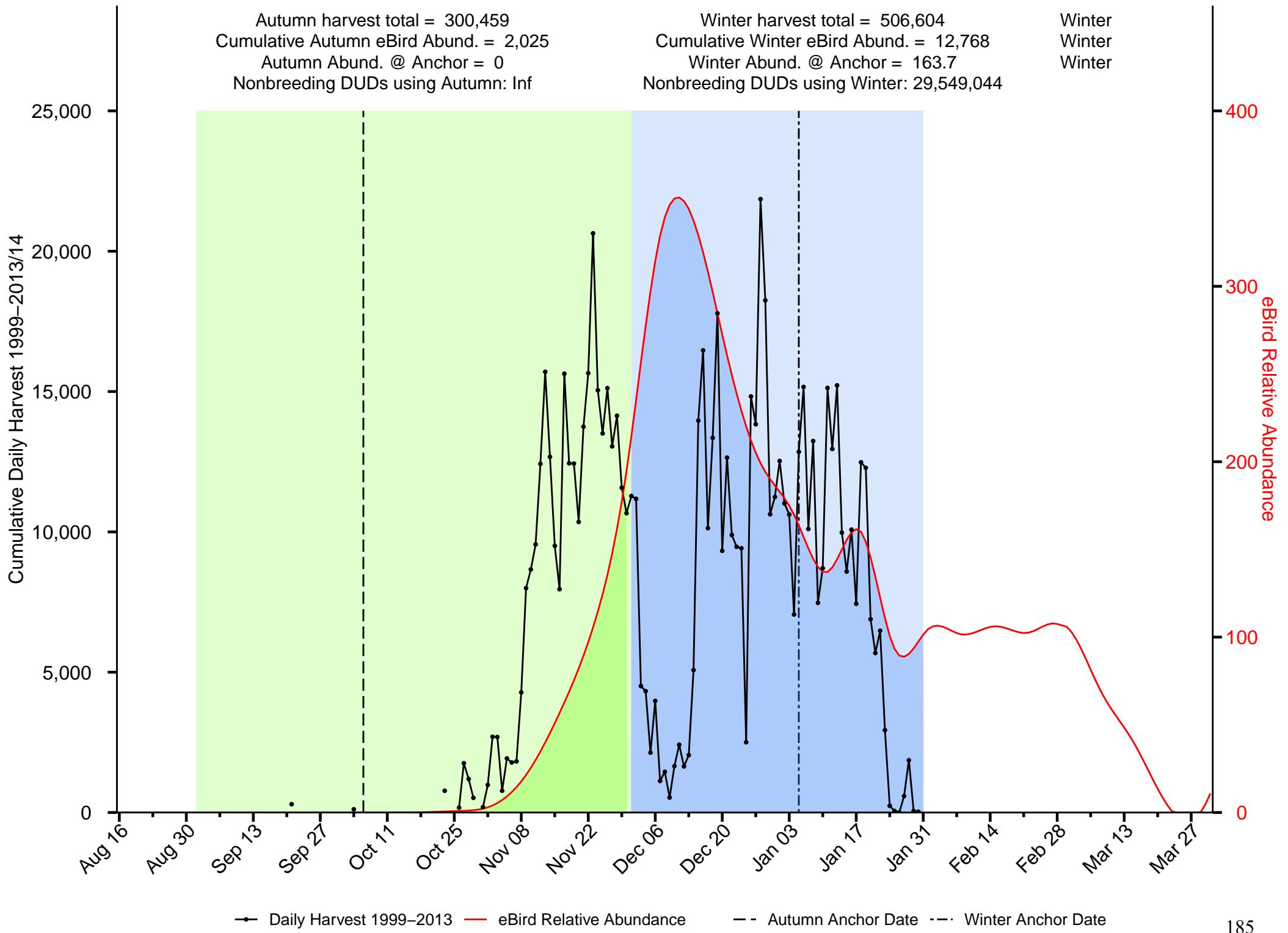
Summary of Northern Shoveler in the Gulf Coast JV



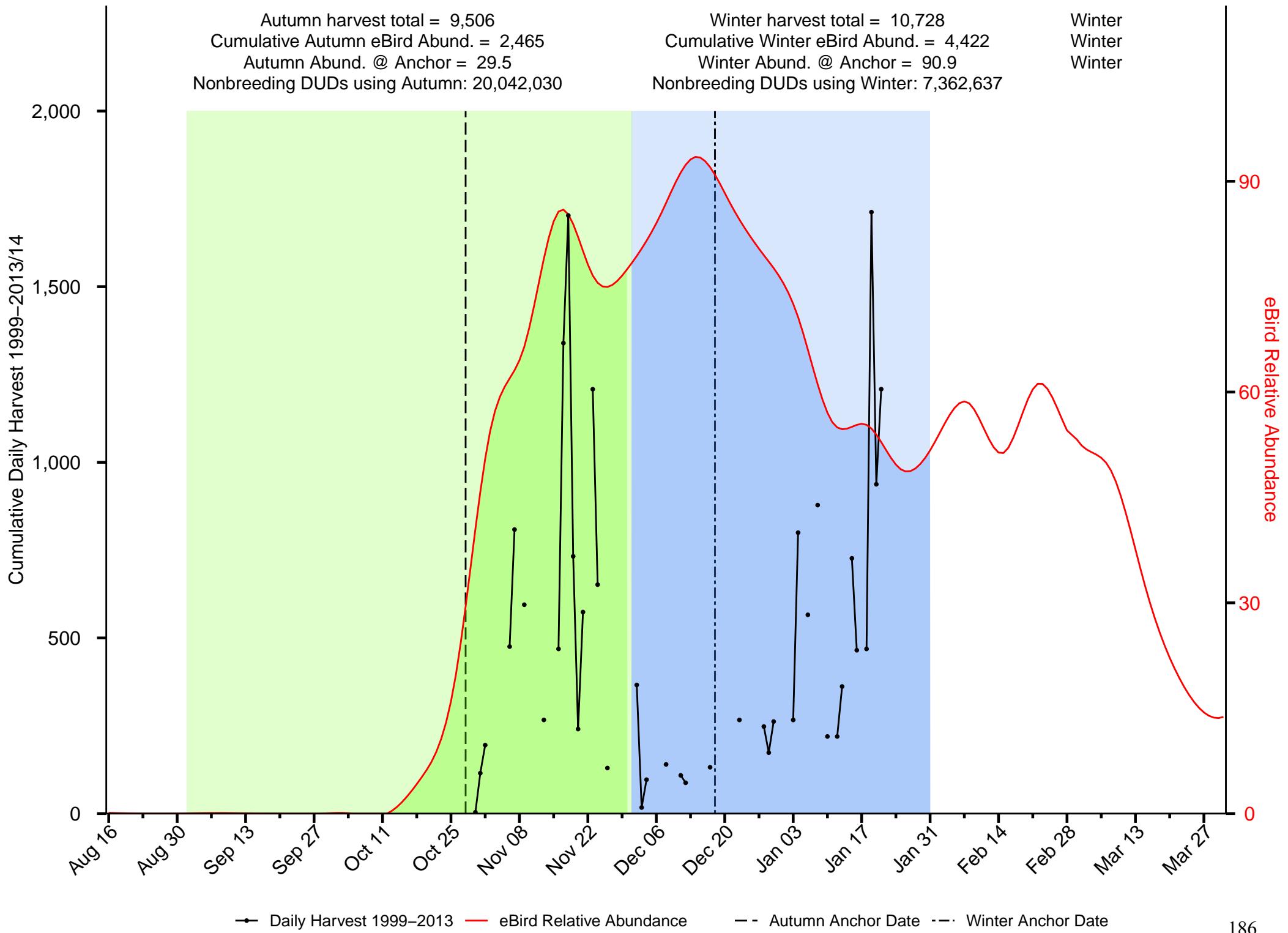
Summary of Redhead in the Gulf Coast JV



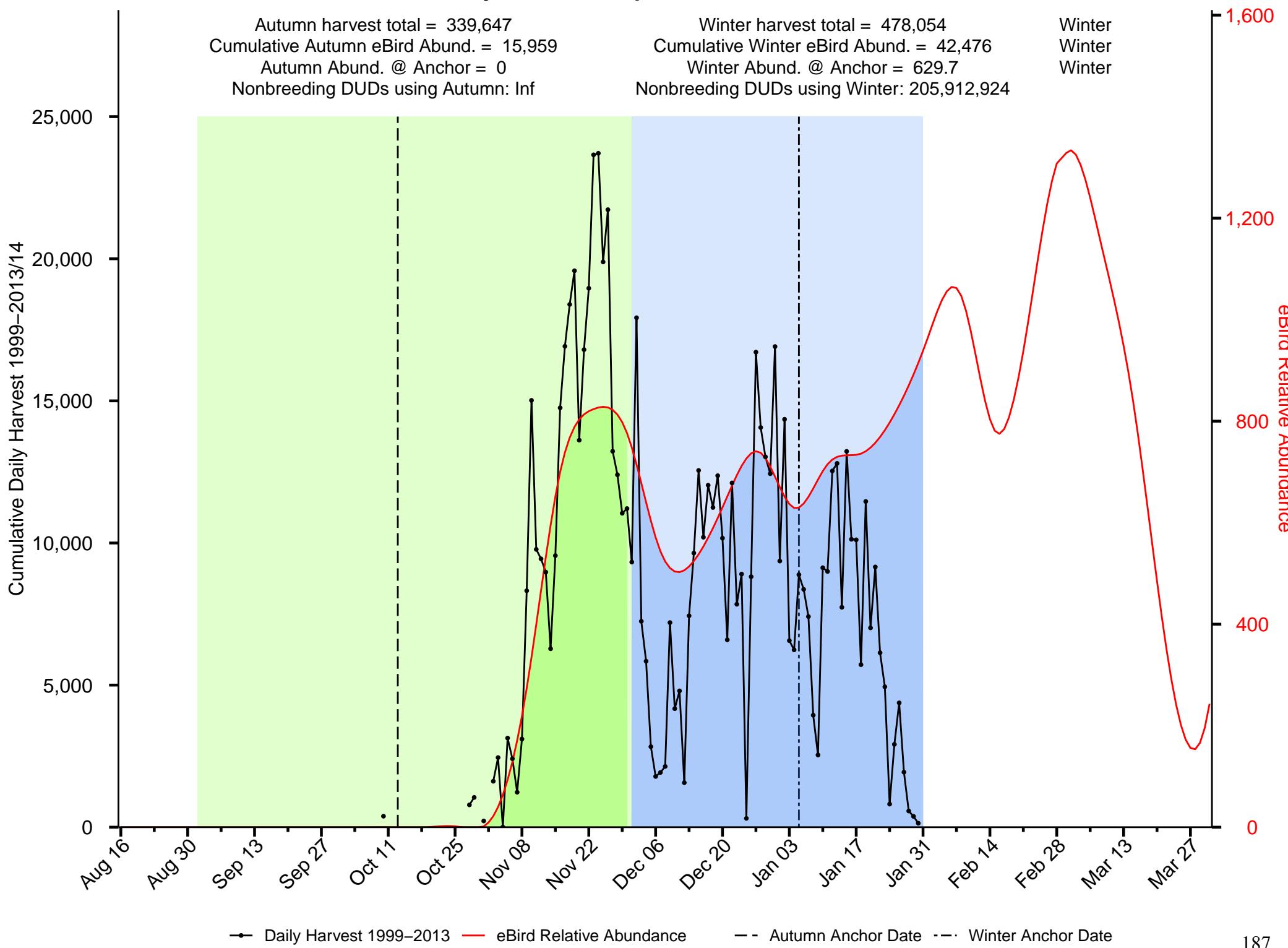
Summary of Ring-necked Duck in the Gulf Coast JV



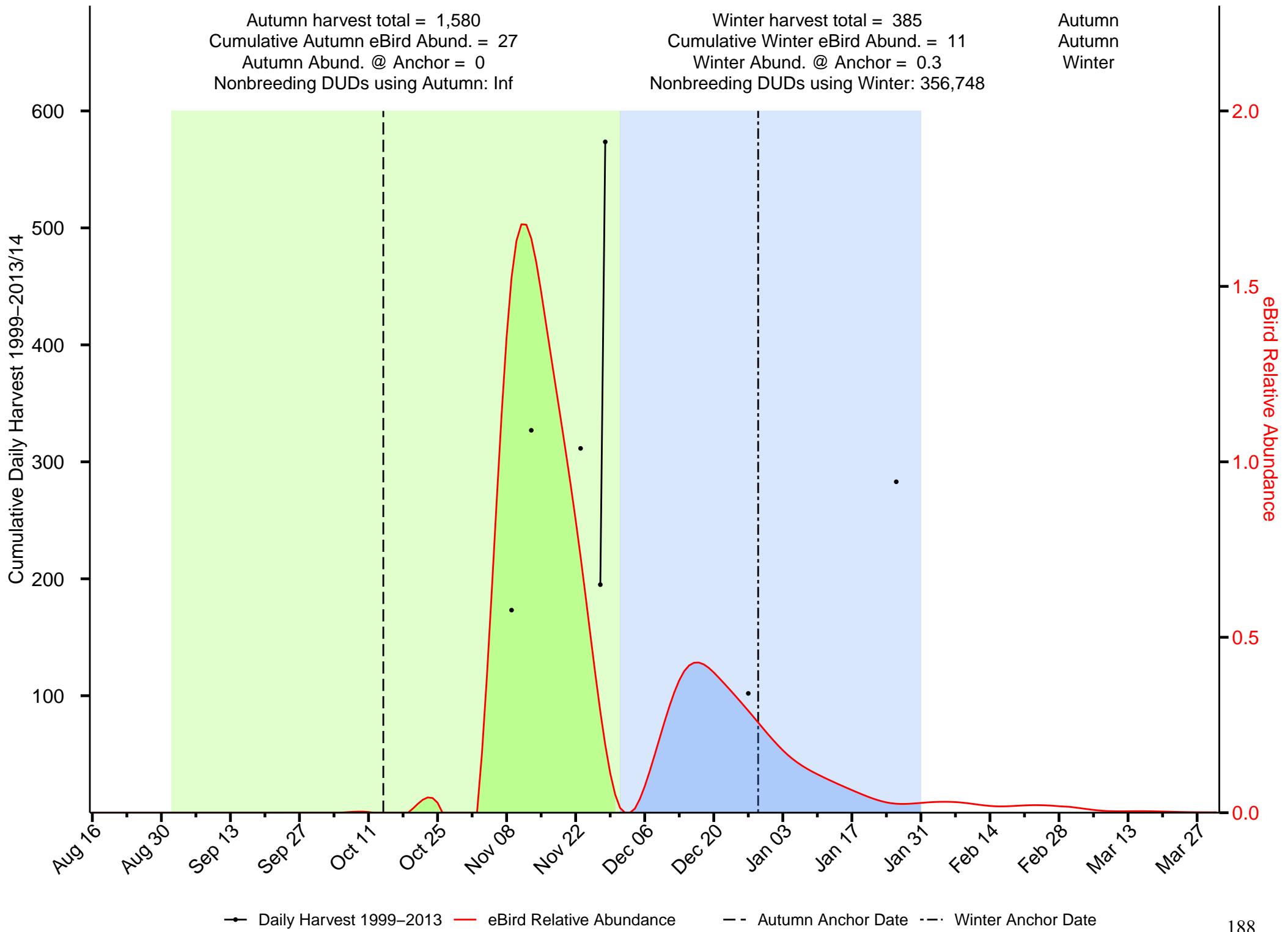
Summary of Ruddy Duck in the Gulf Coast JV



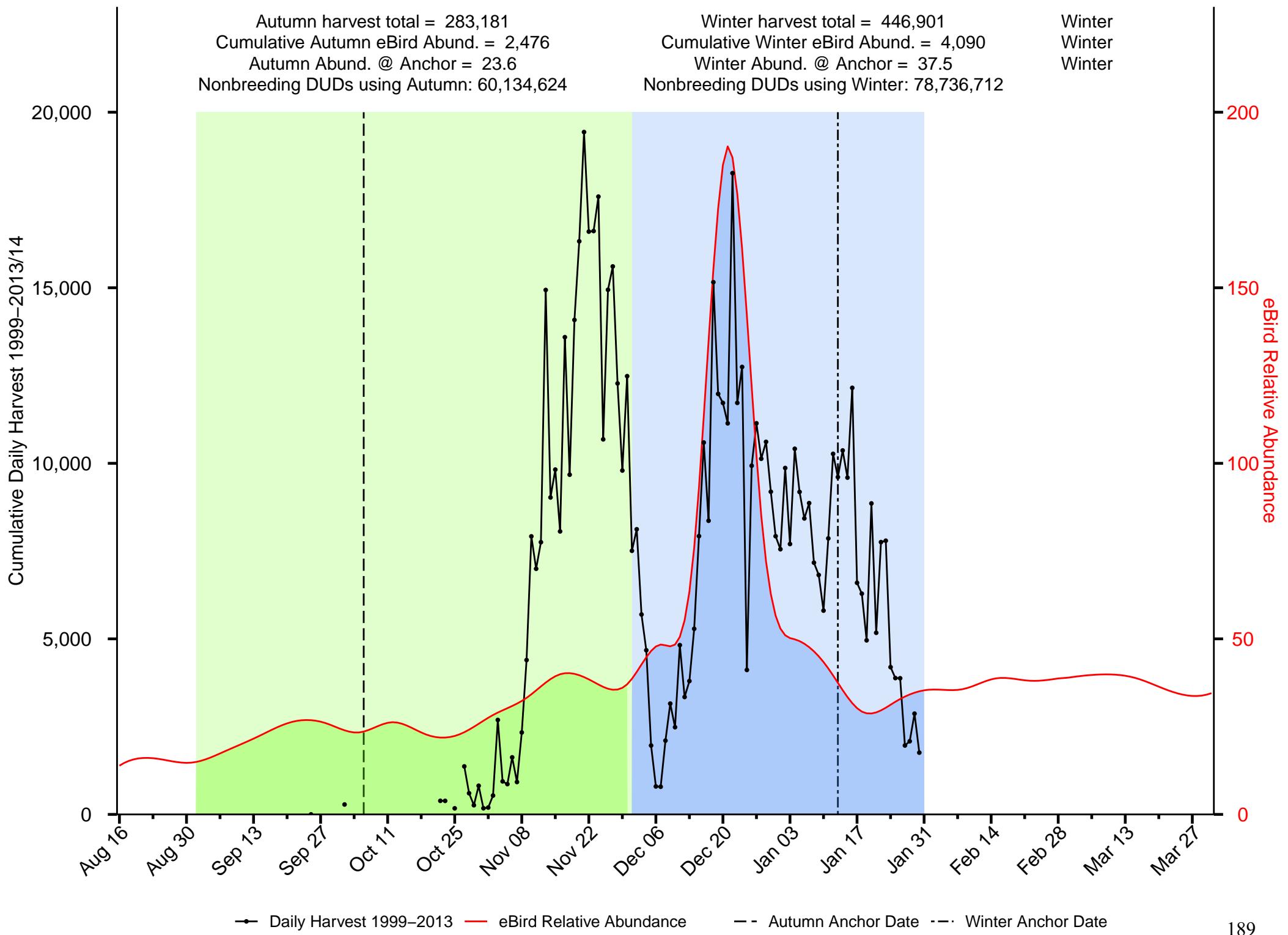
Summary of Scaup in the Gulf Coast JV



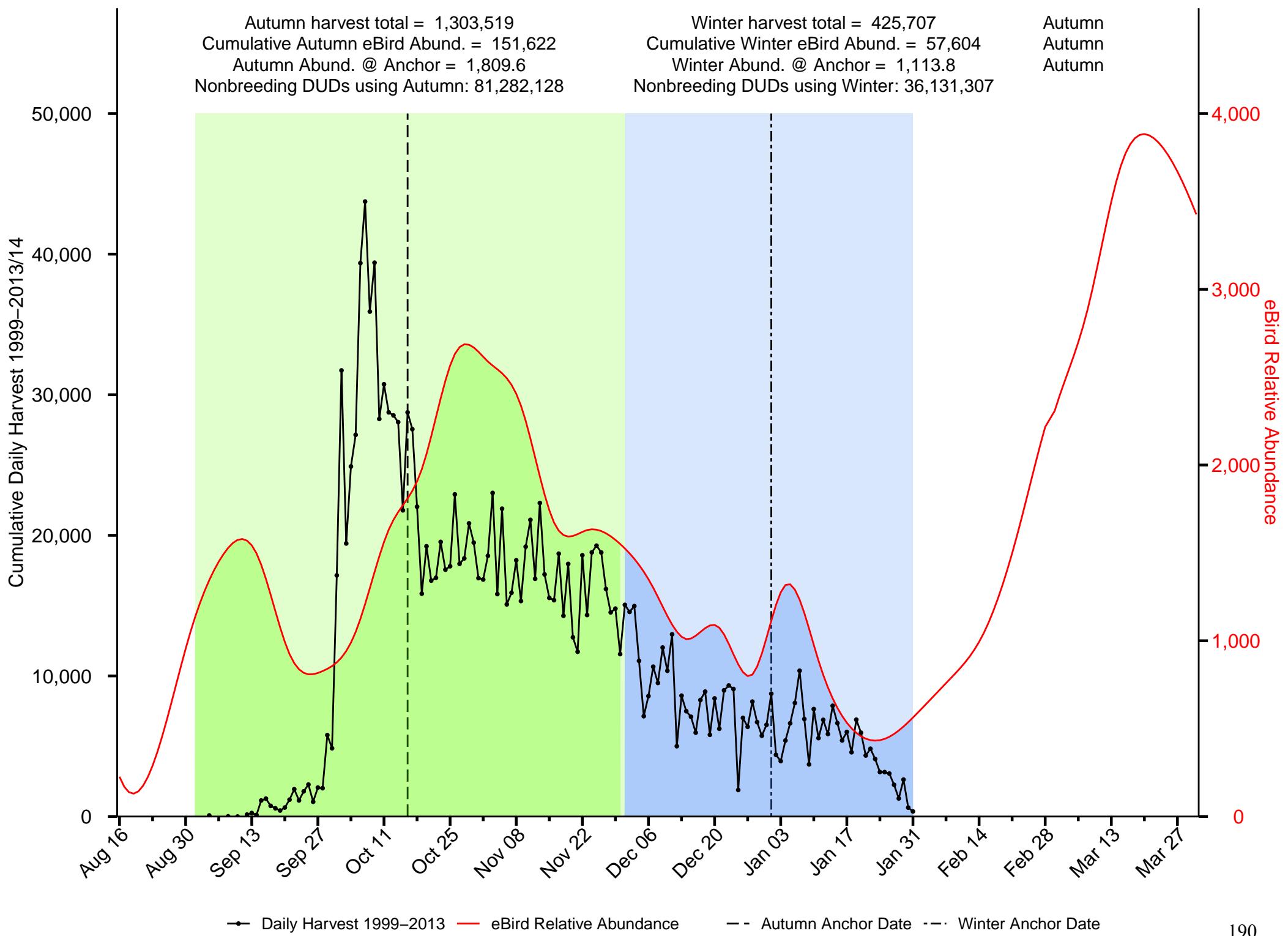
Summary of Scoter in the Gulf Coast JV



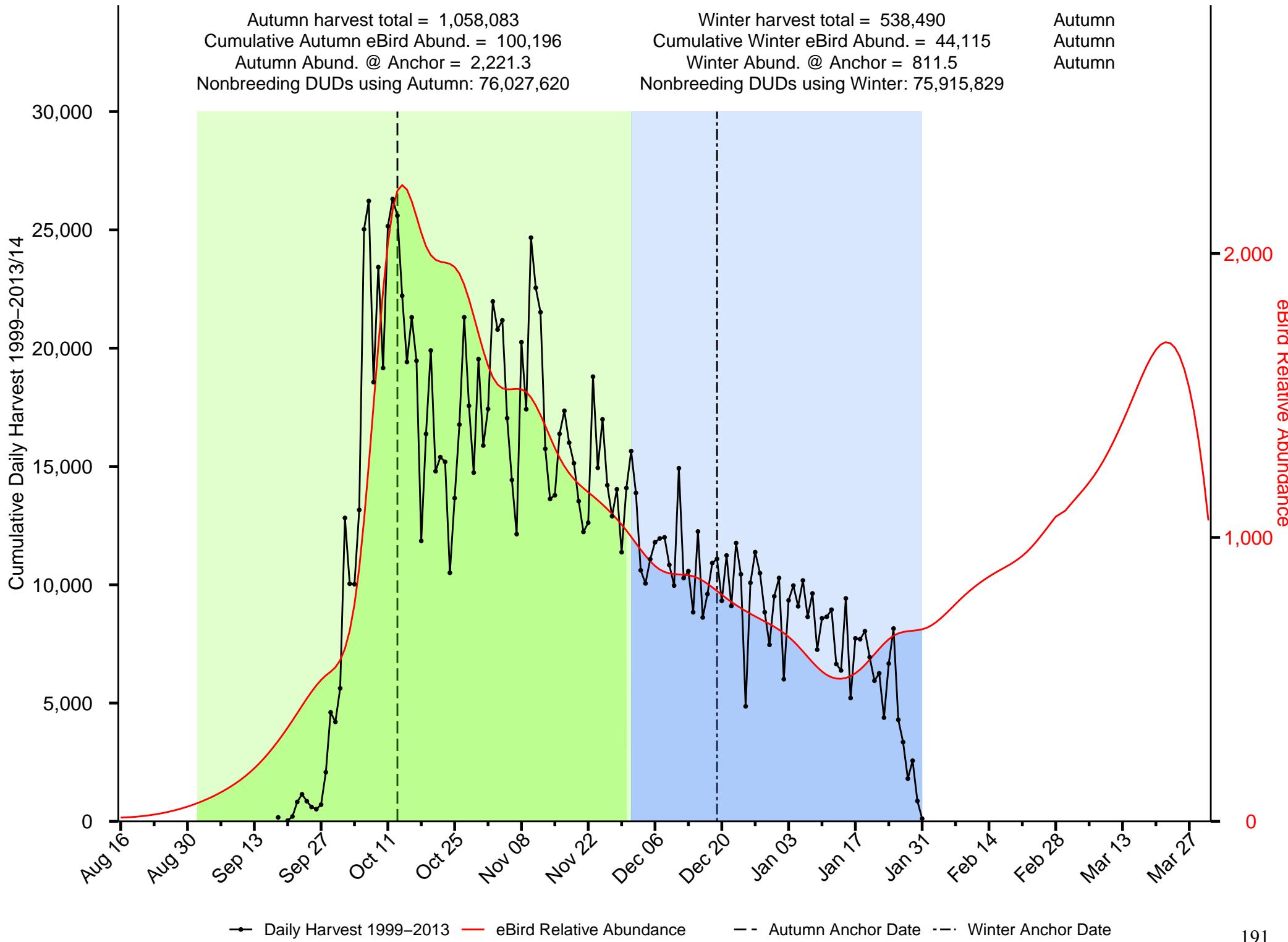
Summary of Wood Duck in the Gulf Coast JV



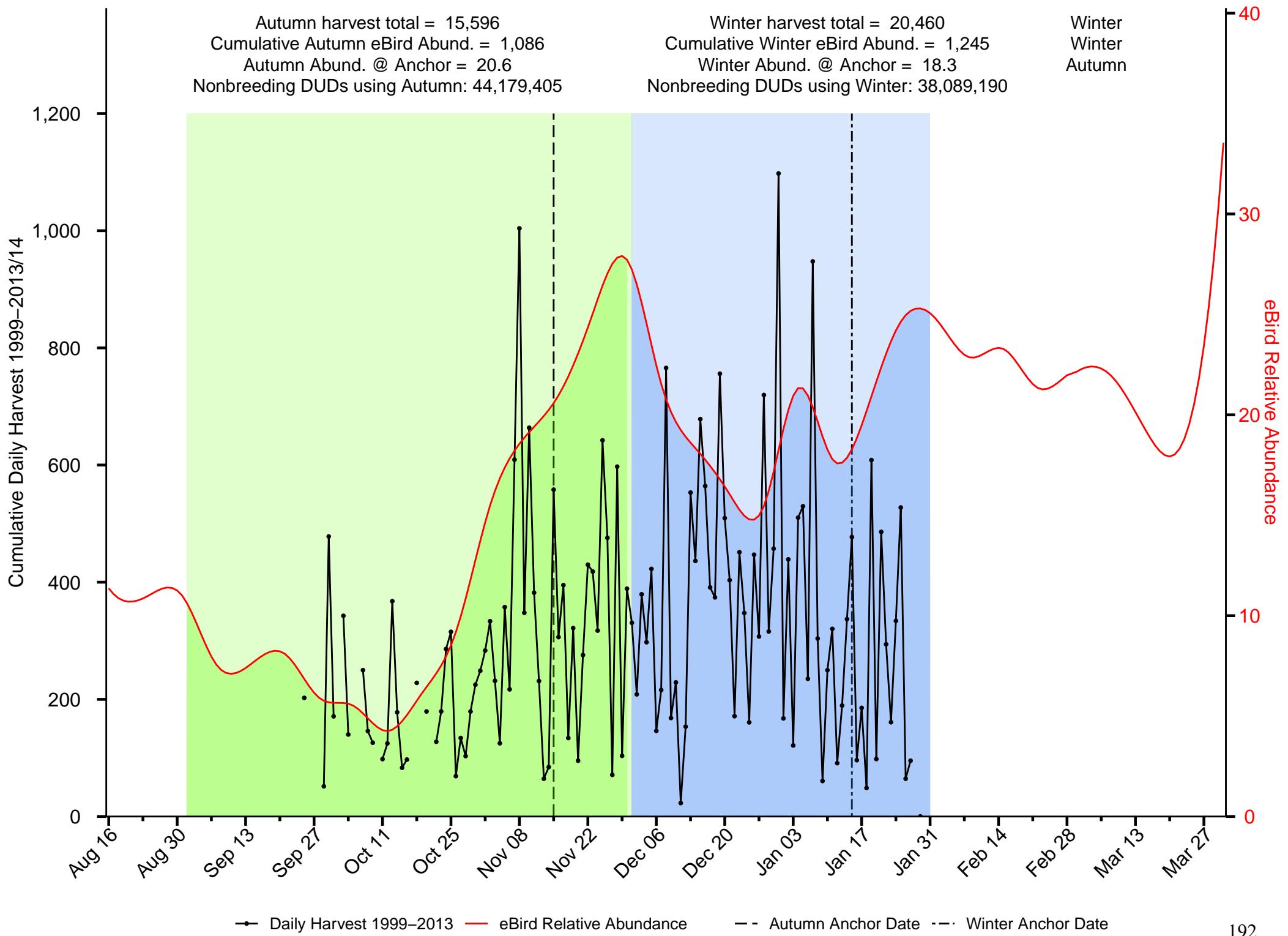
Summary of Green-winged Teal in the Intermountain West JV



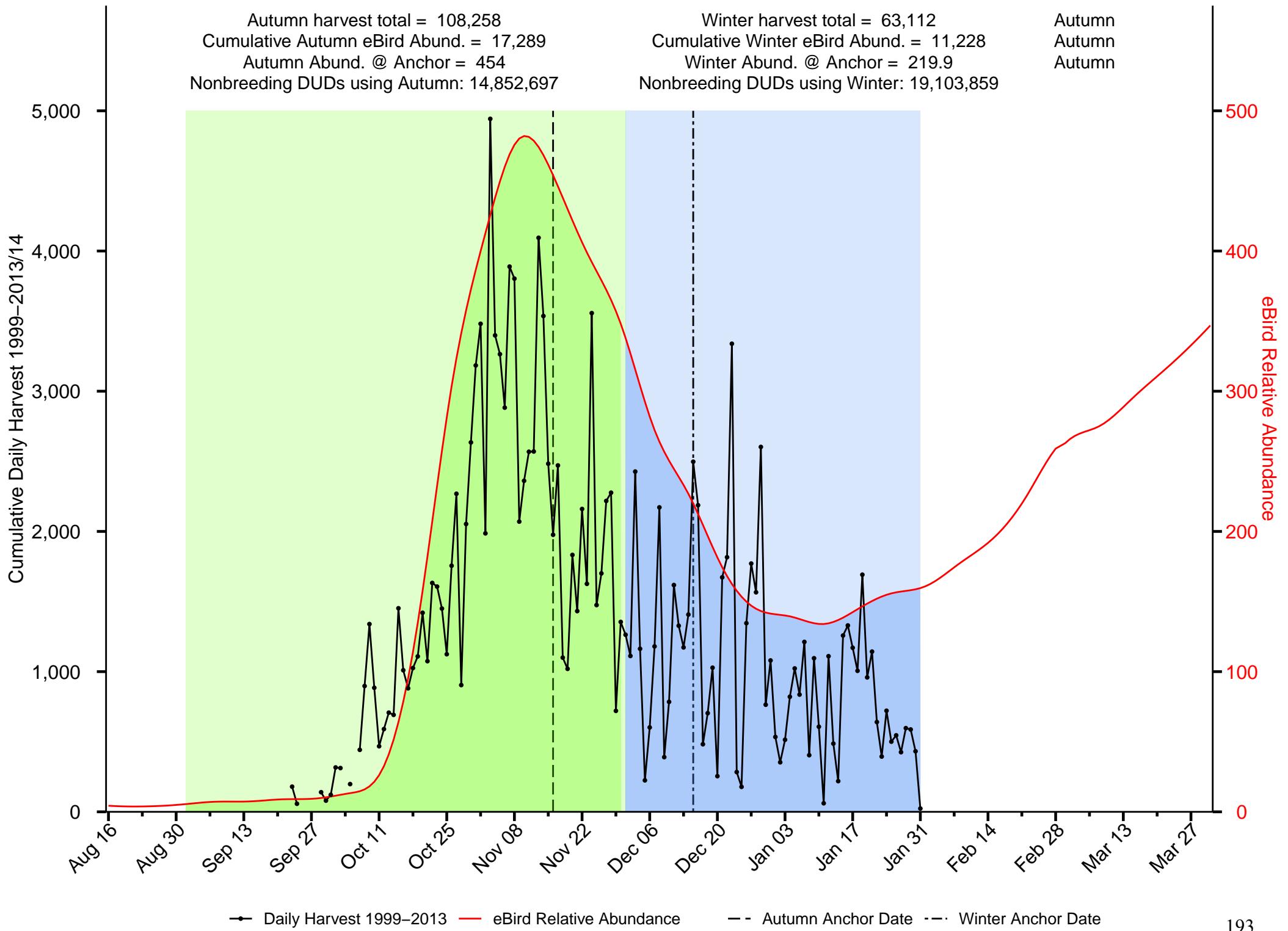
Summary of American Wigeon in the Intermountain West JV



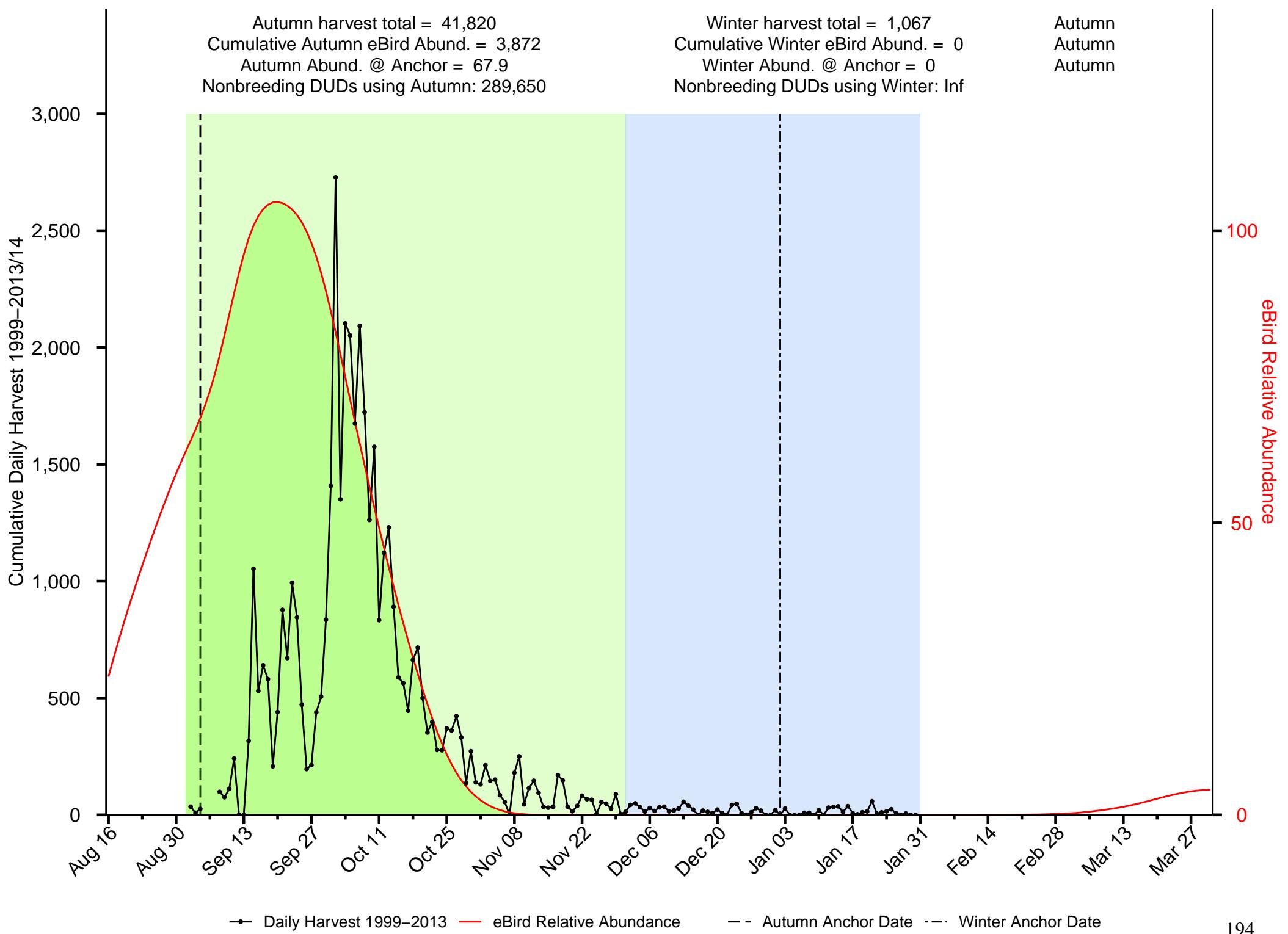
Summary of Barrow's Goldeneye in the Intermountain West JV



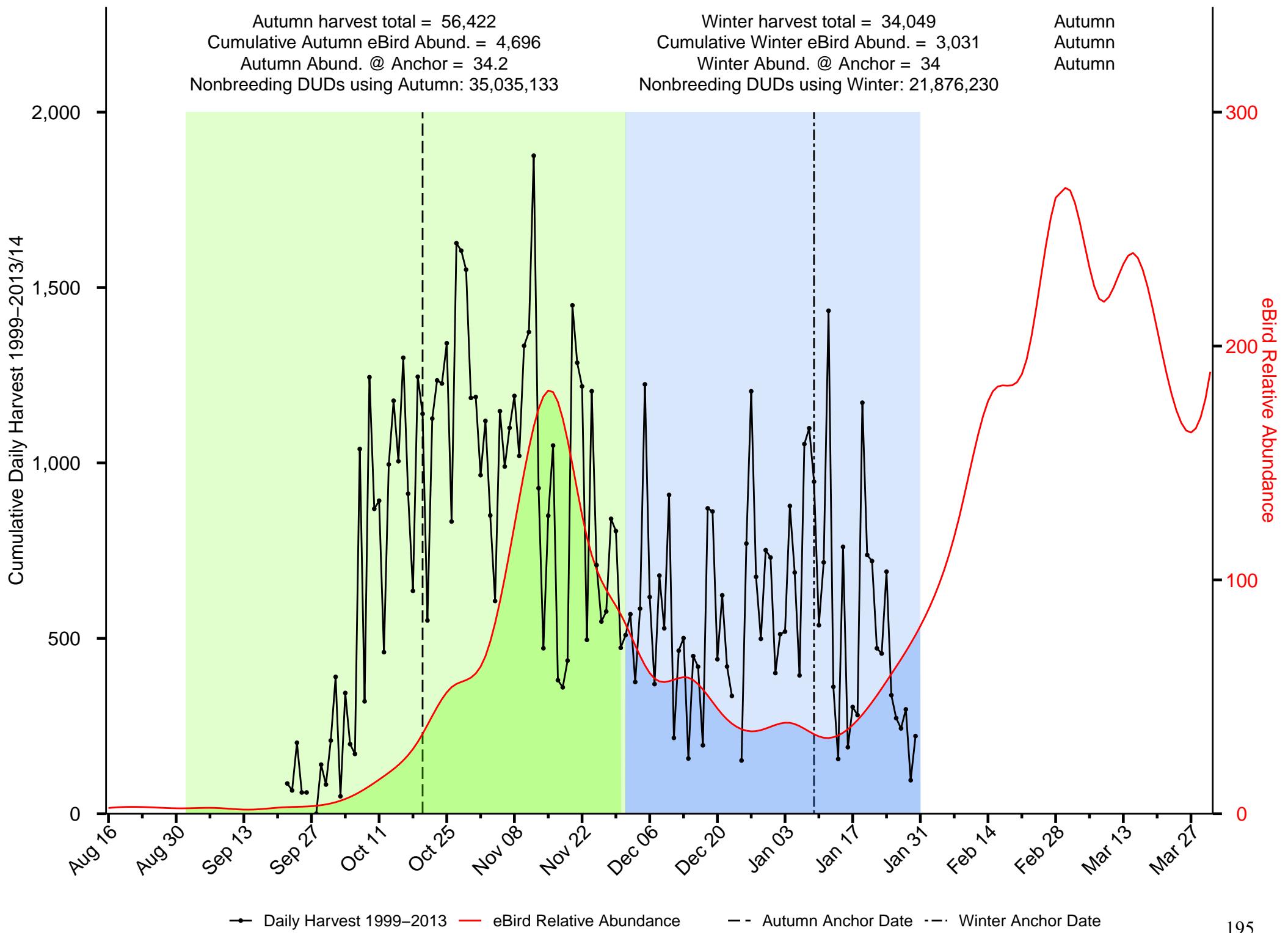
Summary of Bufflehead in the Intermountain West JV



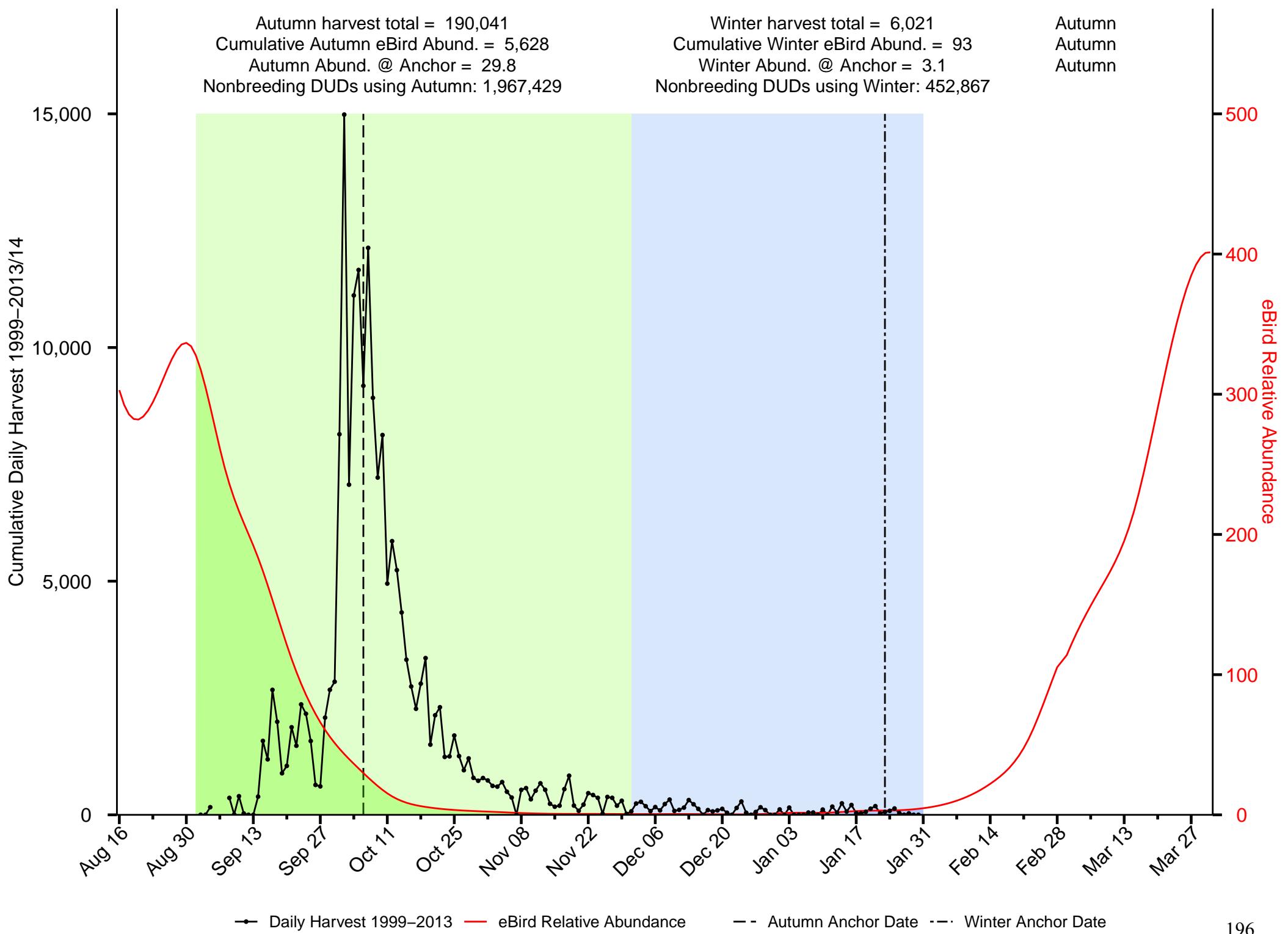
Summary of Blue-winged Teal in the Intermountain West JV



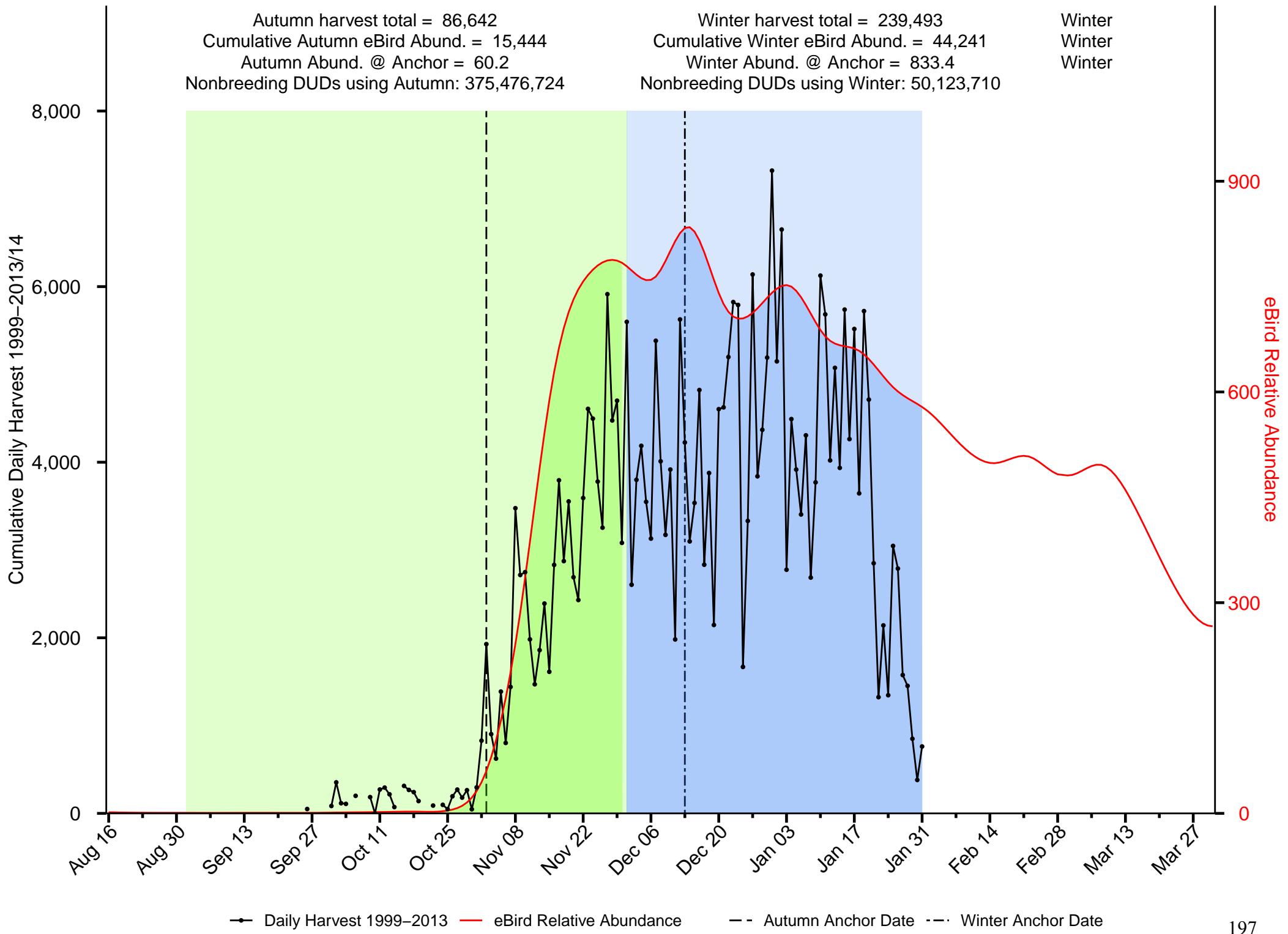
Summary of Canvasback in the Intermountain West JV



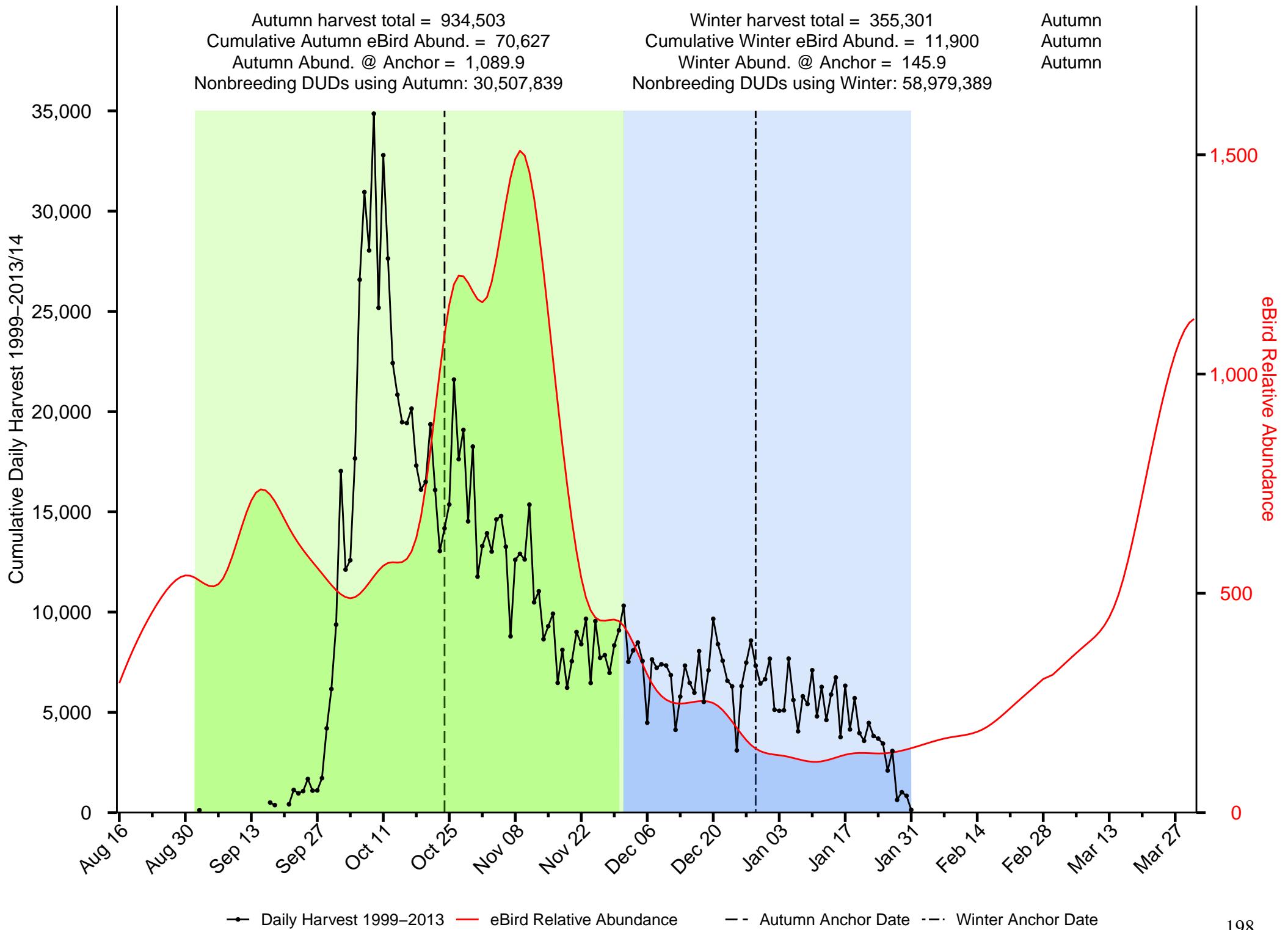
Summary of Cinnamon Teal in the Intermountain West JV



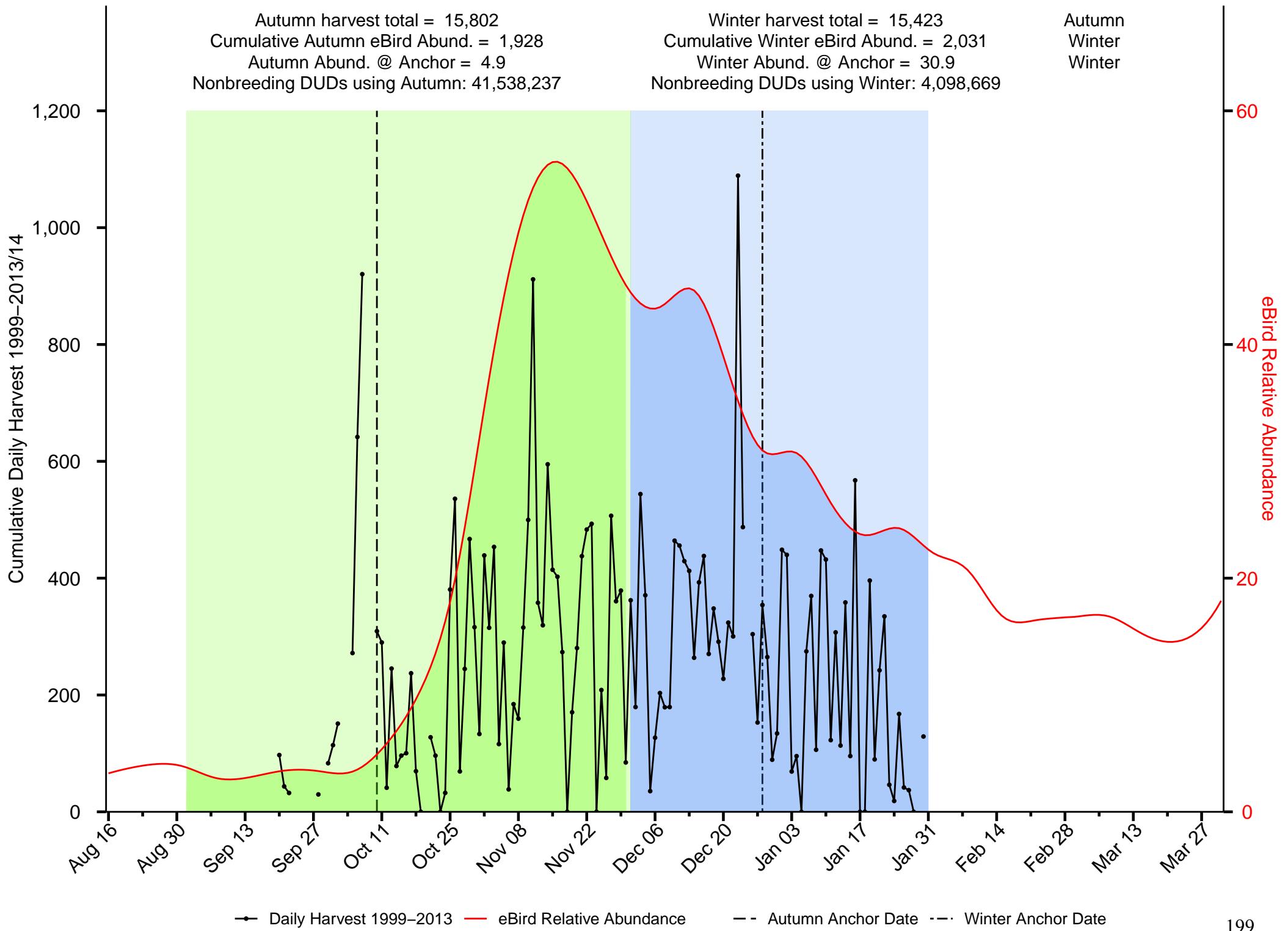
Summary of Common Goldeneye in the Intermountain West JV



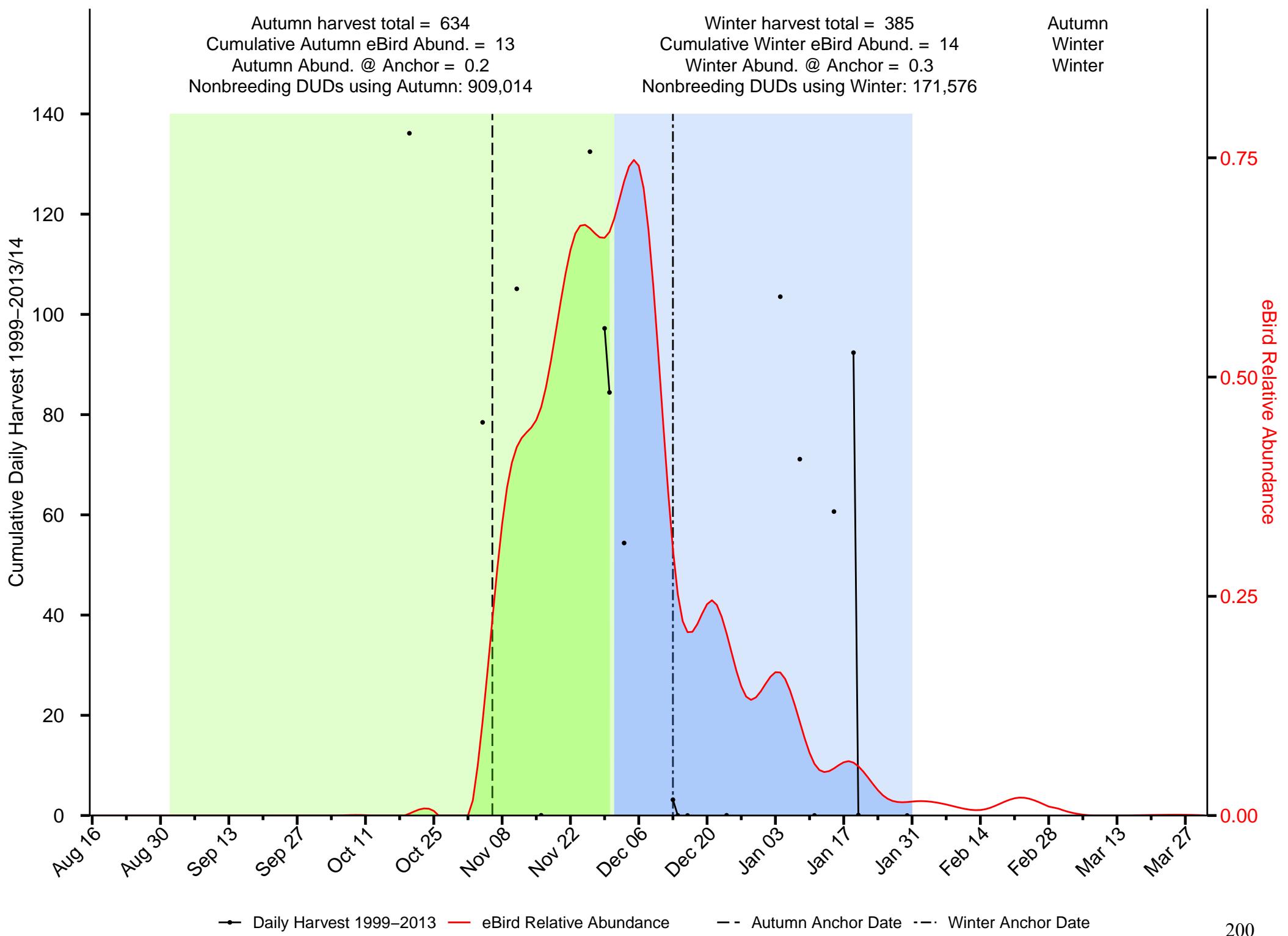
Summary of Gadwall in the Intermountain West JV



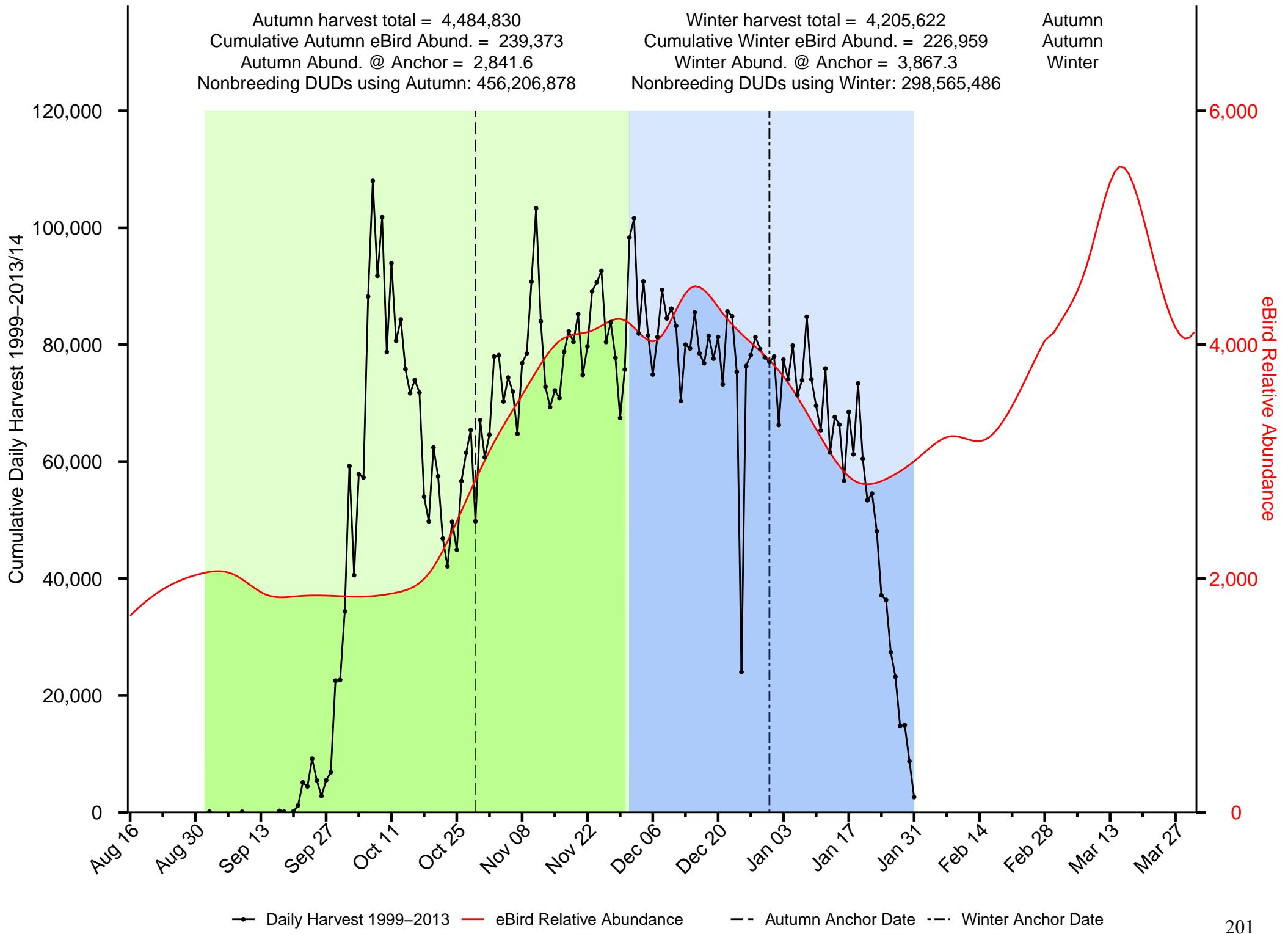
Summary of Hooded Merganser in the Intermountain West JV



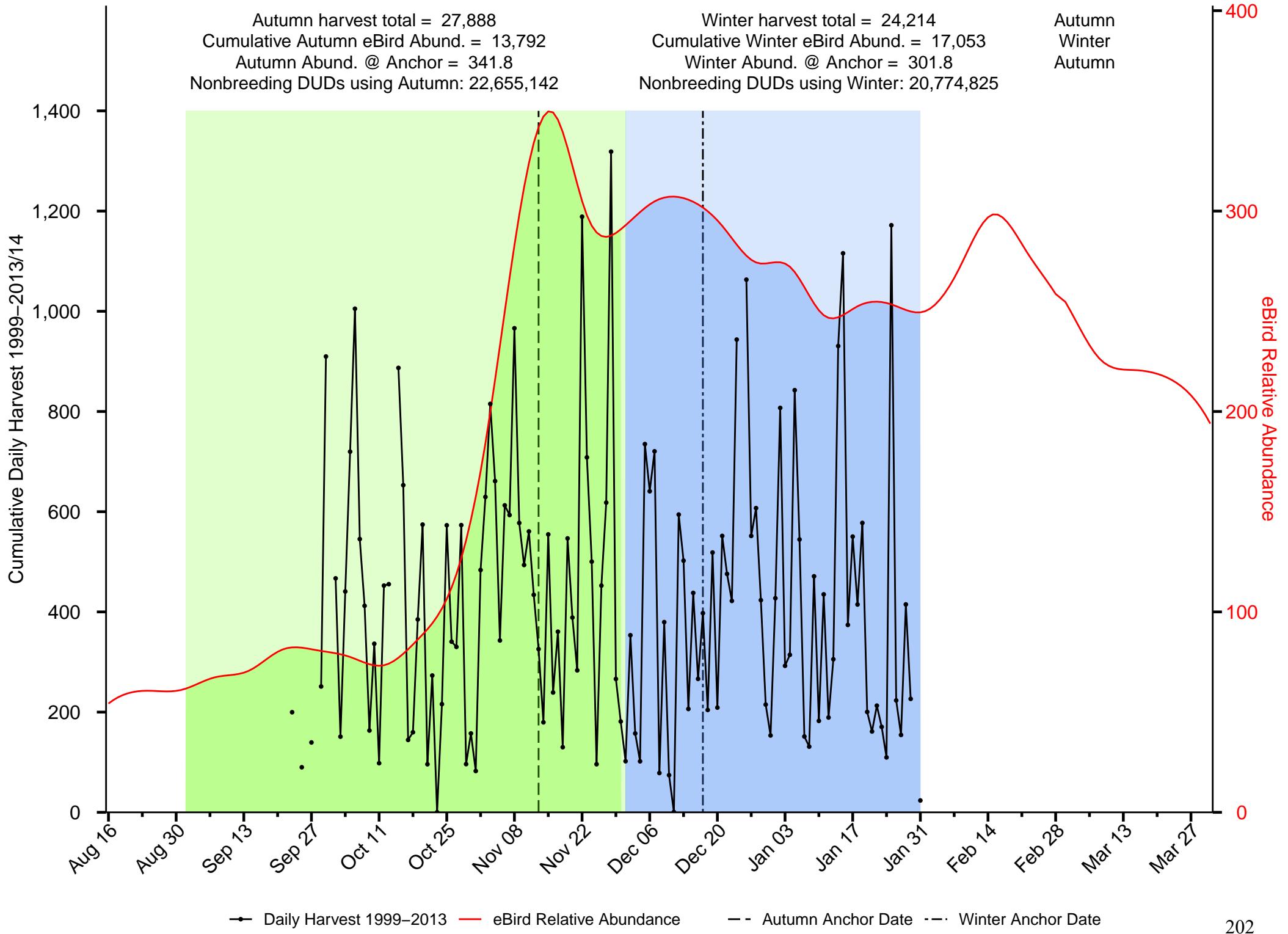
Summary of Long-tailed Duck in the Intermountain West JV



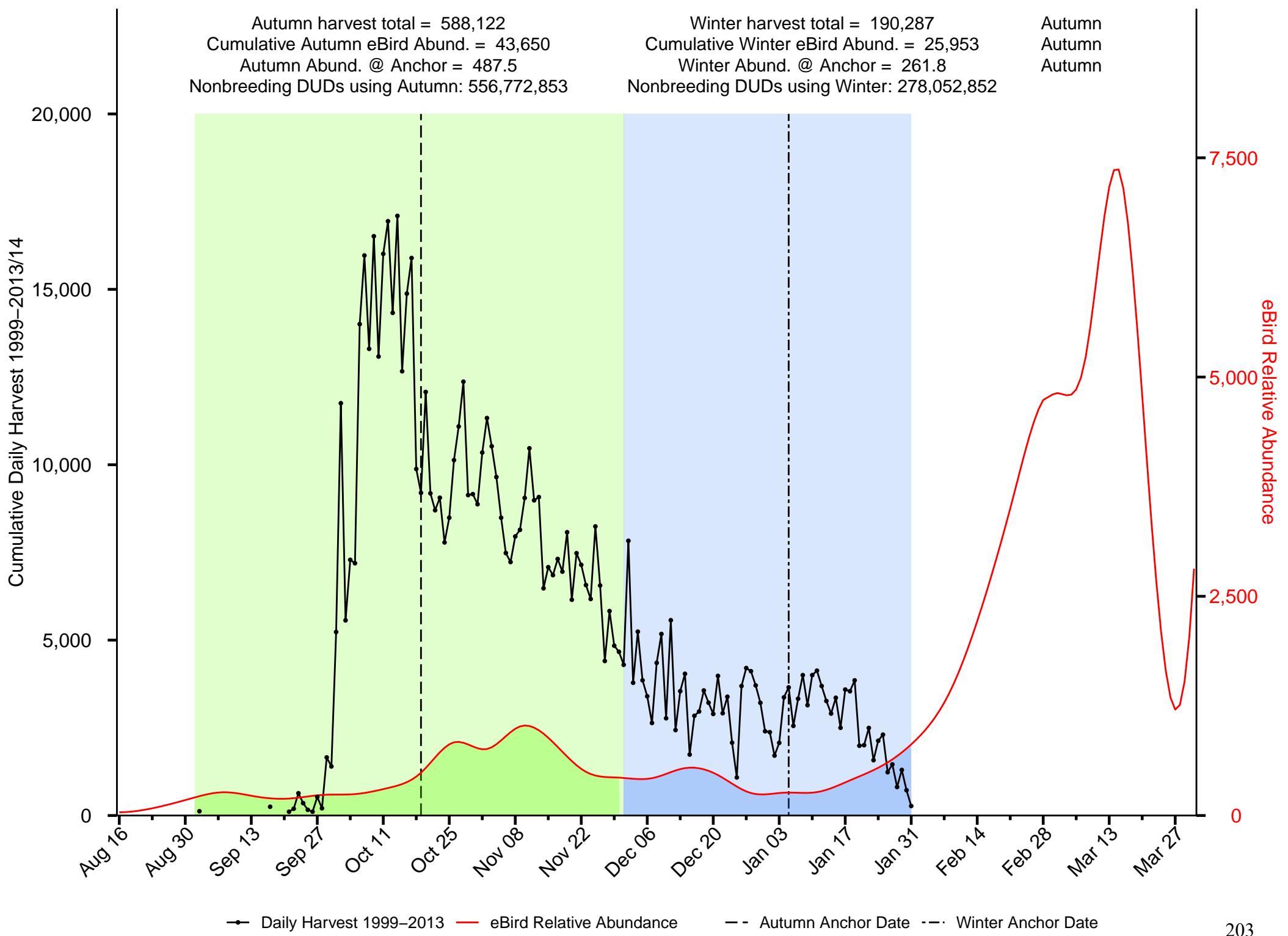
Summary of Mallard in the Intermountain West JV



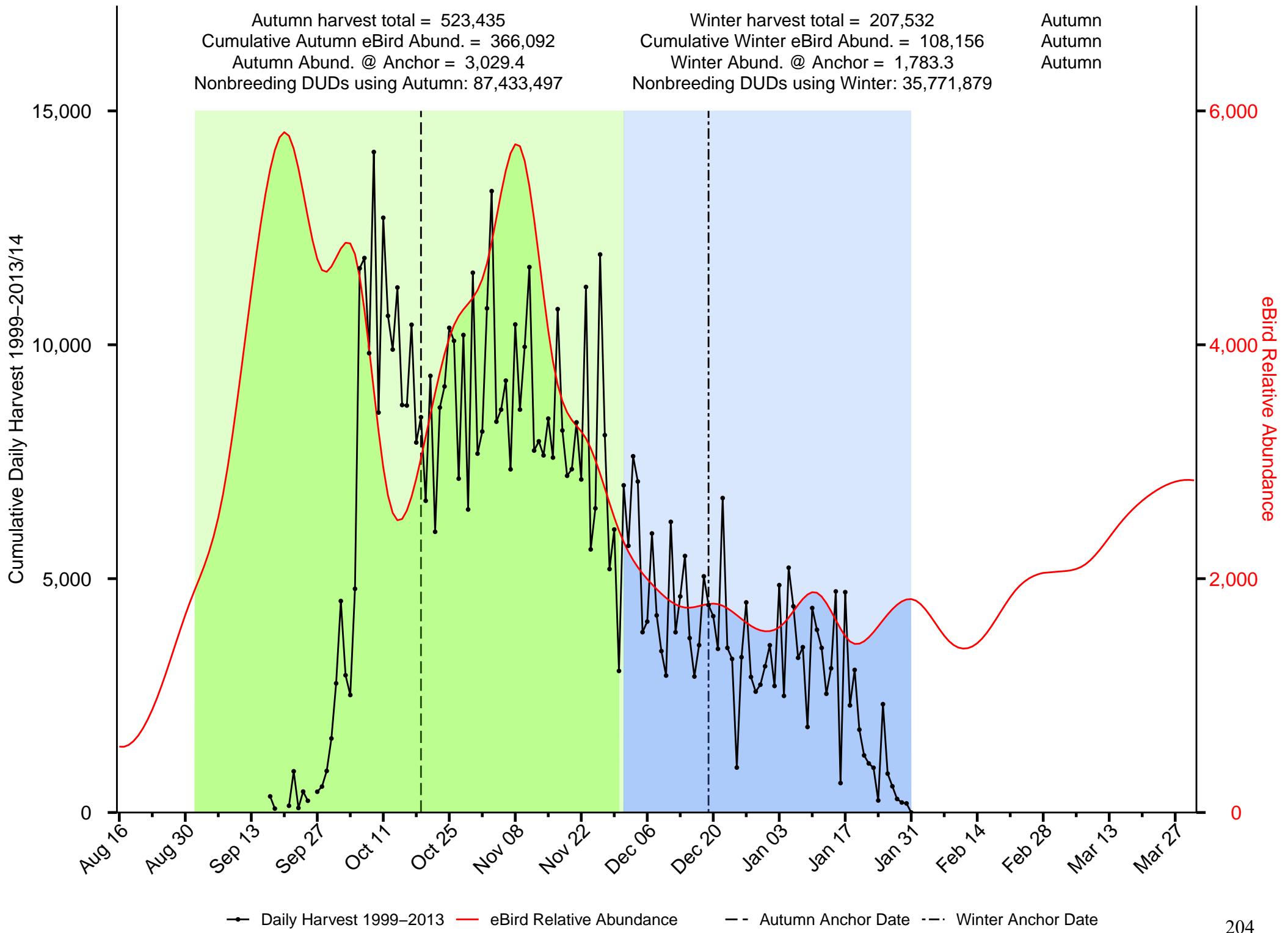
Summary of Merganser in the Intermountain West JV



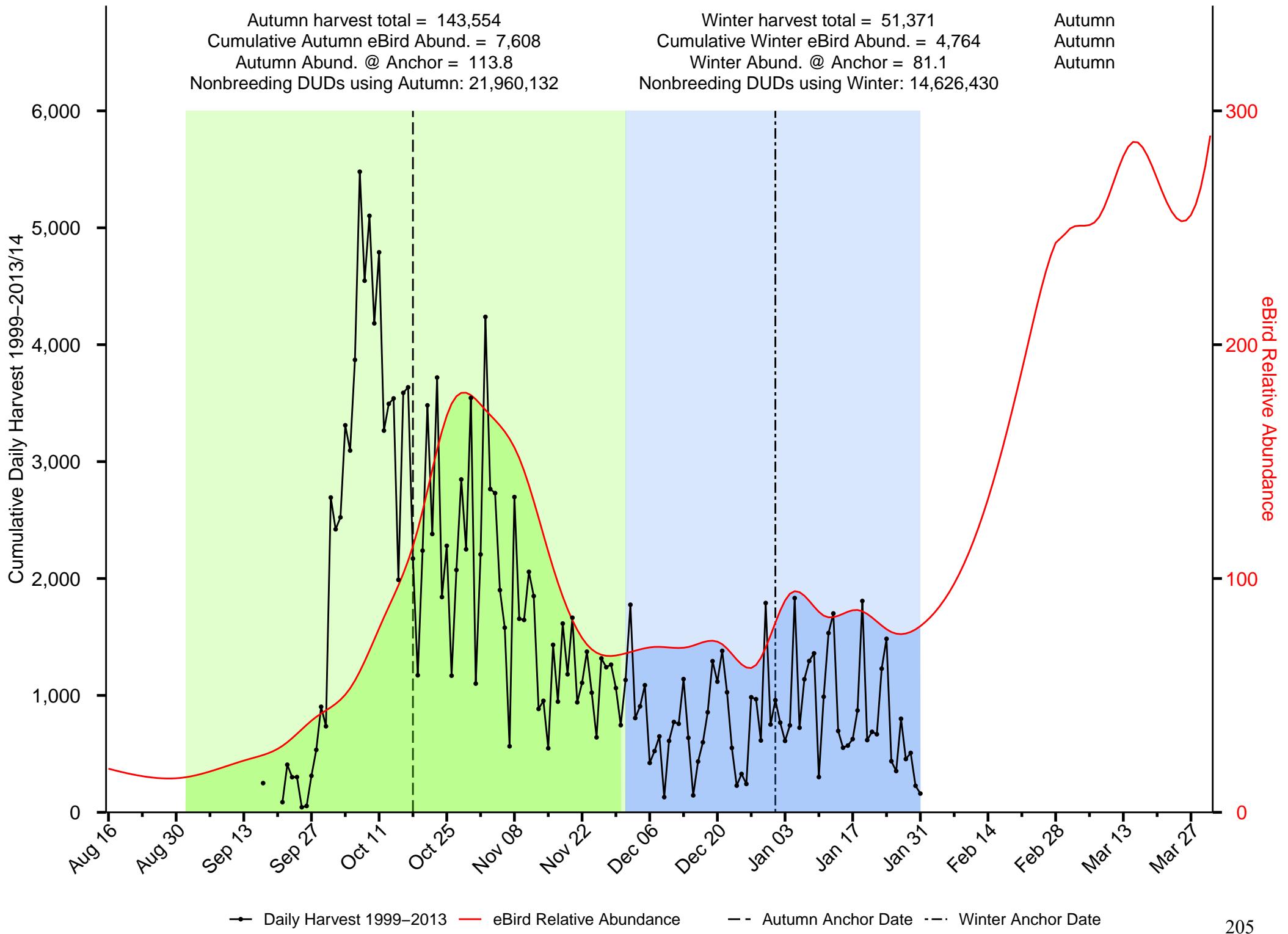
Summary of Northern Pintail in the Intermountain West JV



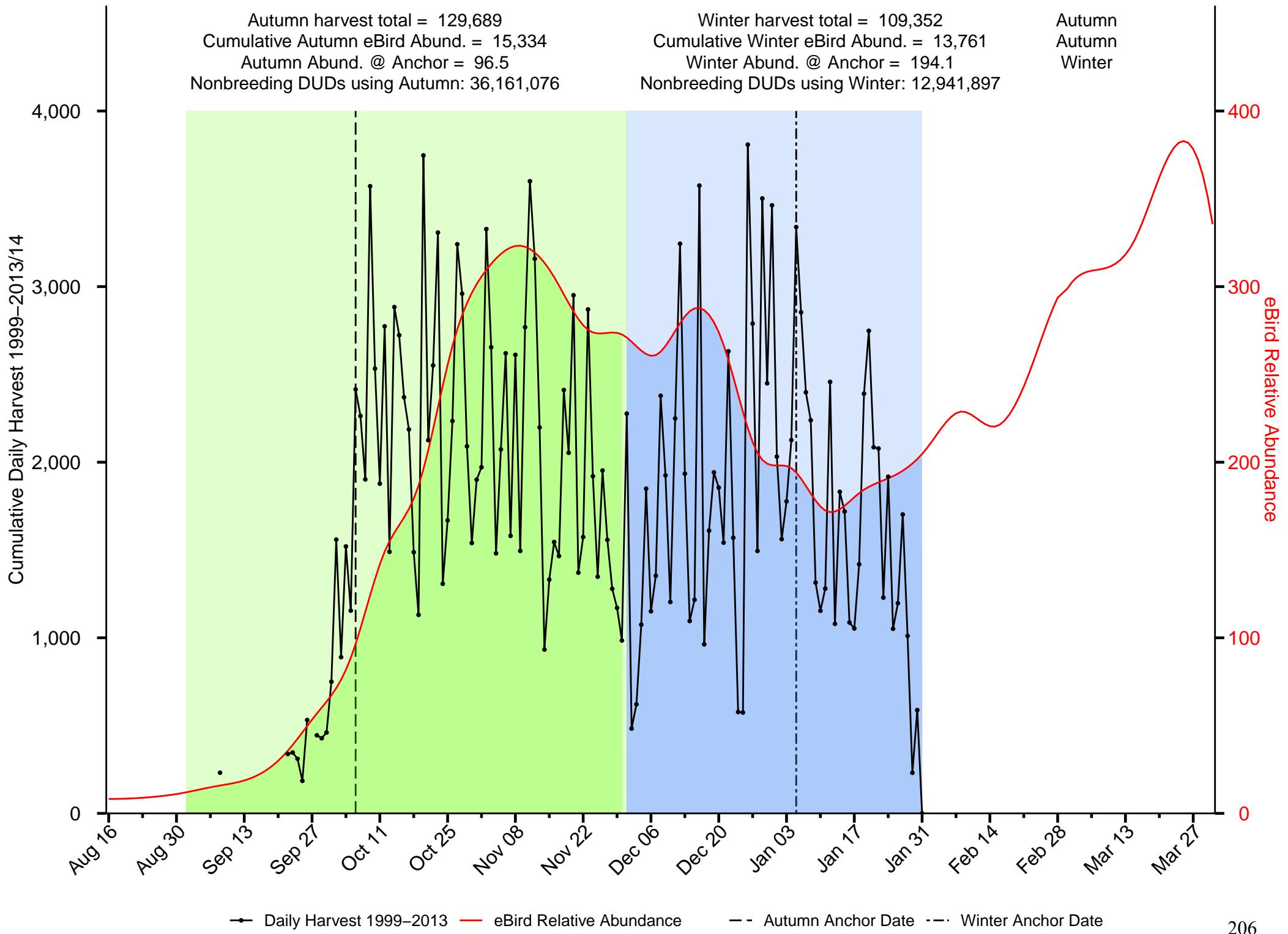
Summary of Northern Shoveler in the Intermountain West JV



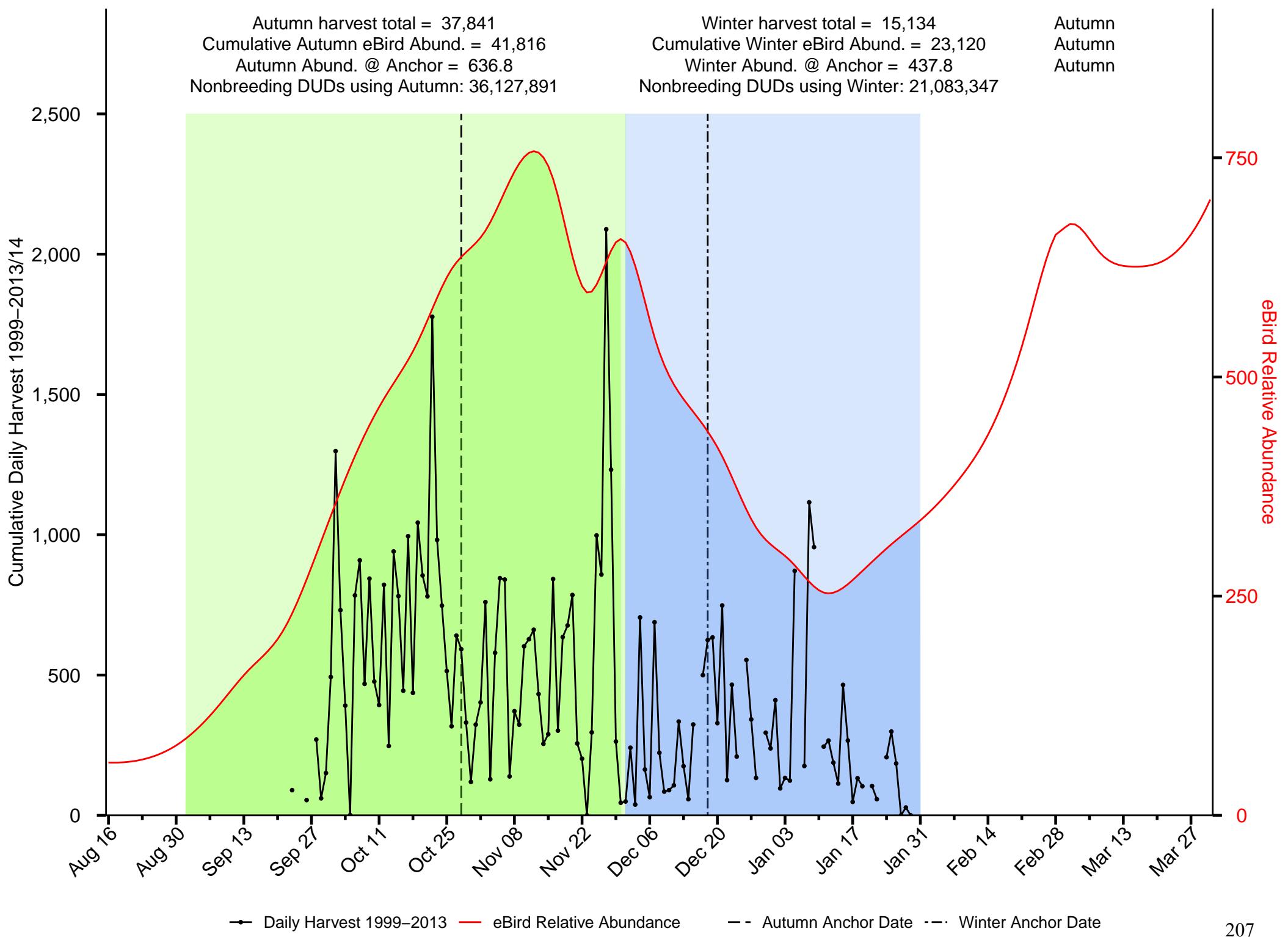
Summary of Redhead in the Intermountain West JV



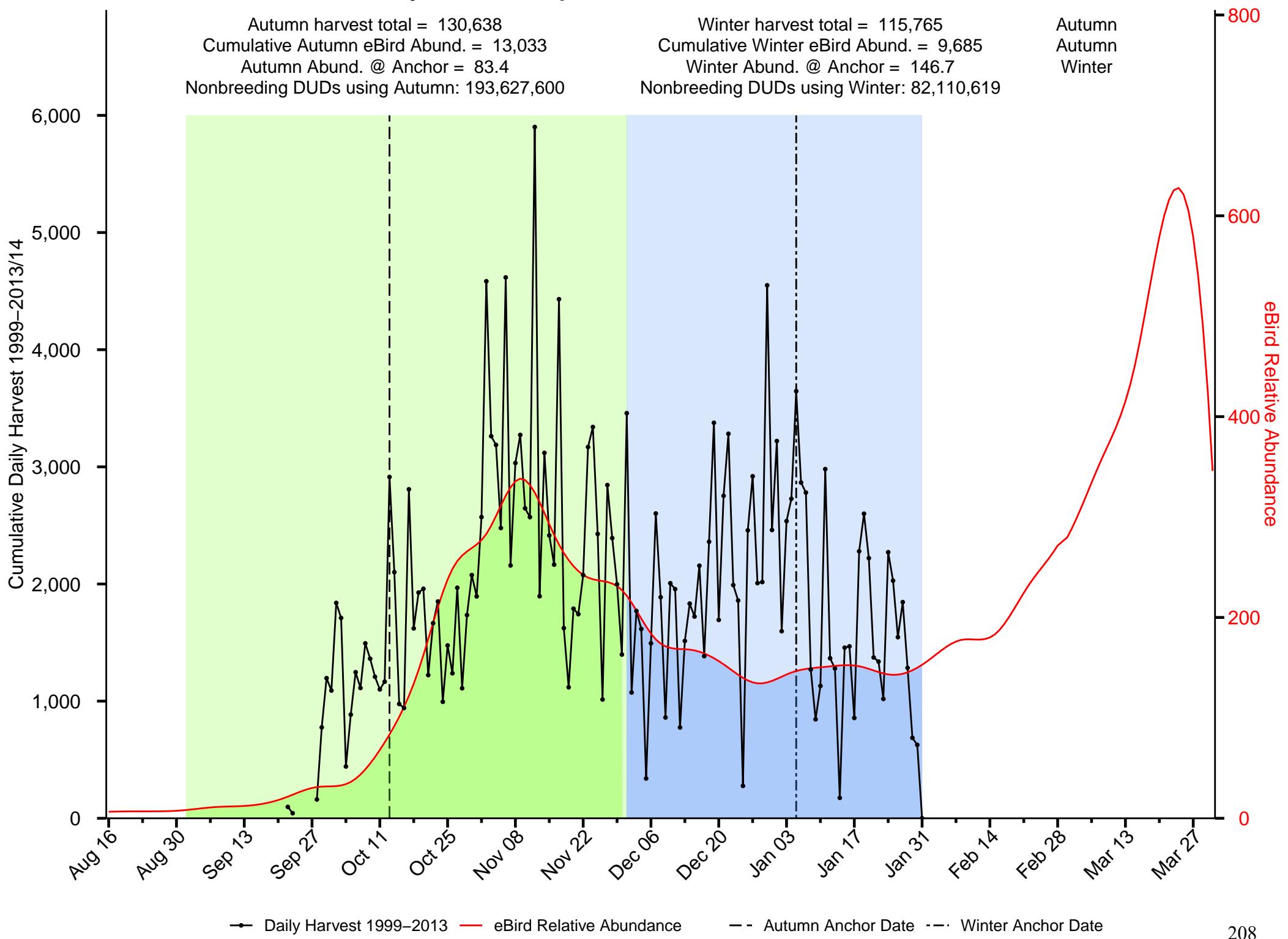
Summary of Ring-necked Duck in the Intermountain West JV



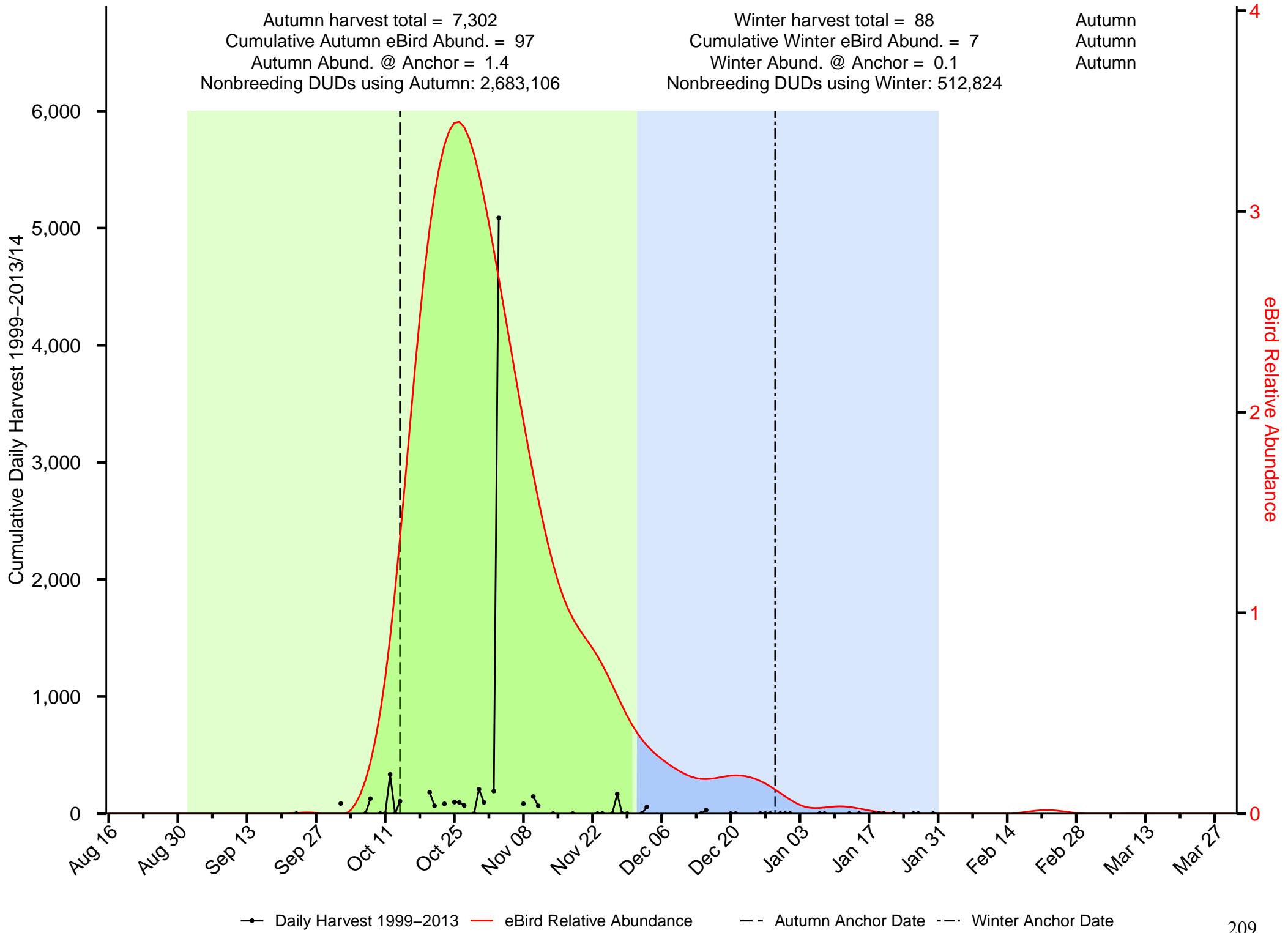
Summary of Ruddy Duck in the Intermountain West JV



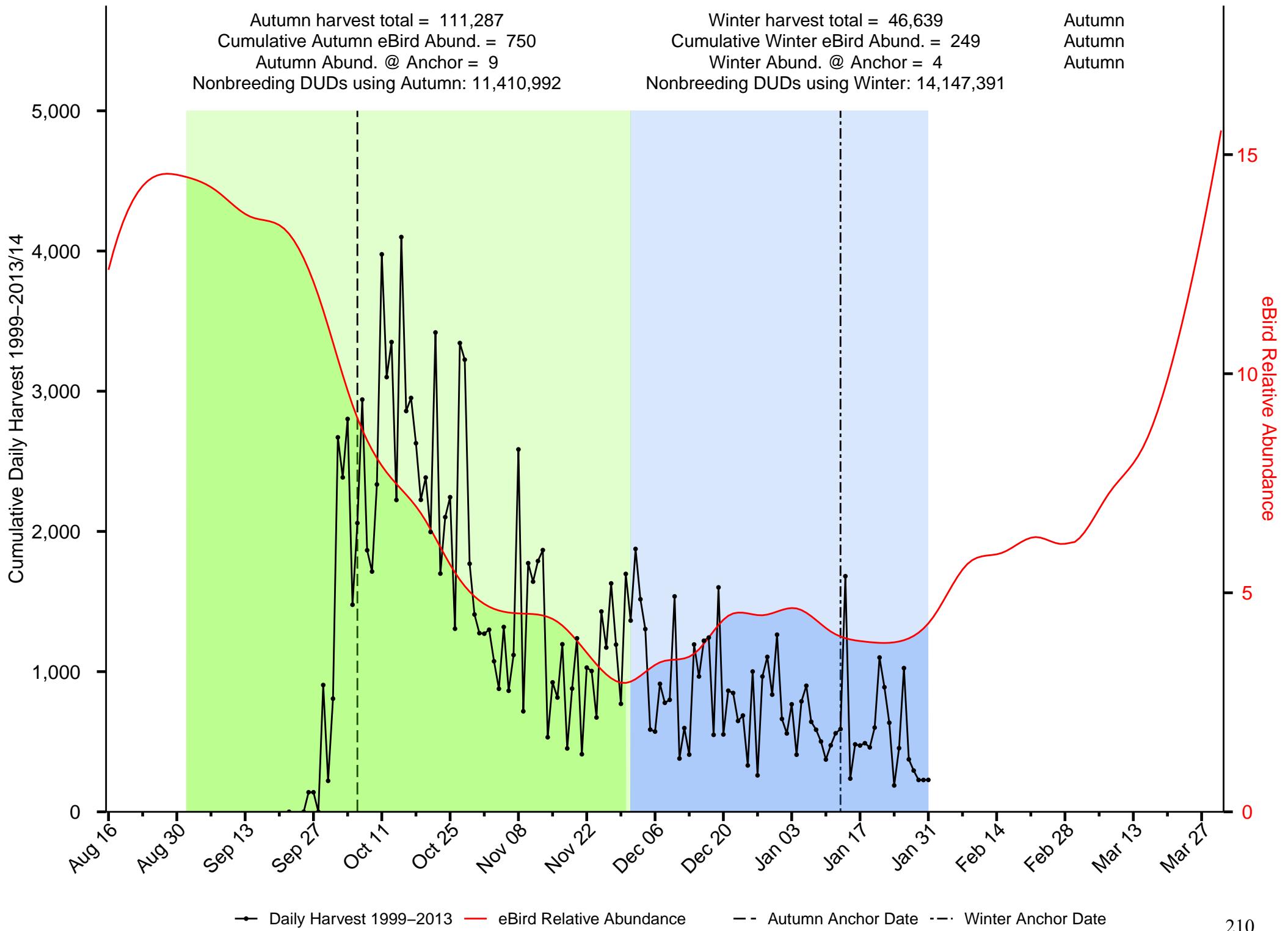
Summary of Scaup in the Intermountain West JV



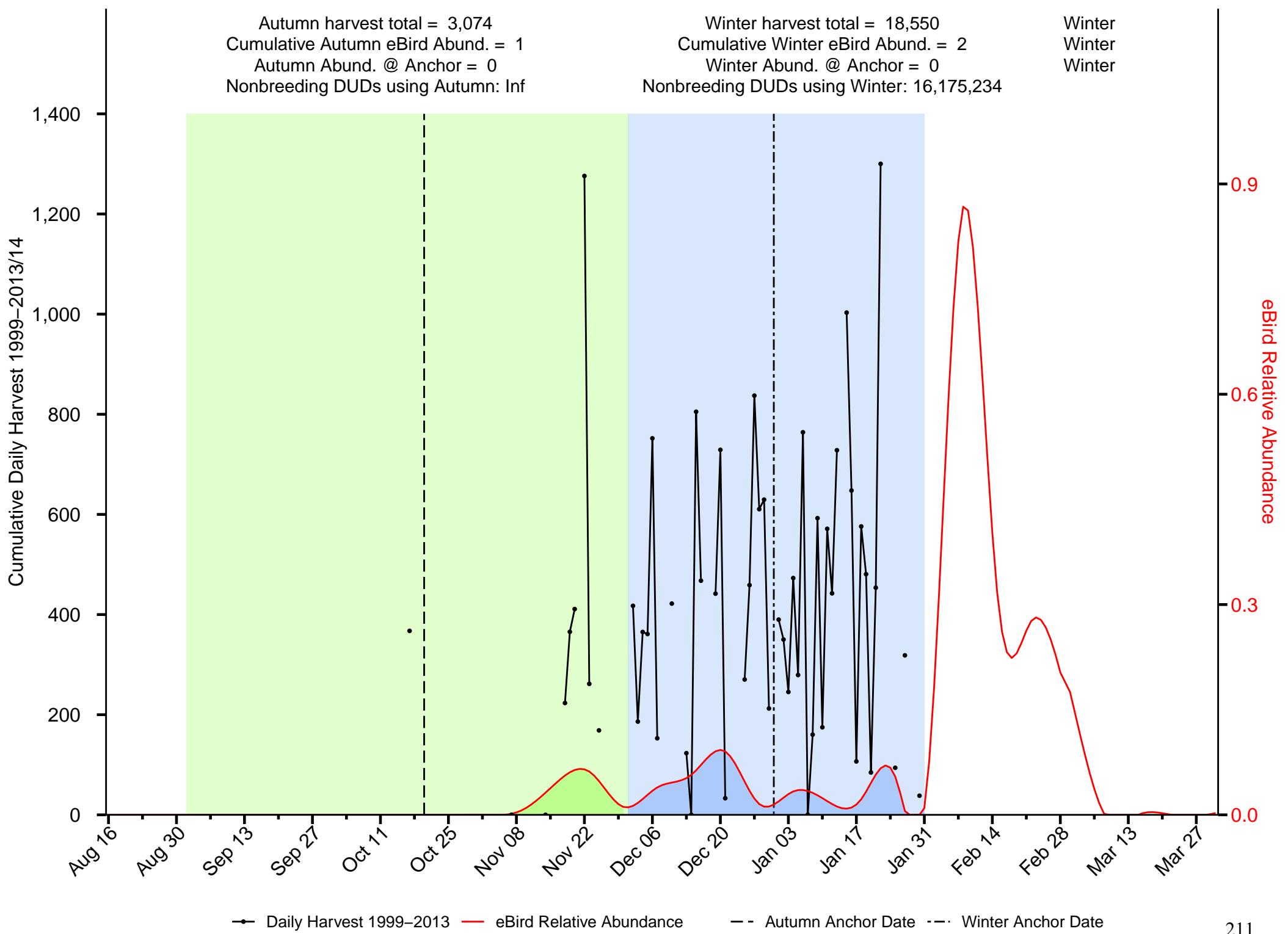
Summary of Scoter in the Intermountain West JV



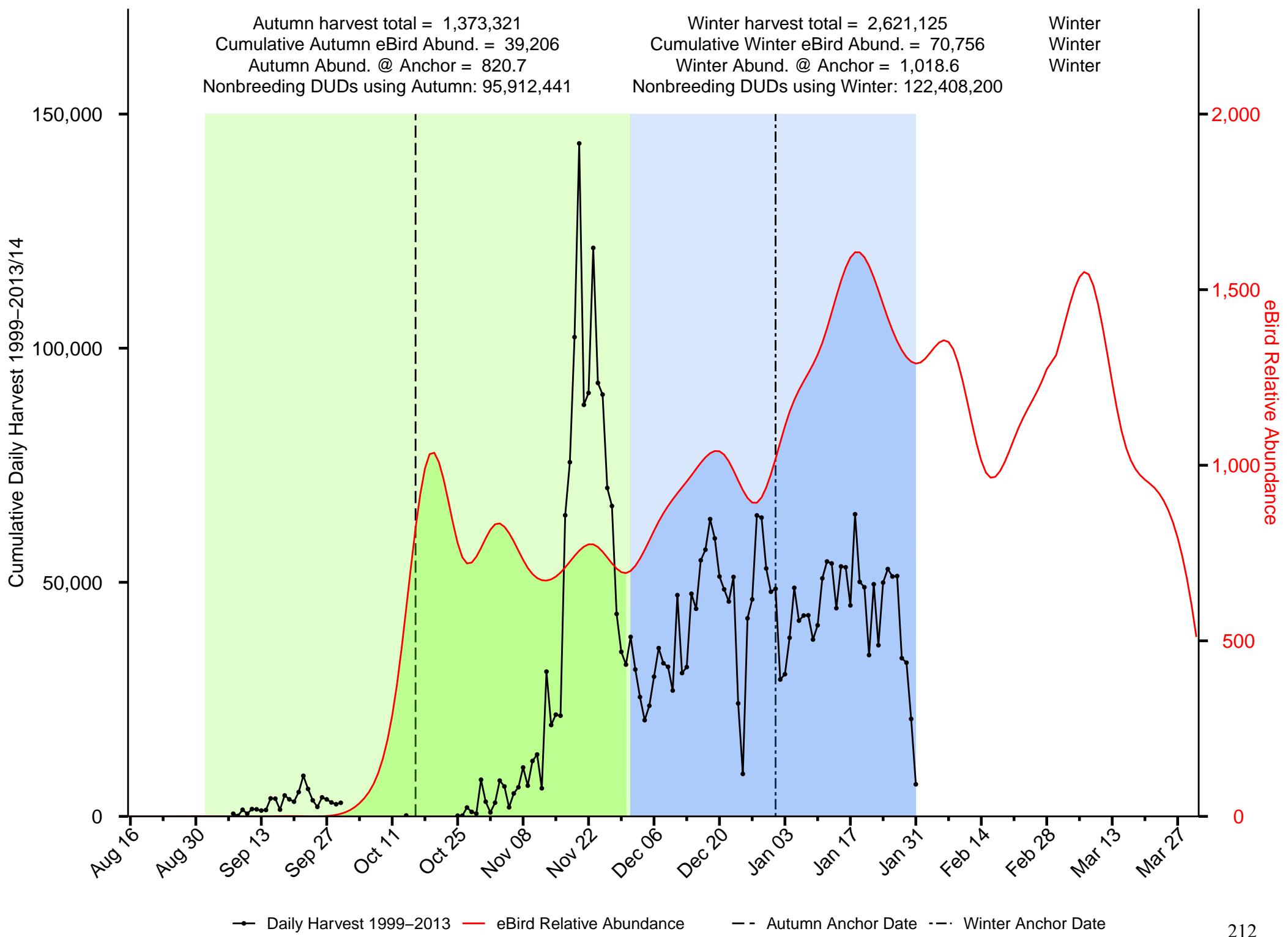
Summary of Wood Duck in the Intermountain West JV



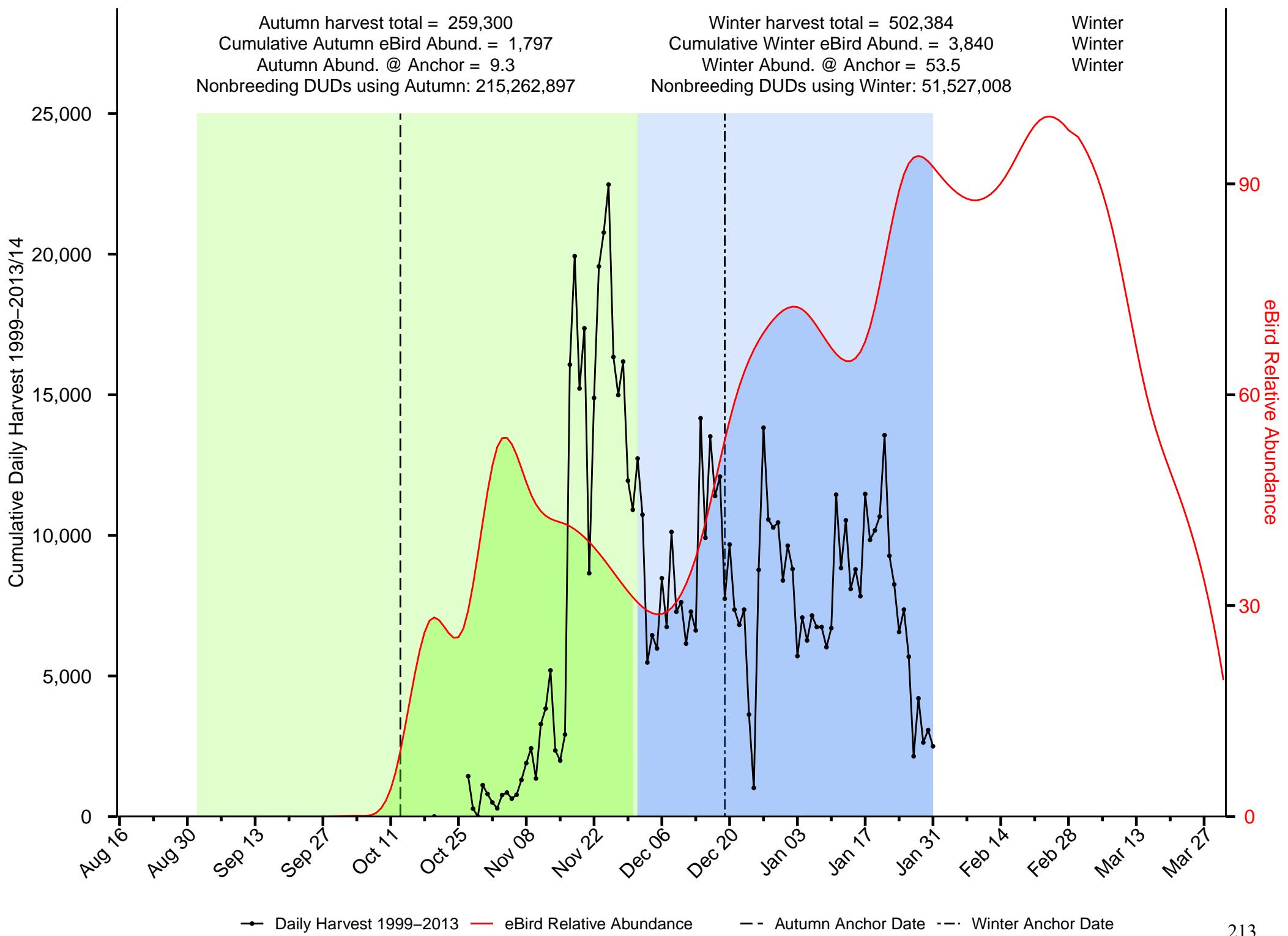
Summary of American Black Duck in the Lower Mississippi Valley JV



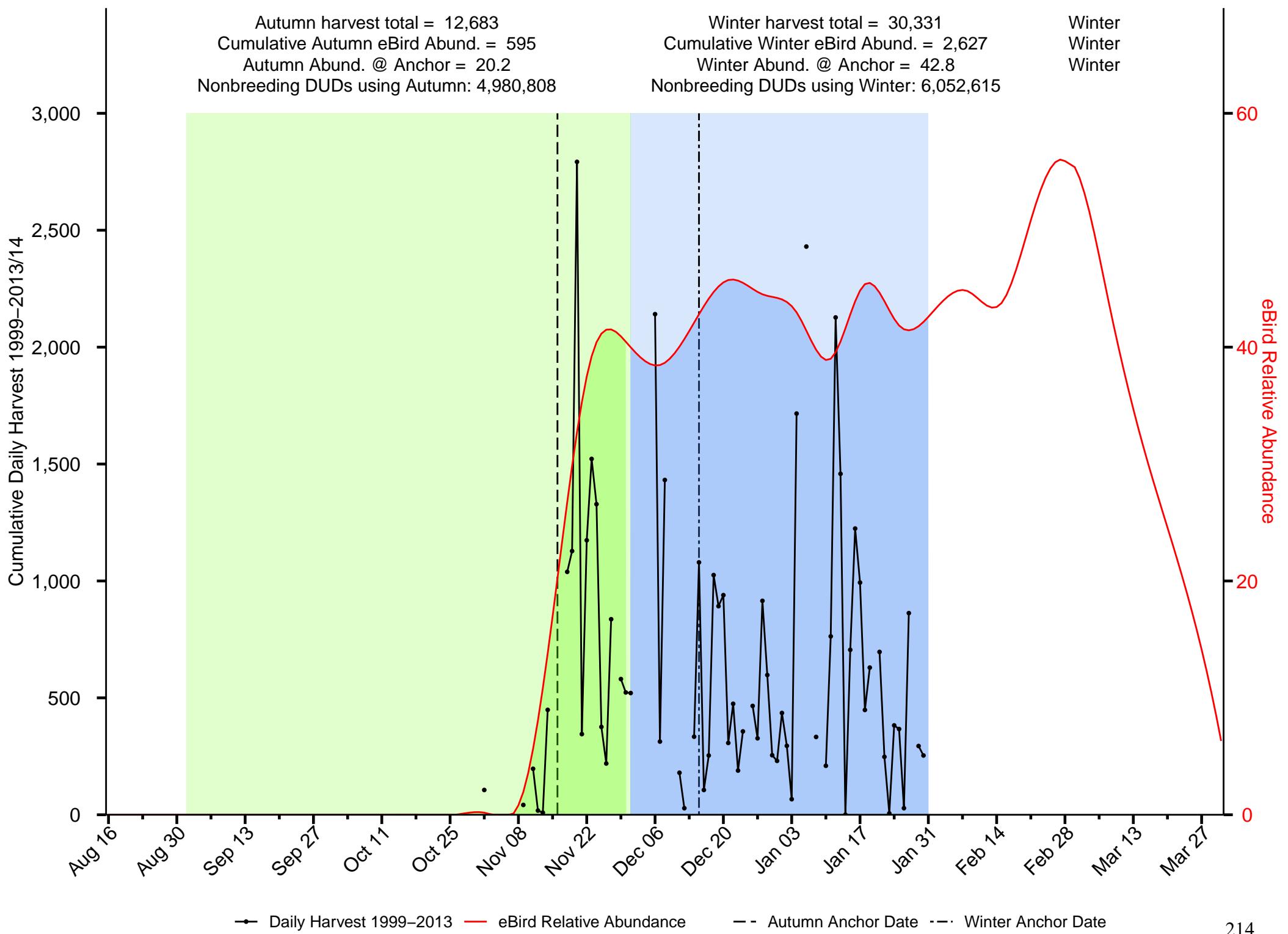
Summary of Green-winged Teal in the Lower Mississippi Valley JV



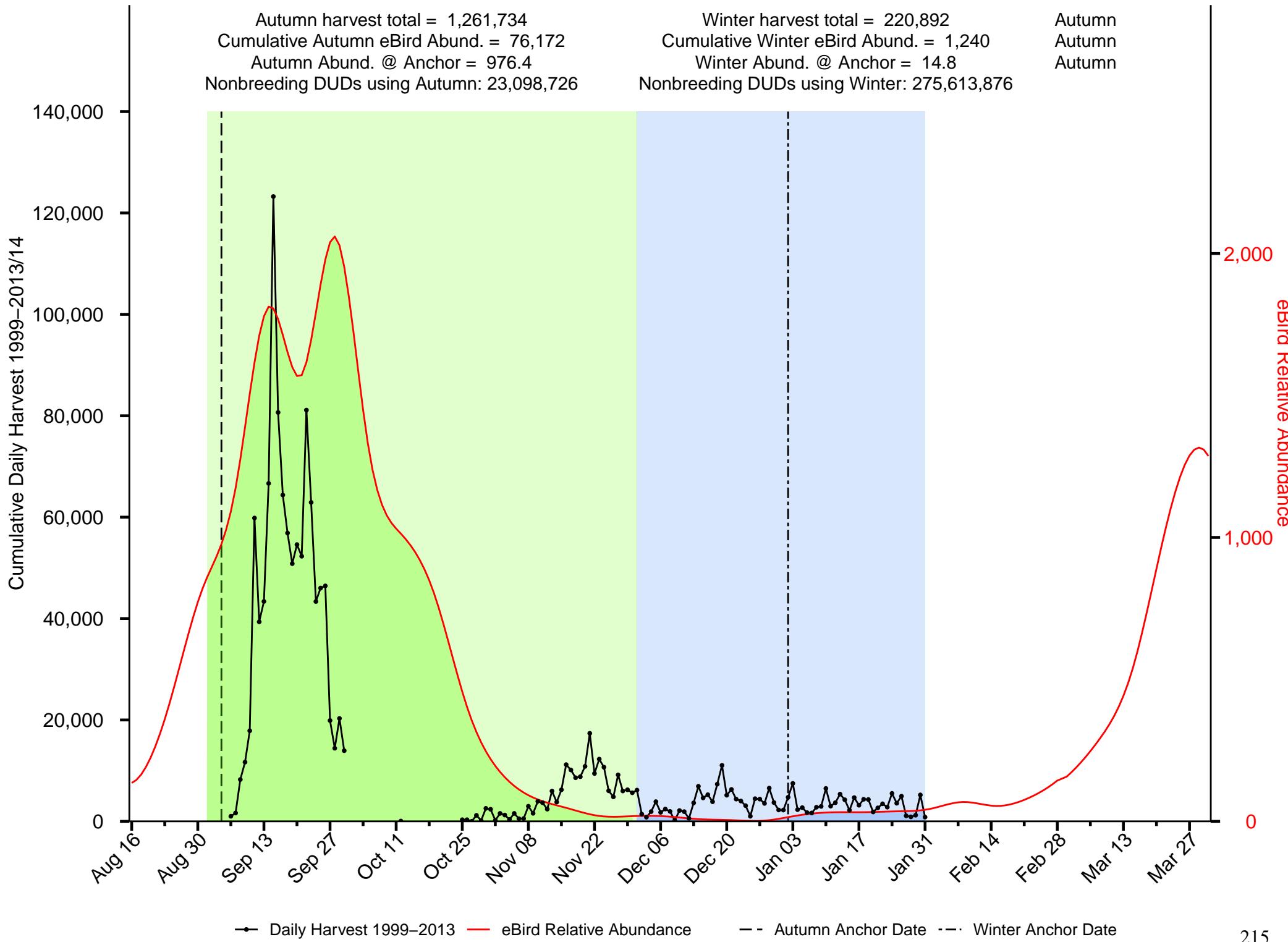
Summary of American Wigeon in the Lower Mississippi Valley JV



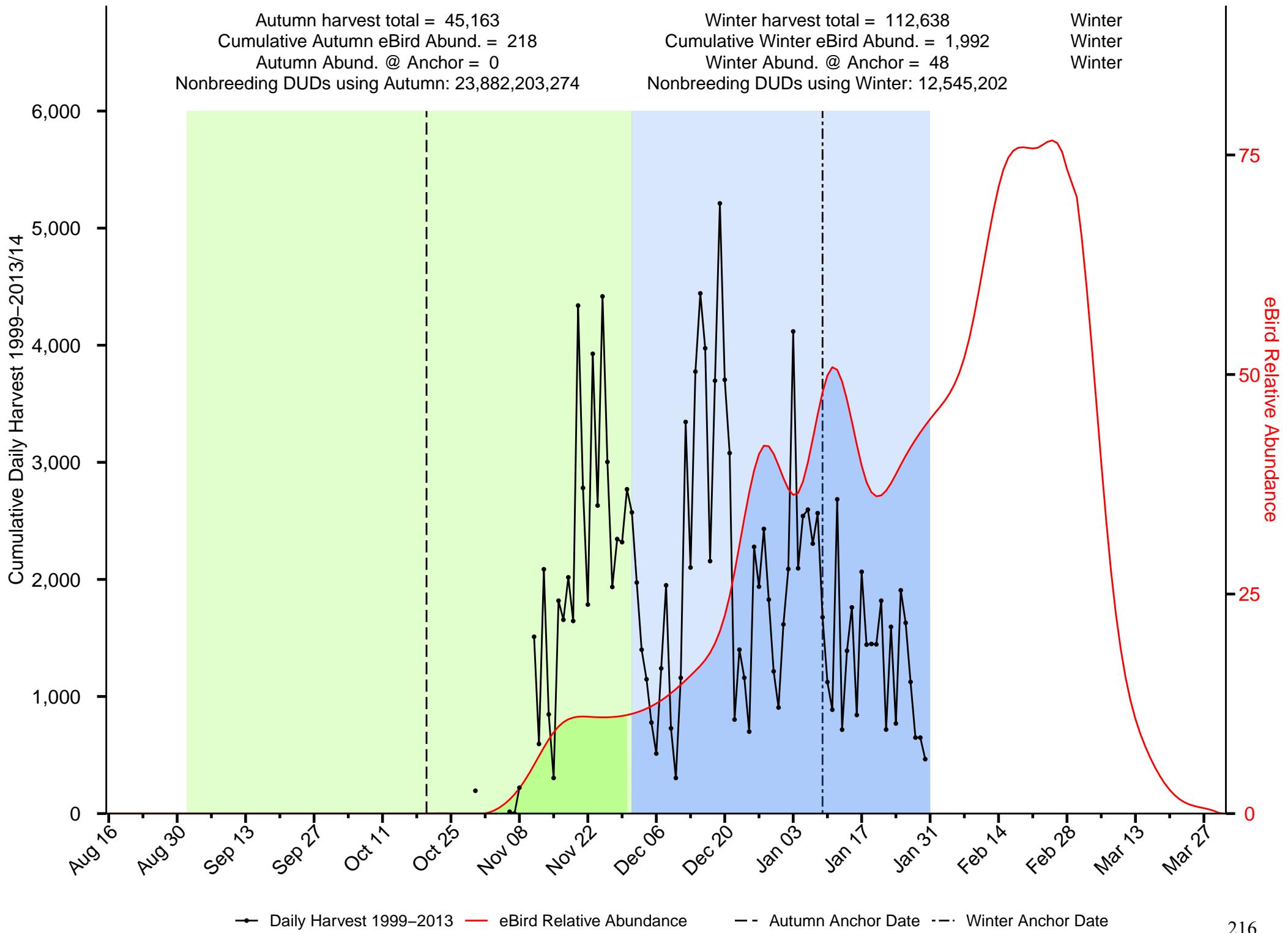
Summary of Bufflehead in the Lower Mississippi Valley JV



Summary of Blue-winged Teal in the Lower Mississippi Valley JV



Summary of Canvasback in the Lower Mississippi Valley JV

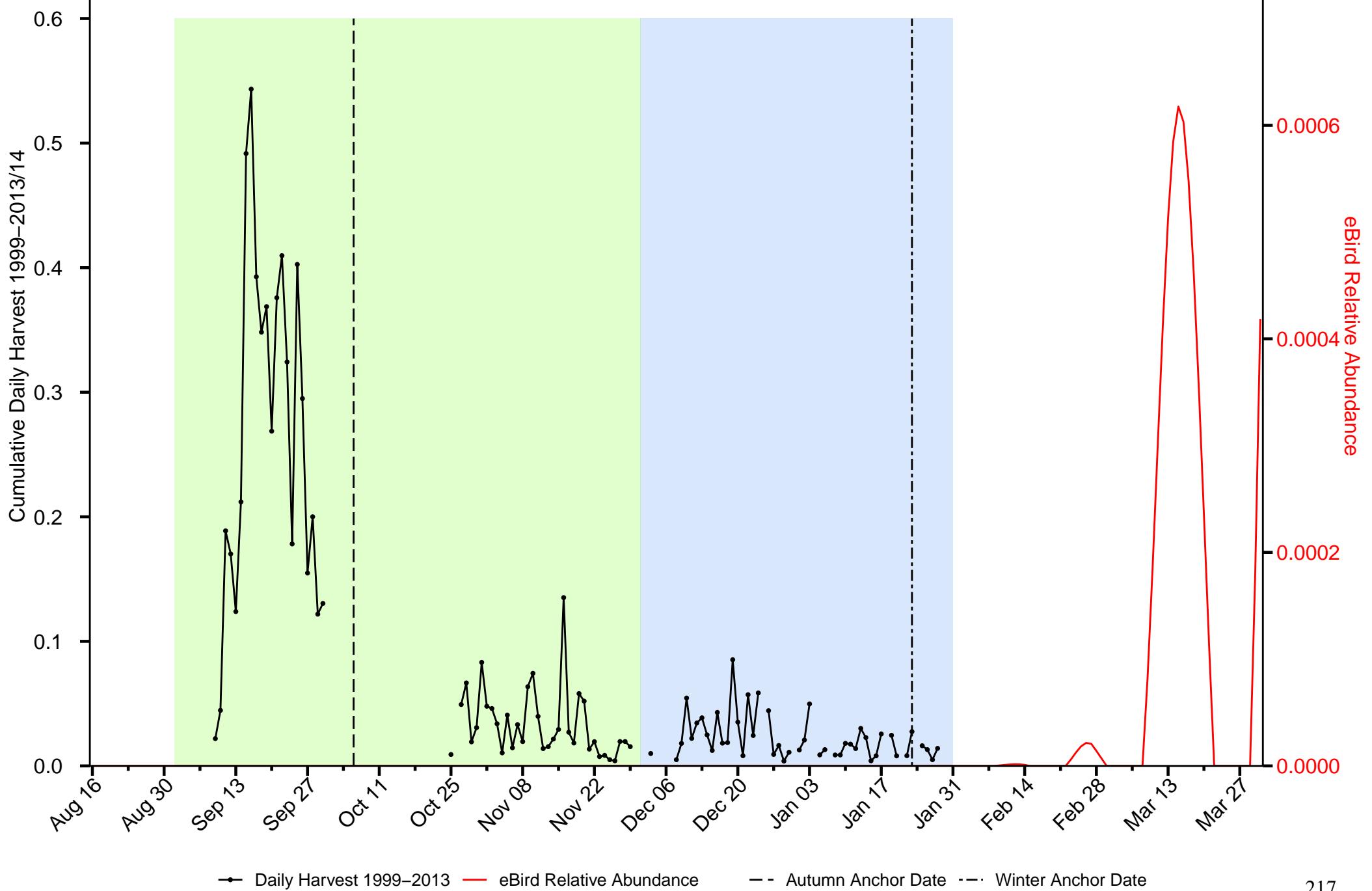


Summary of Cinnamon Teal in the Lower Mississippi Valley JV

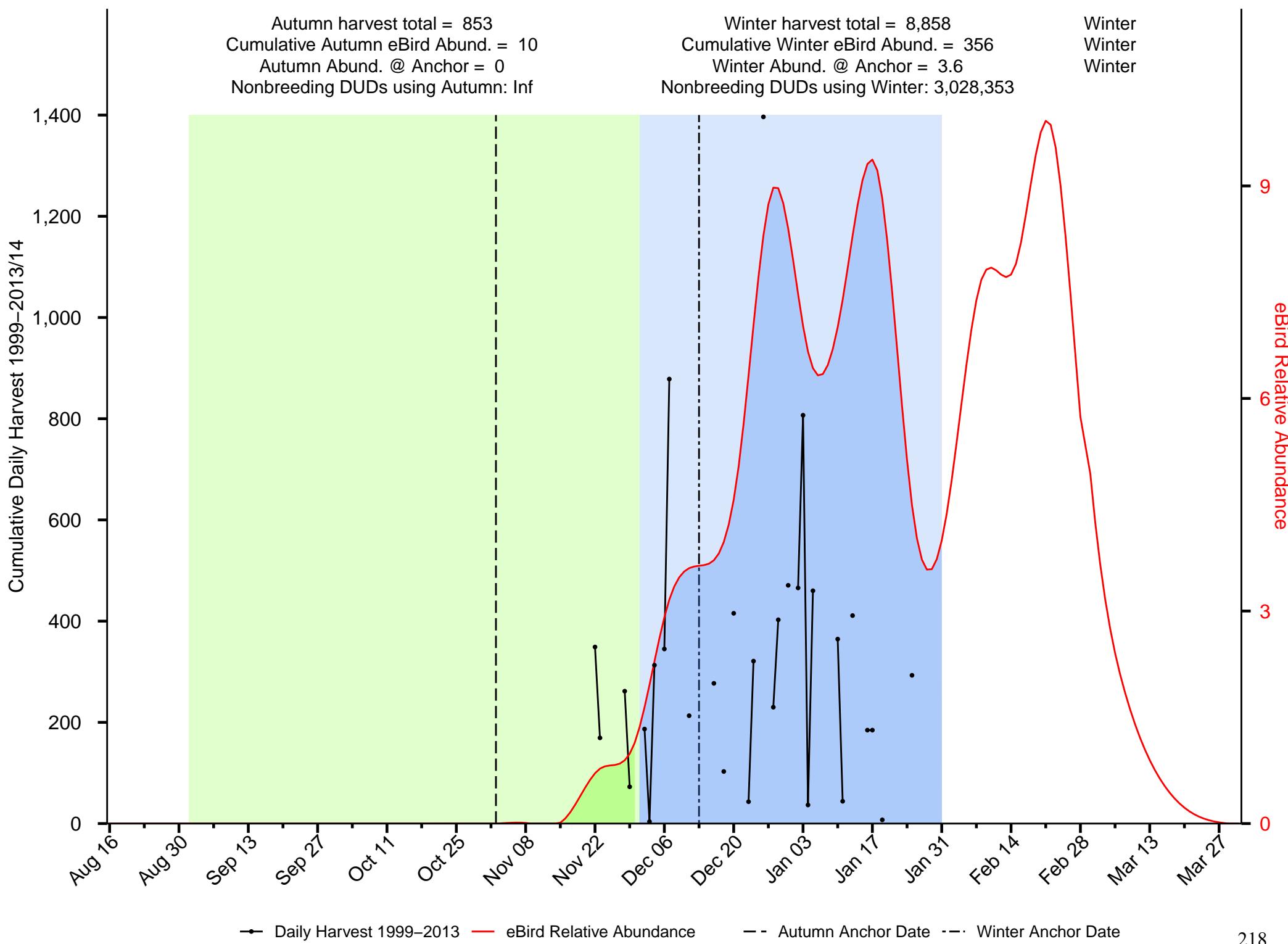
Autumn harvest total = 7
Cumulative Autumn eBird Abund. = 0
Autumn Abund. @ Anchor = 0
Nonbreeding DUDs using Autumn: 390,548,171,957,393

Winter harvest total = 1
Cumulative Winter eBird Abund. = 0
Winter Abund. @ Anchor = 0
Nonbreeding DUDs using Winter: Int

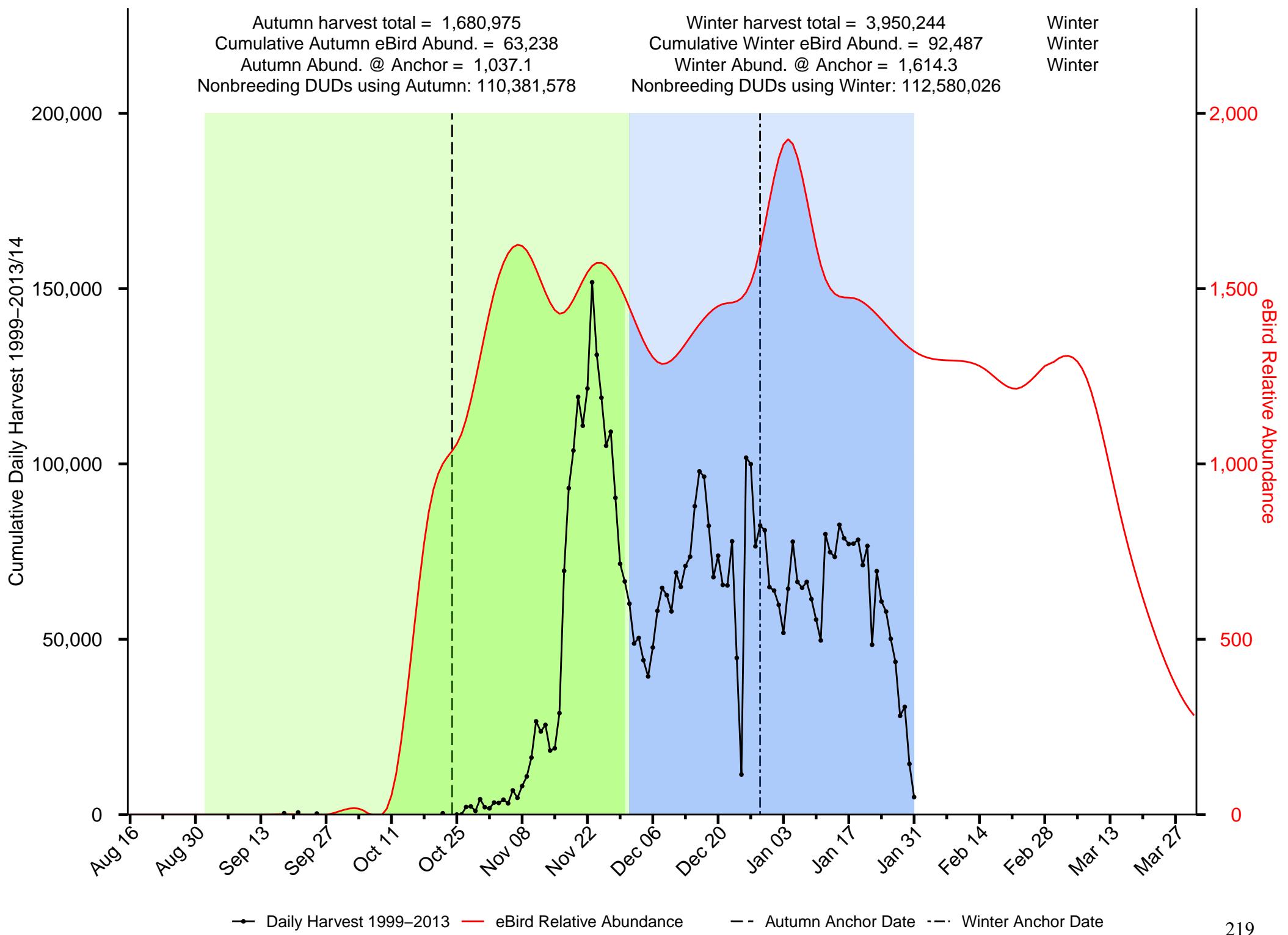
Autumn
Winter
Autumn



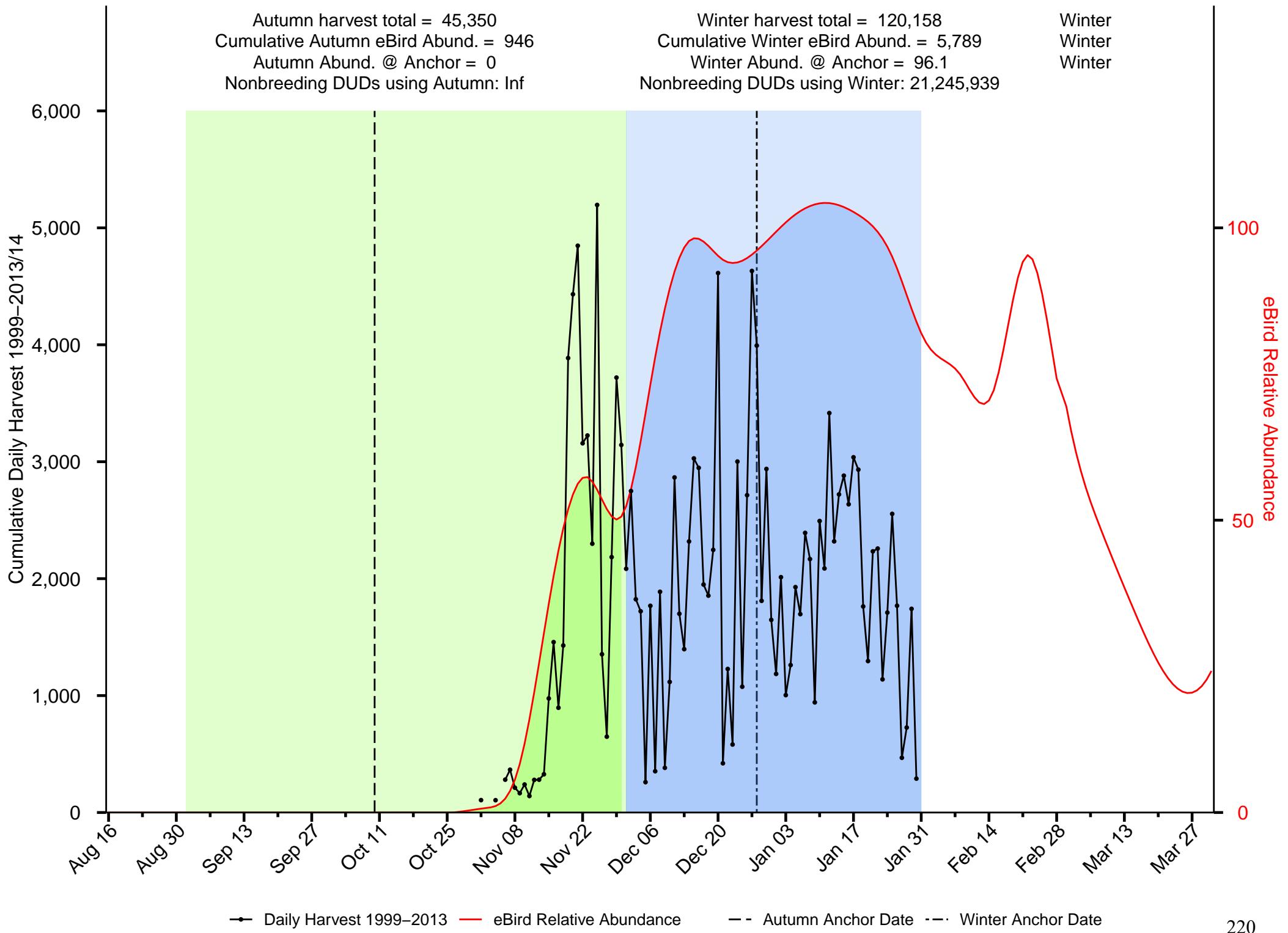
Summary of Common Goldeneye in the Lower Mississippi Valley JV



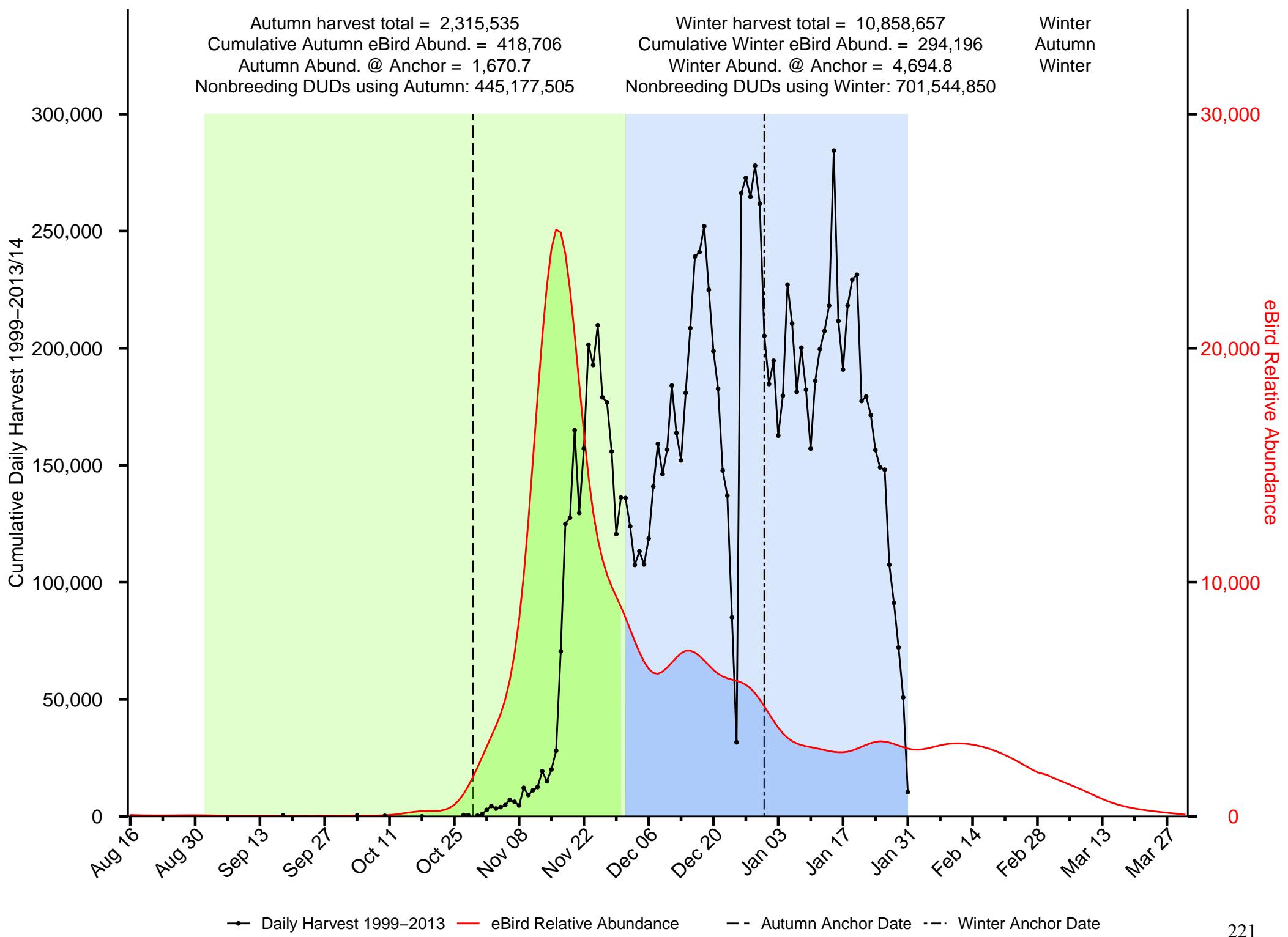
Summary of Gadwall in the Lower Mississippi Valley JV



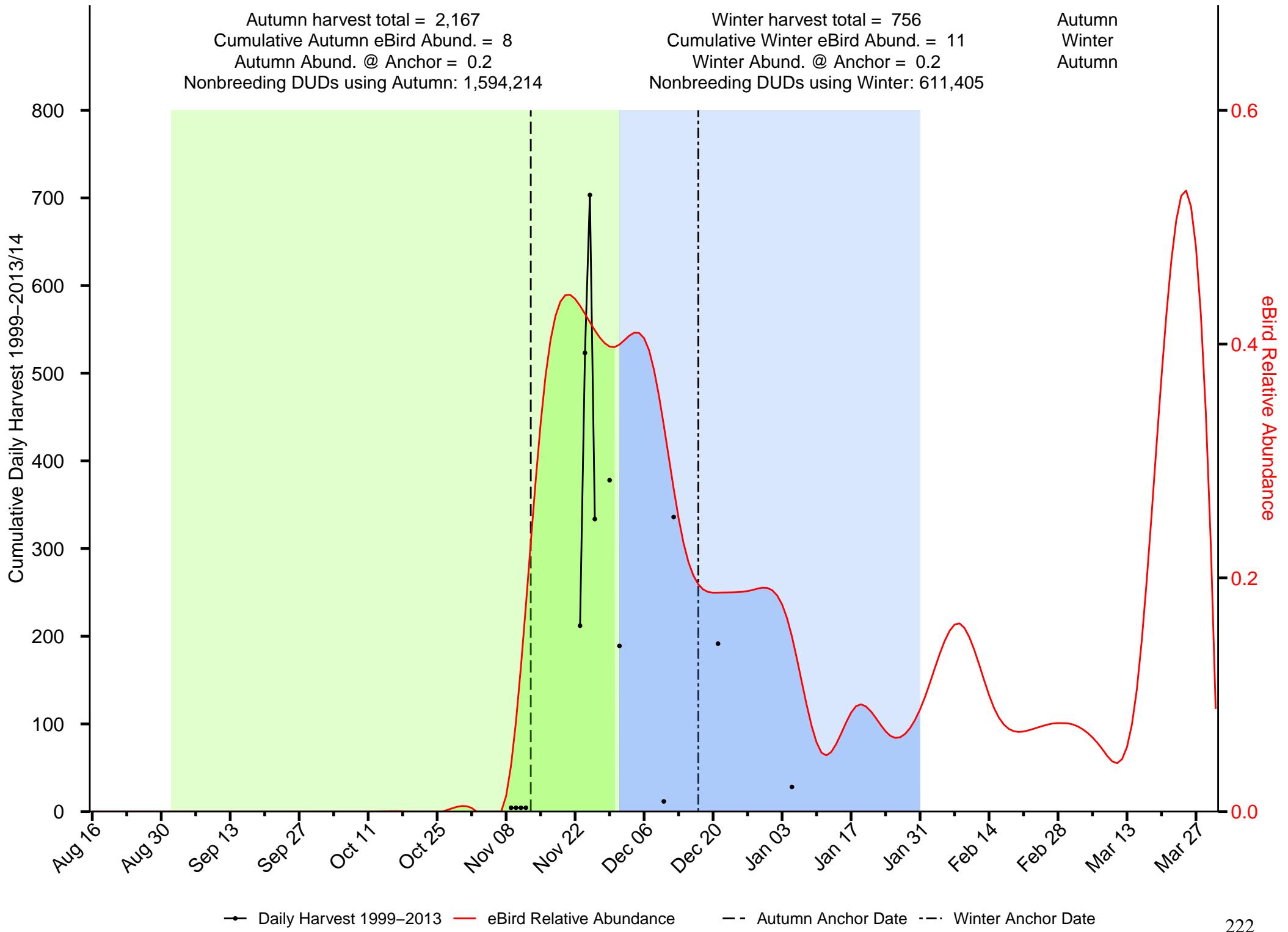
Summary of Hooded Merganser in the Lower Mississippi Valley JV



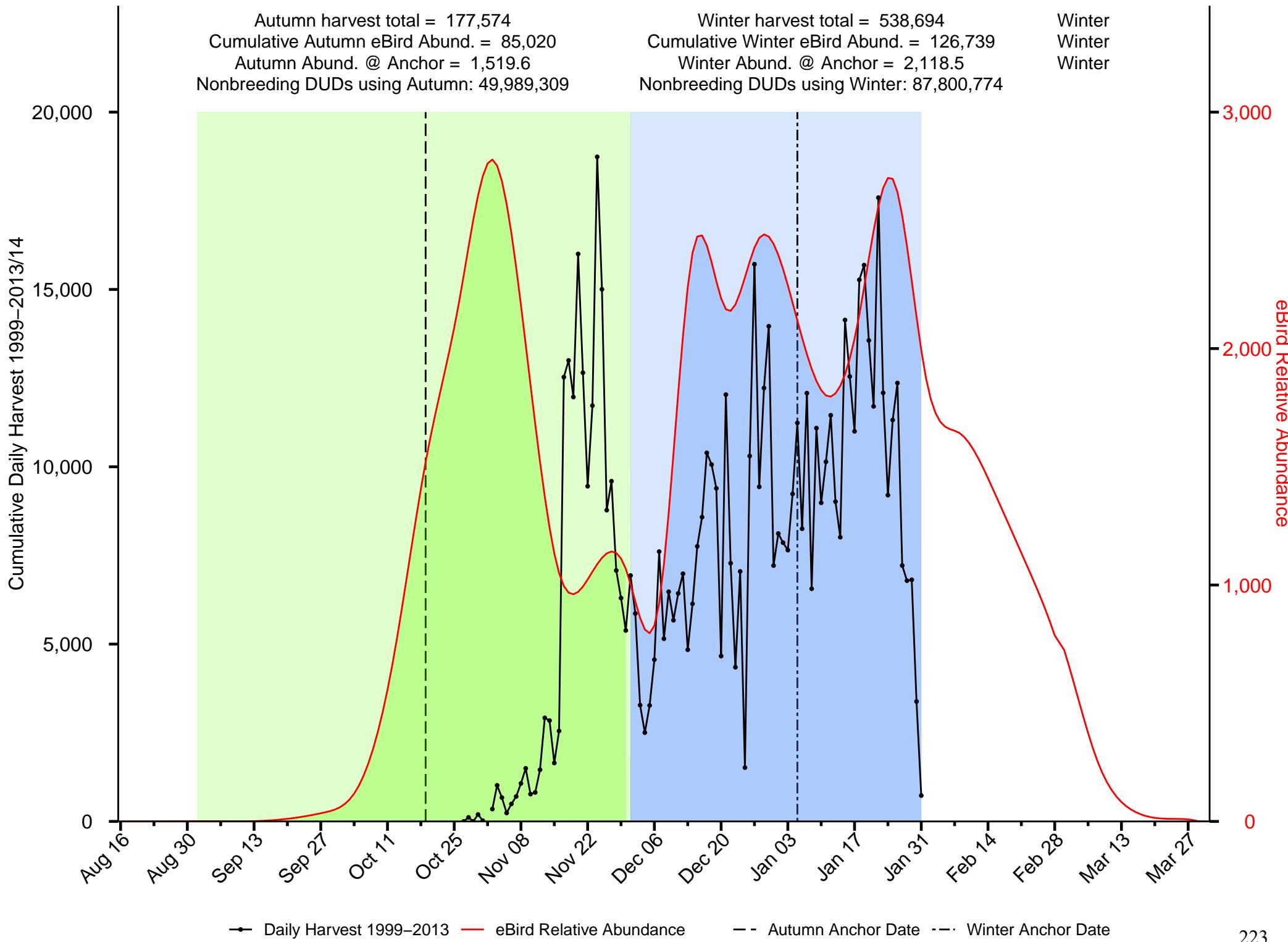
Summary of Mallard in the Lower Mississippi Valley JV



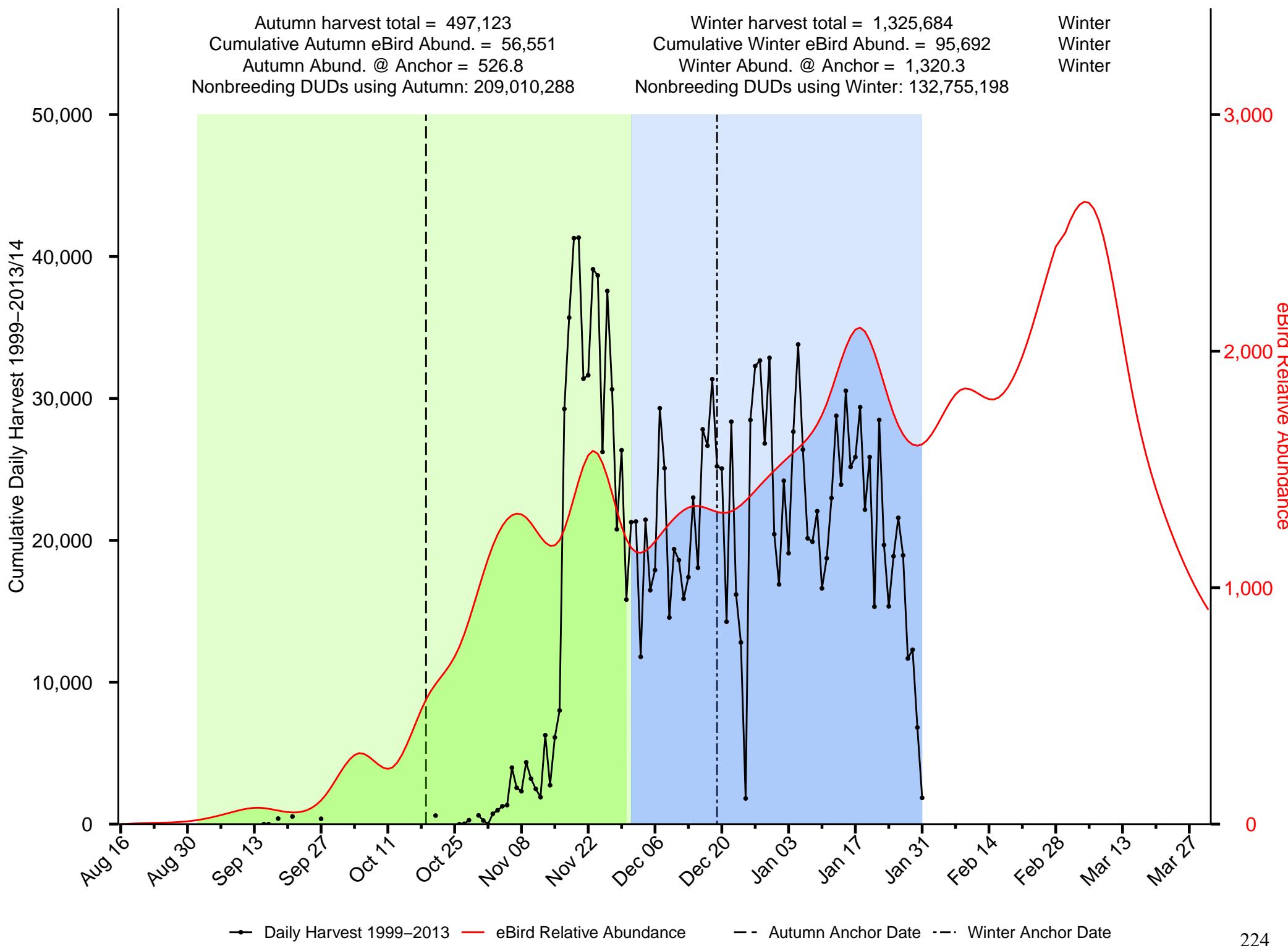
Summary of Merganser in the Lower Mississippi Valley JV



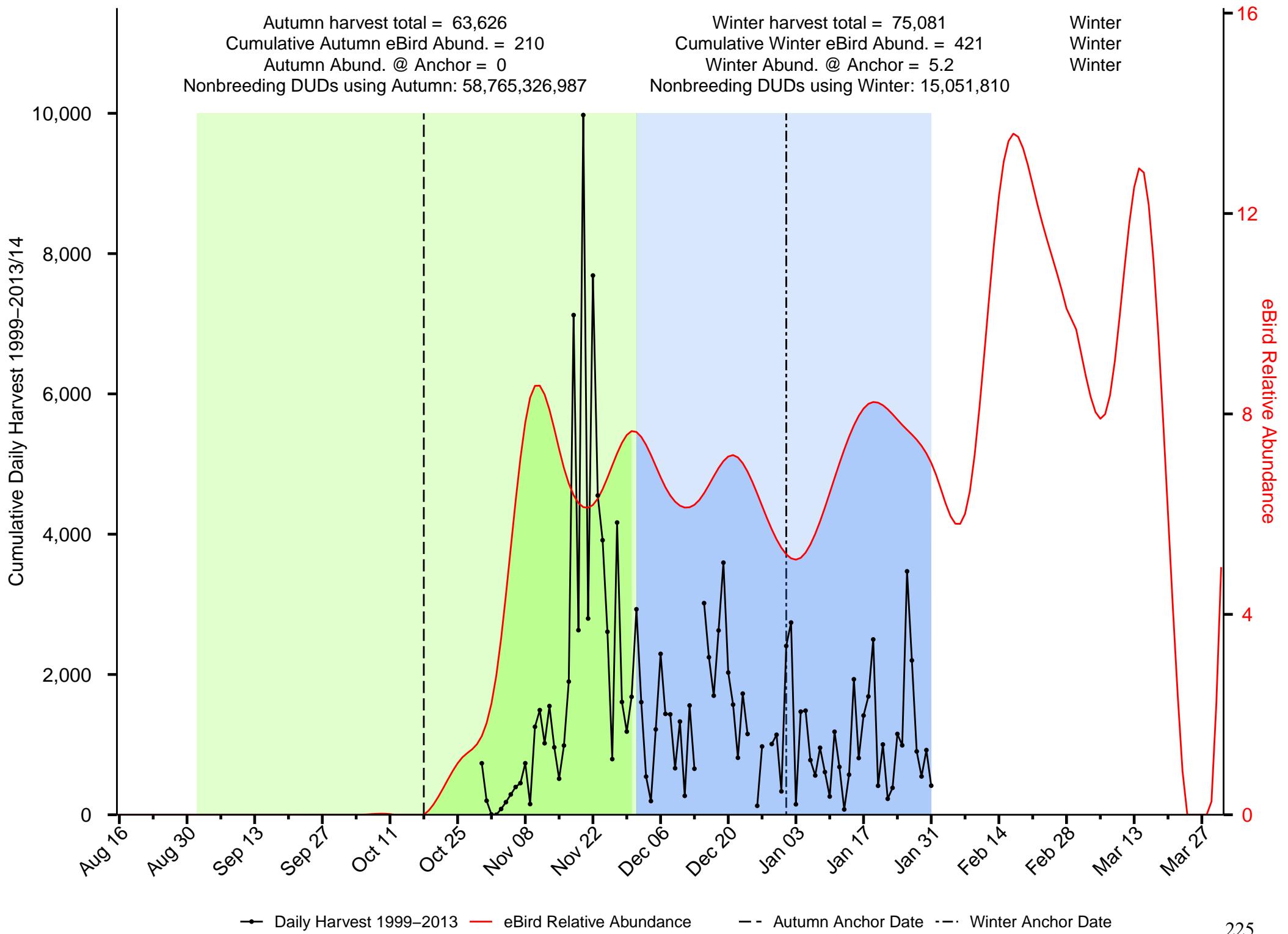
Summary of Northern Pintail in the Lower Mississippi Valley JV



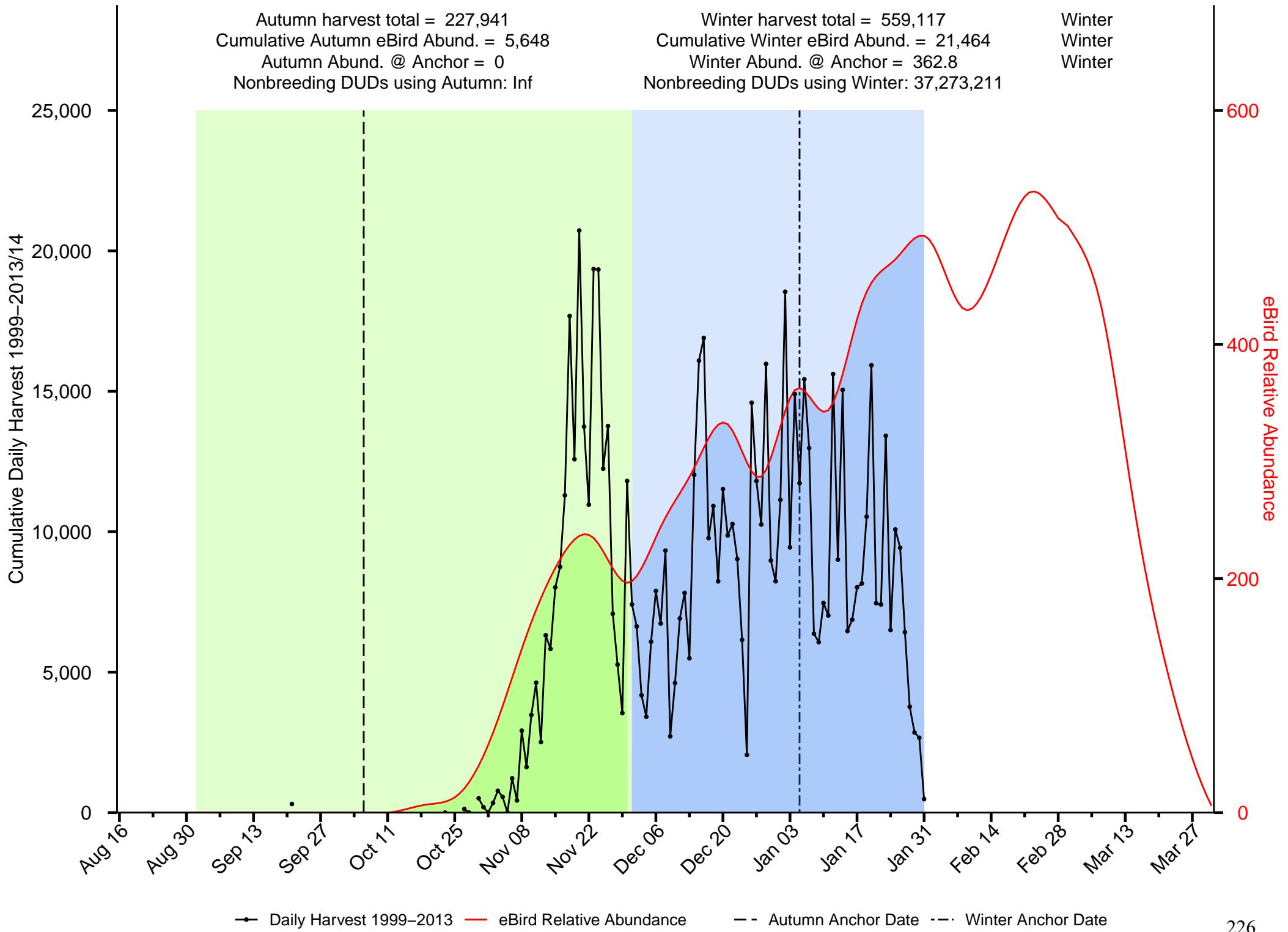
Summary of Northern Shoveler in the Lower Mississippi Valley JV



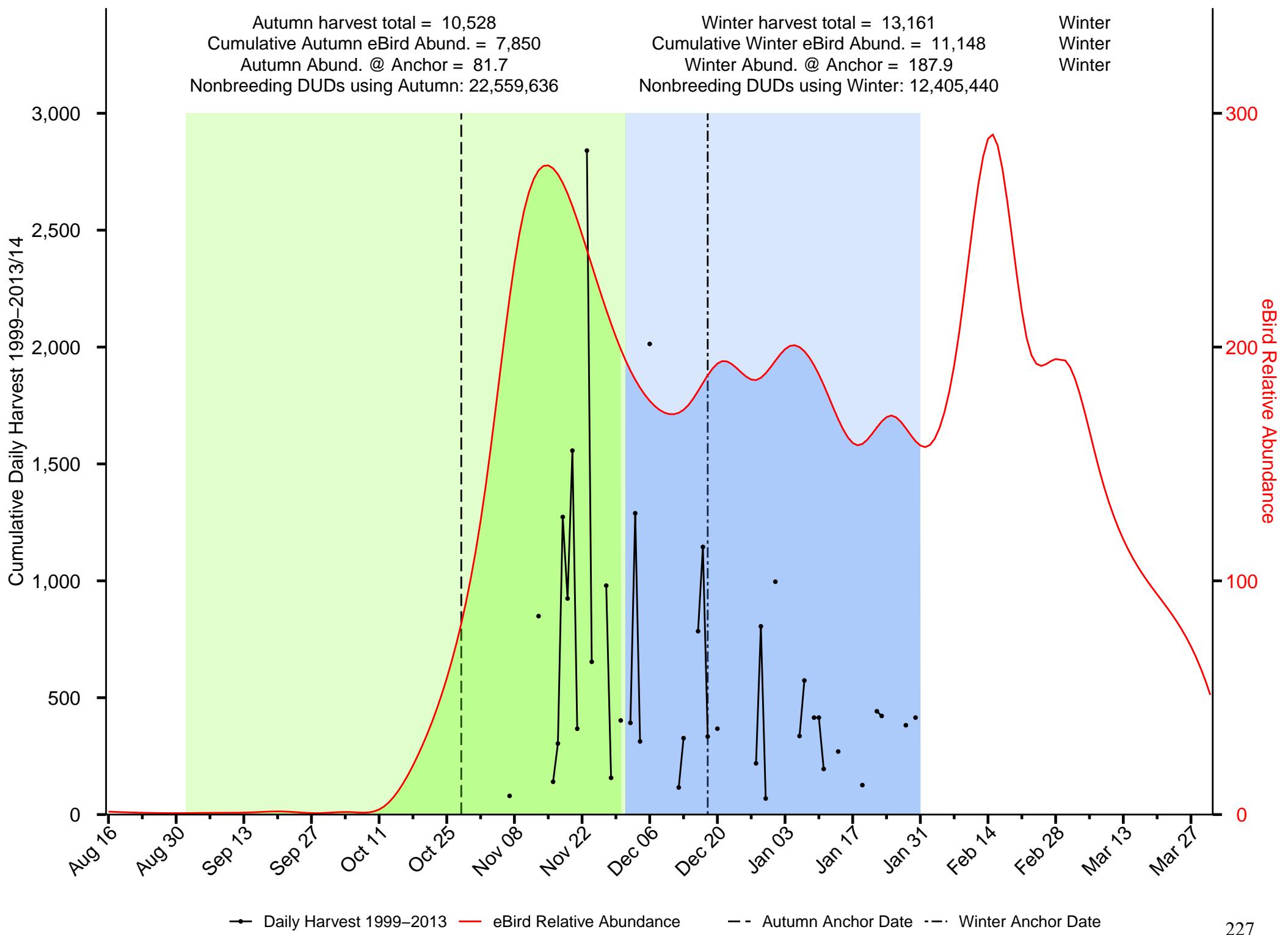
Summary of Redhead in the Lower Mississippi Valley JV



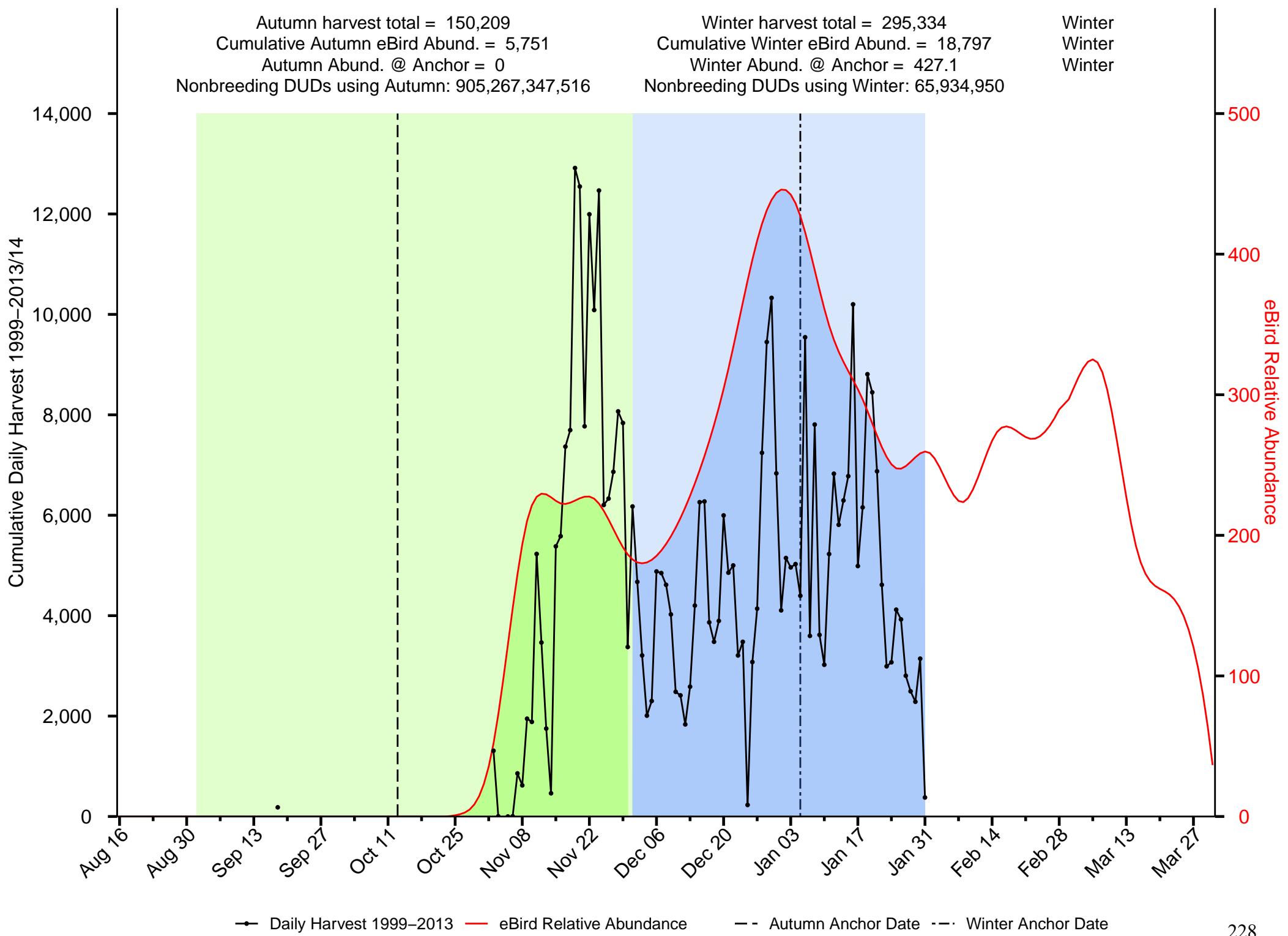
Summary of Ring-necked Duck in the Lower Mississippi Valley JV



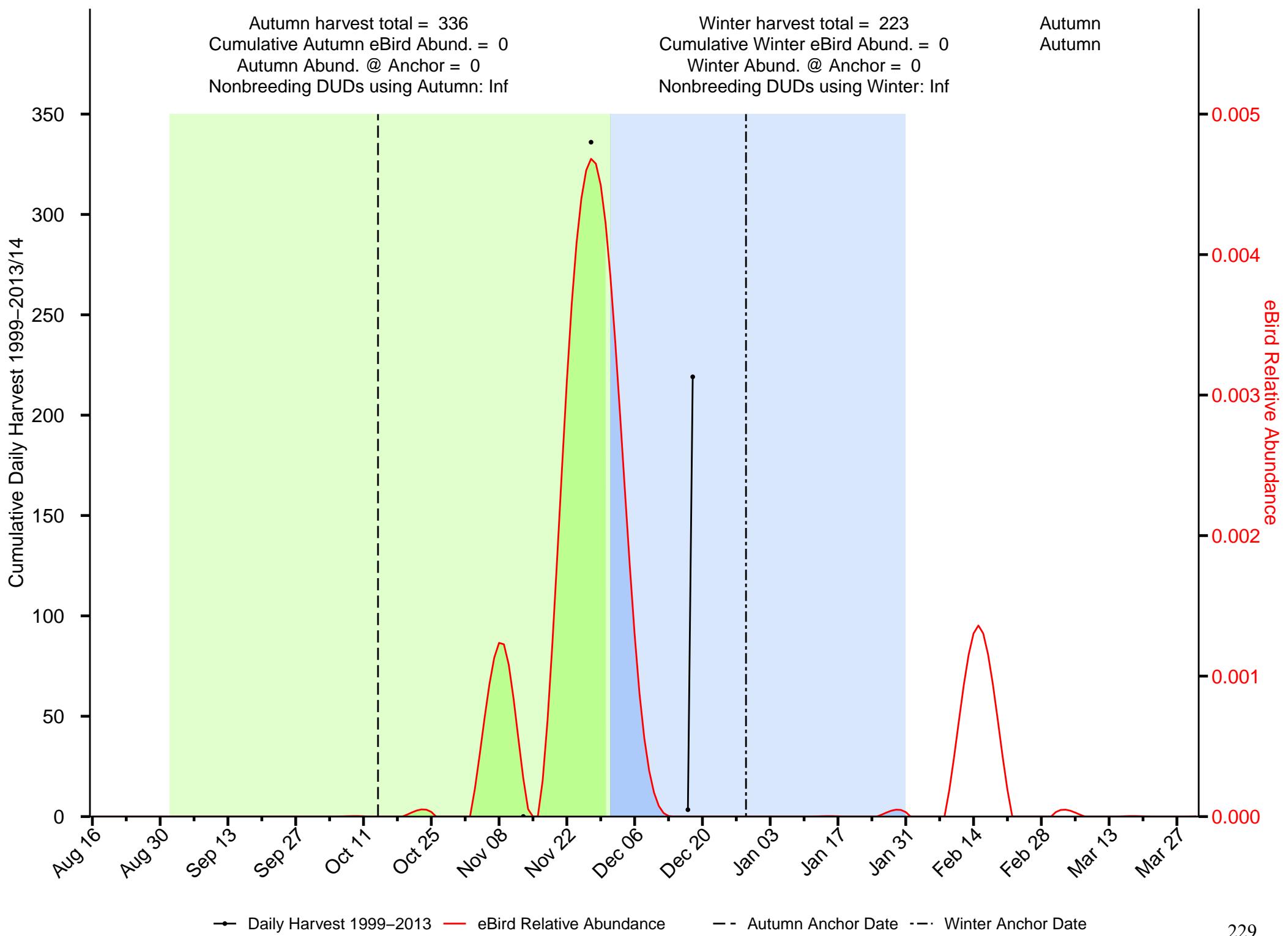
Summary of Ruddy Duck in the Lower Mississippi Valley JV



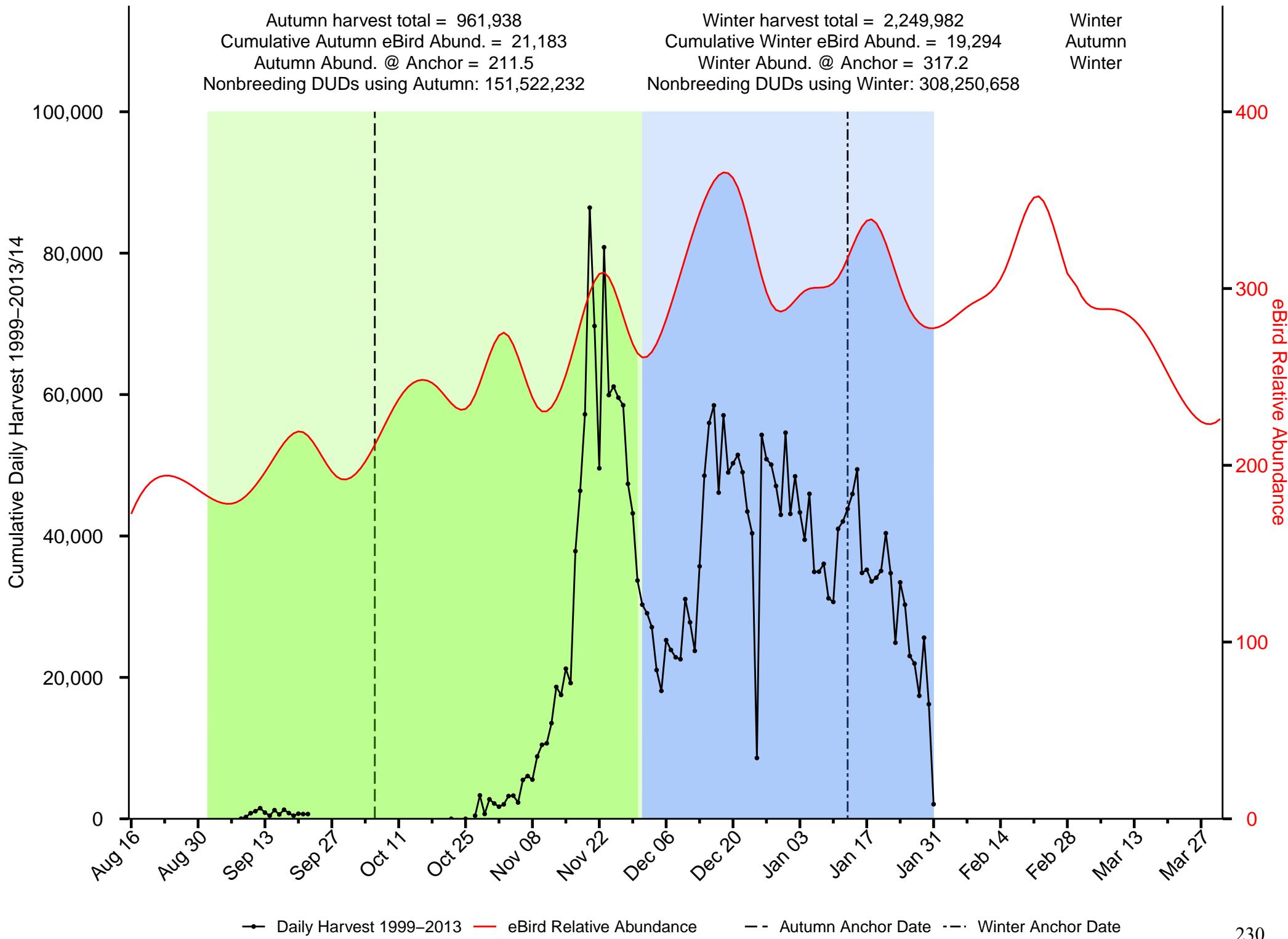
Summary of Scaup in the Lower Mississippi Valley JV



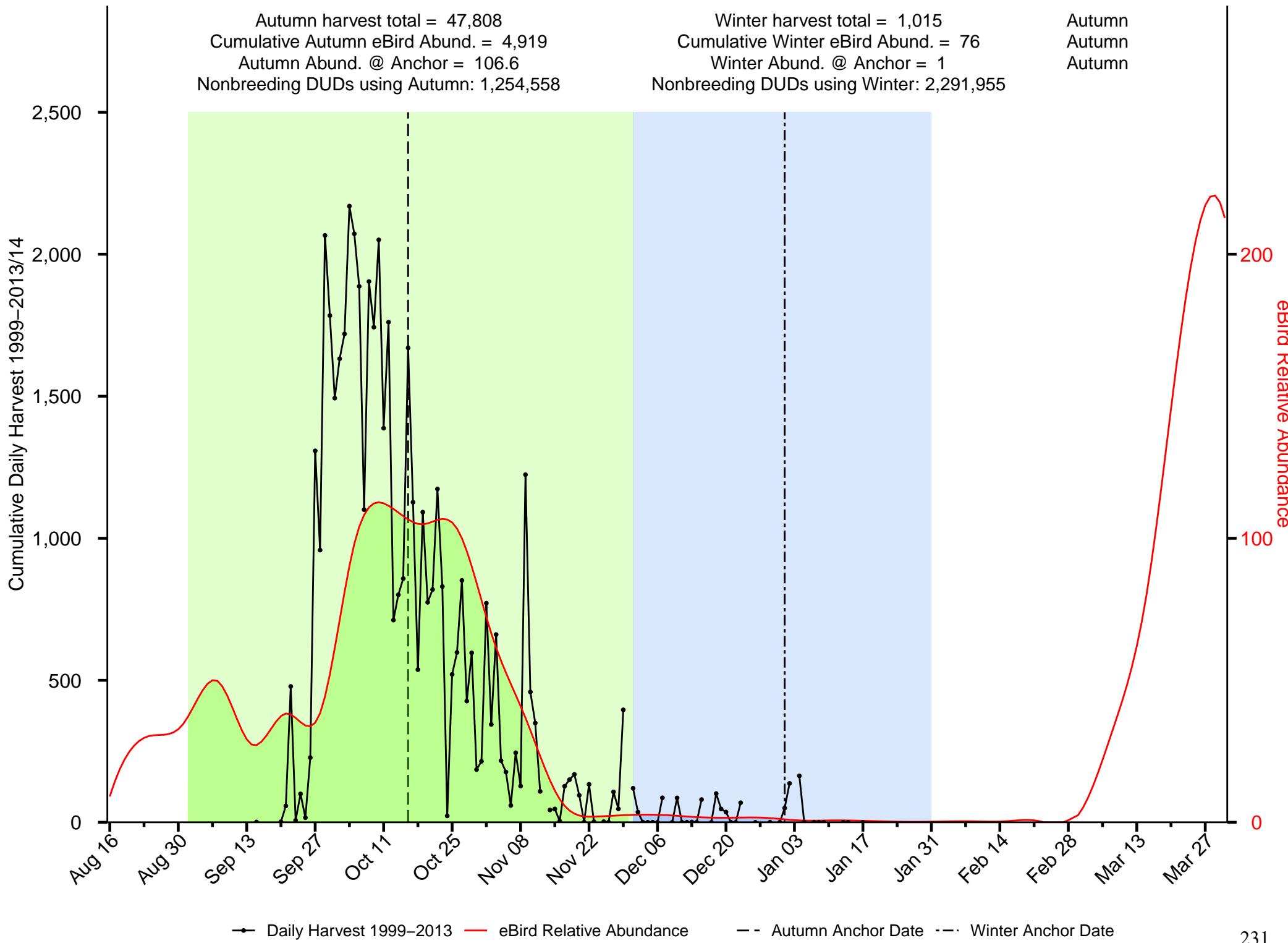
Summary of Scoter in the Lower Mississippi Valley JV



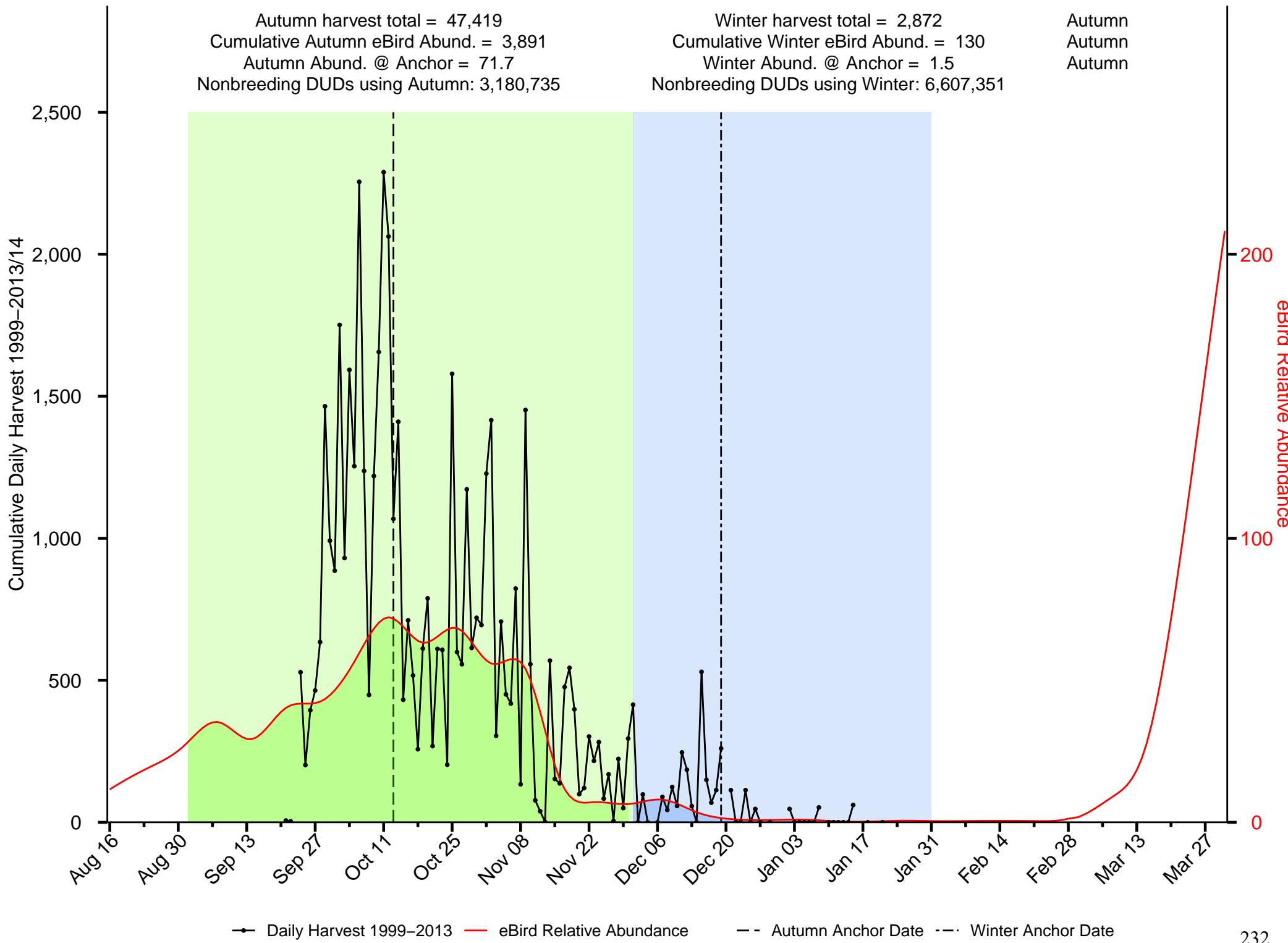
Summary of Wood Duck in the Lower Mississippi Valley JV



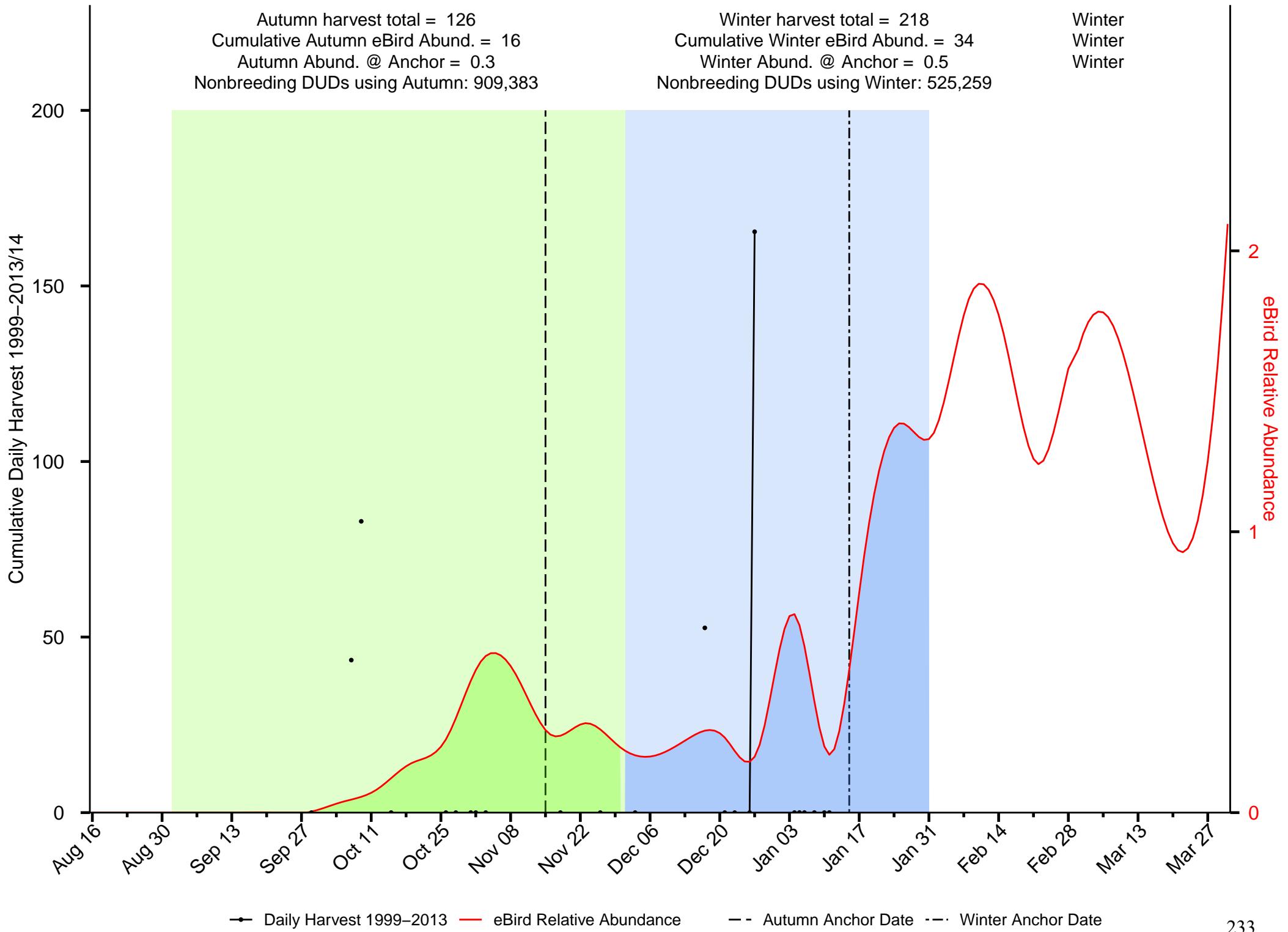
Summary of Green-winged Teal in the Northern Great Plains JV



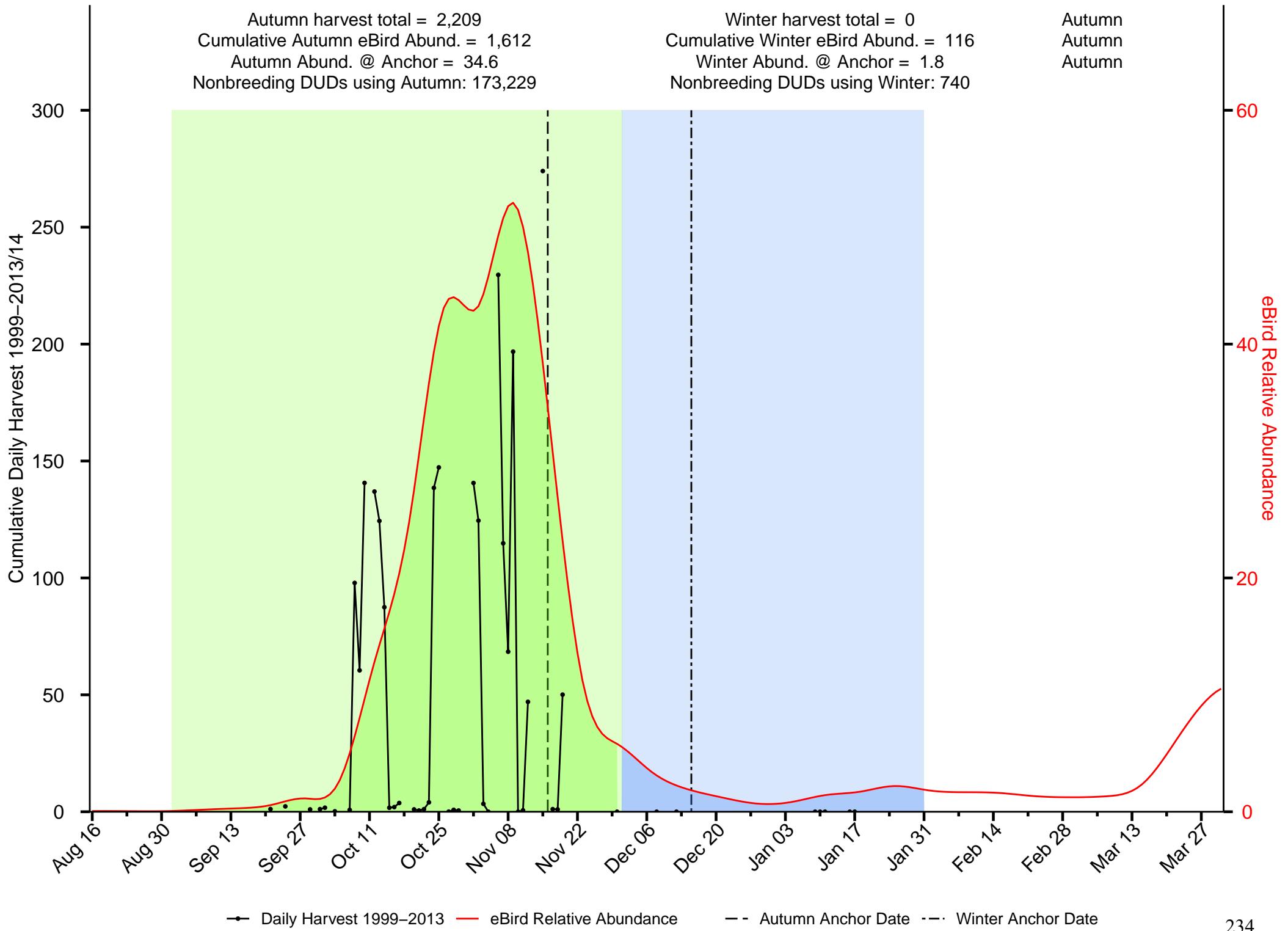
Summary of American Wigeon in the Northern Great Plains JV



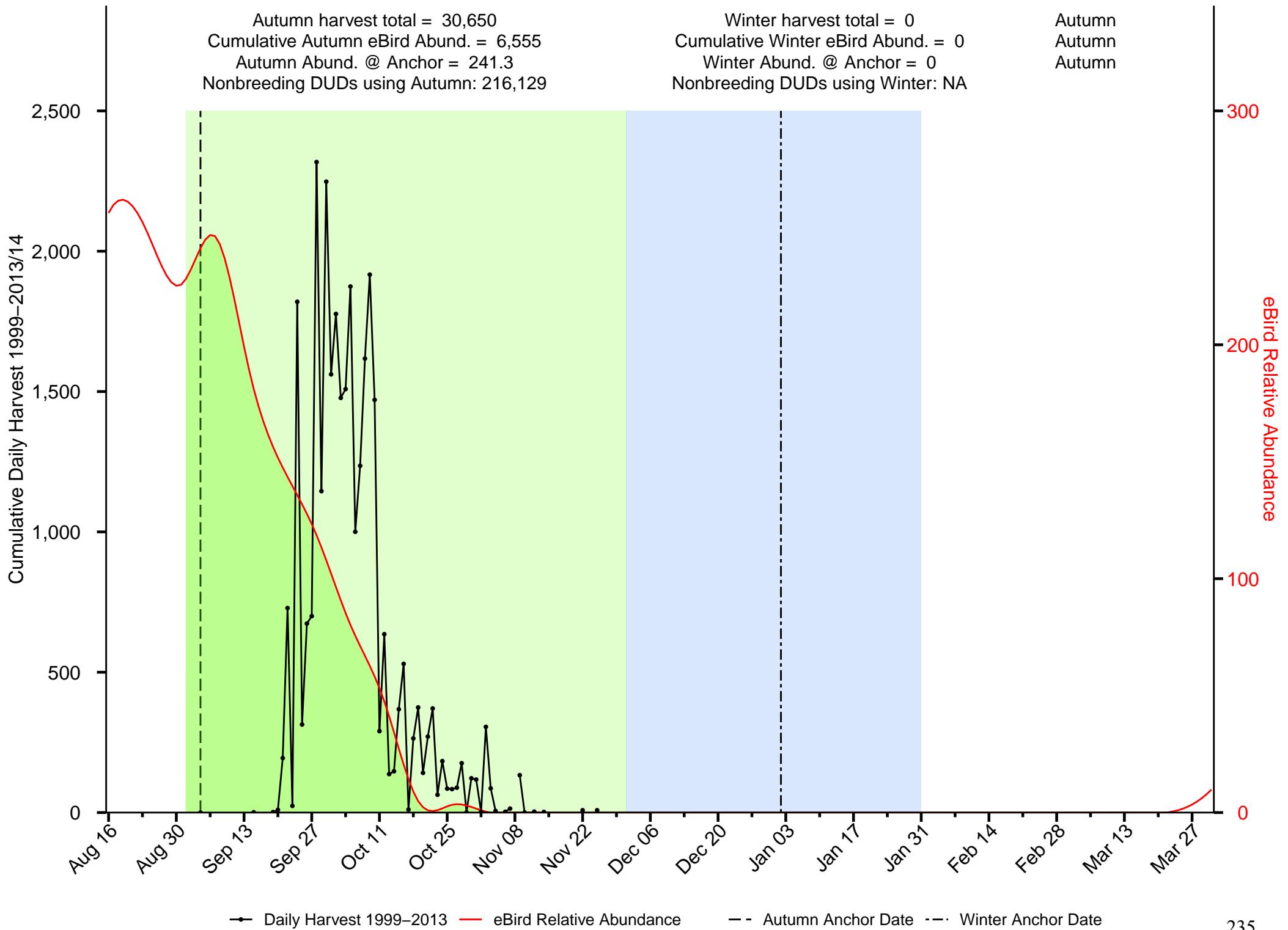
Summary of Barrow's Goldeneye in the Northern Great Plains JV



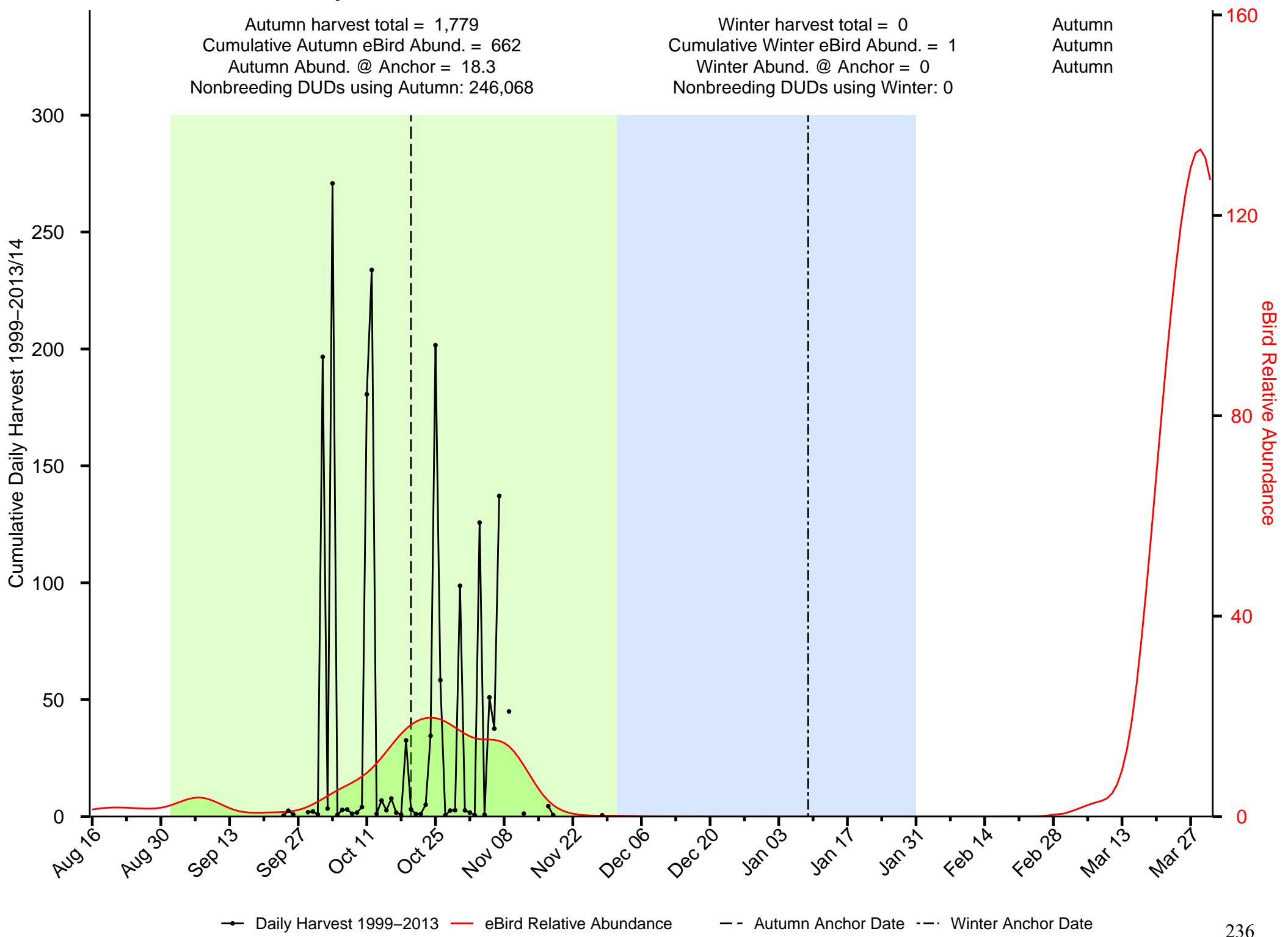
Summary of Bufflehead in the Northern Great Plains JV



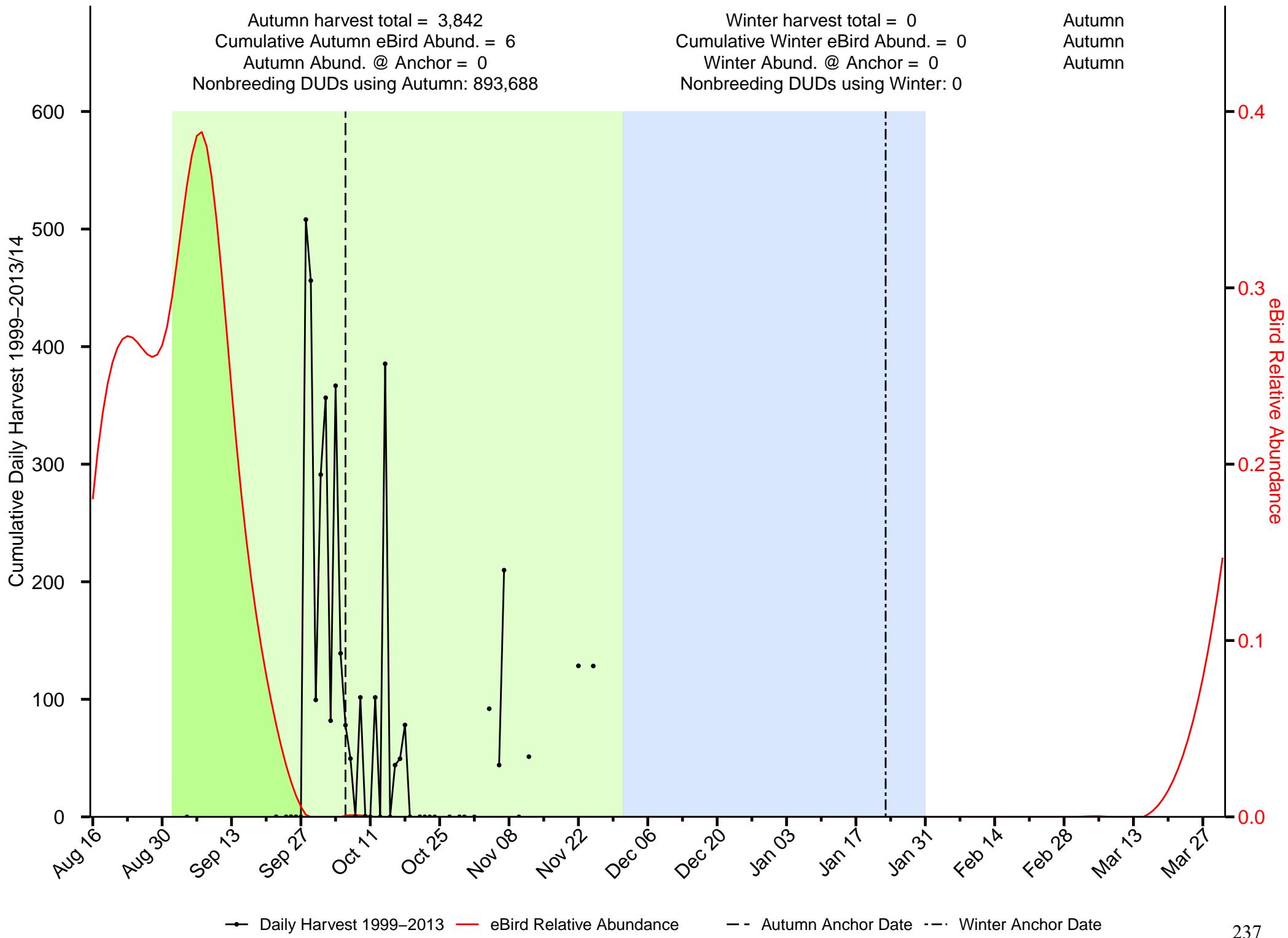
Summary of Blue-winged Teal in the Northern Great Plains JV



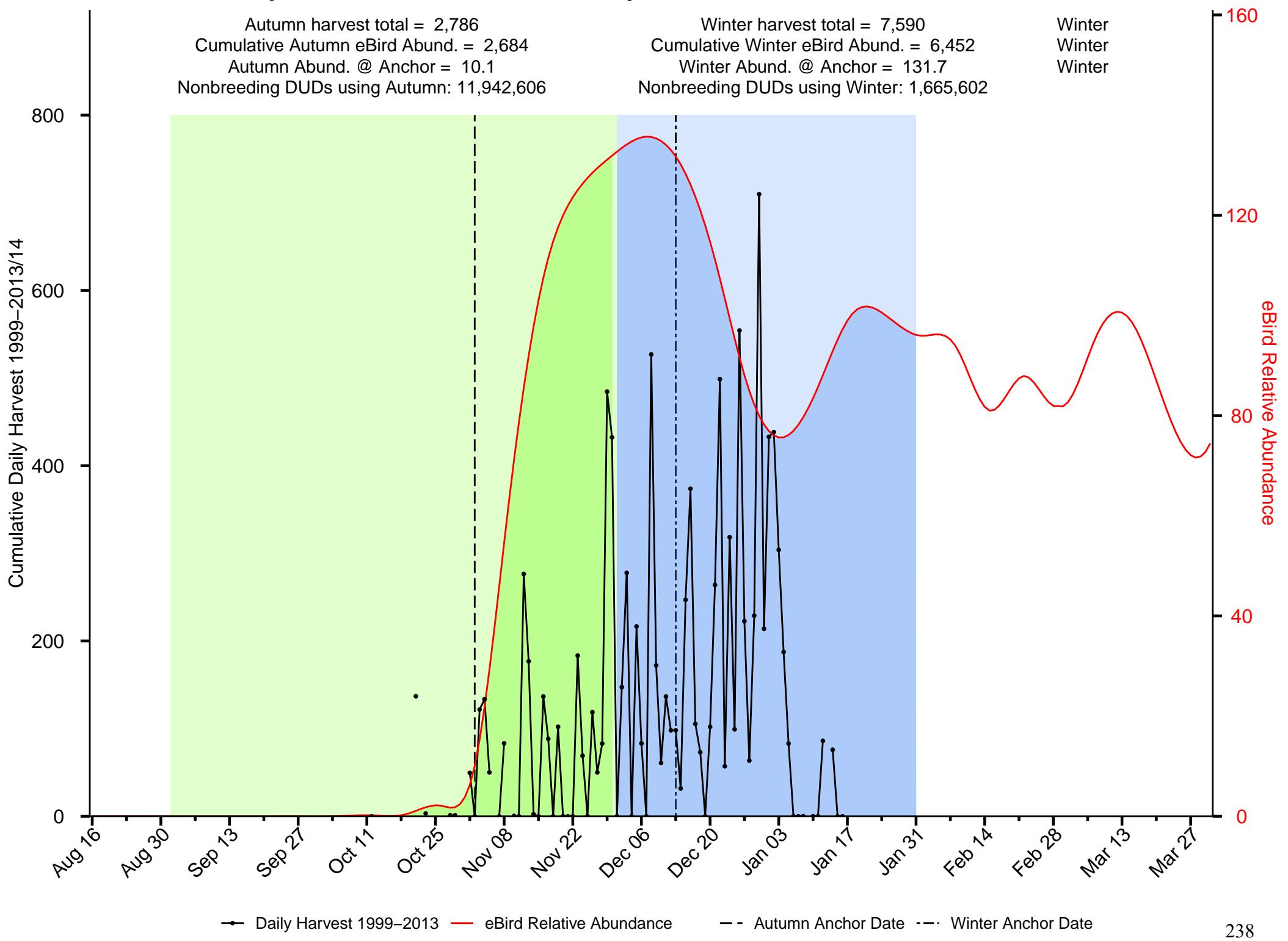
Summary of Canvasback in the Northern Great Plains JV



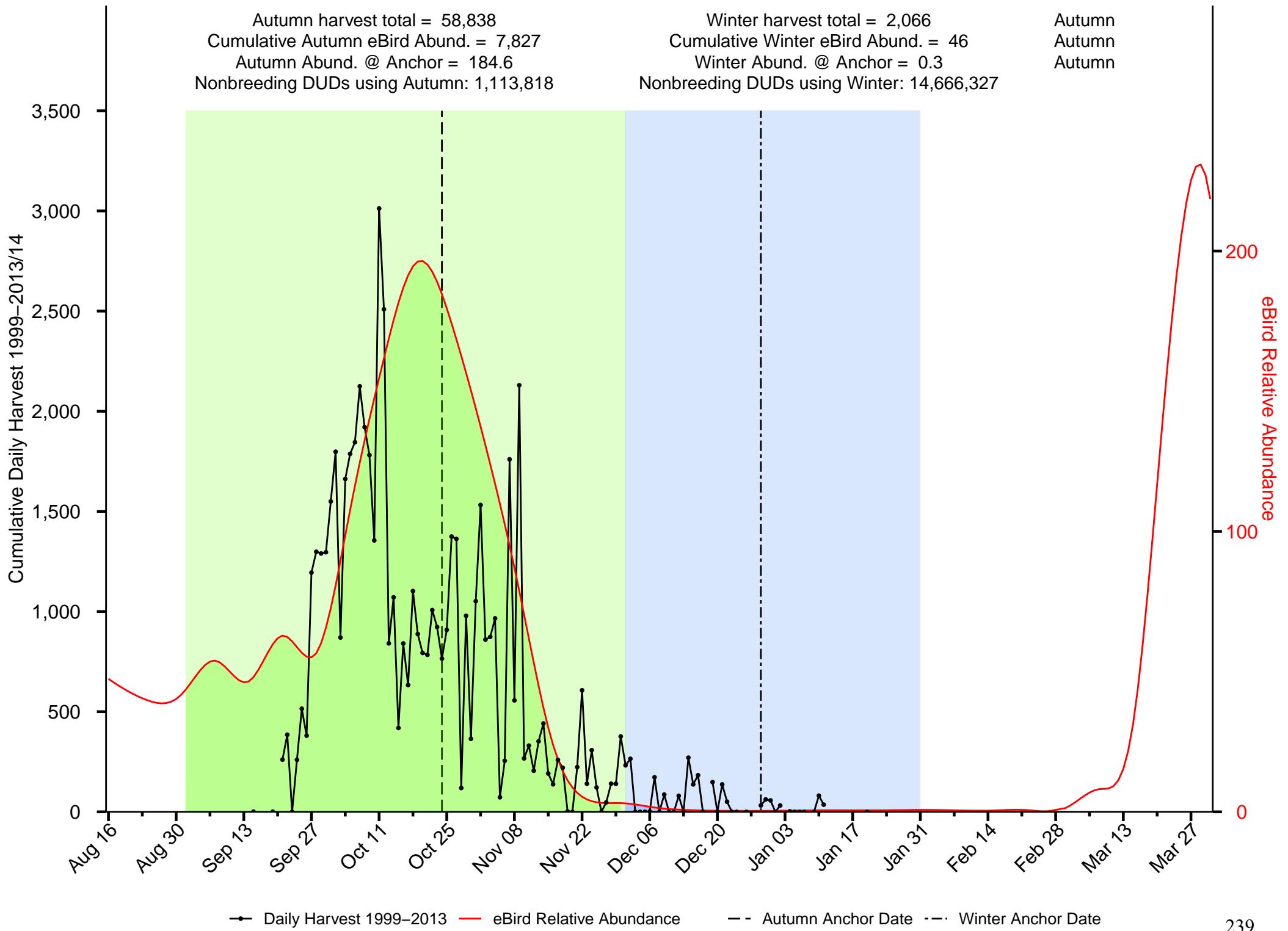
Summary of Cinnamon Teal in the Northern Great Plains JV



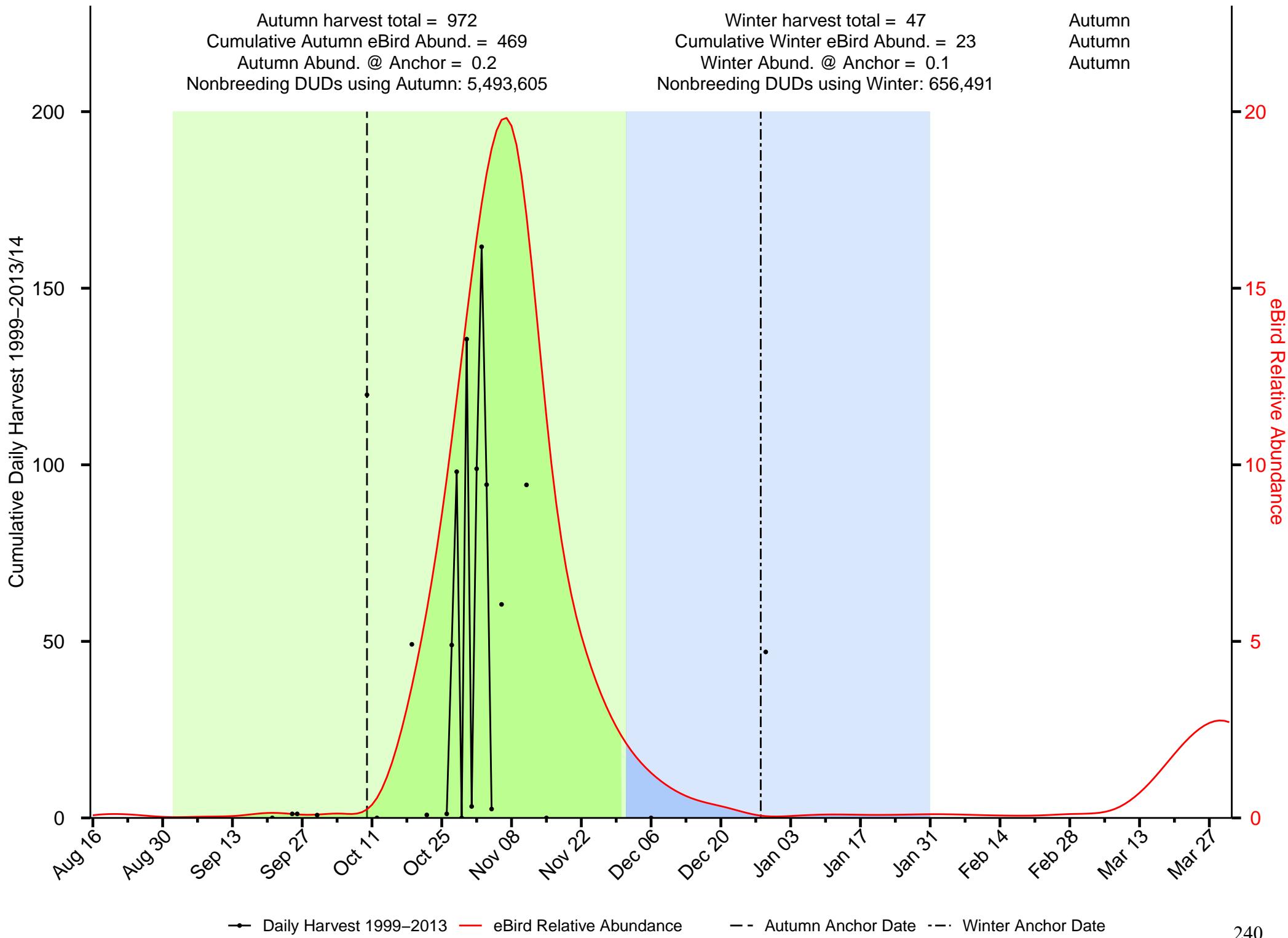
Summary of Common Goldeneye in the Northern Great Plains JV



Summary of Gadwall in the Northern Great Plains JV



Summary of Hooded Merganser in the Northern Great Plains JV

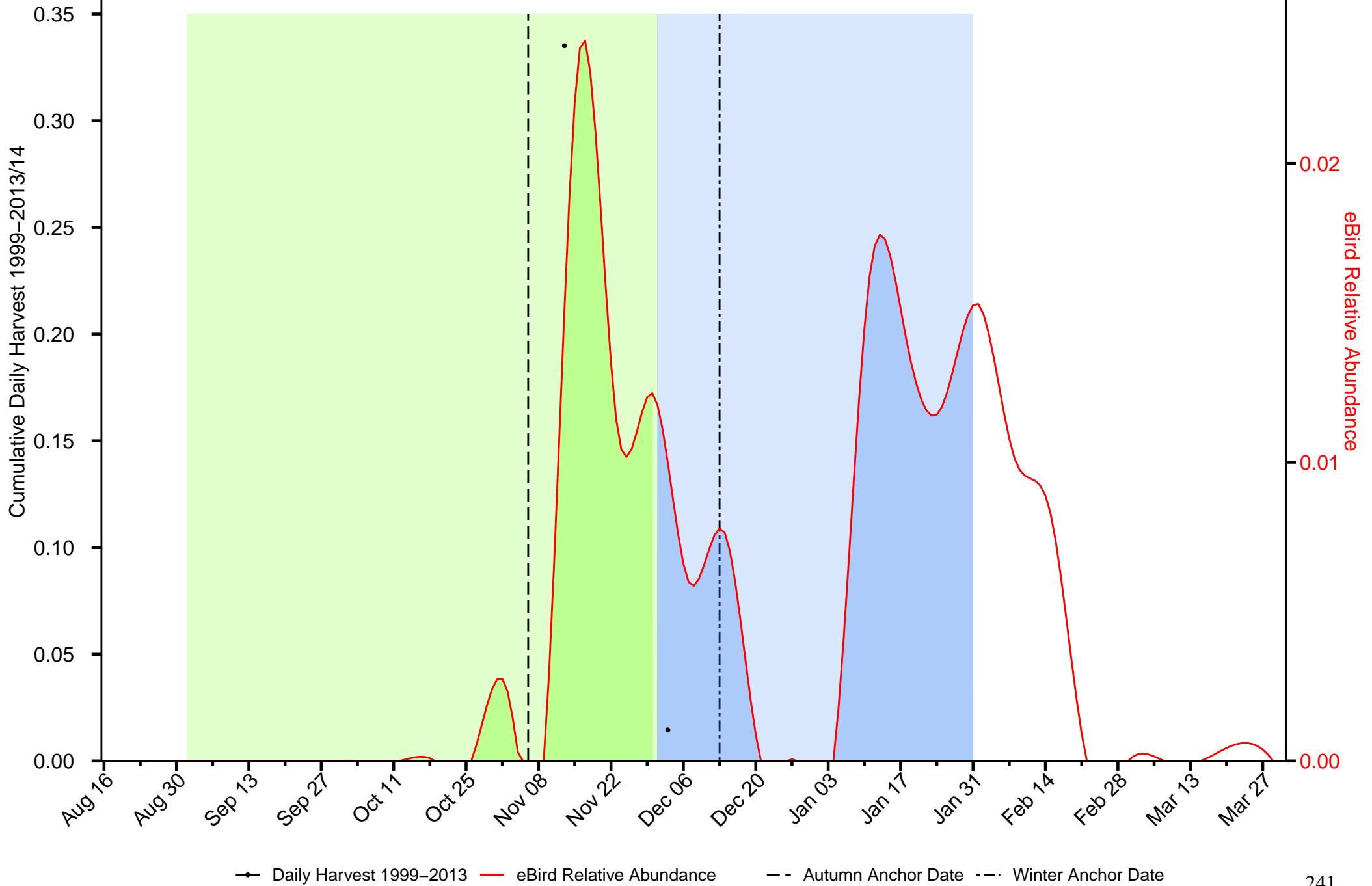


Summary of Long-tailed Duck in the Northern Great Plains JV

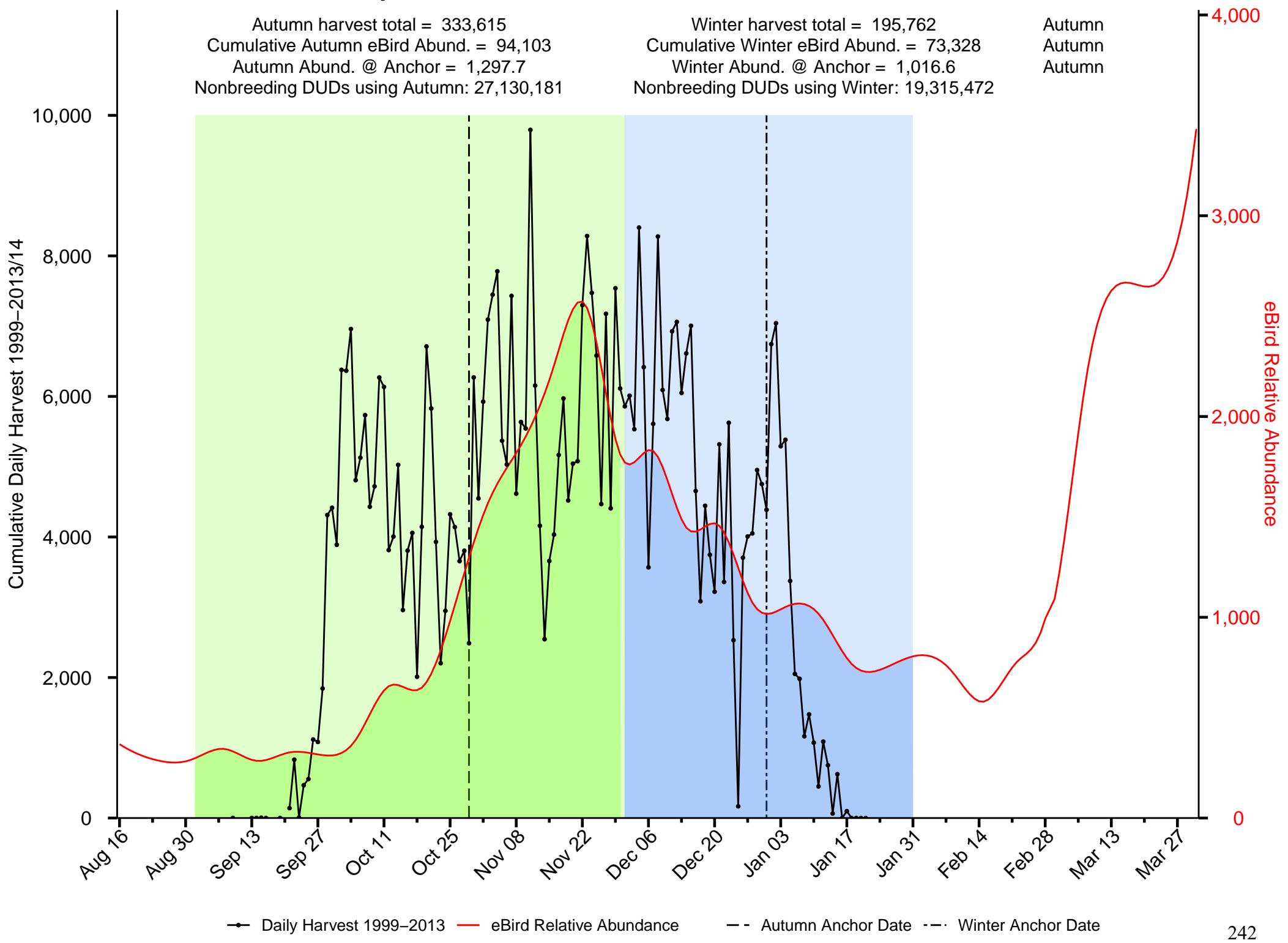
Autumn harvest total = 0
Cumulative Autumn eBird Abund. = 0
Autumn Abund. @ Anchor = 0
Nonbreeding DUDs using Autumn: Inf

Winter harvest total = 0
Cumulative Winter eBird Abund. = 0
Winter Abund. @ Anchor = 0
Nonbreeding DUDs using Winter: 0

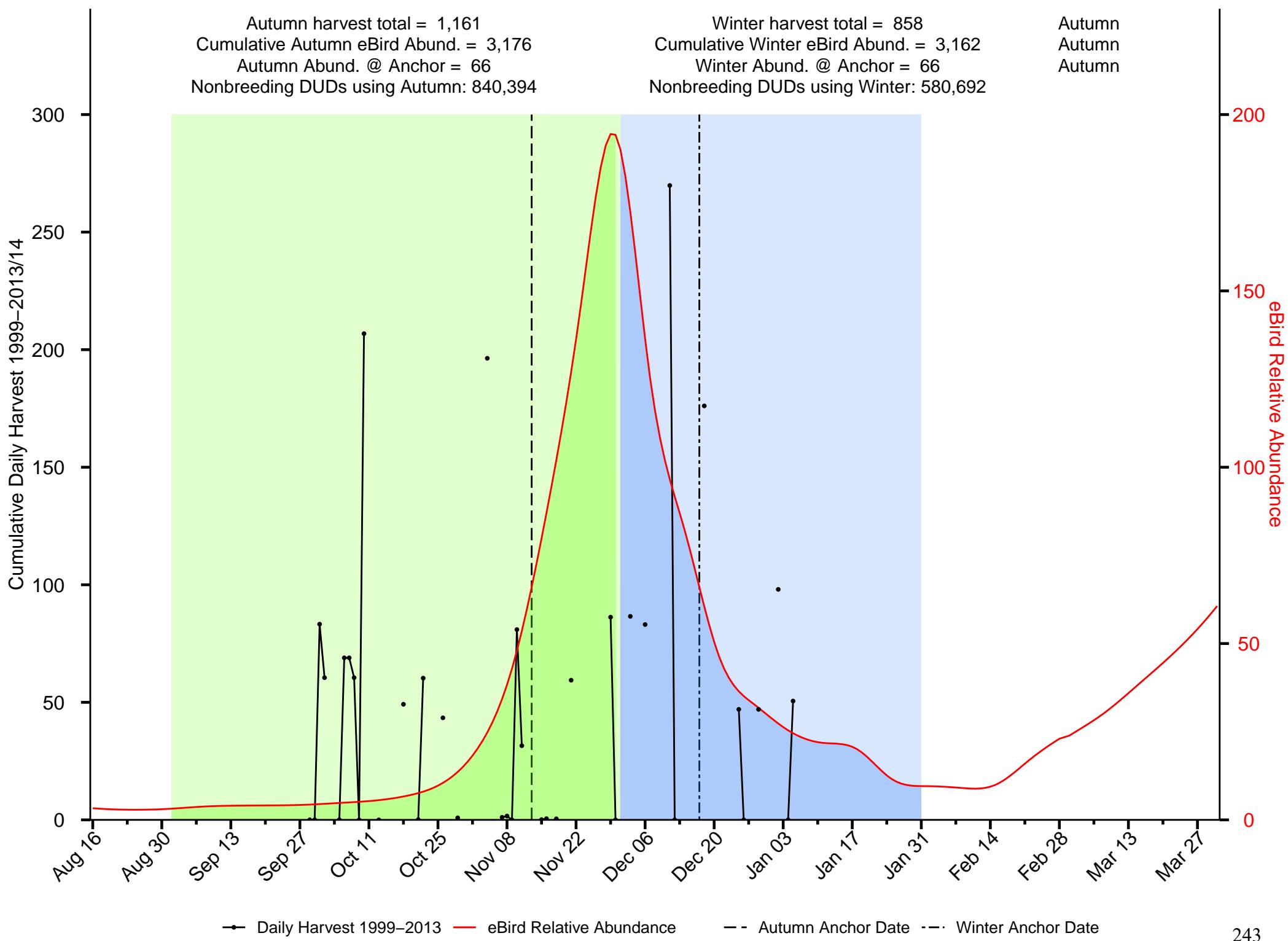
Autumn
Winter
Winter



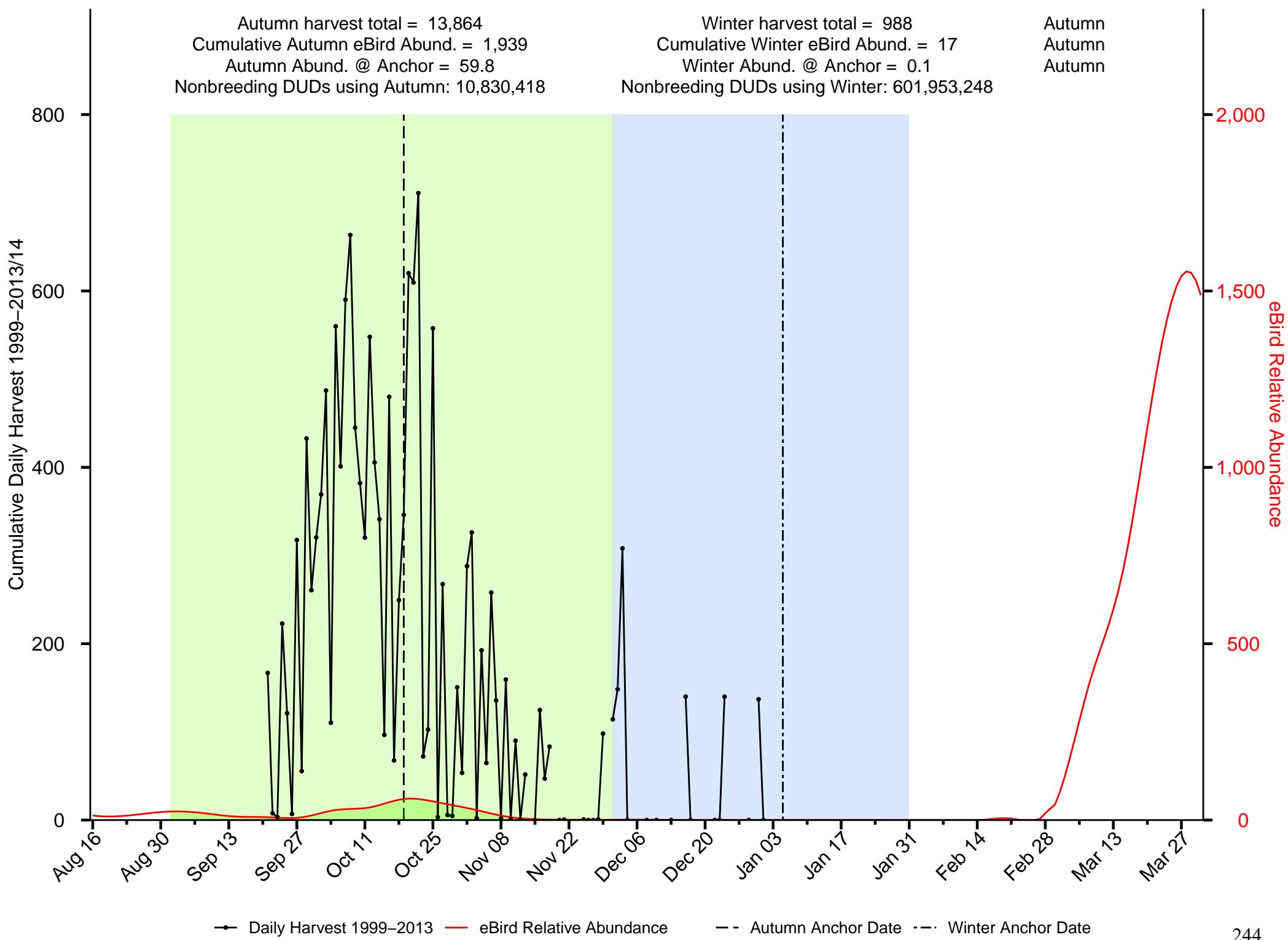
Summary of Mallard in the Northern Great Plains JV



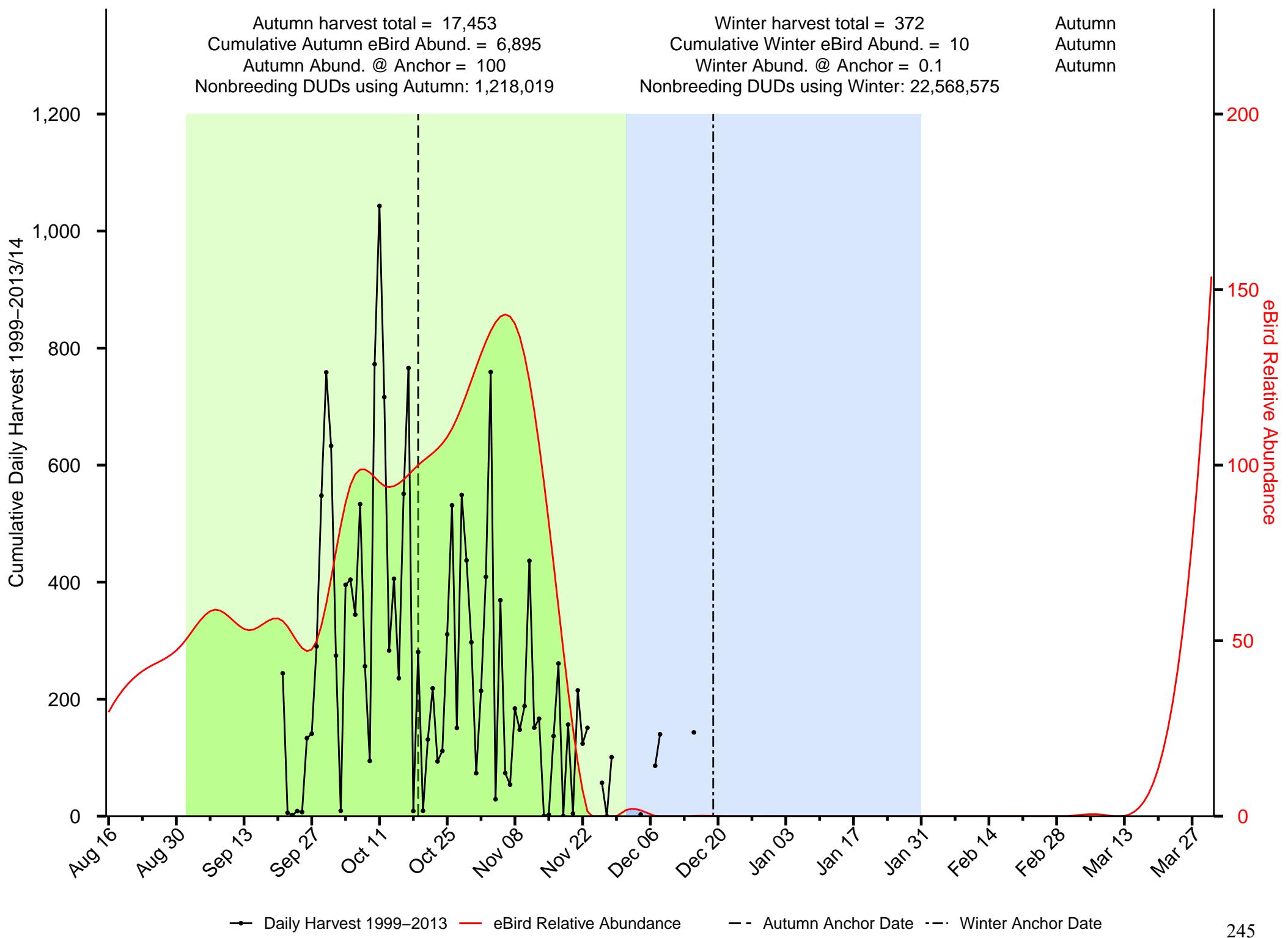
Summary of Merganser in the Northern Great Plains JV



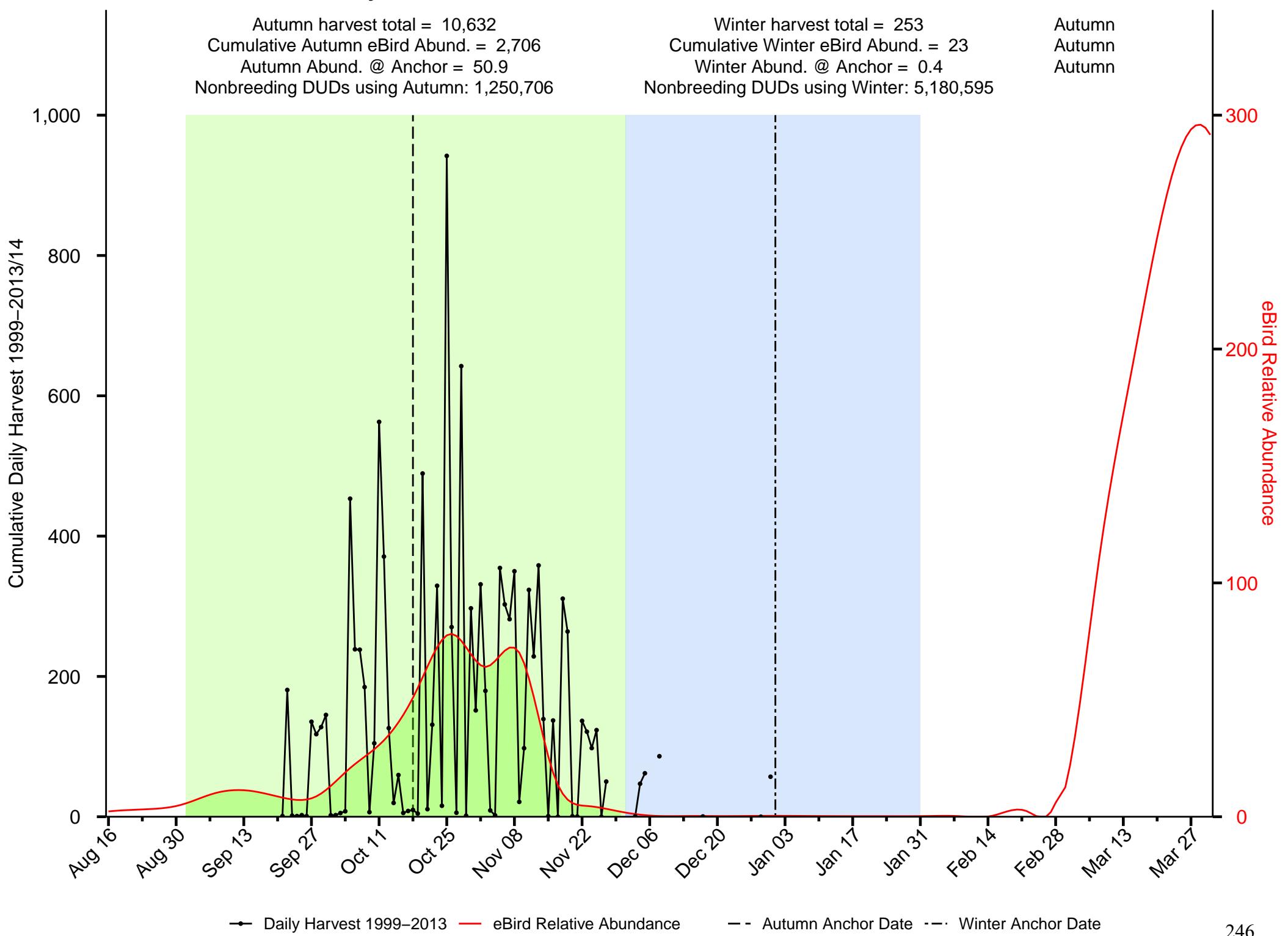
Summary of Northern Pintail in the Northern Great Plains JV



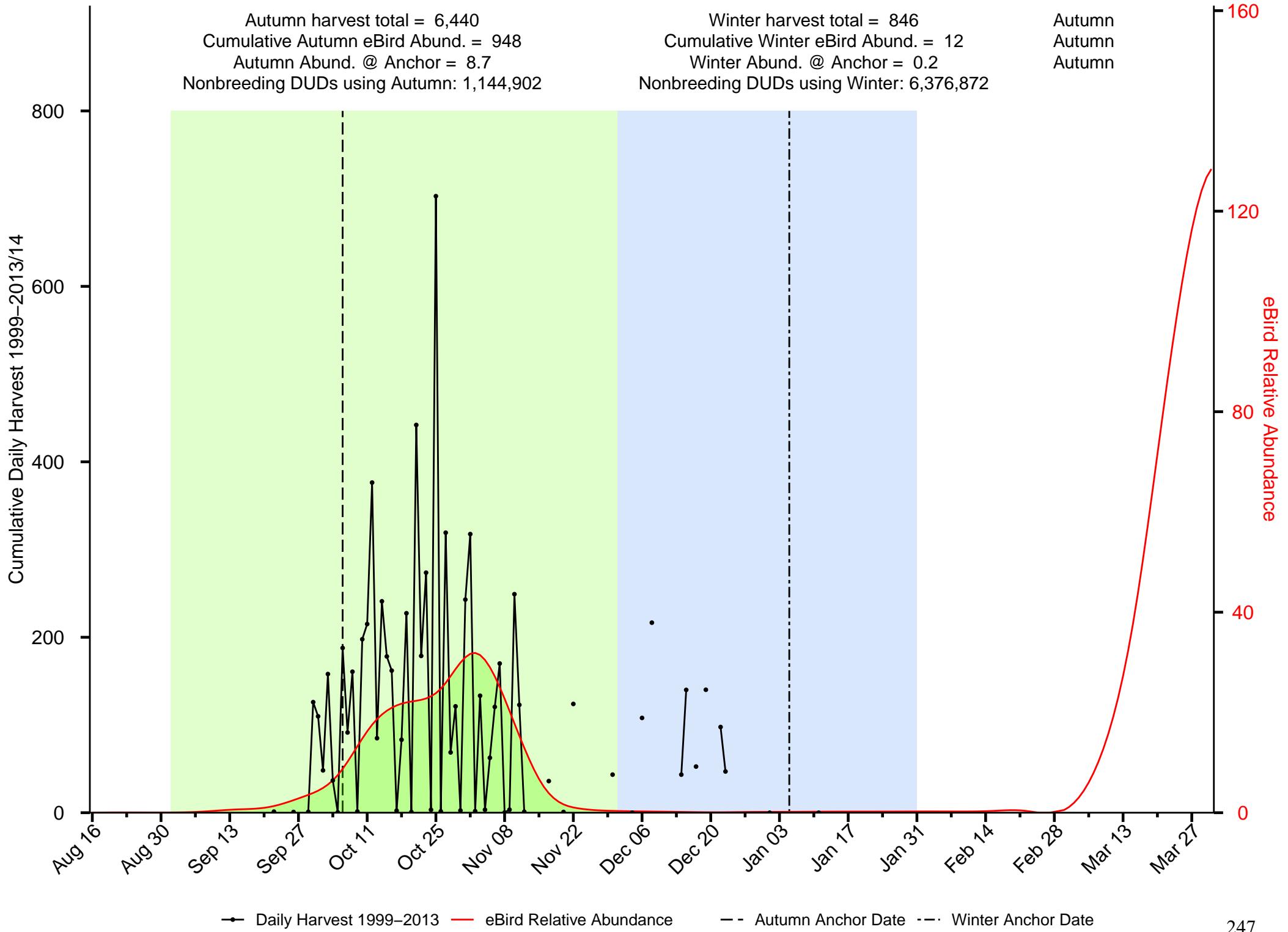
Summary of Northern Shoveler in the Northern Great Plains JV



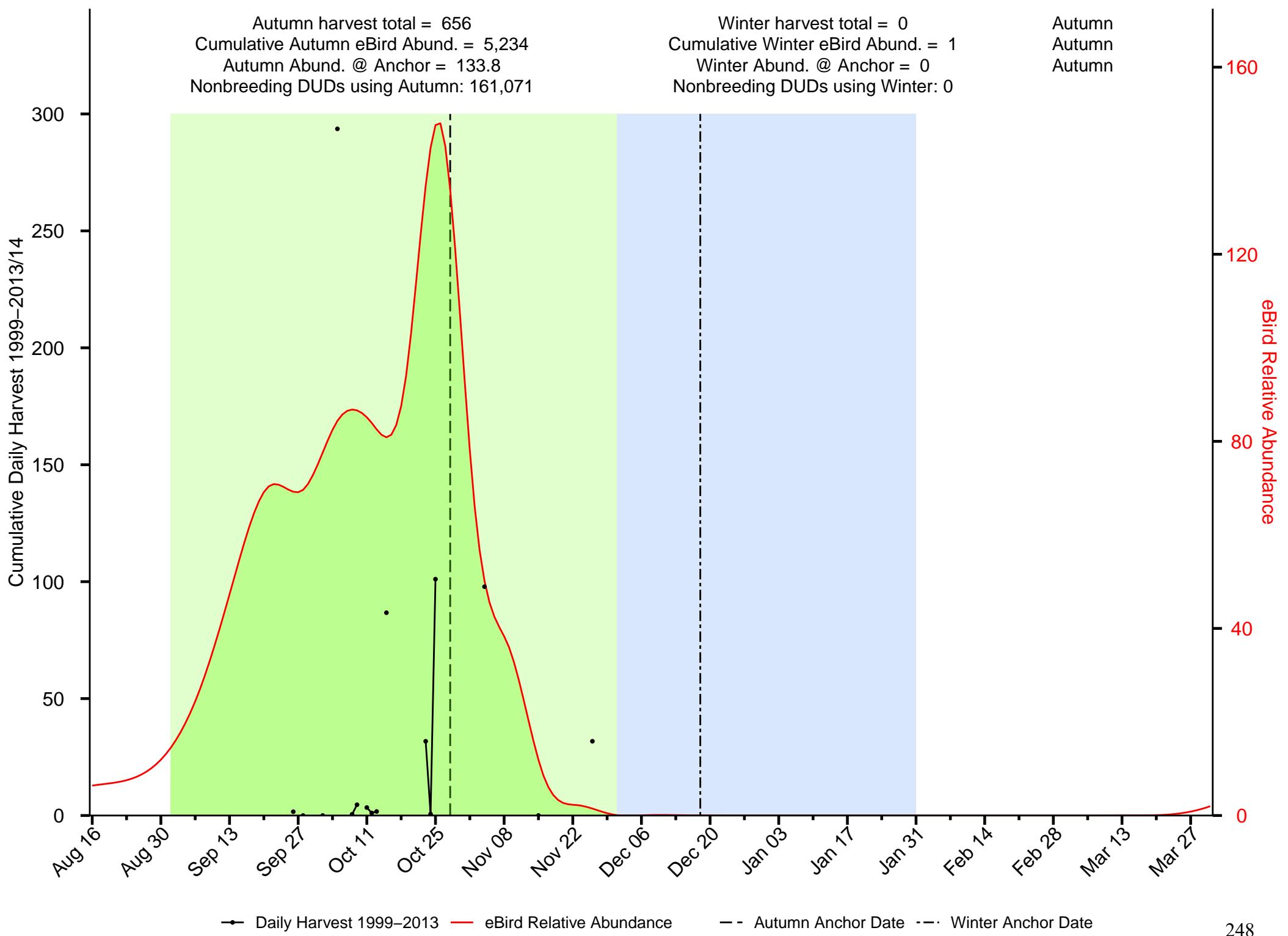
Summary of Redhead in the Northern Great Plains JV



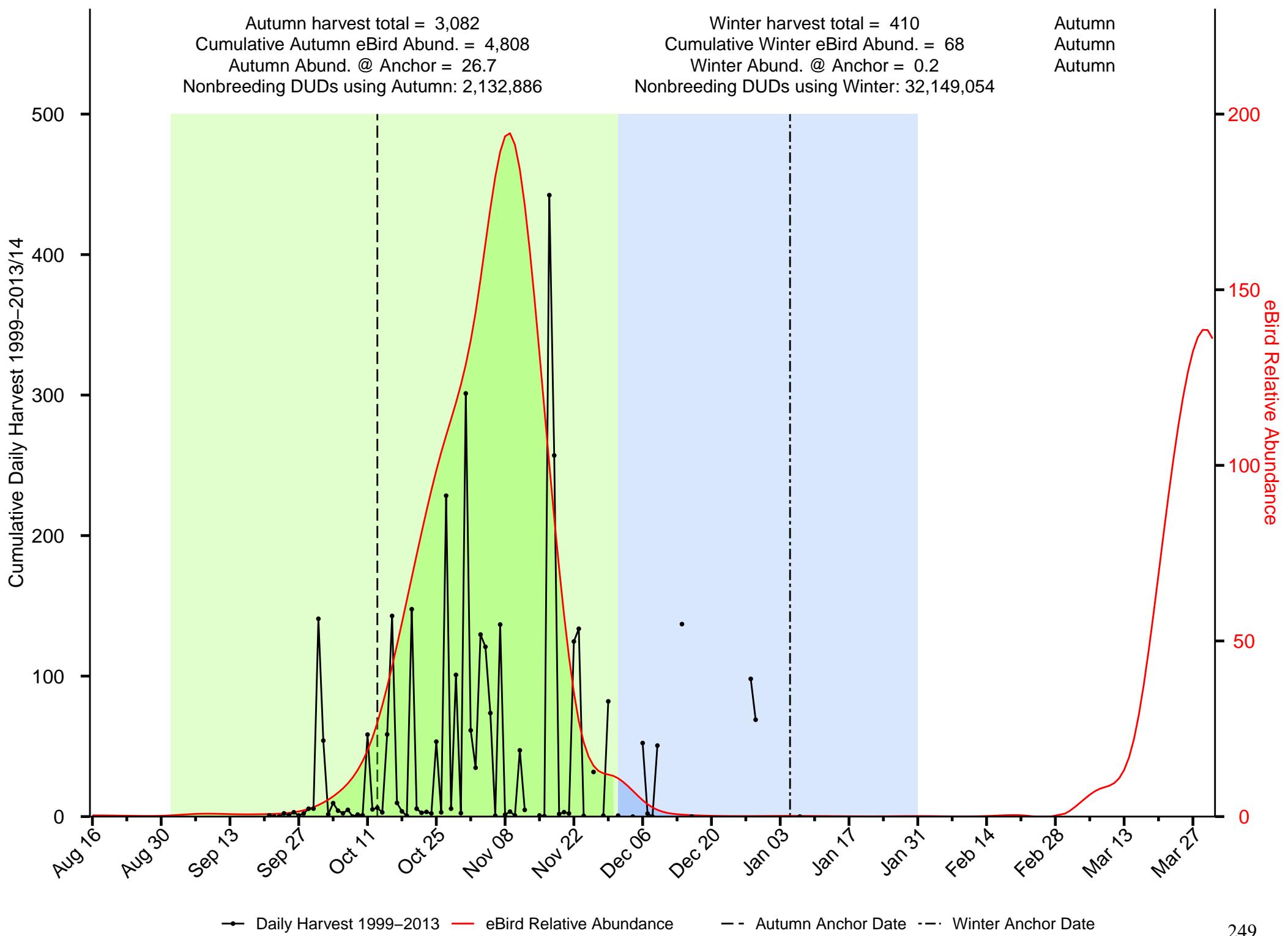
Summary of Ring-necked Duck in the Northern Great Plains JV



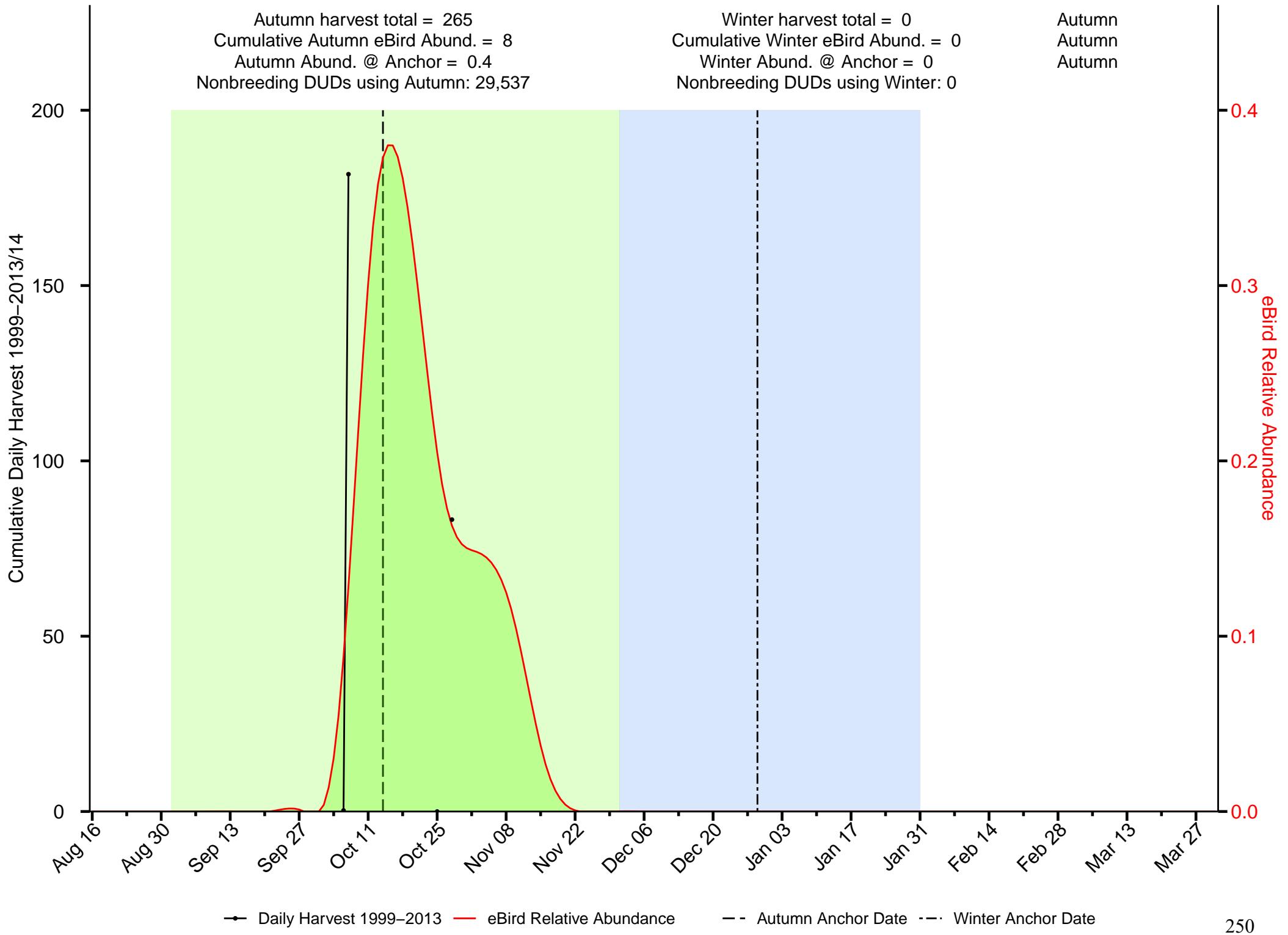
Summary of Ruddy Duck in the Northern Great Plains JV



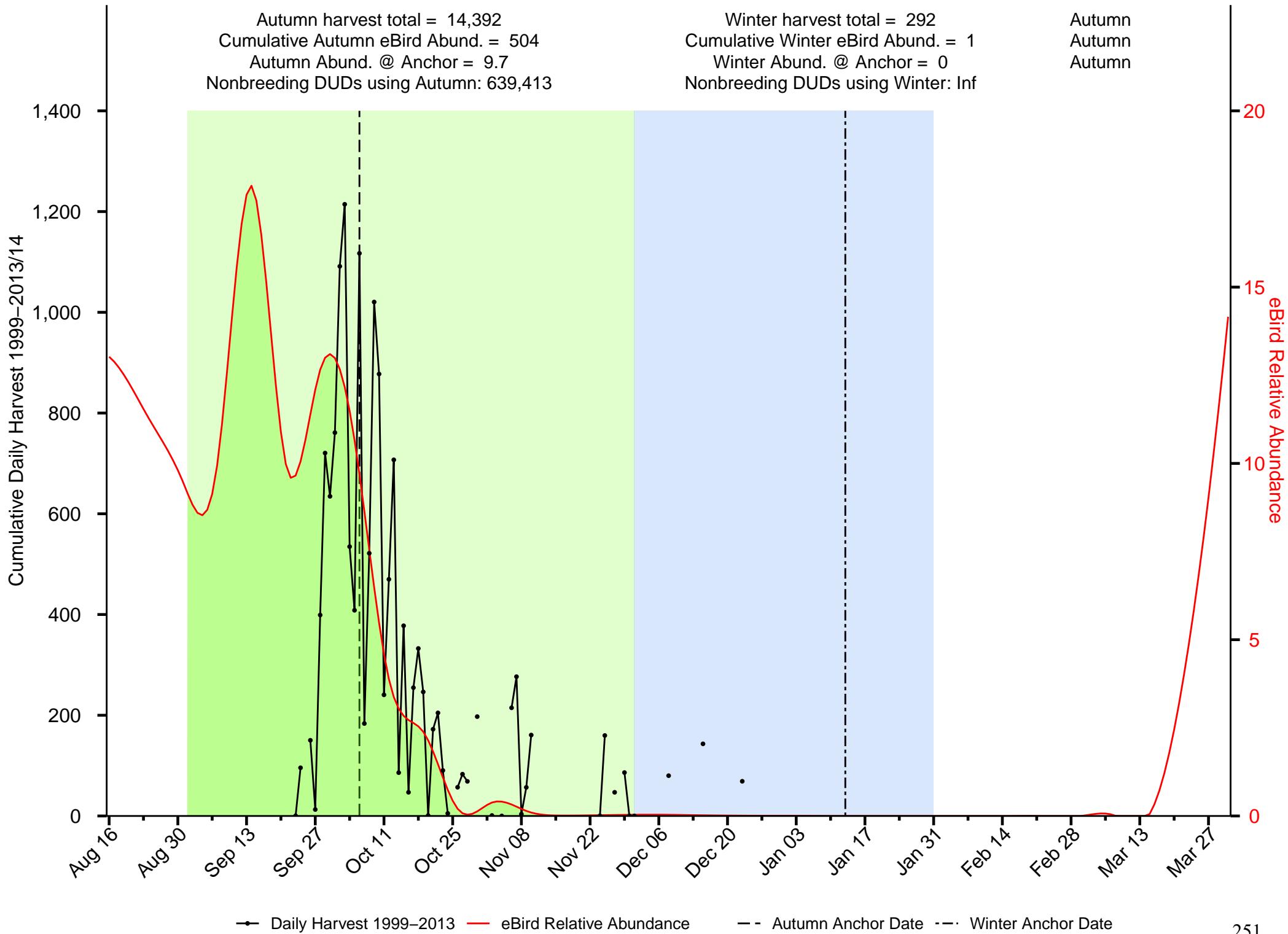
Summary of Scaup in the Northern Great Plains JV



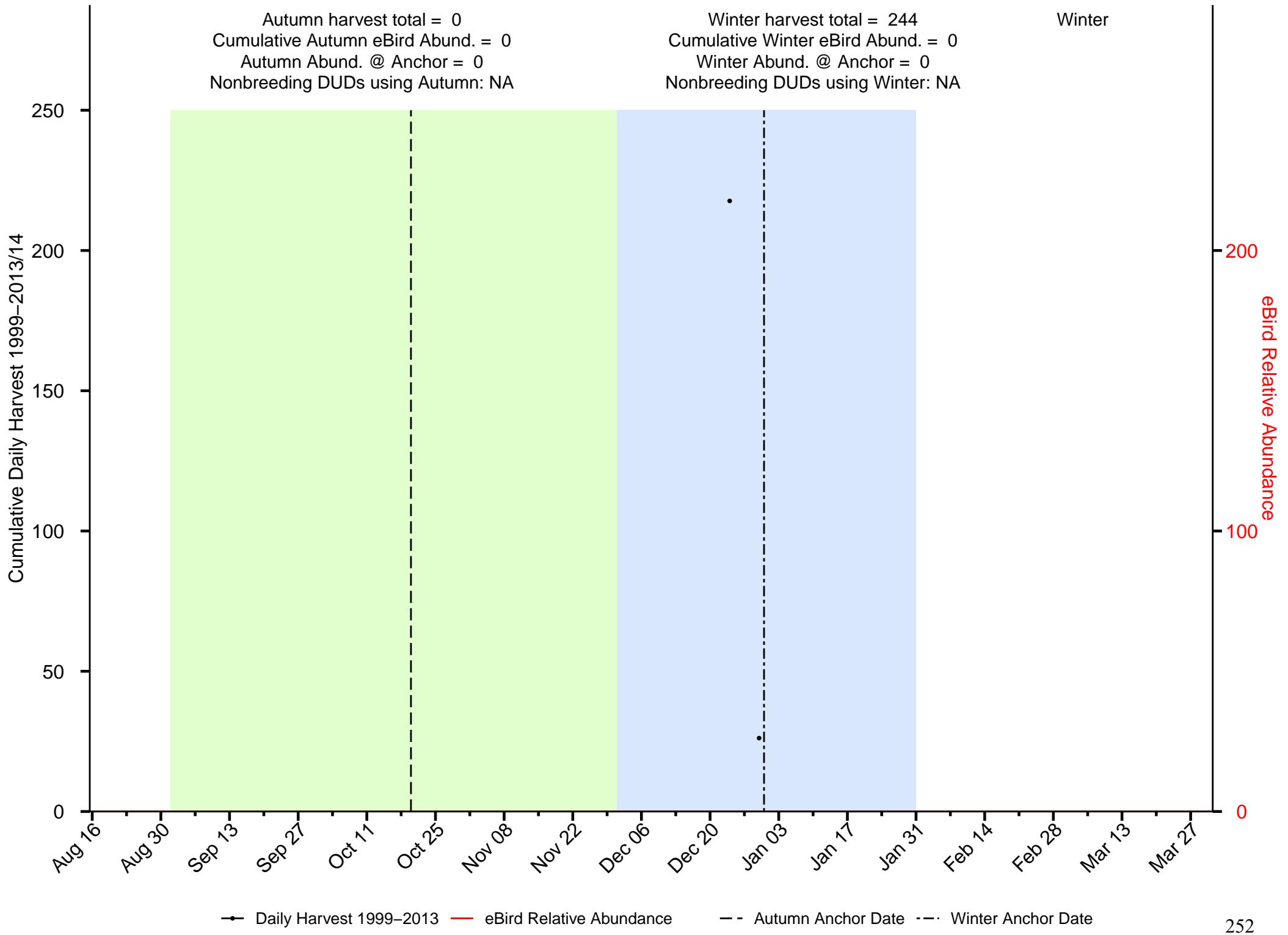
Summary of Scoter in the Northern Great Plains JV



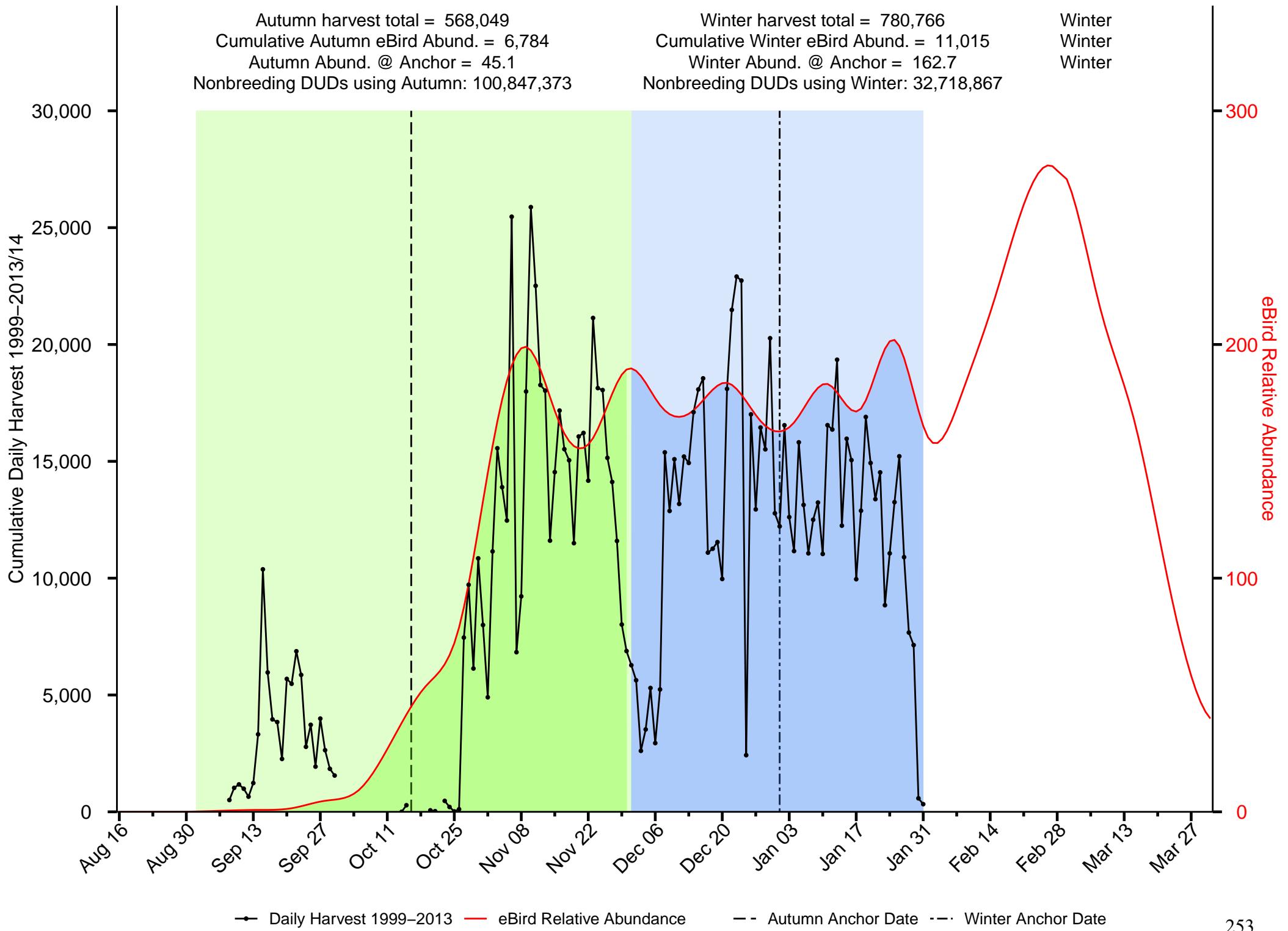
Summary of Wood Duck in the Northern Great Plains JV



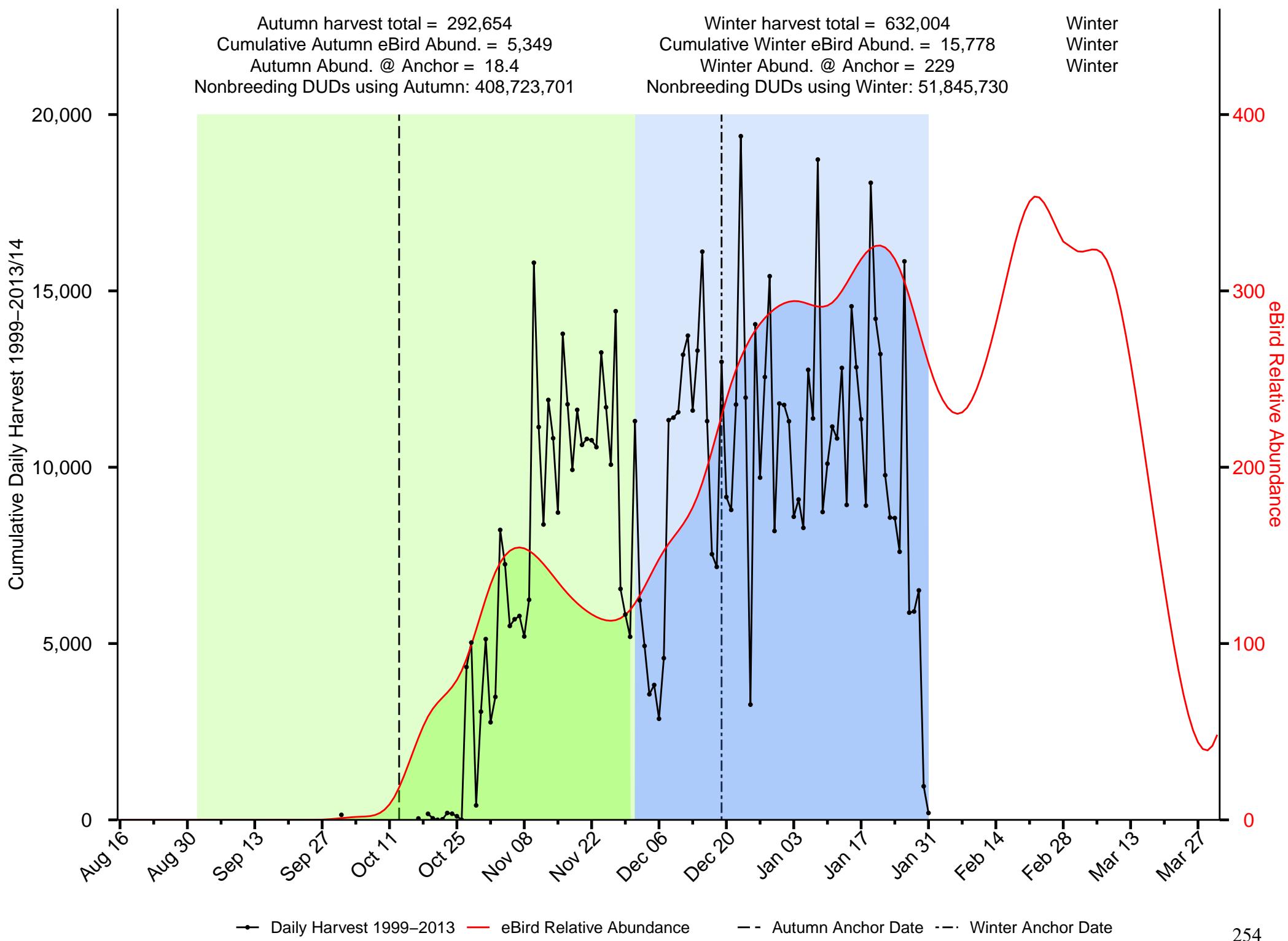
Summary of American Black Duck in the Oaks and Prairies JV



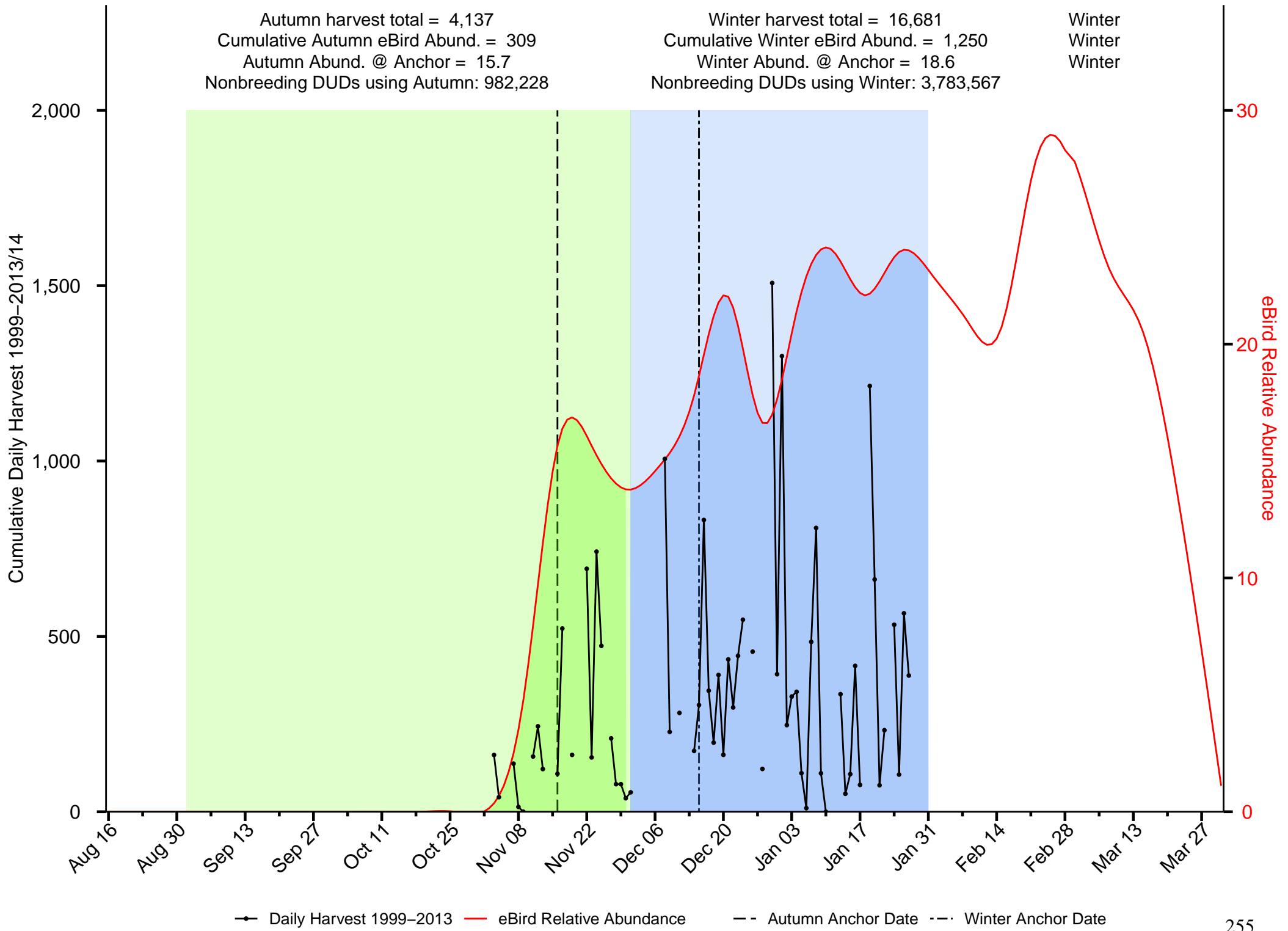
Summary of Green-winged Teal in the Oaks and Prairies JV



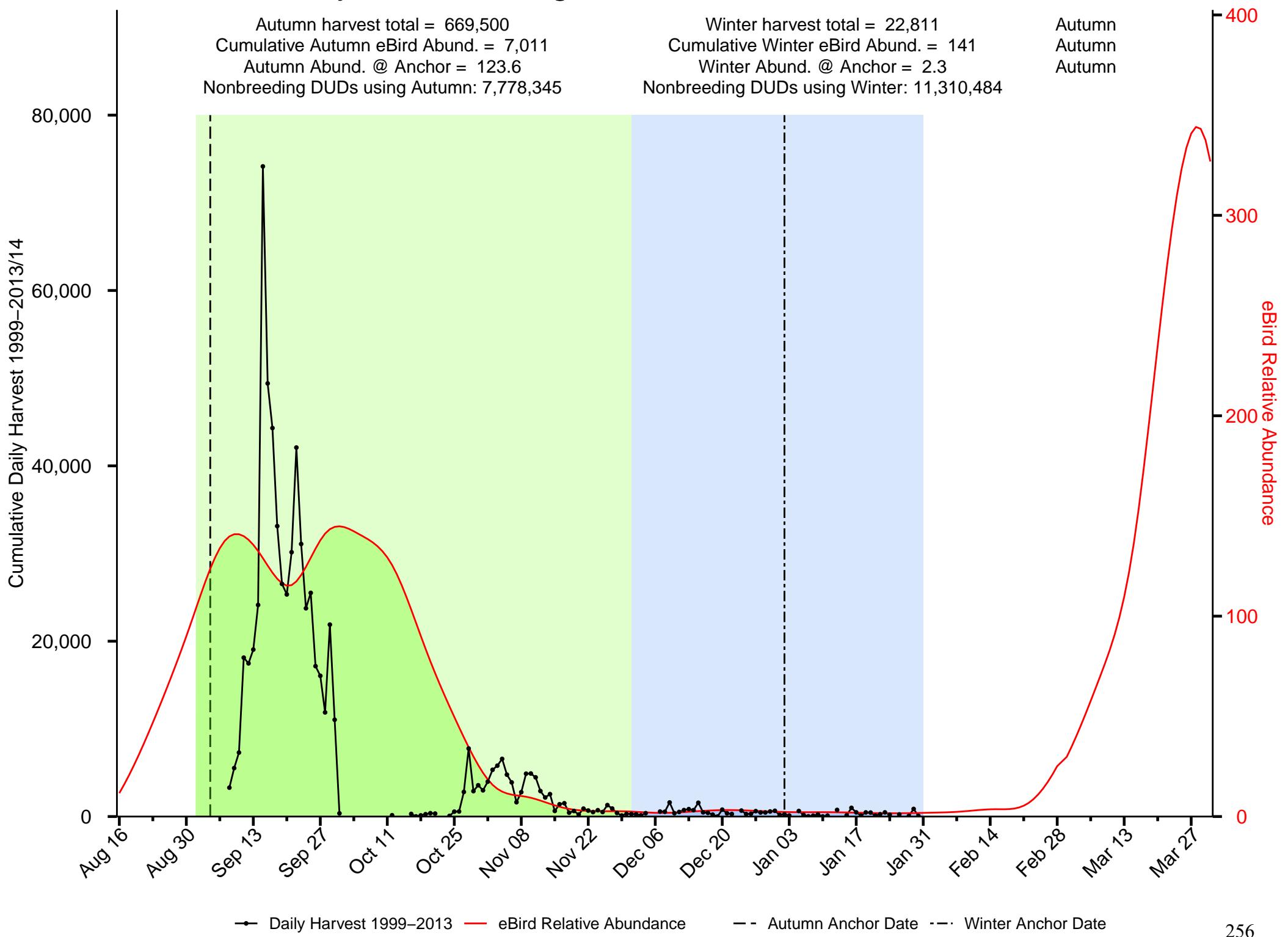
Summary of American Wigeon in the Oaks and Prairies JV



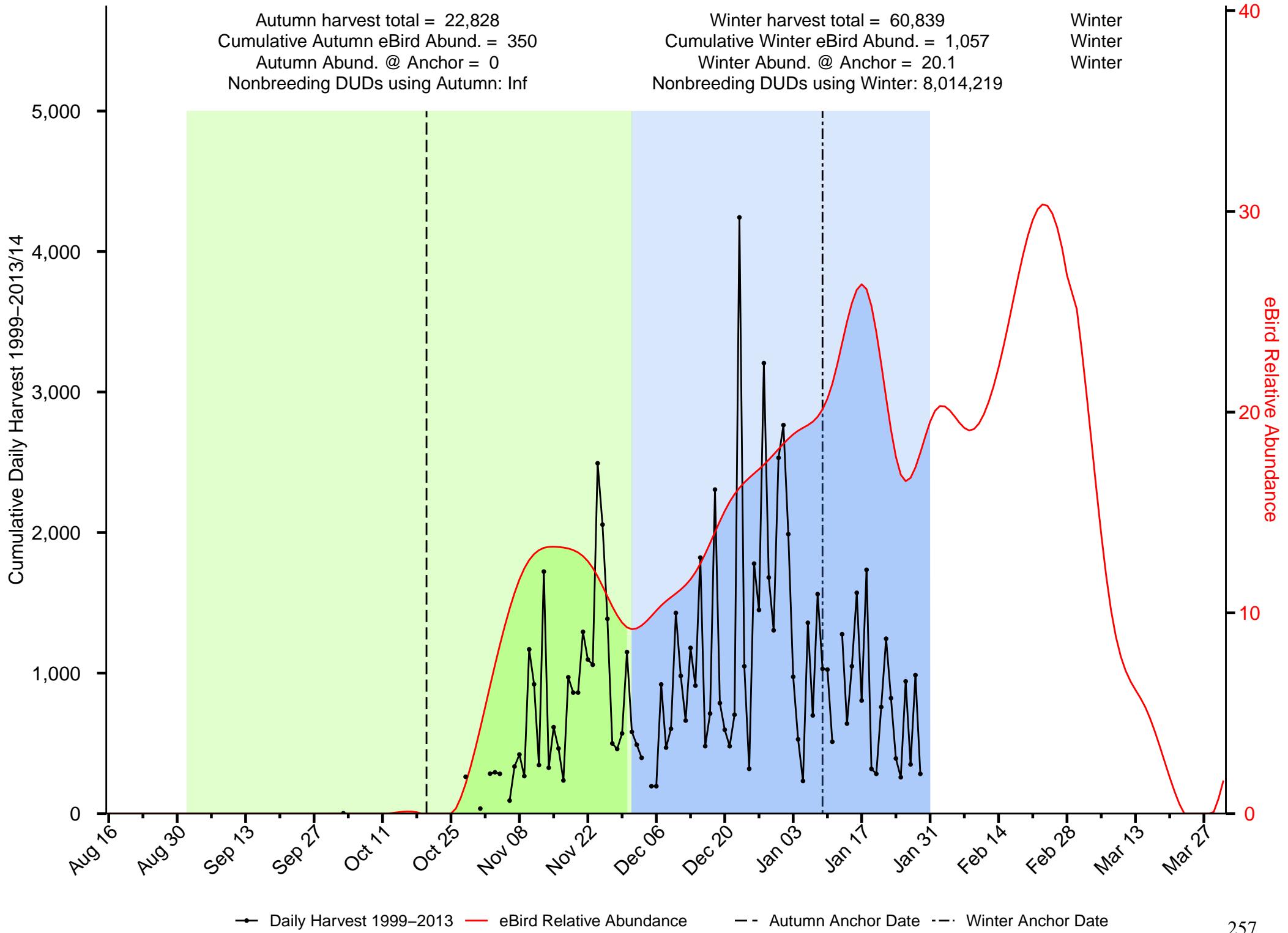
Summary of Bufflehead in the Oaks and Prairies JV



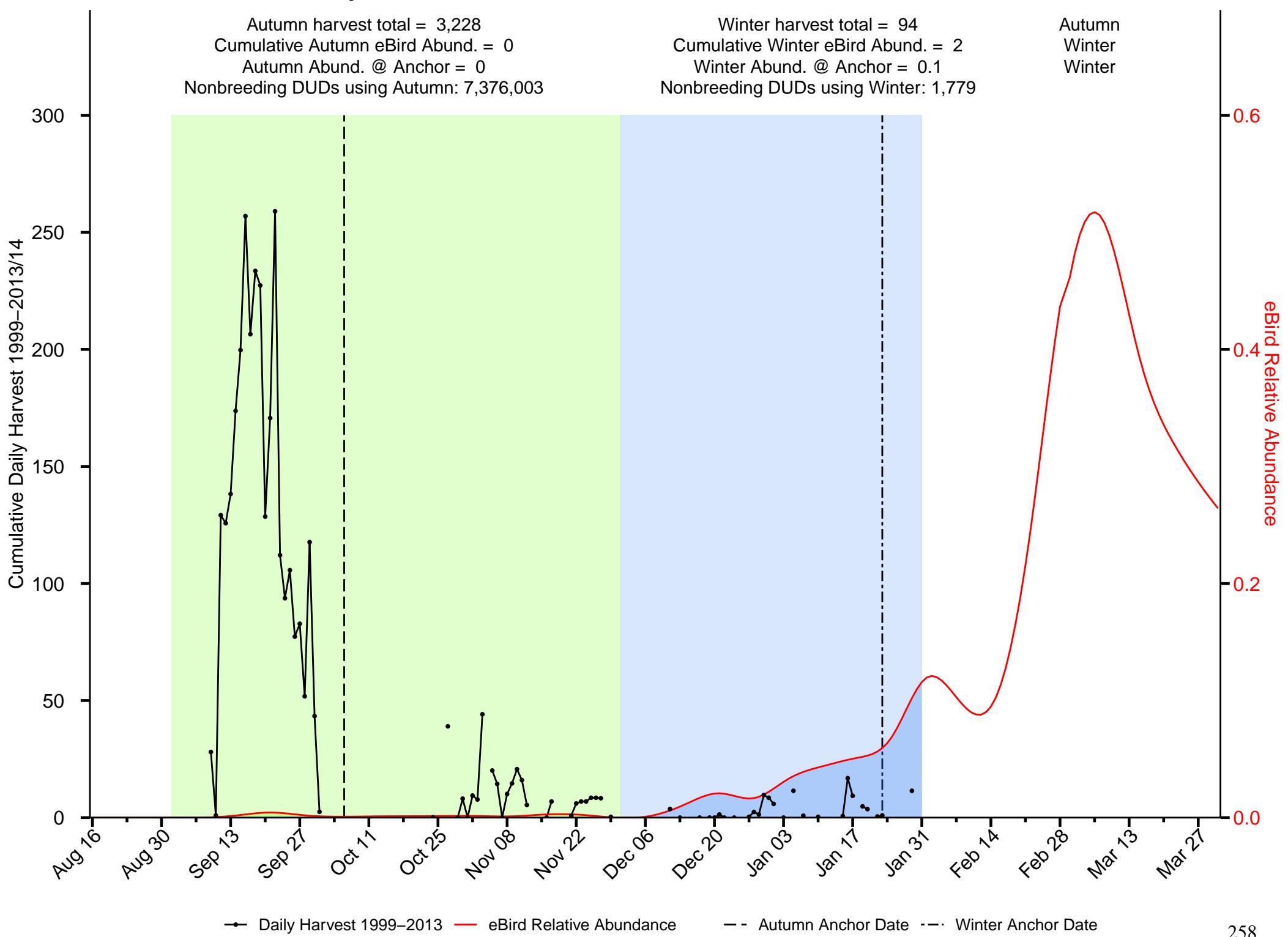
Summary of Blue-winged Teal in the Oaks and Prairies JV



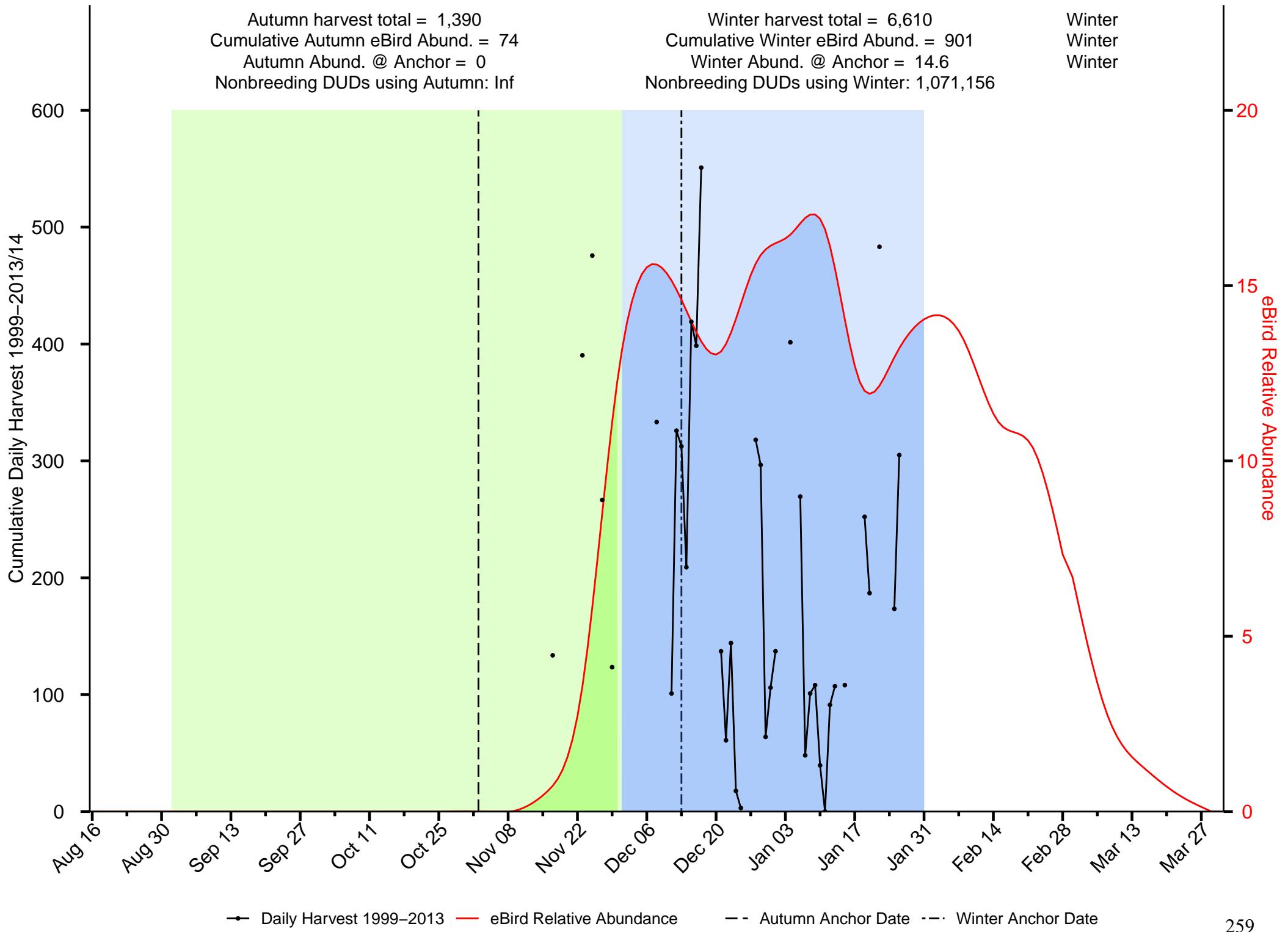
Summary of Canvasback in the Oaks and Prairies JV



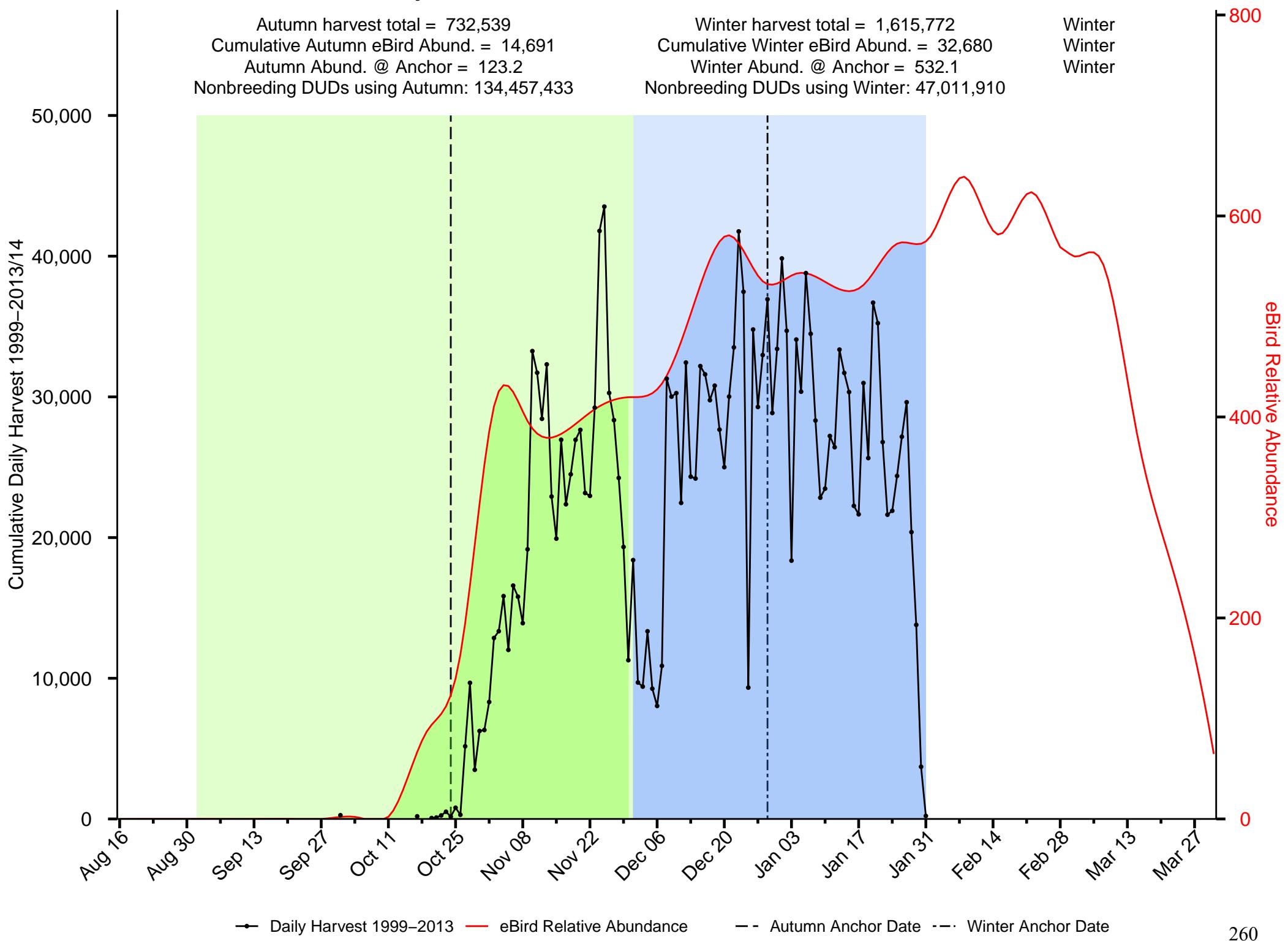
Summary of Cinnamon Teal in the Oaks and Prairies JV



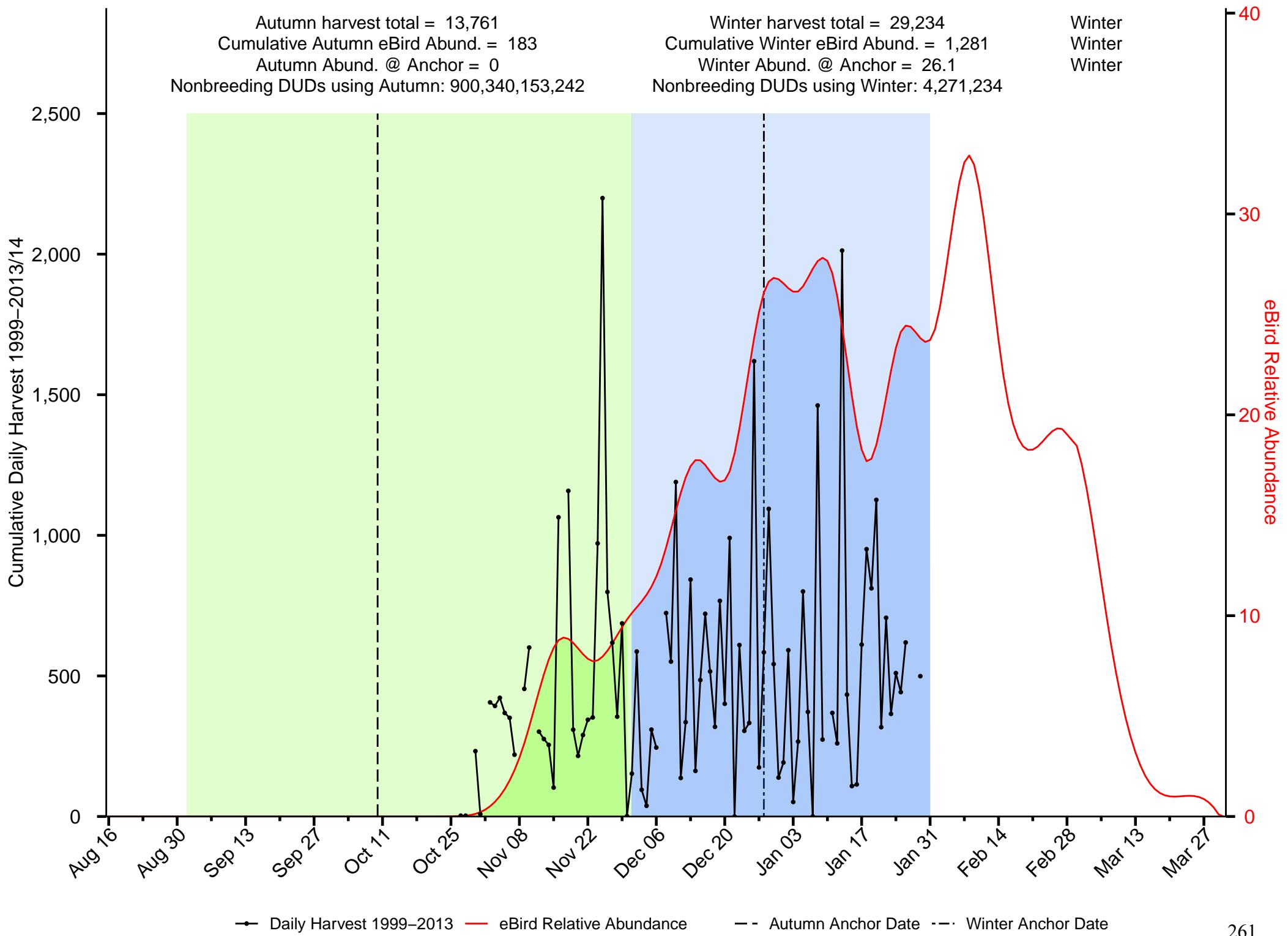
Summary of Common Goldeneye in the Oaks and Prairies JV



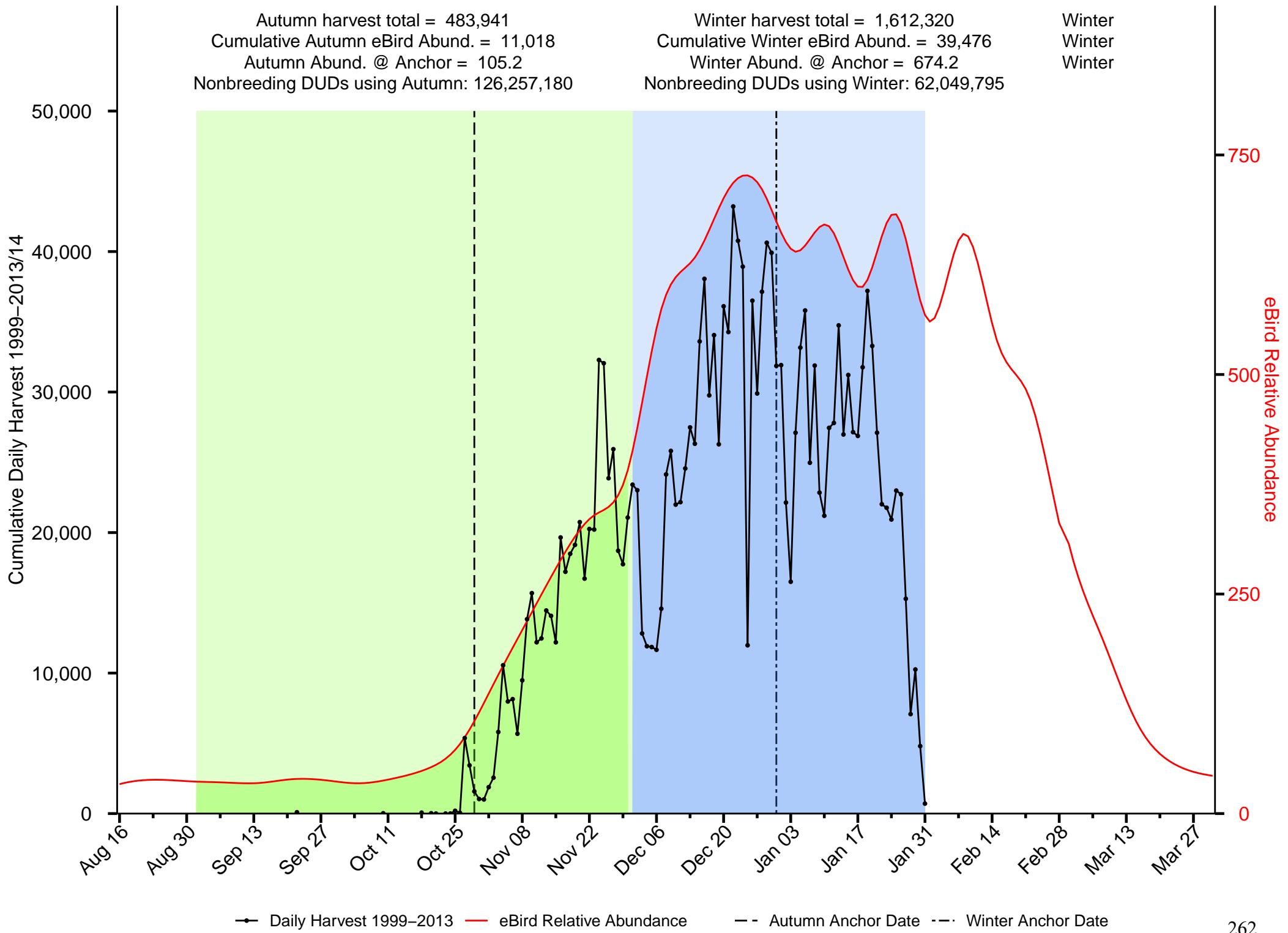
Summary of Gadwall in the Oaks and Prairies JV



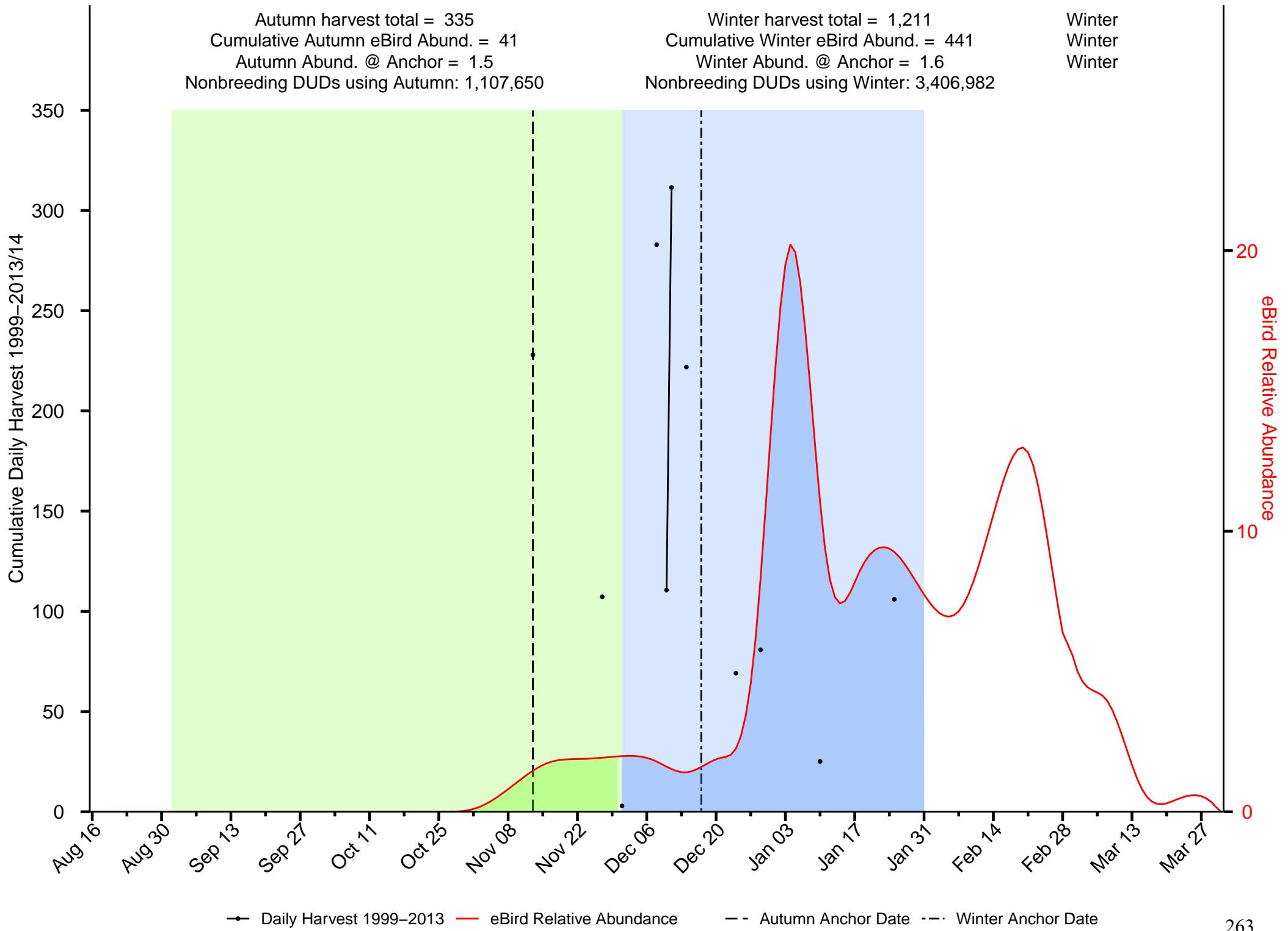
Summary of Hooded Merganser in the Oaks and Prairies JV



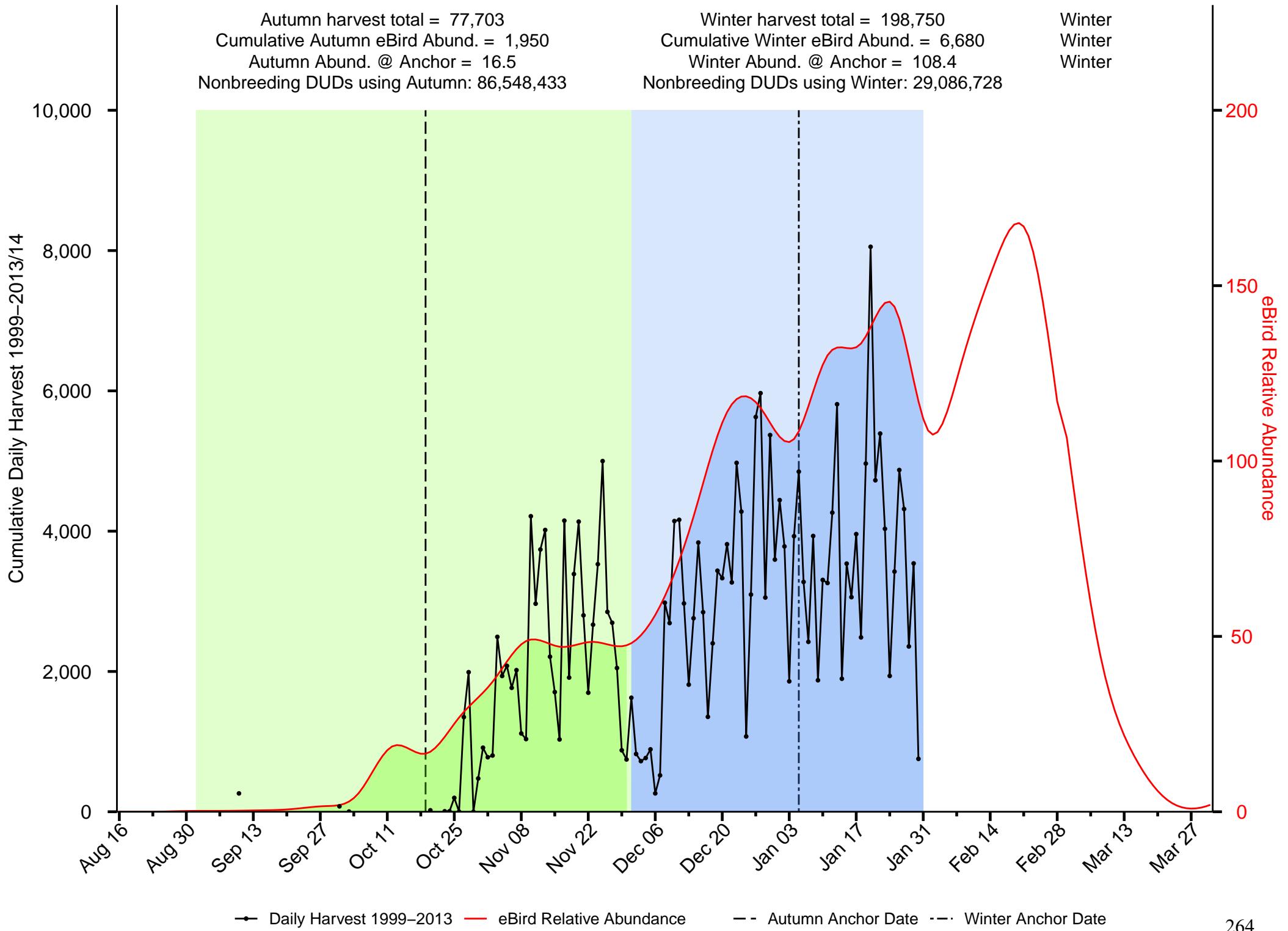
Summary of Mallard in the Oaks and Prairies JV



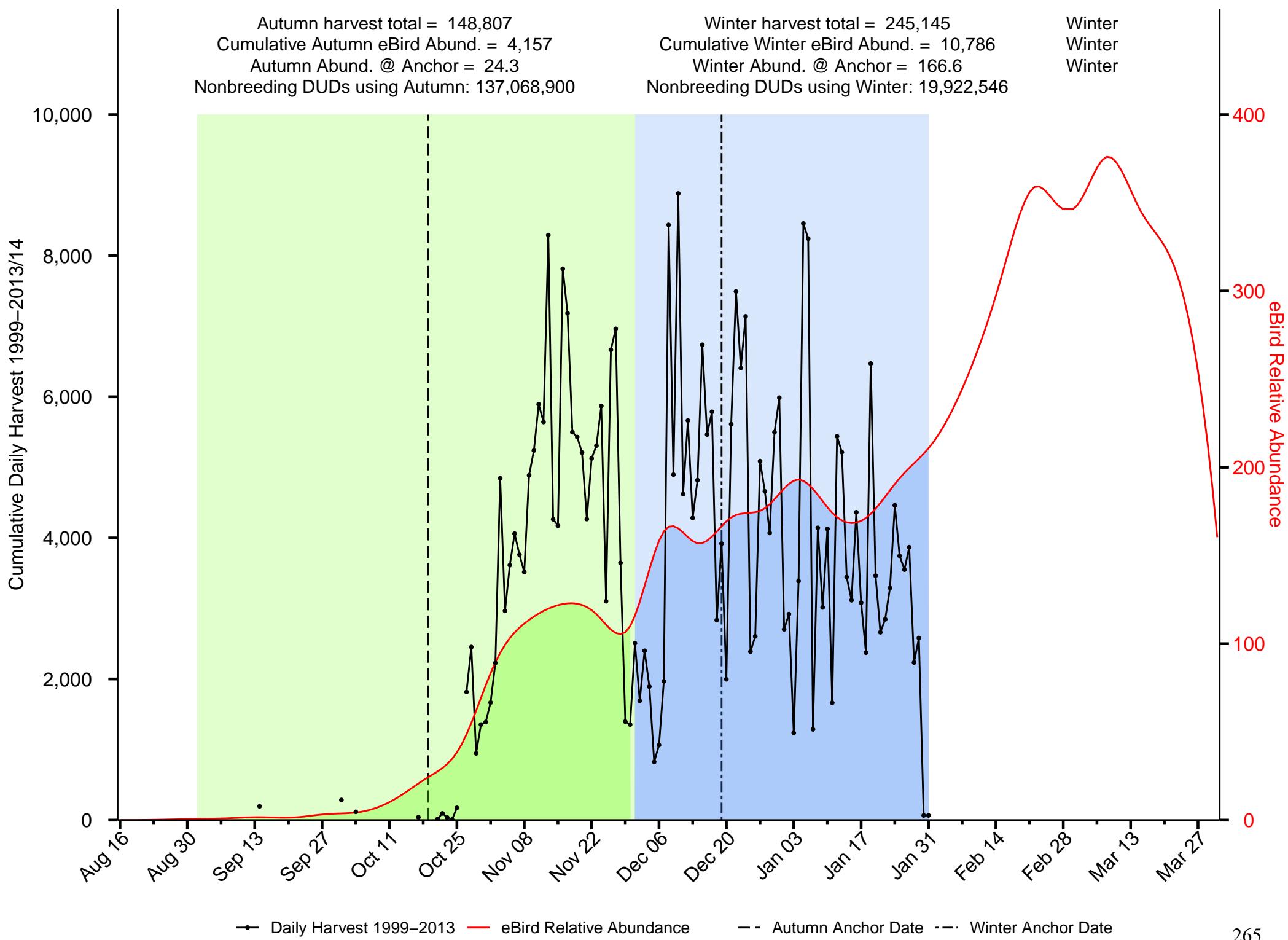
Summary of Merganser in the Oaks and Prairies JV



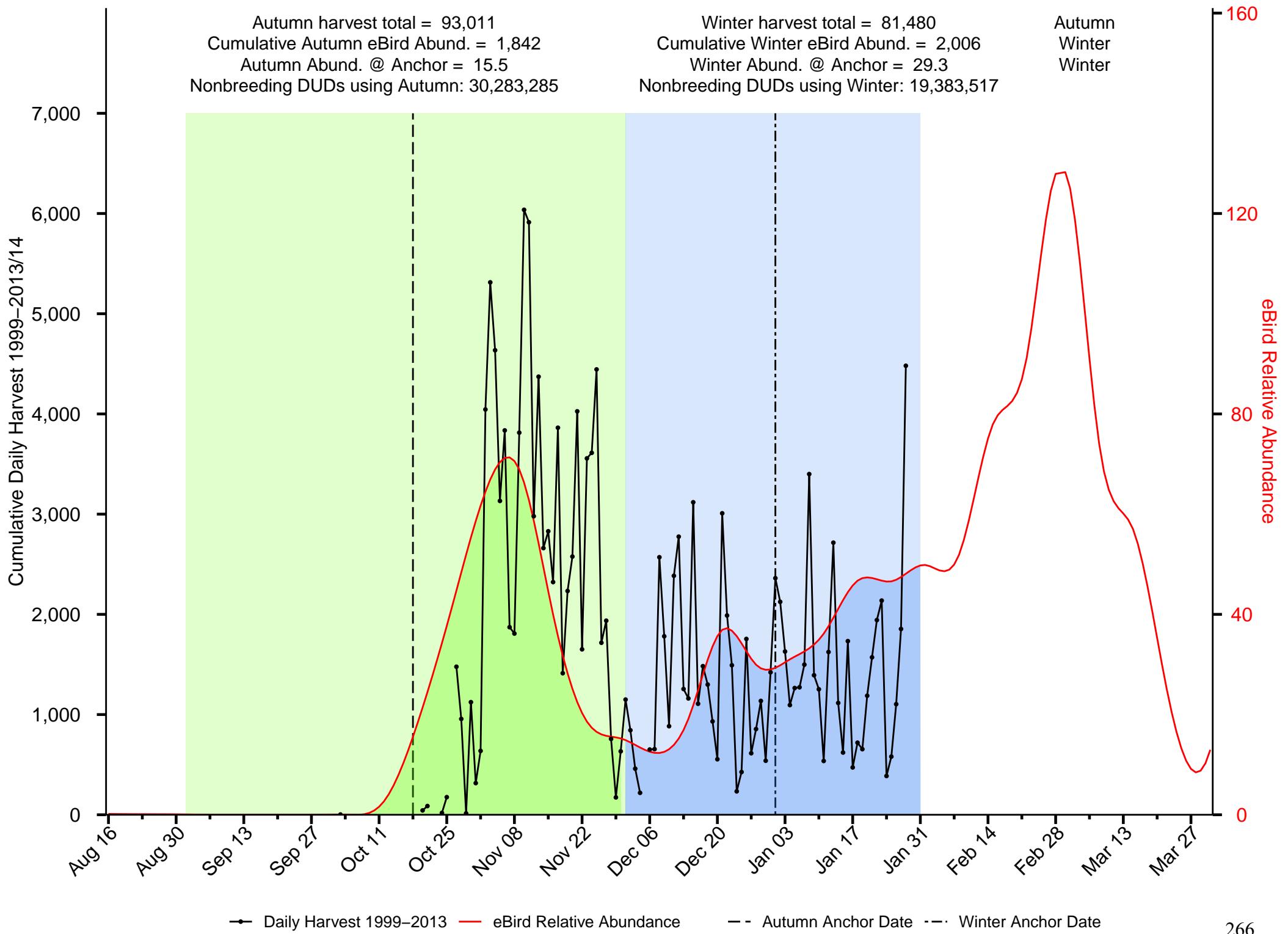
Summary of Northern Pintail in the Oaks and Prairies JV



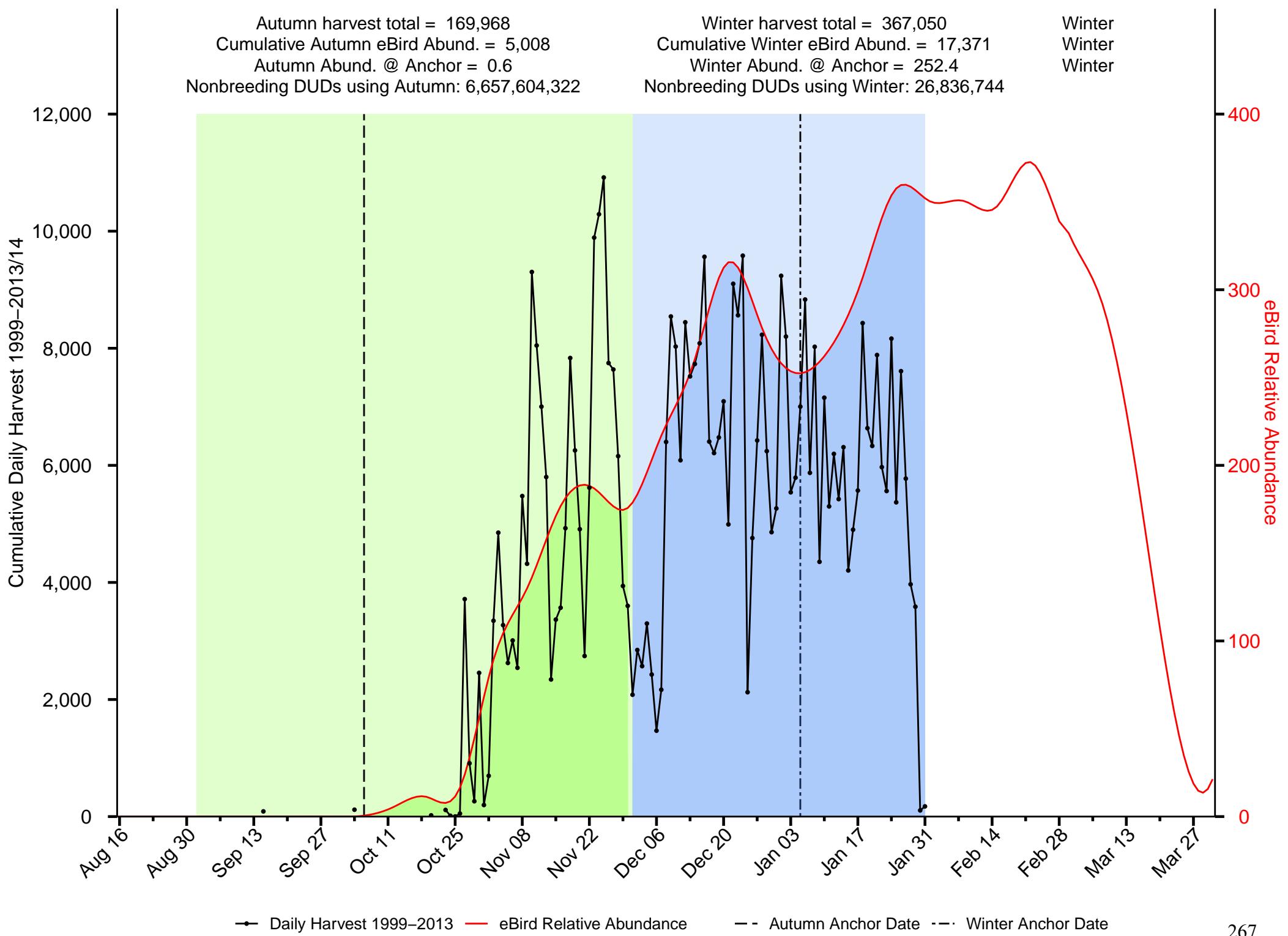
Summary of Northern Shoveler in the Oaks and Prairies JV



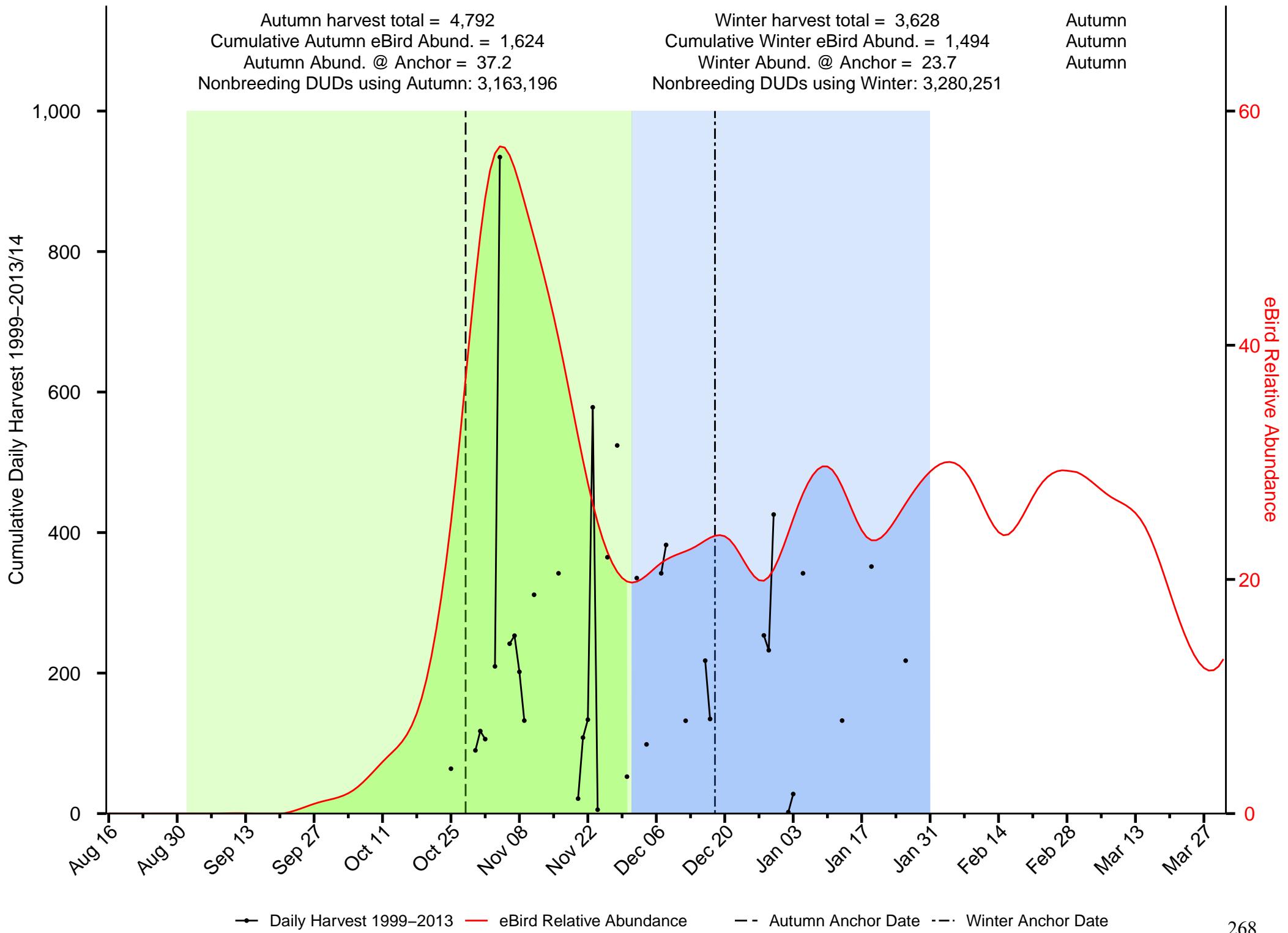
Summary of Redhead in the Oaks and Prairies JV



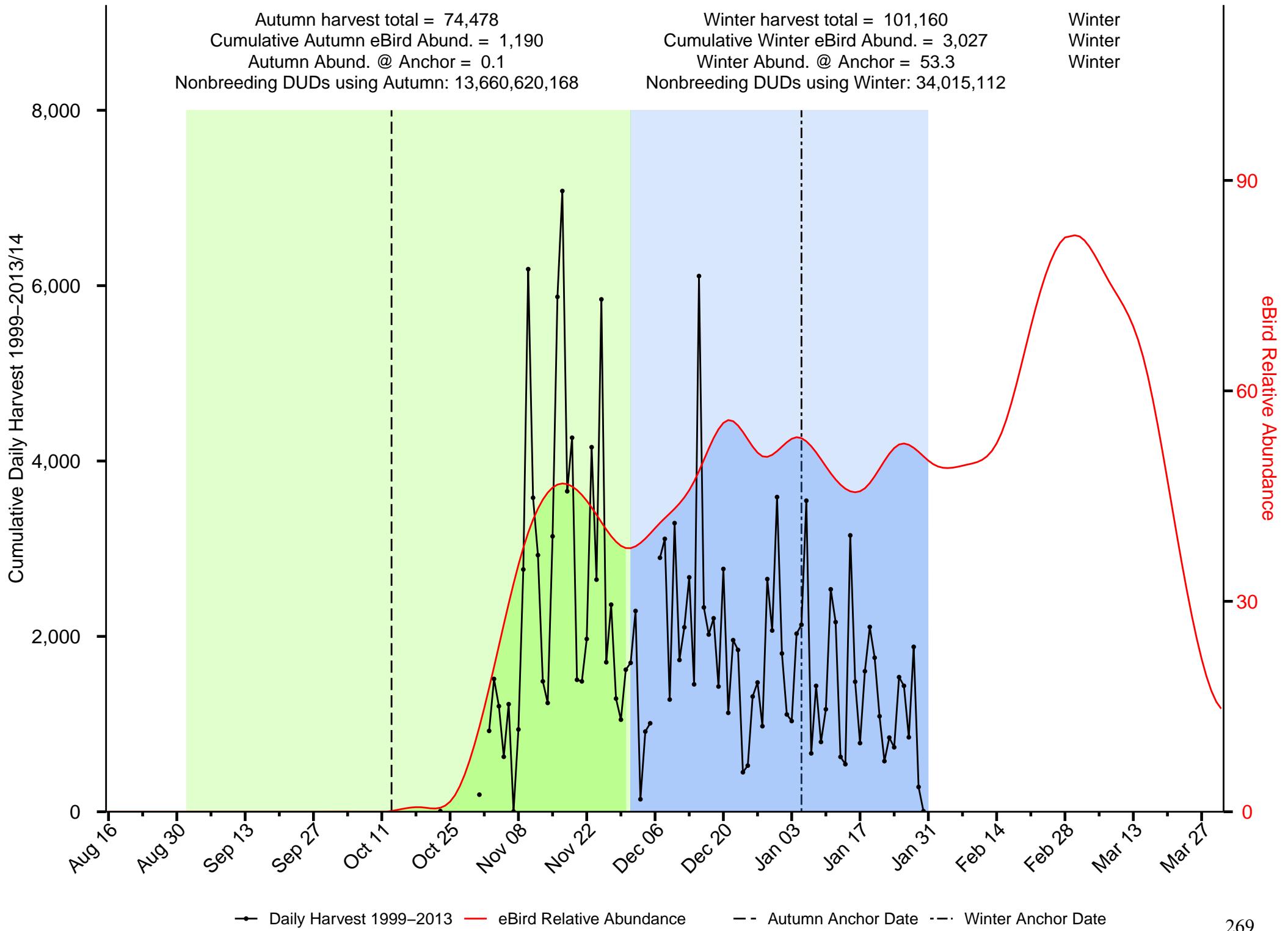
Summary of Ring-necked Duck in the Oaks and Prairies JV



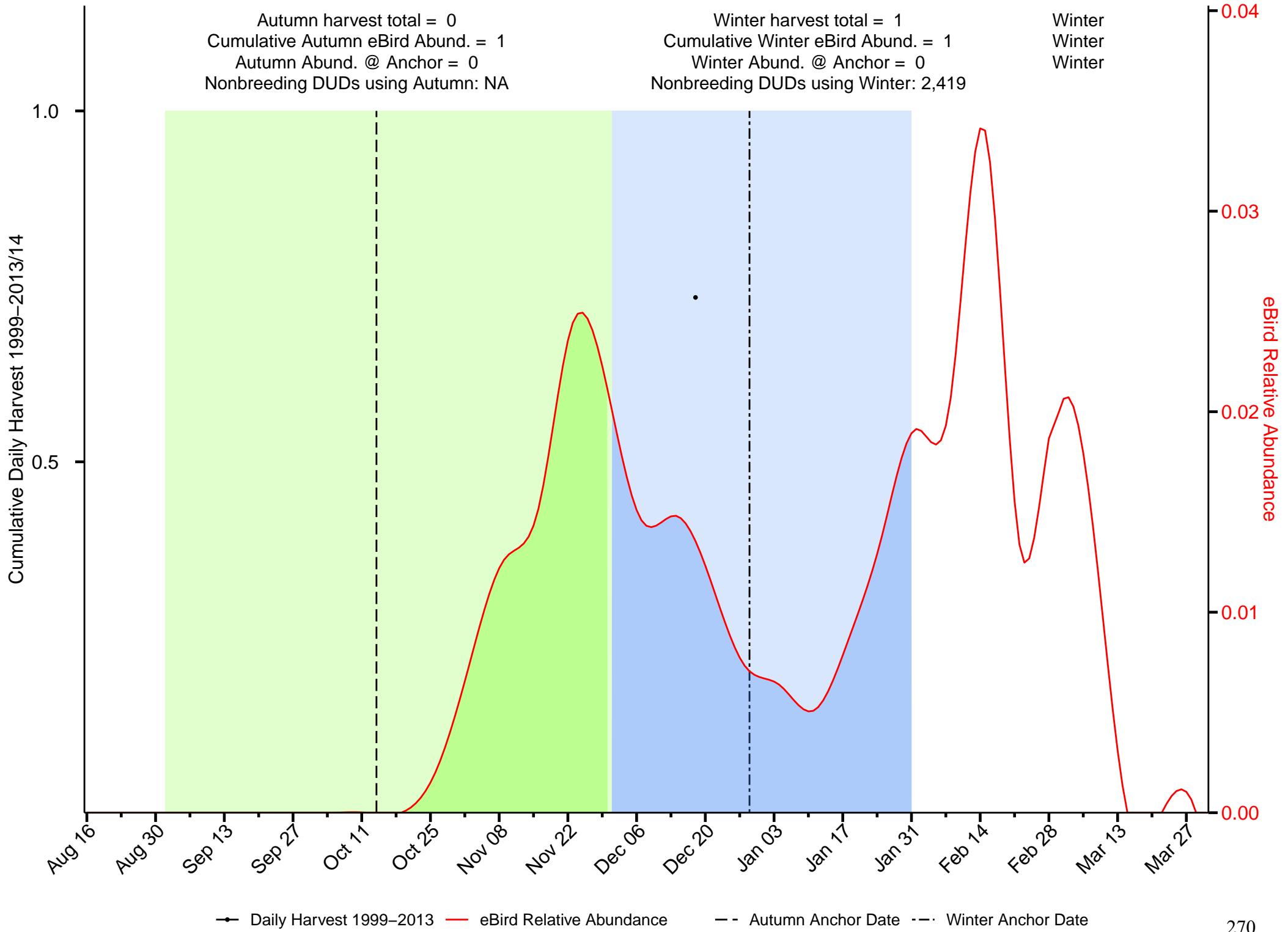
Summary of Ruddy Duck in the Oaks and Prairies JV



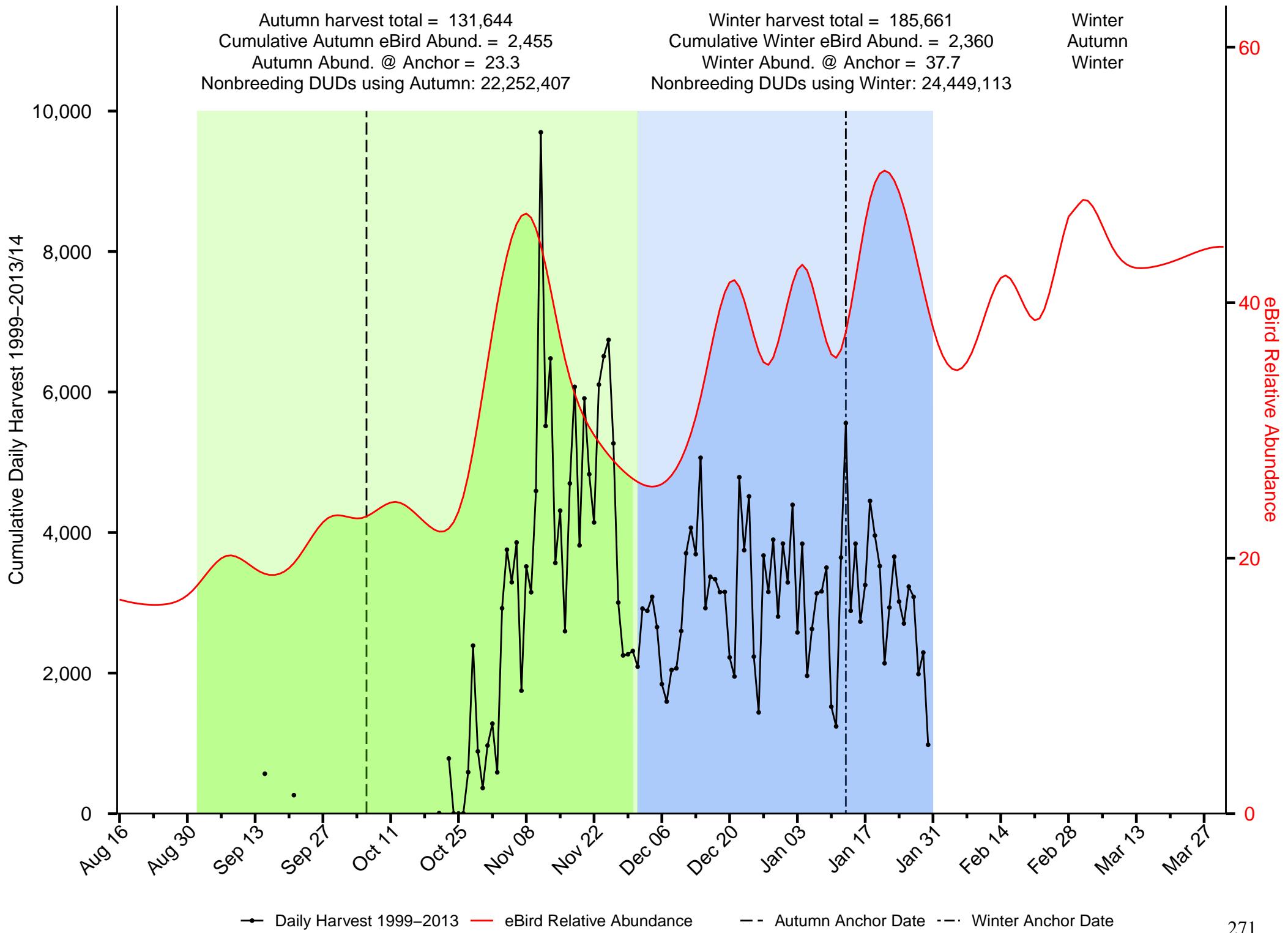
Summary of Scaup in the Oaks and Prairies JV



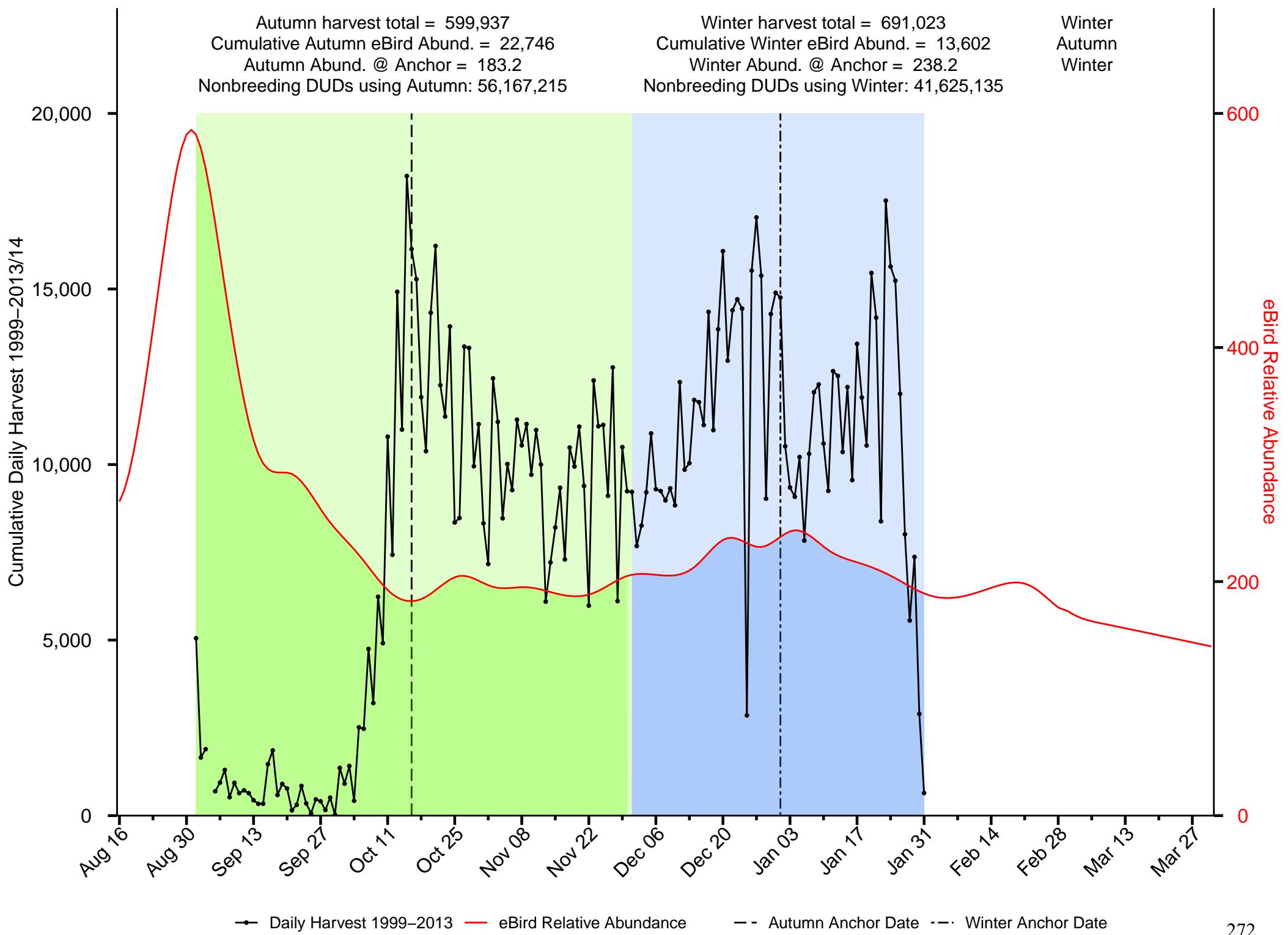
Summary of Scoter in the Oaks and Prairies JV



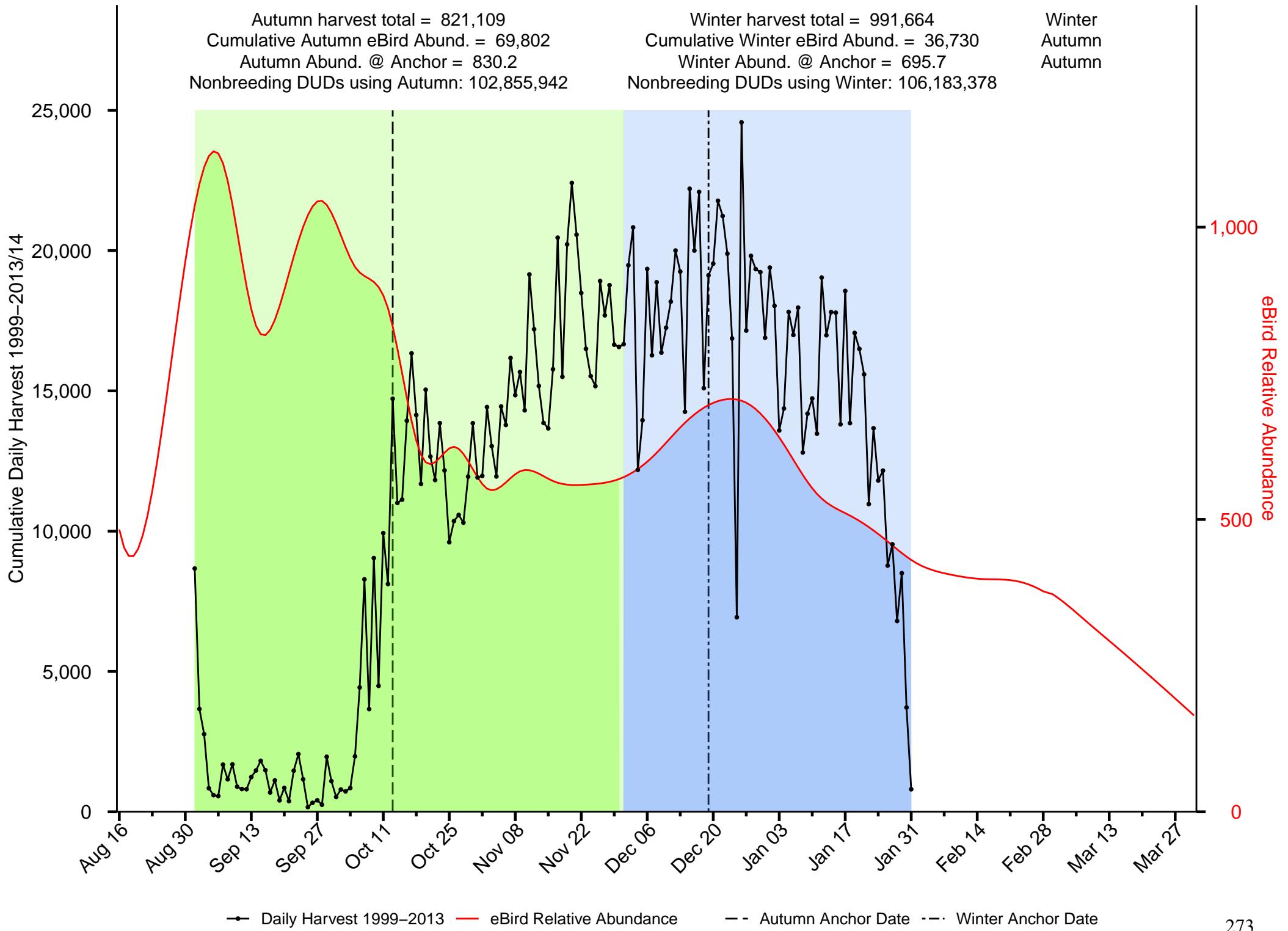
Summary of Wood Duck in the Oaks and Prairies JV



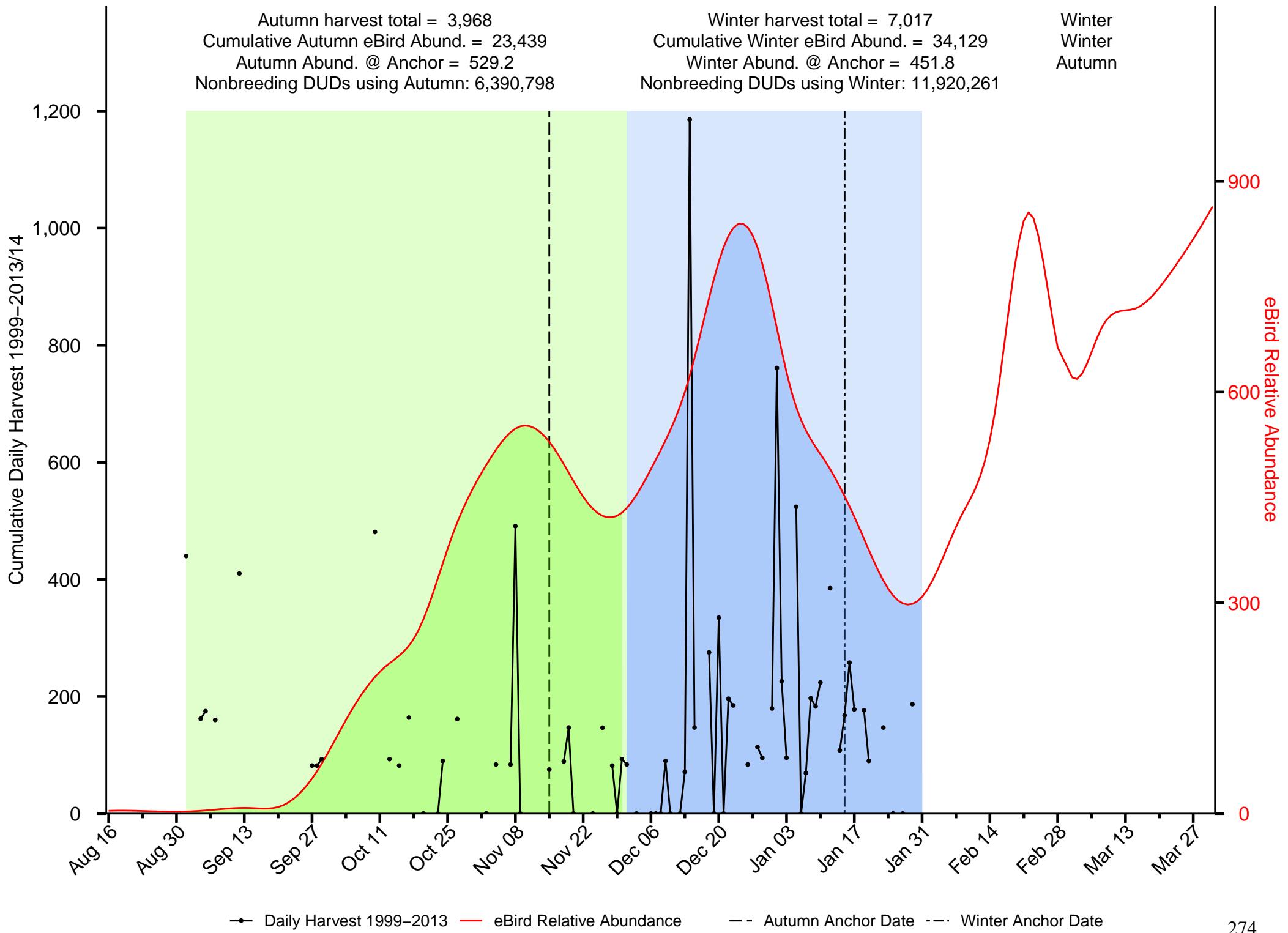
Summary of Green-winged Teal in the Pacific Birds Habitat JV



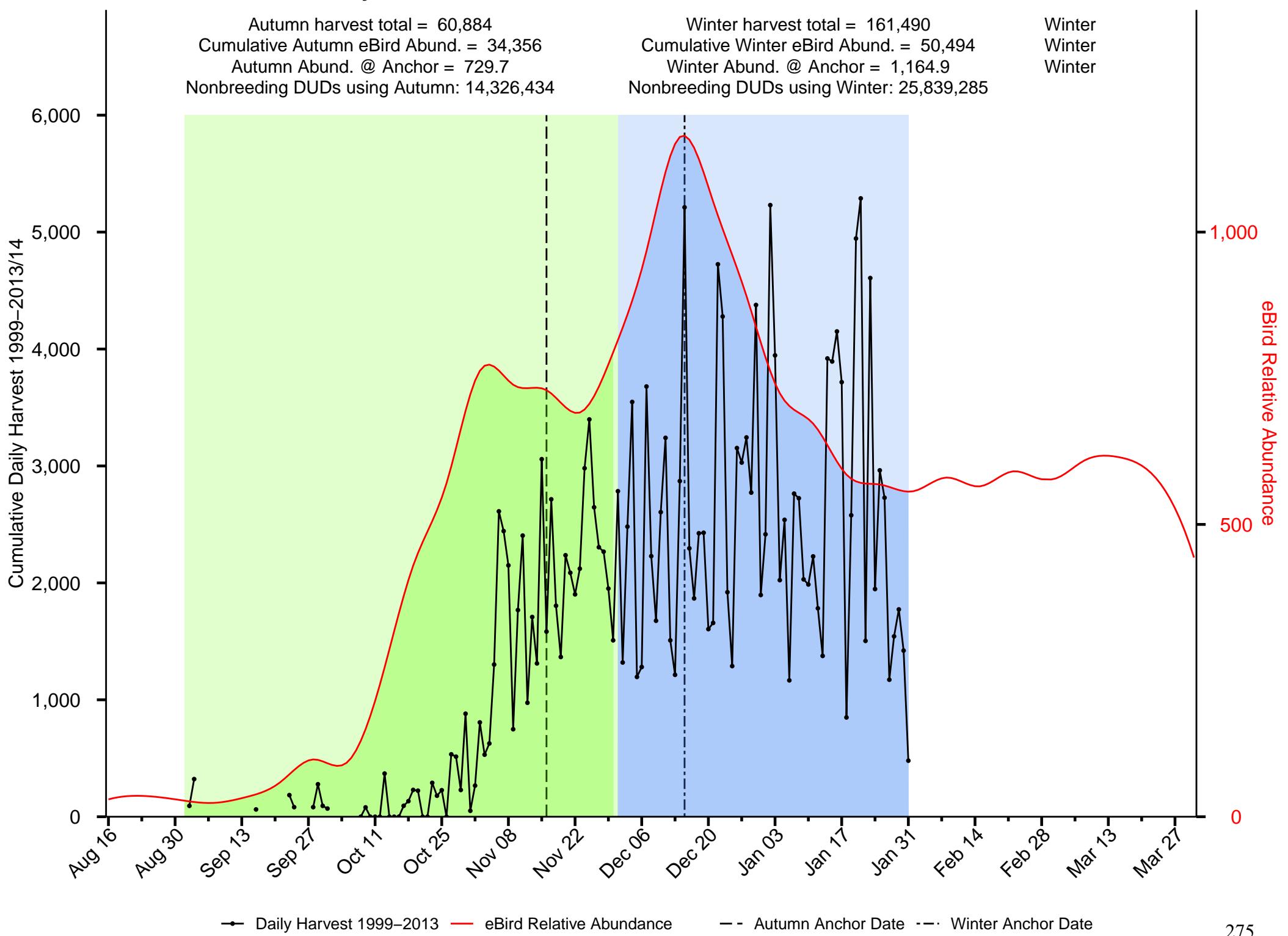
Summary of American Wigeon in the Pacific Birds Habitat JV



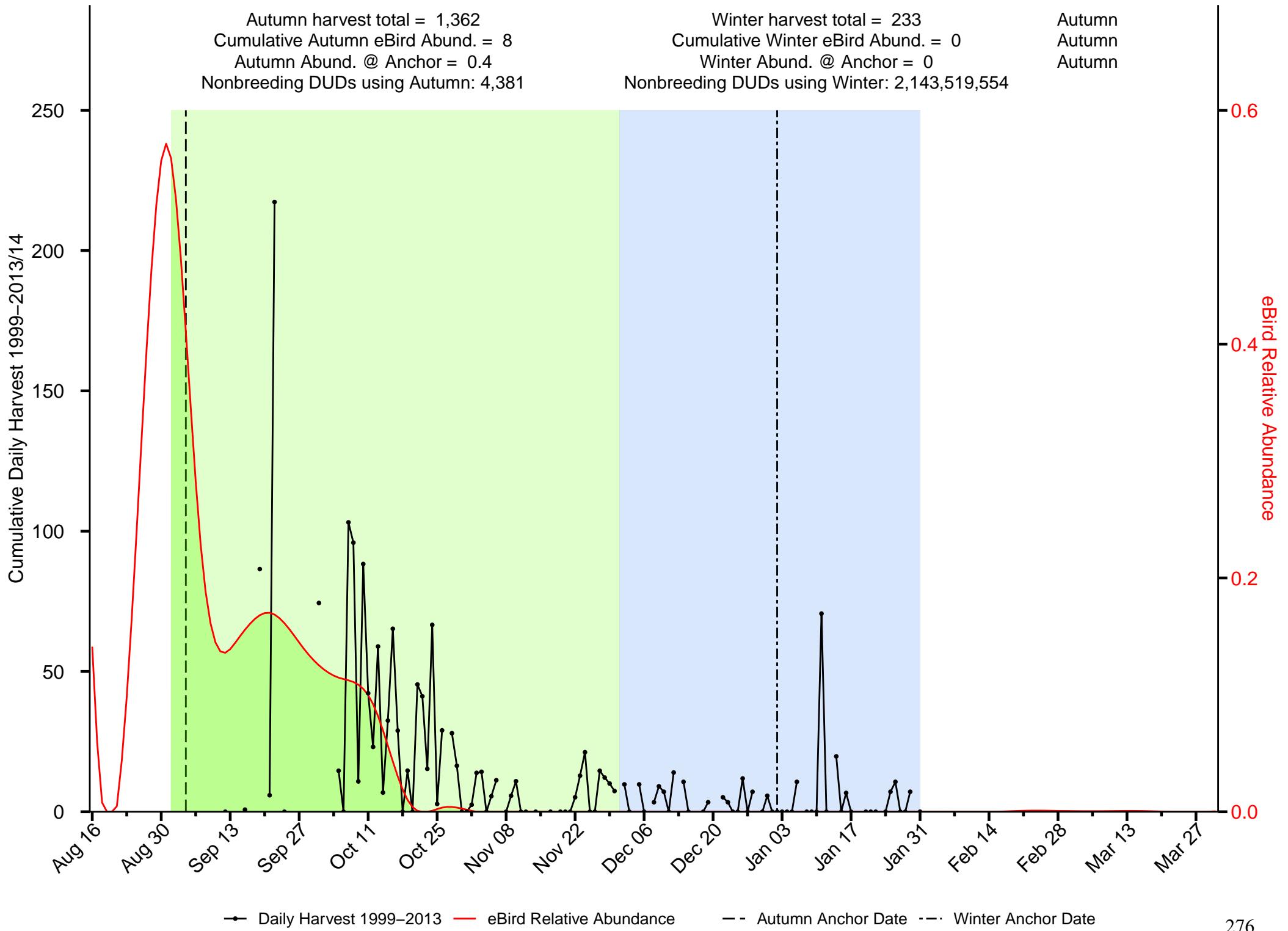
Summary of Barrow's Goldeneye in the Pacific Birds Habitat JV



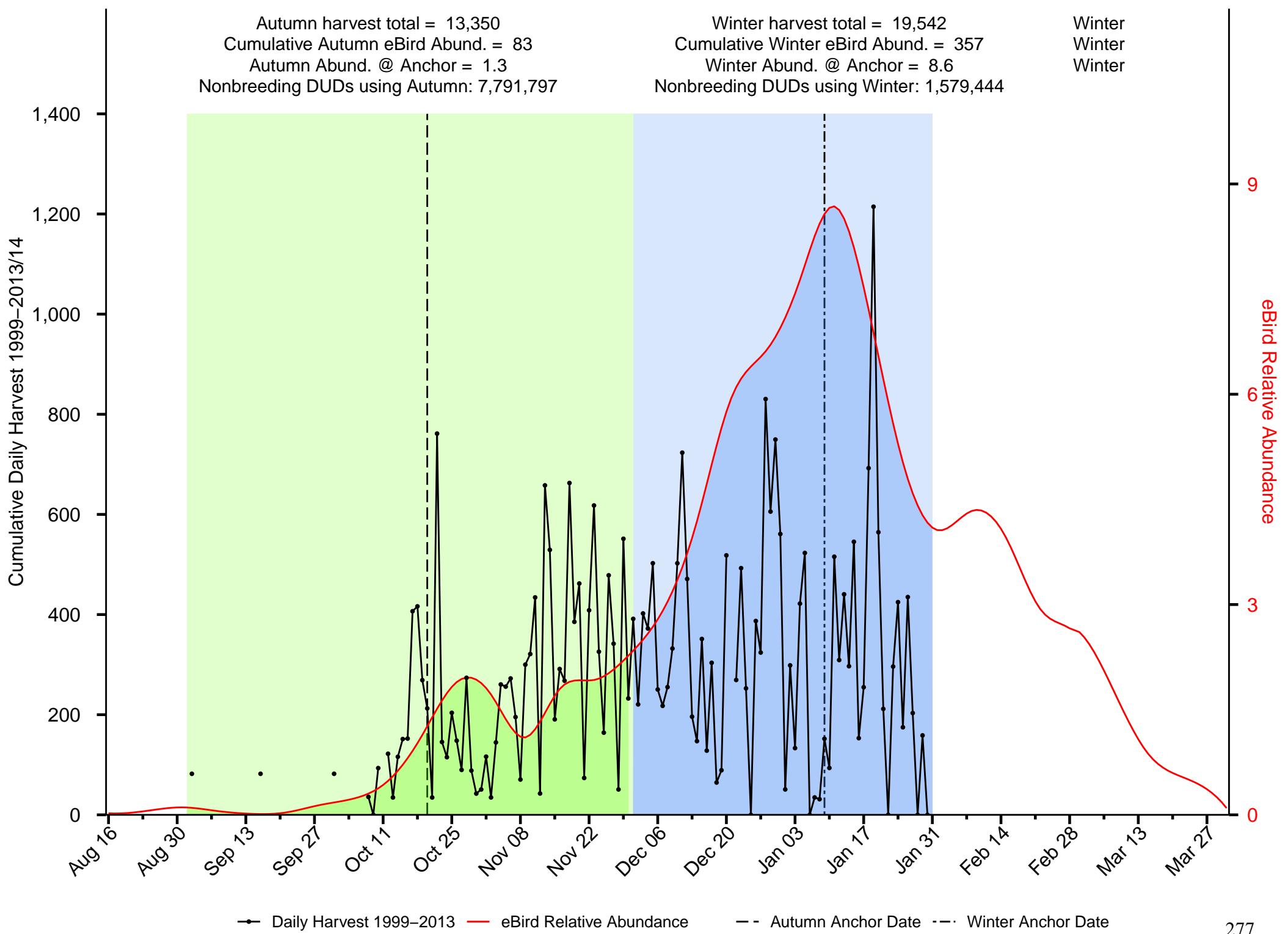
Summary of Bufflehead in the Pacific Birds Habitat JV



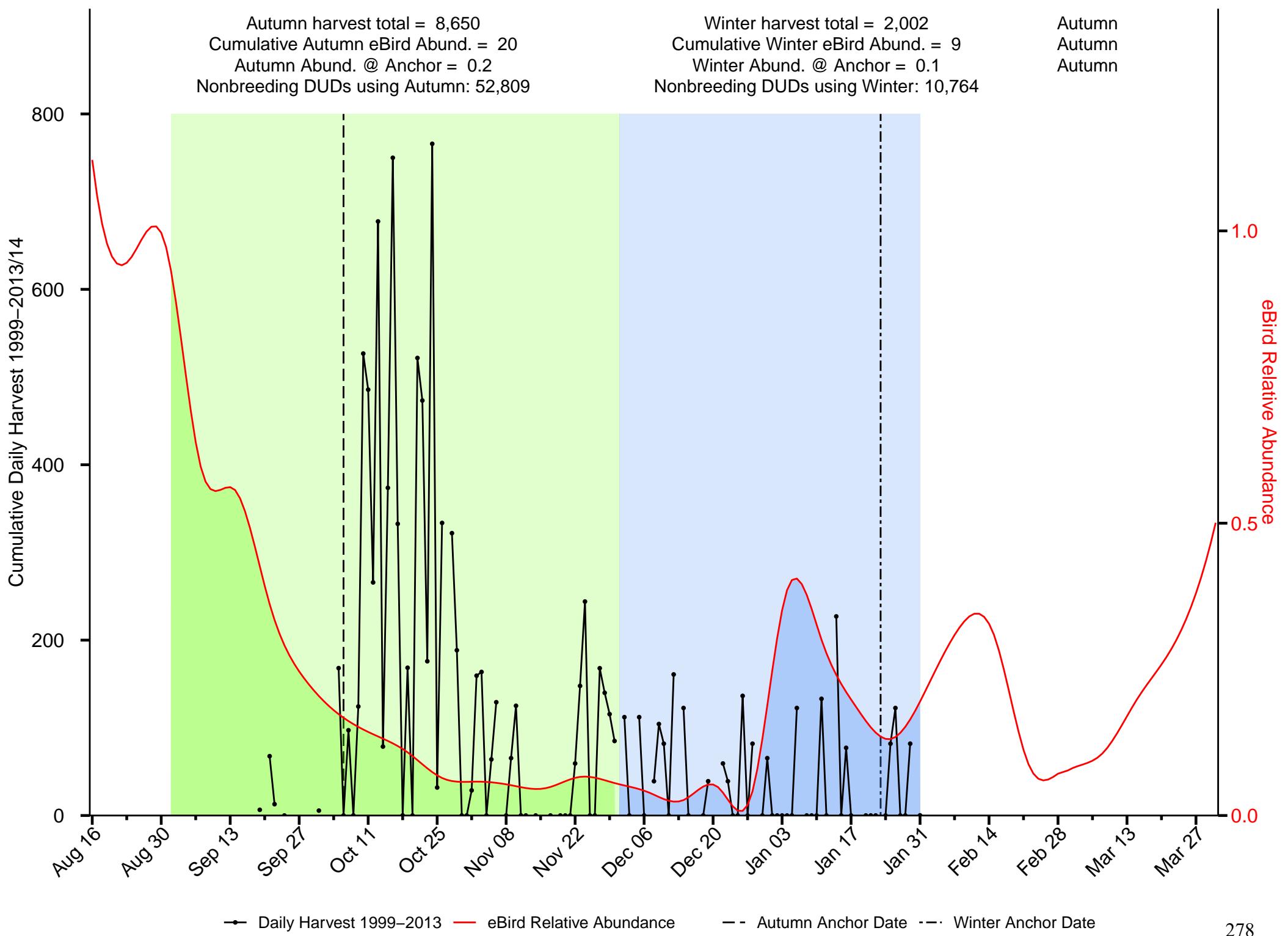
Summary of Blue-winged Teal in the Pacific Birds Habitat JV



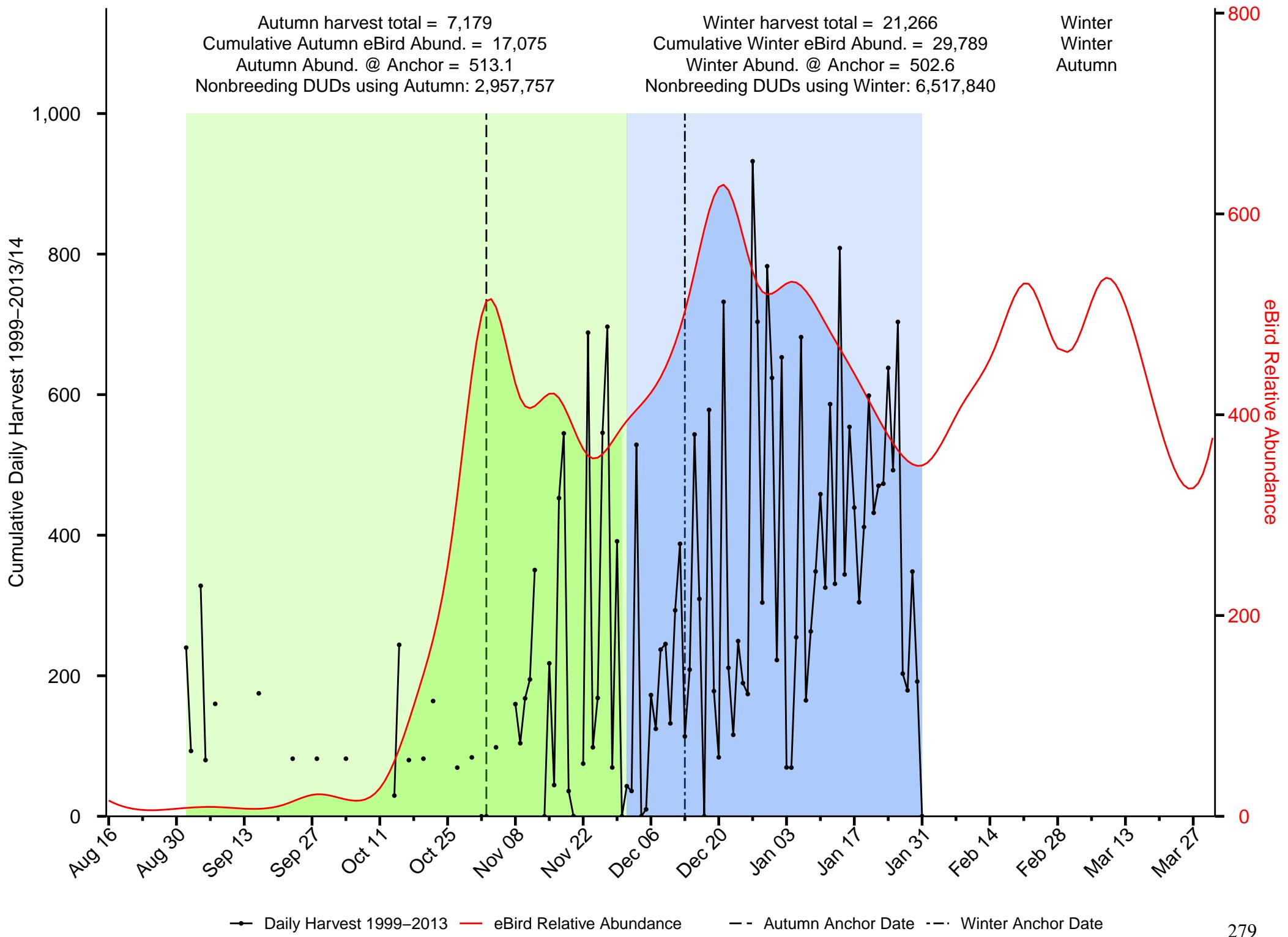
Summary of Canvasback in the Pacific Birds Habitat JV



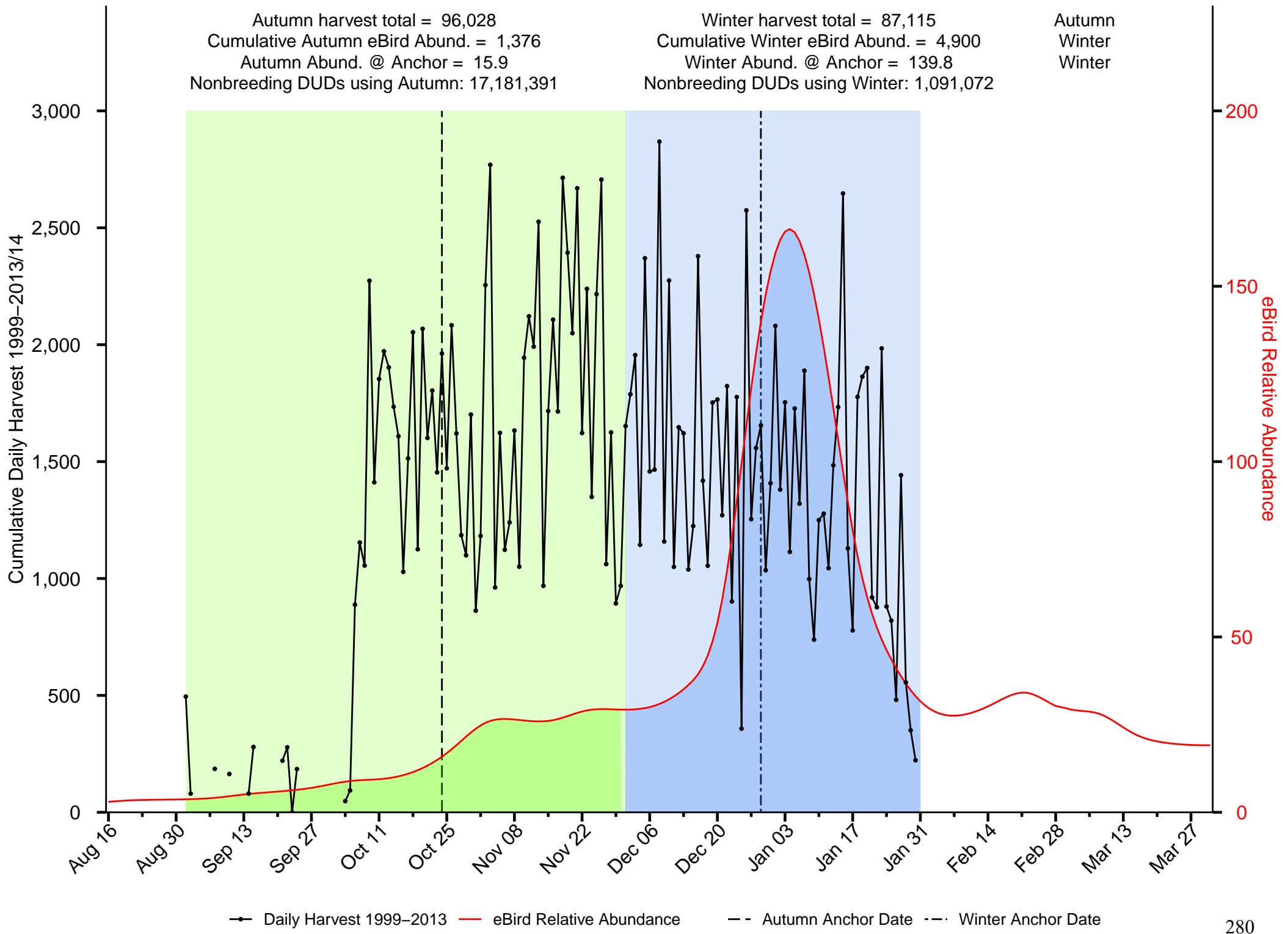
Summary of Cinnamon Teal in the Pacific Birds Habitat JV



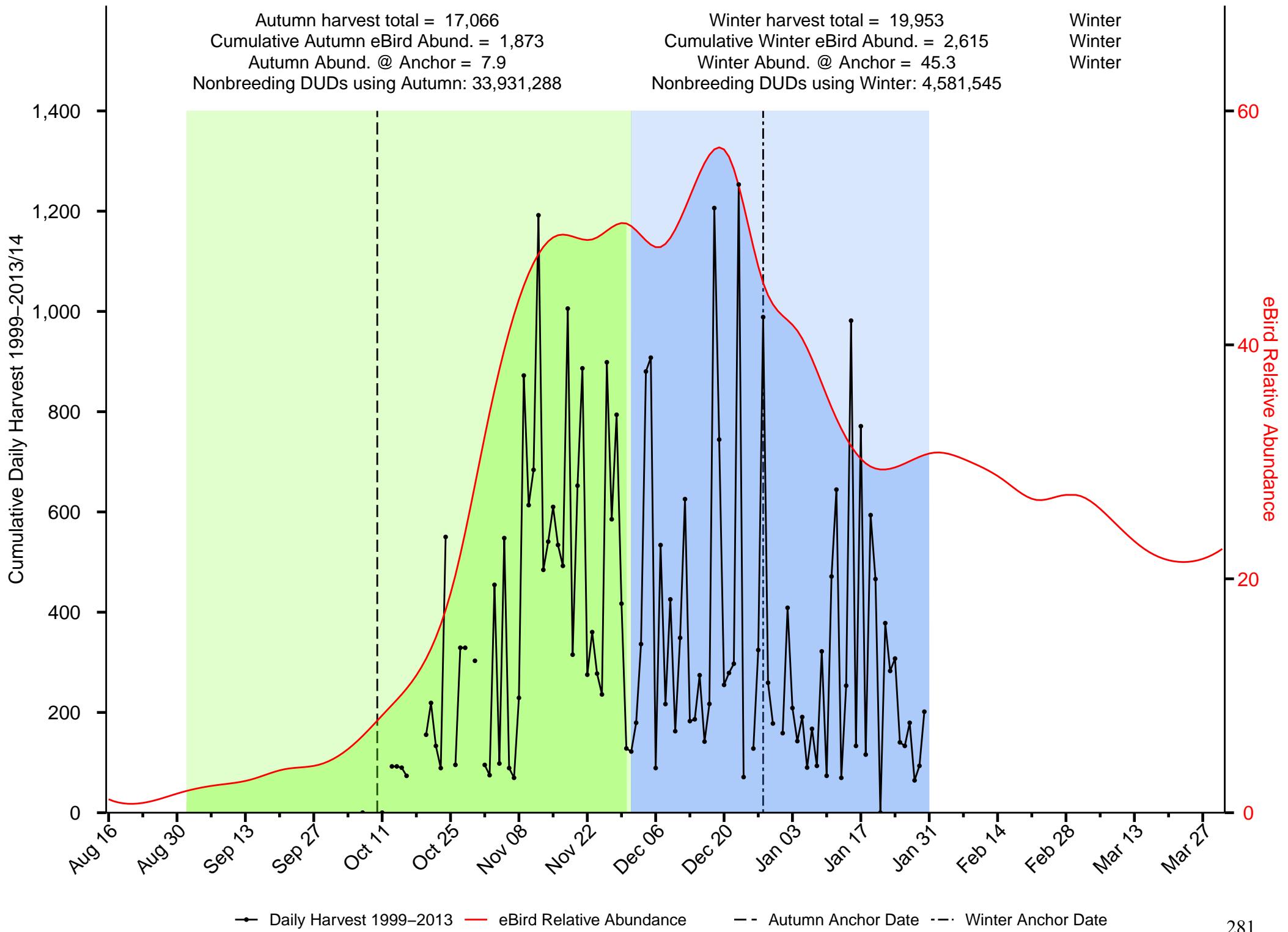
Summary of Common Goldeneye in the Pacific Birds Habitat JV



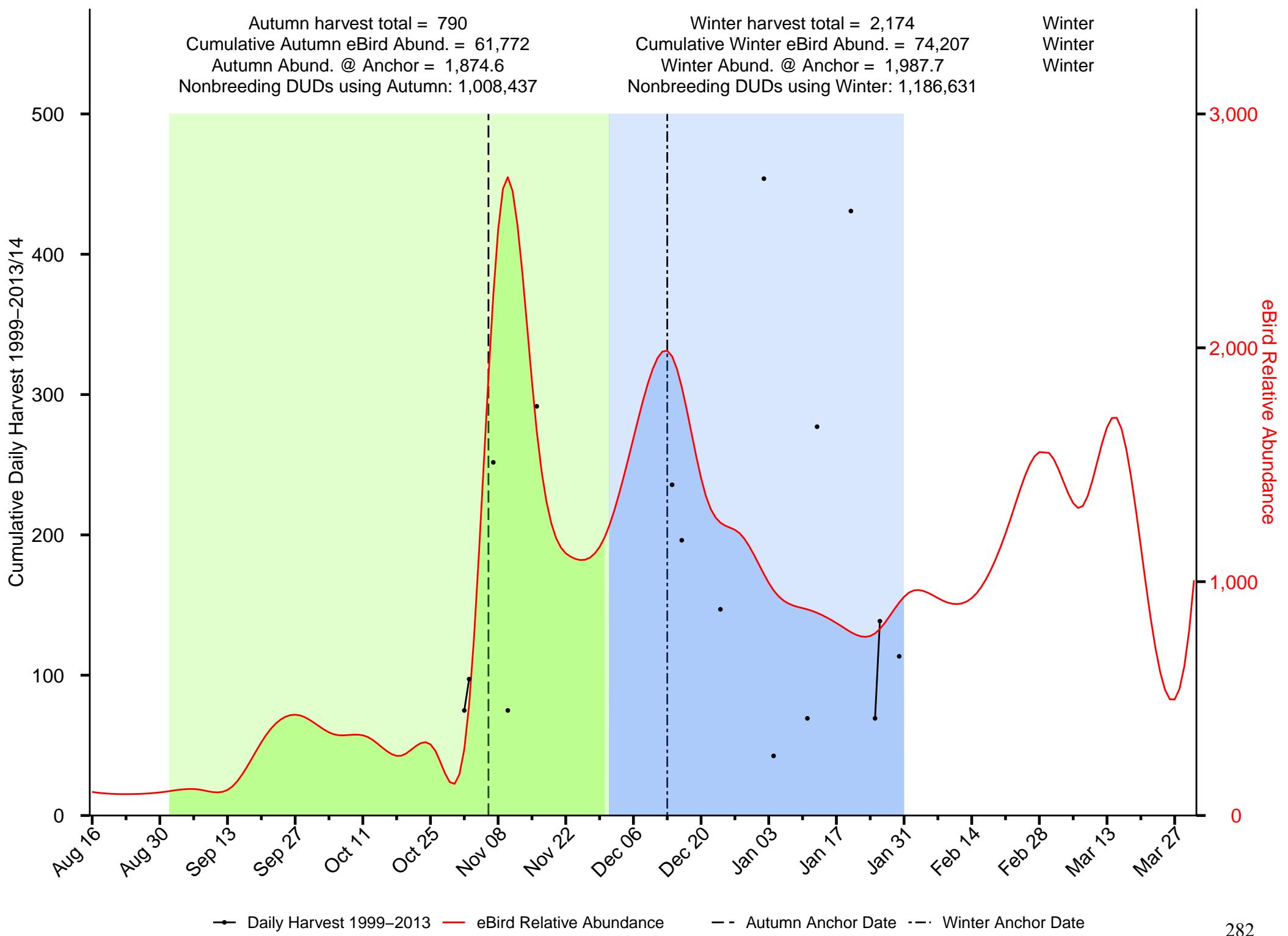
Summary of Gadwall in the Pacific Birds Habitat JV



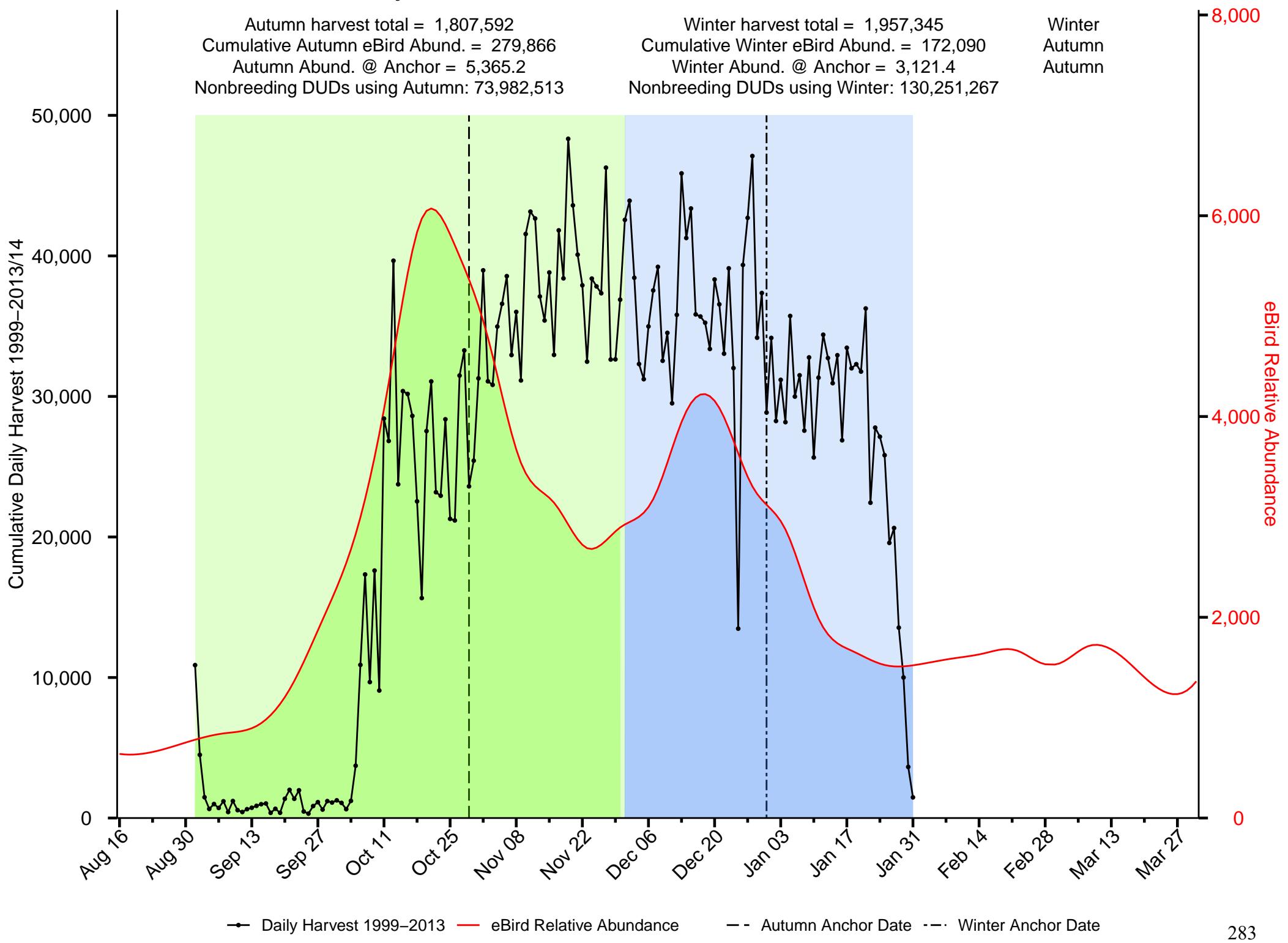
Summary of Hooded Merganser in the Pacific Birds Habitat JV



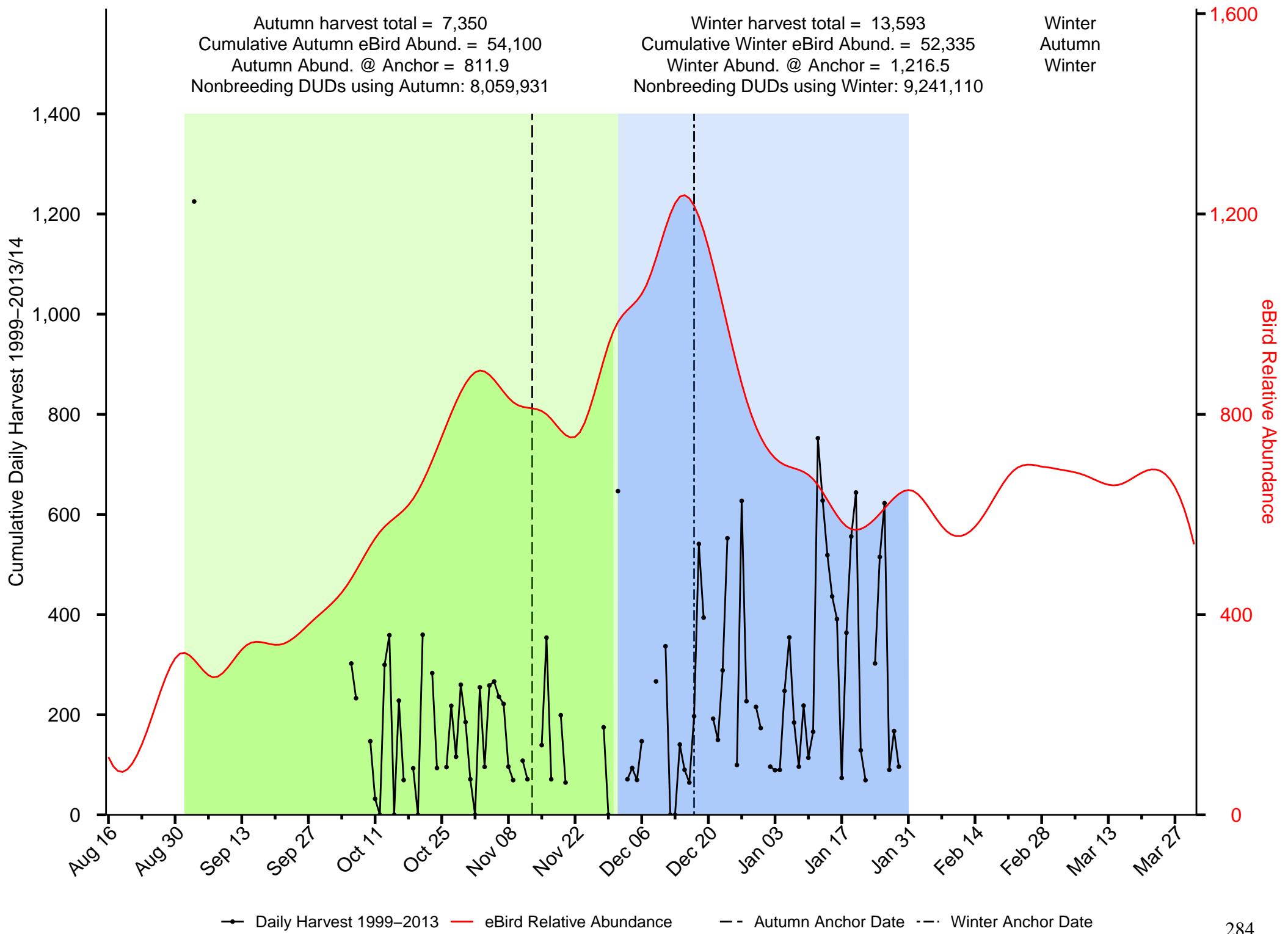
Summary of Long-tailed Duck in the Pacific Birds Habitat JV



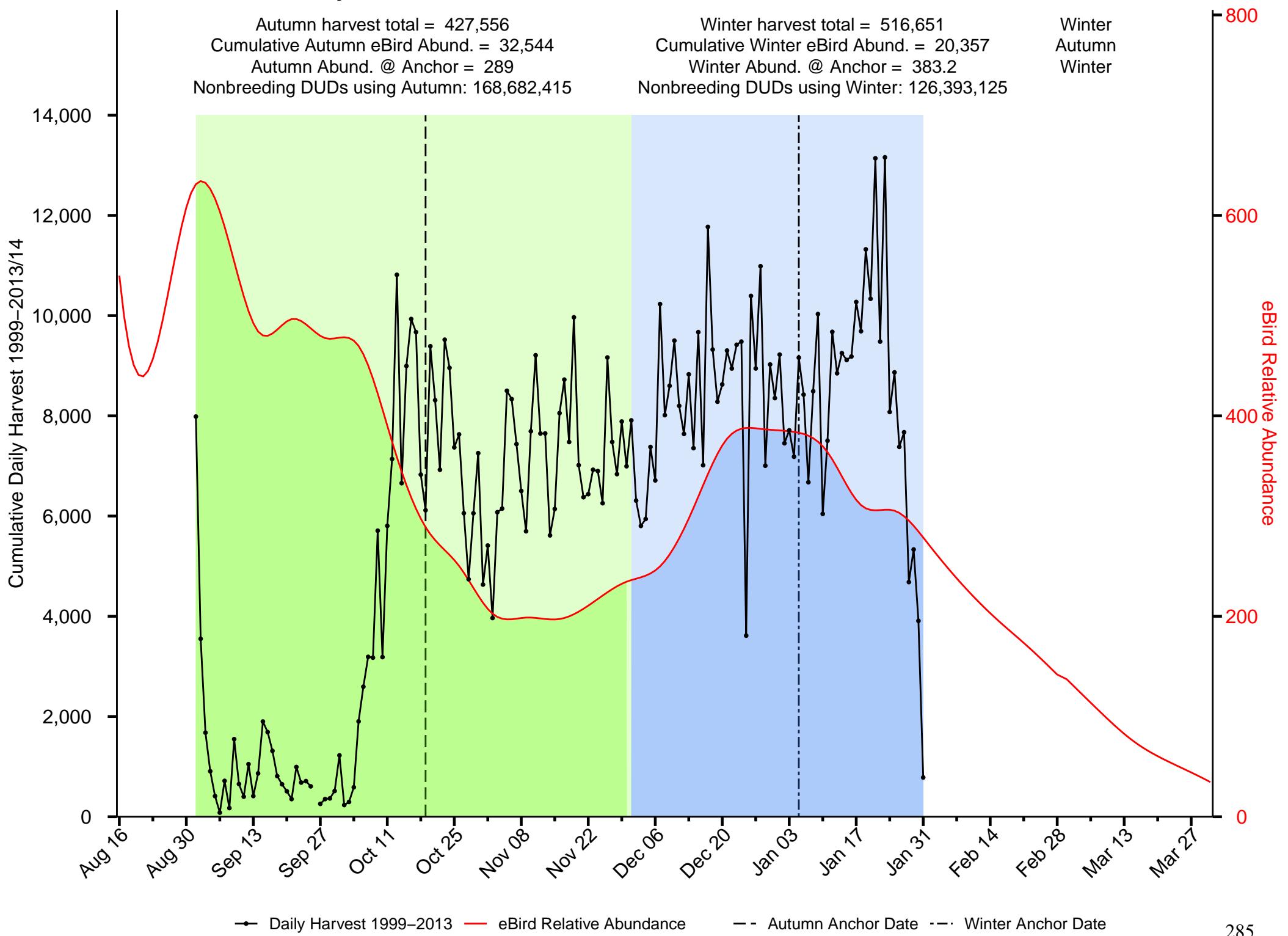
Summary of Mallard in the Pacific Birds Habitat JV



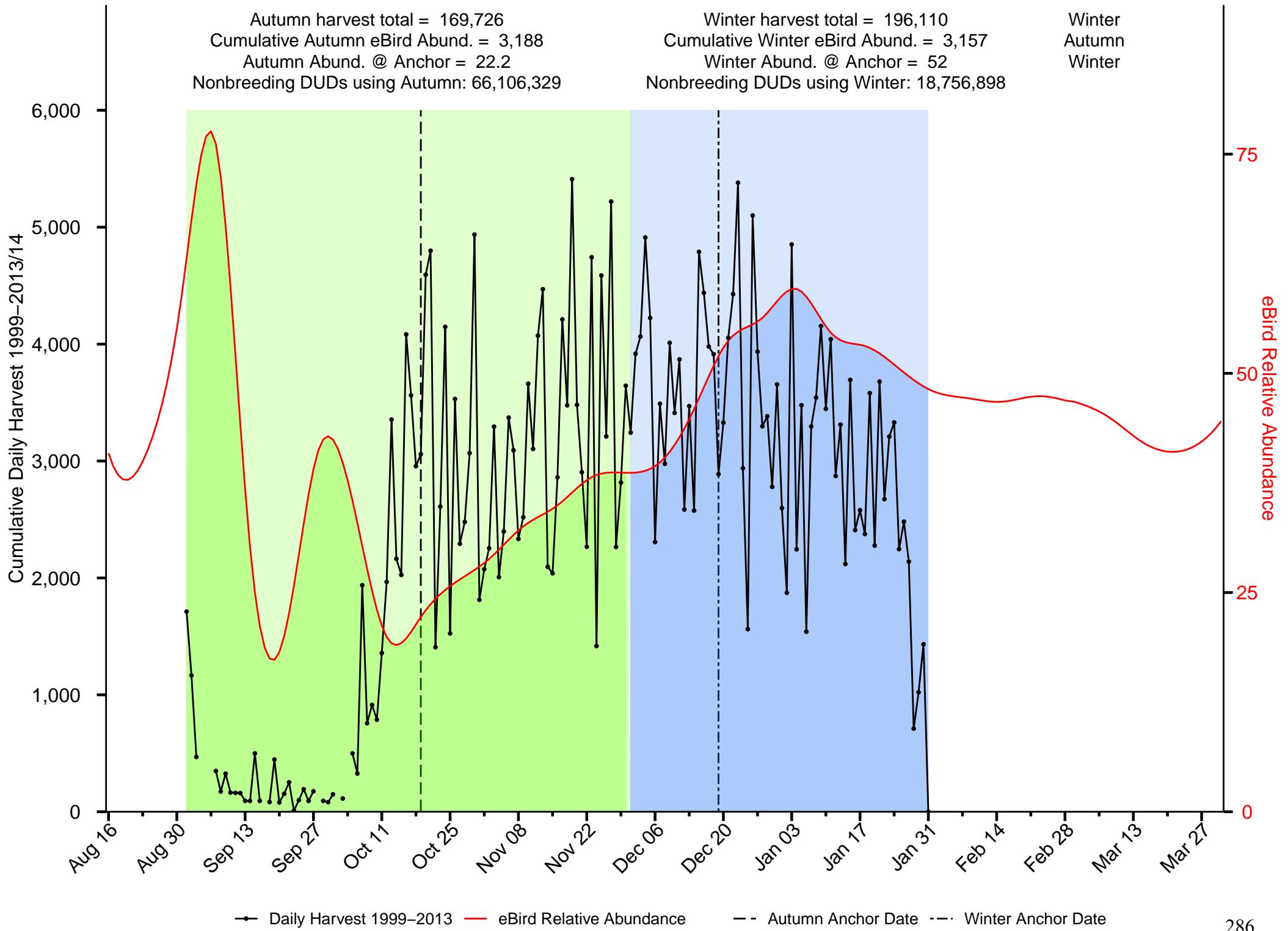
Summary of Merganser in the Pacific Birds Habitat JV



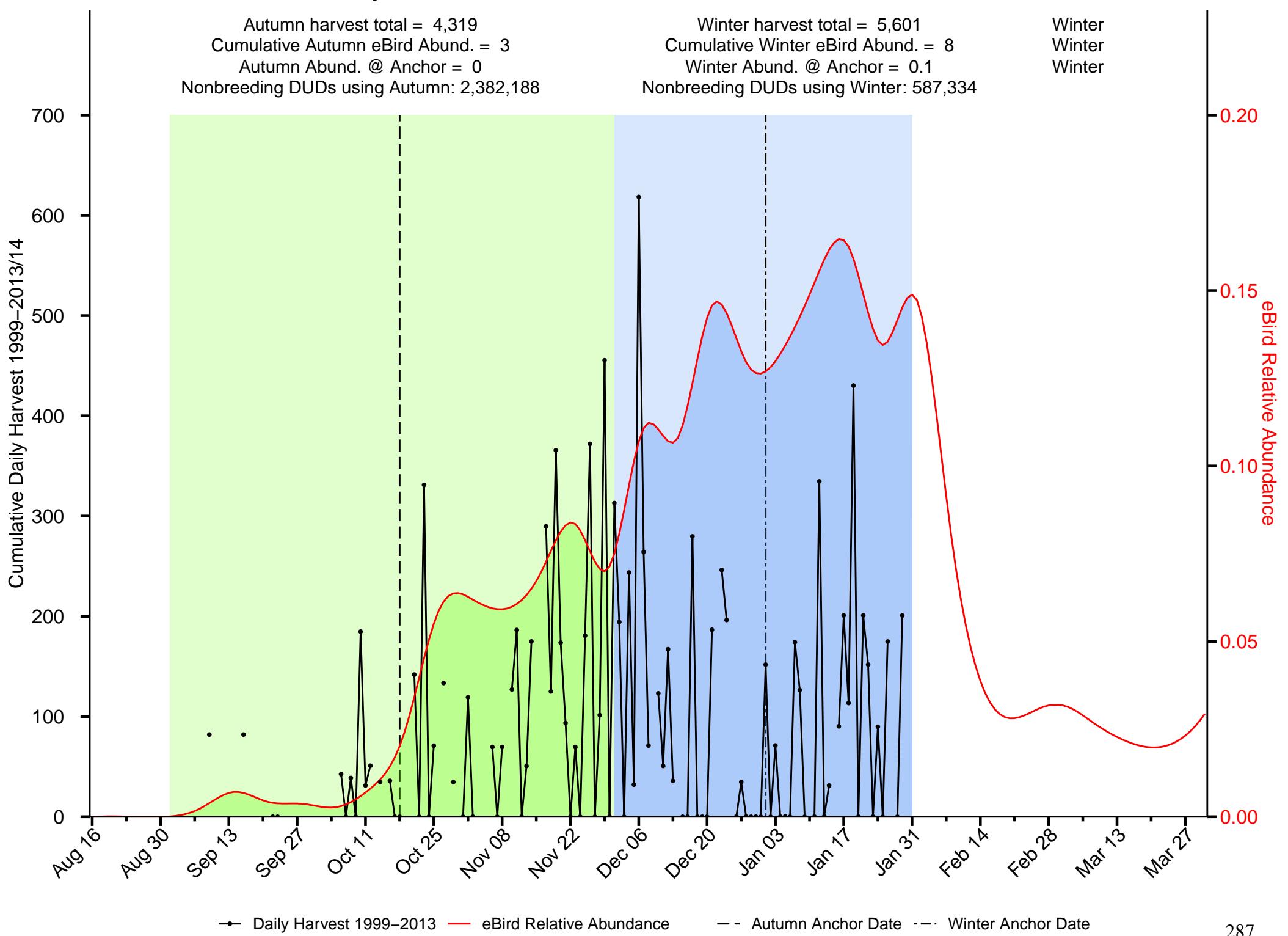
Summary of Northern Pintail in the Pacific Birds Habitat JV



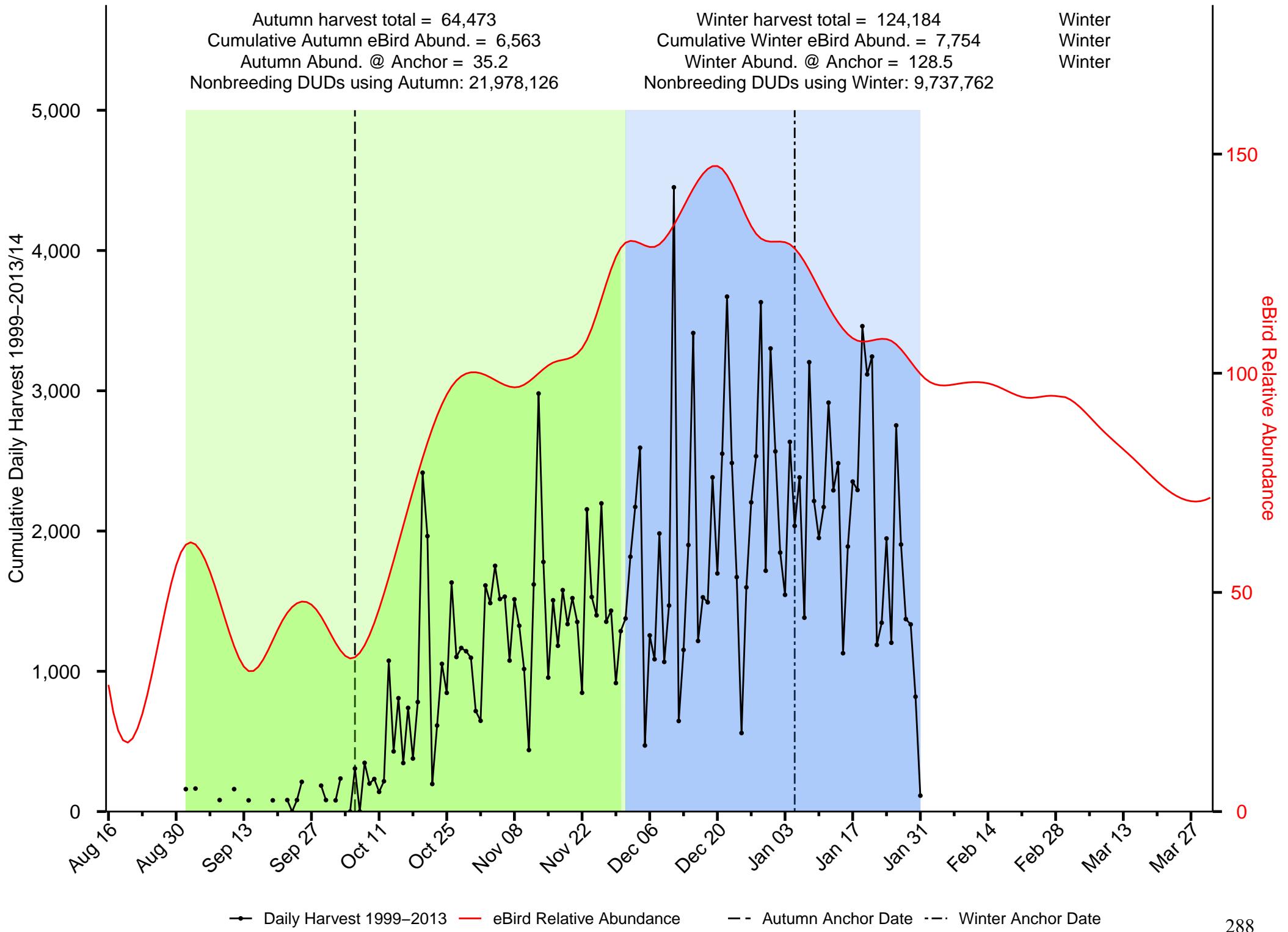
Summary of Northern Shoveler in the Pacific Birds Habitat JV



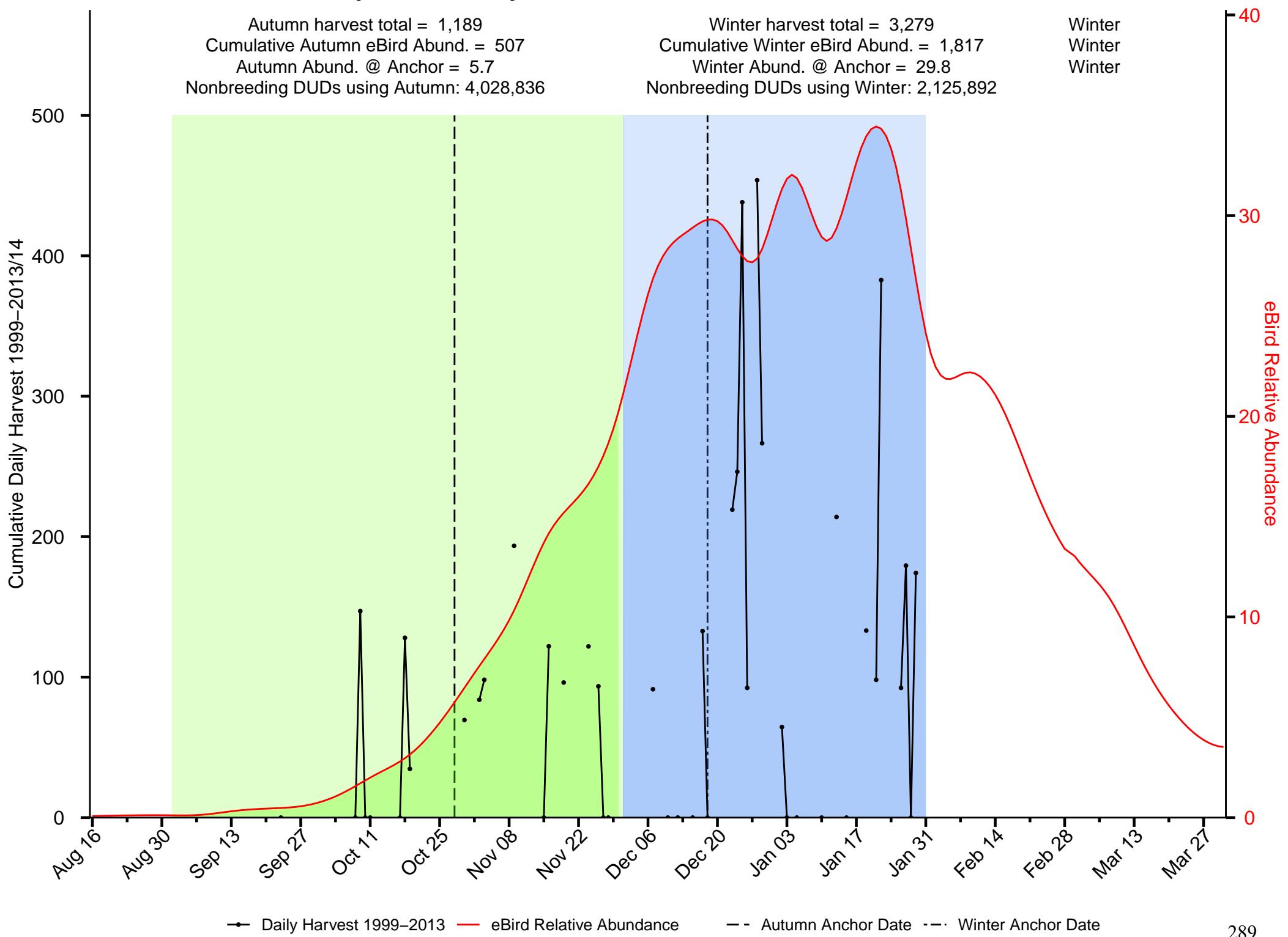
Summary of Redhead in the Pacific Birds Habitat JV



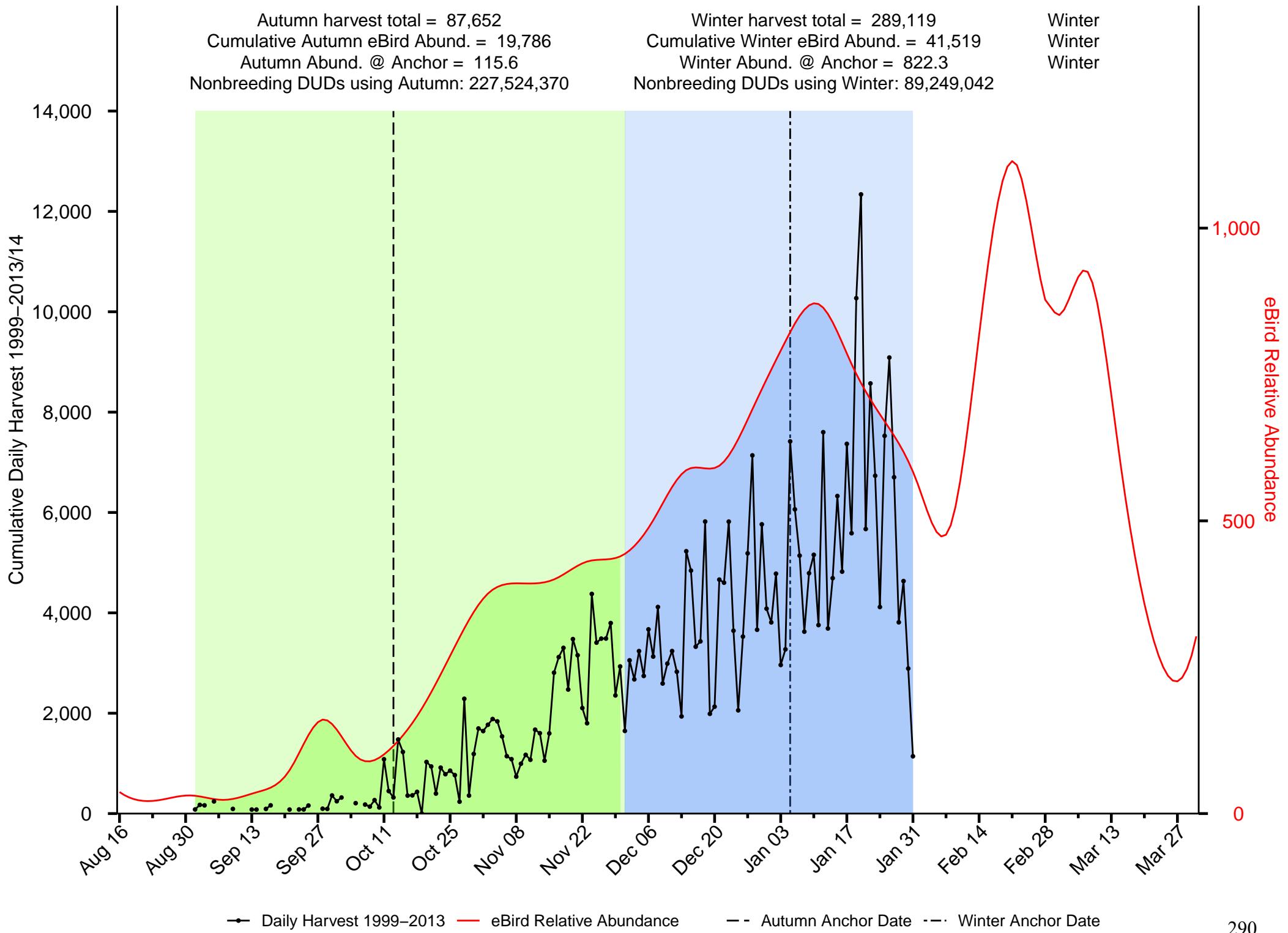
Summary of Ring-necked Duck in the Pacific Birds Habitat JV



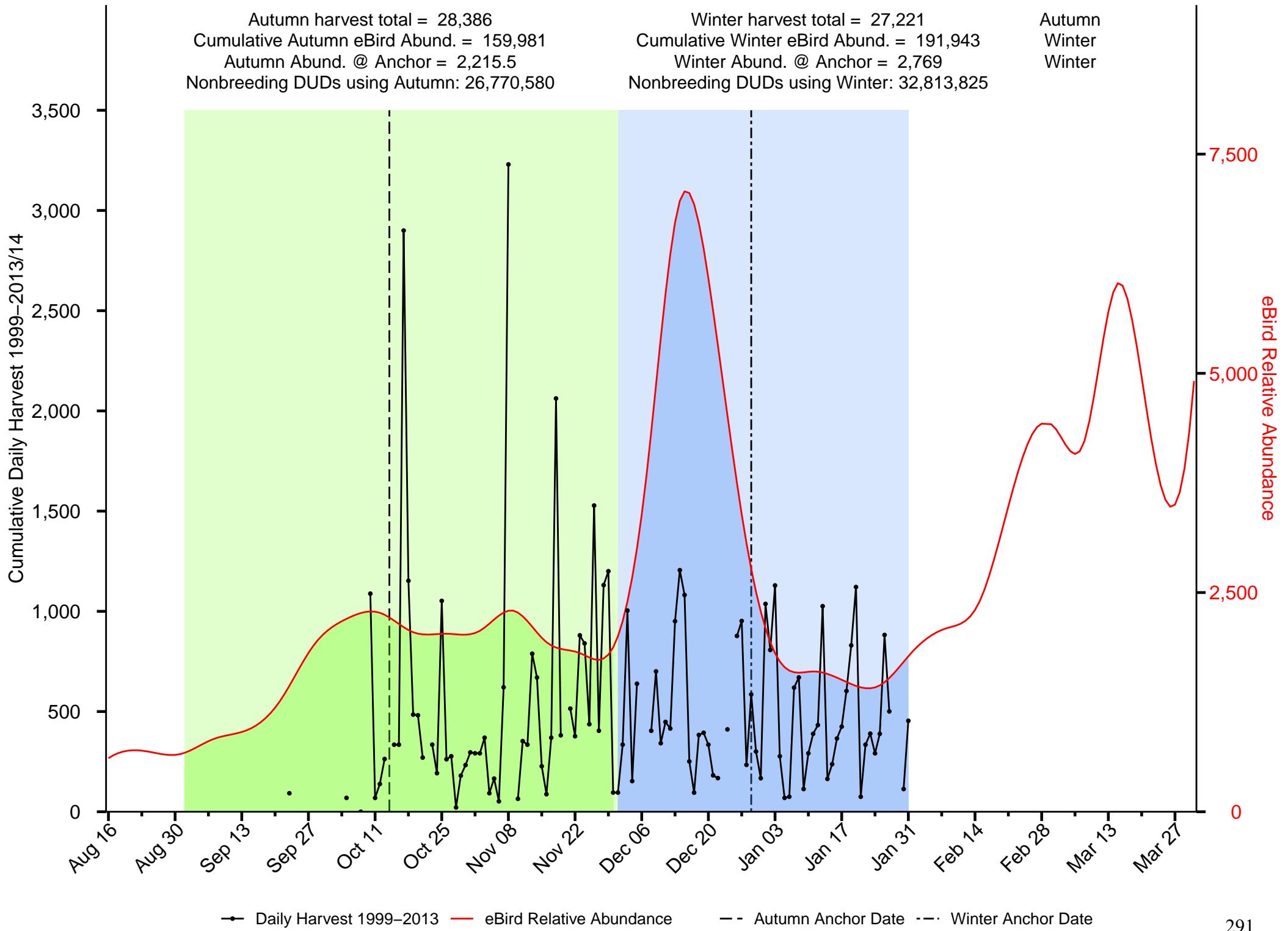
Summary of Ruddy Duck in the Pacific Birds Habitat JV



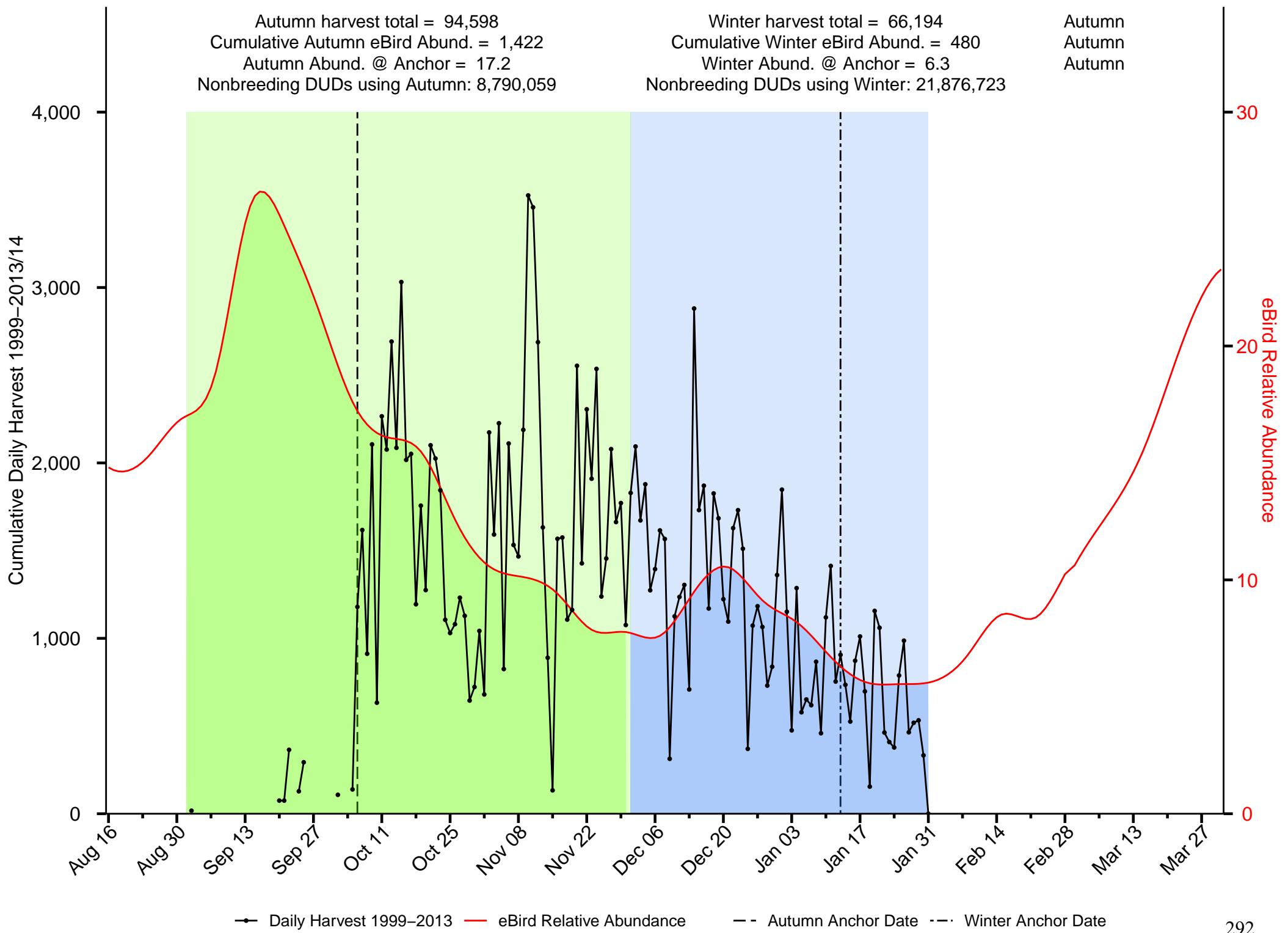
Summary of Scaup in the Pacific Birds Habitat JV



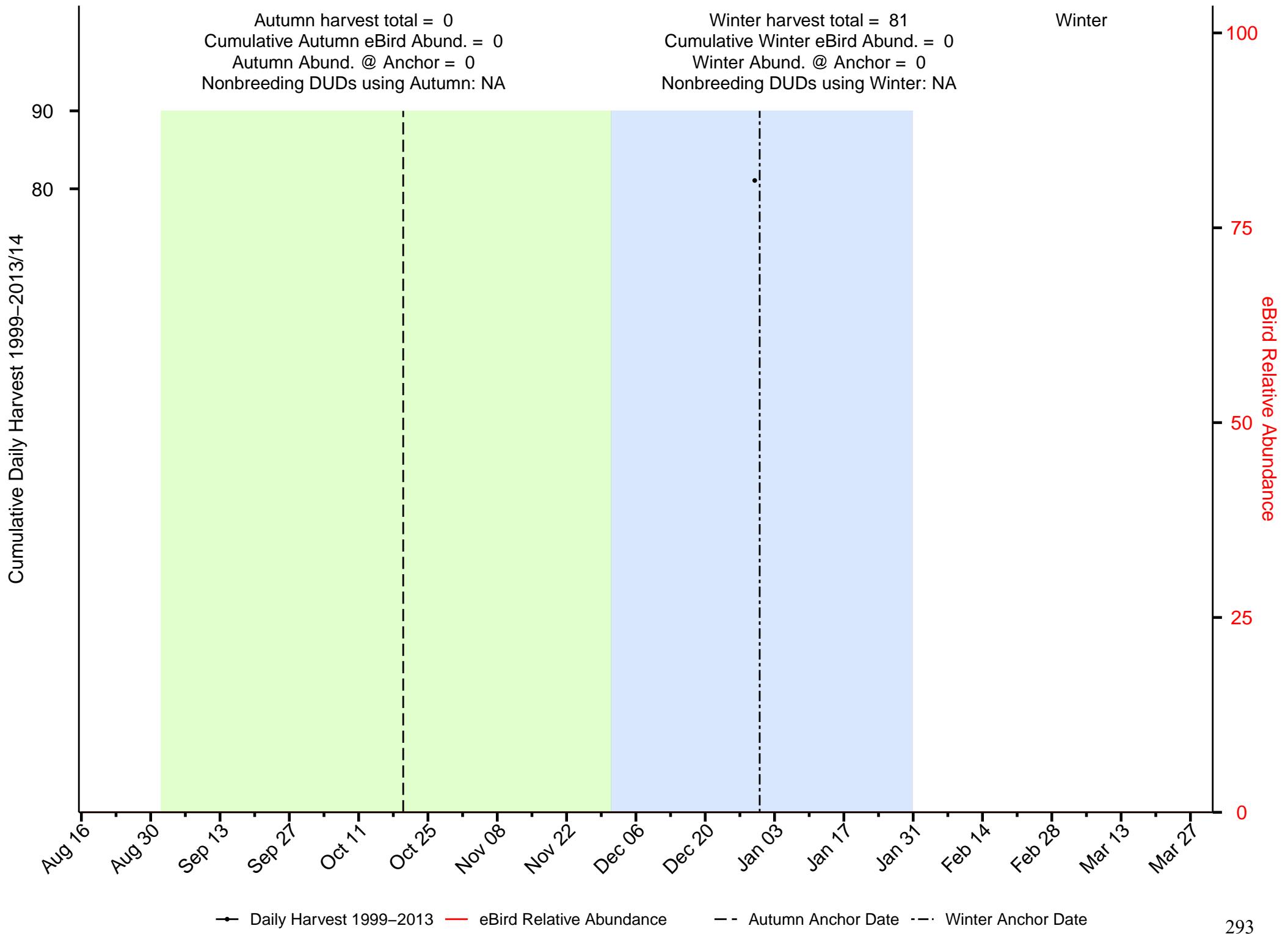
Summary of Scoter in the Pacific Birds Habitat JV



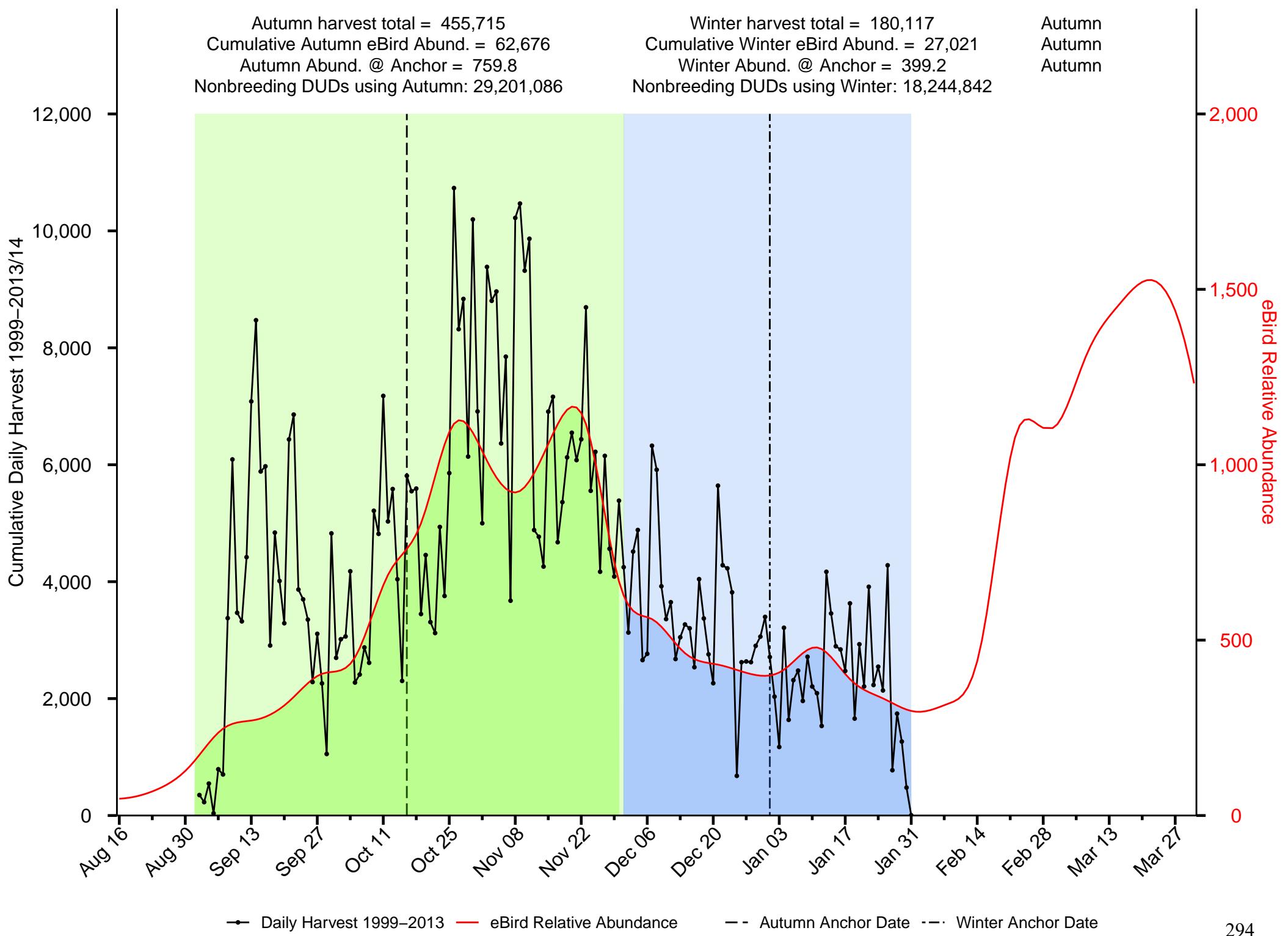
Summary of Wood Duck in the Pacific Birds Habitat JV



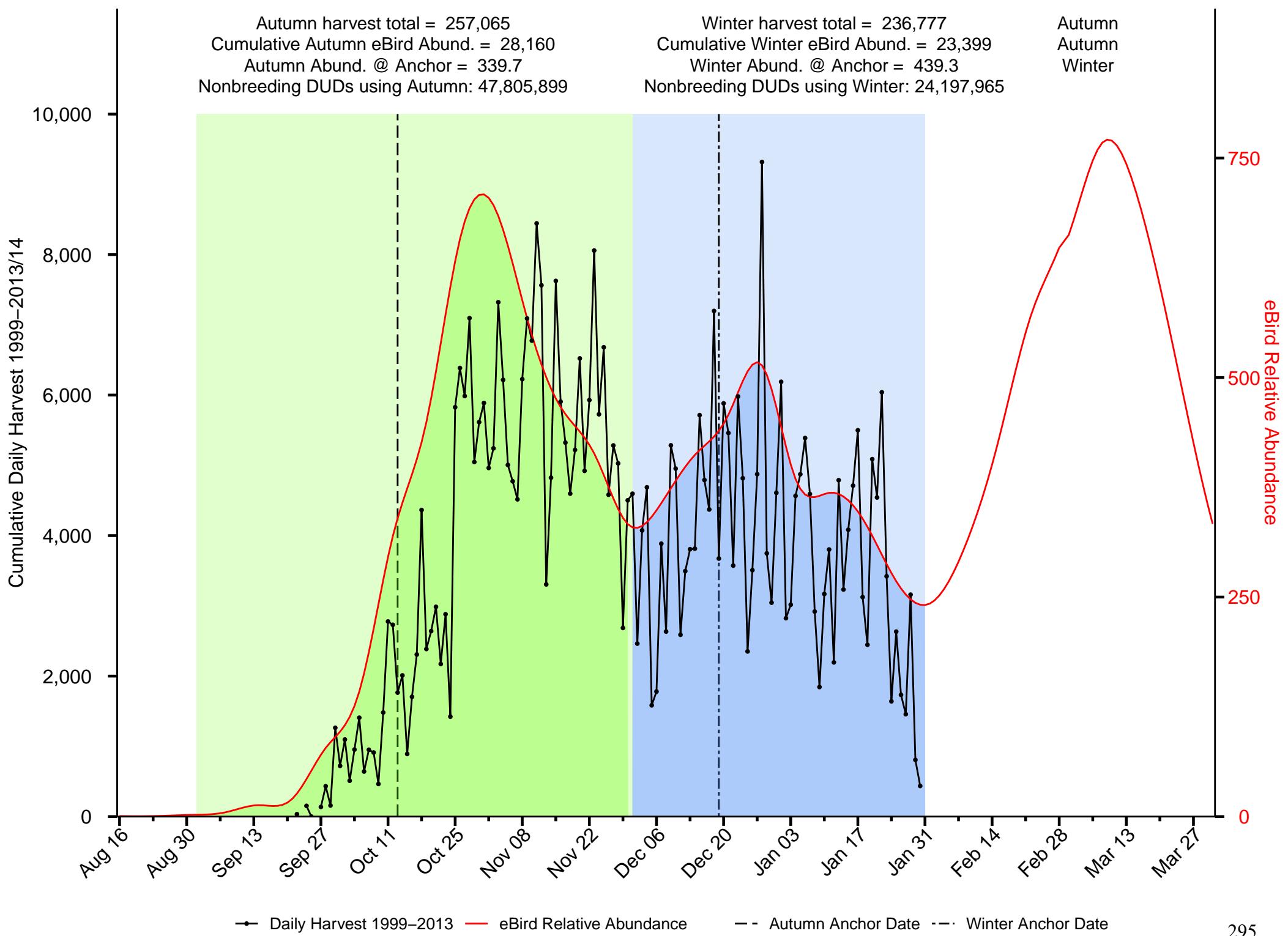
Summary of American Black Duck in the Playa Lakes JV



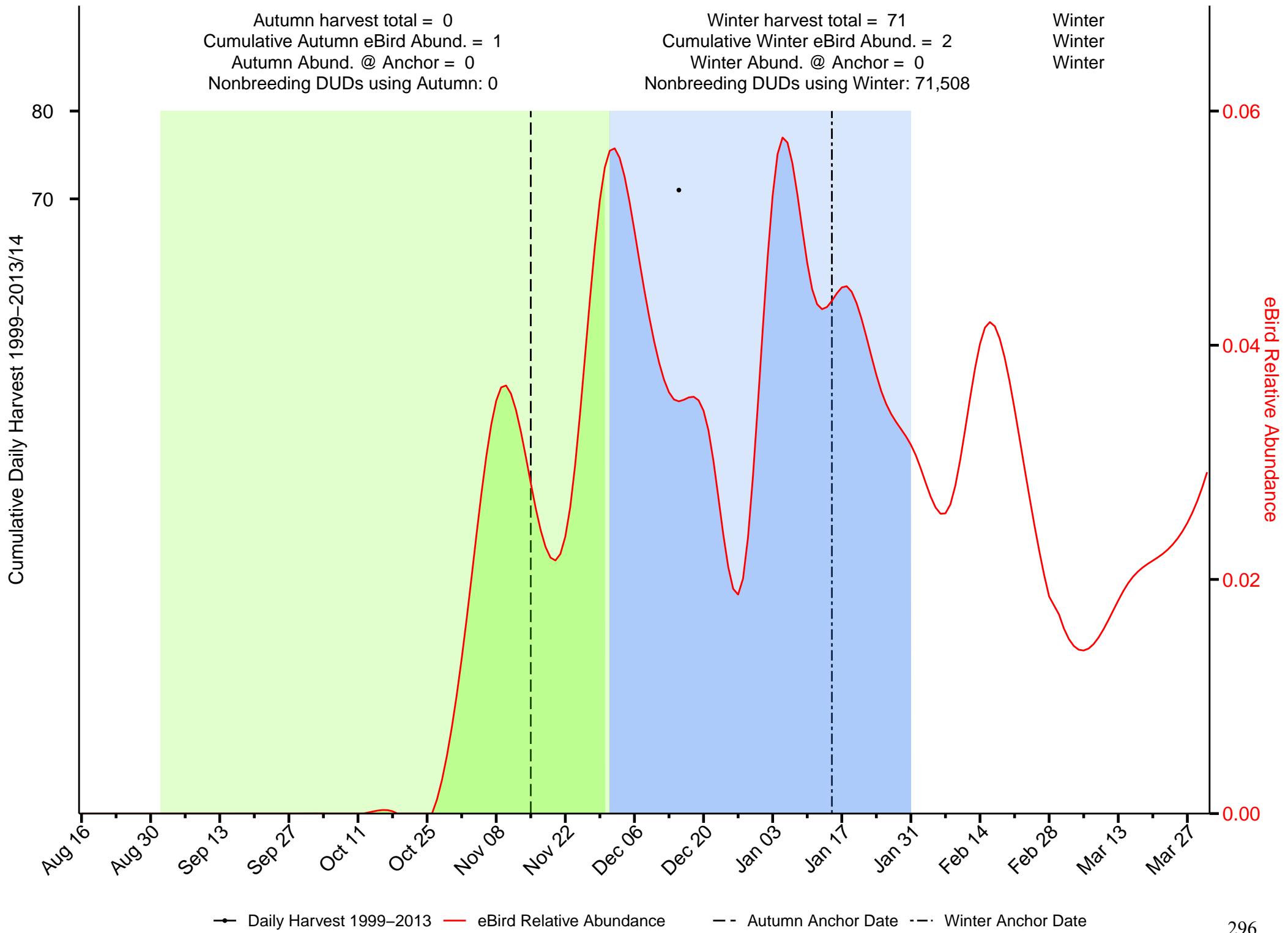
Summary of Green-winged Teal in the Playa Lakes JV



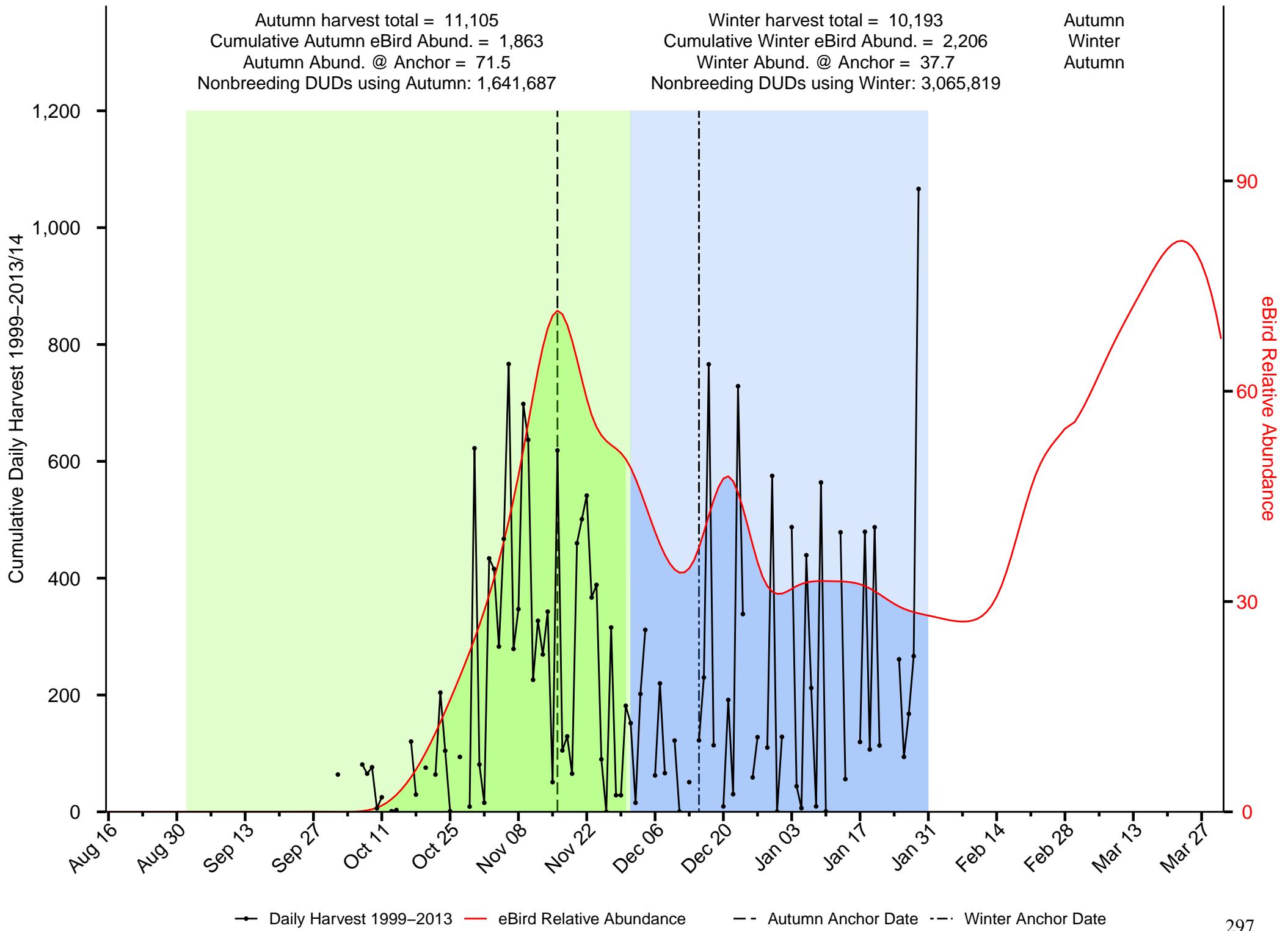
Summary of American Wigeon in the Playa Lakes JV



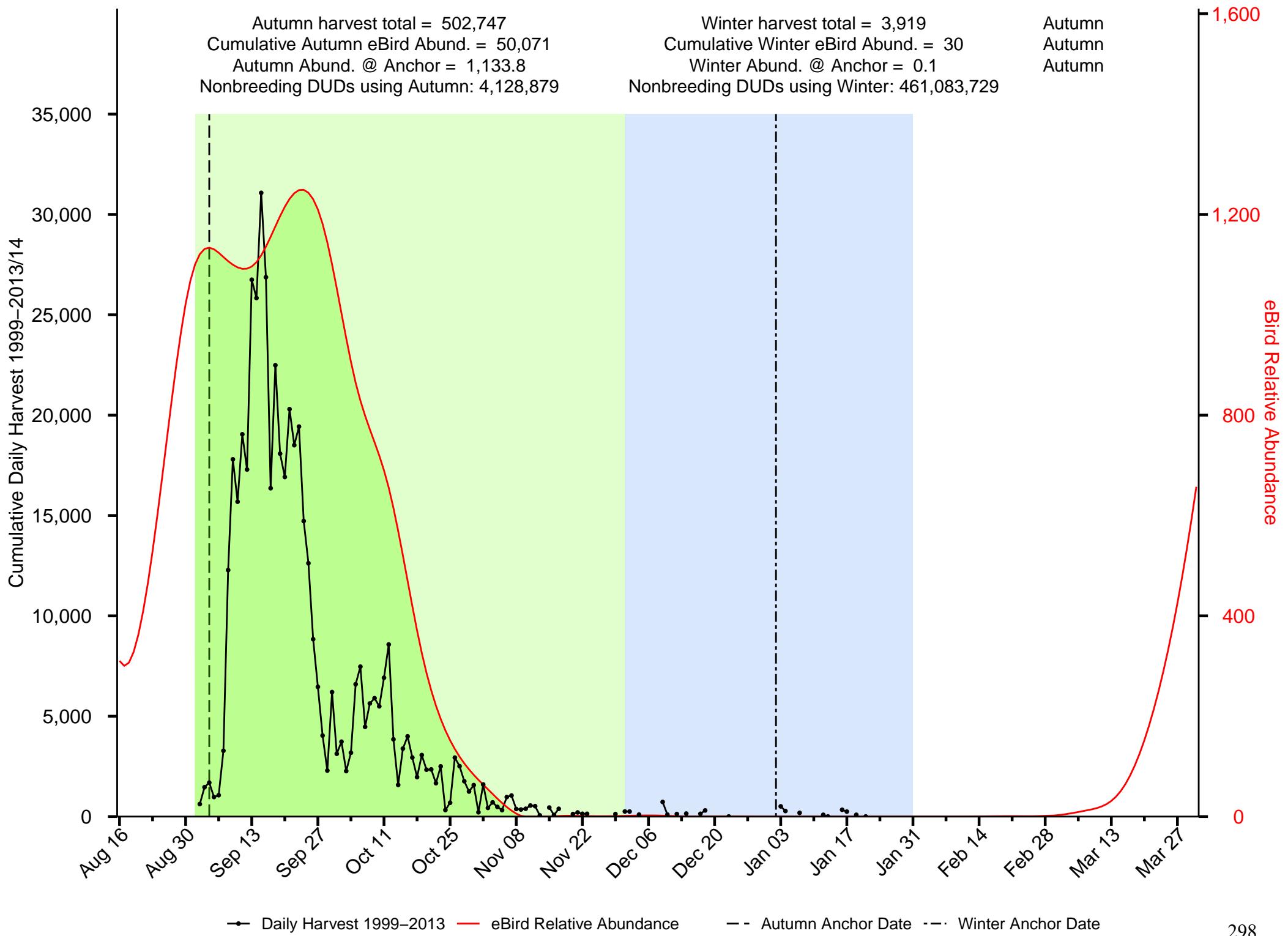
Summary of Barrow's Goldeneye in the Playa Lakes JV



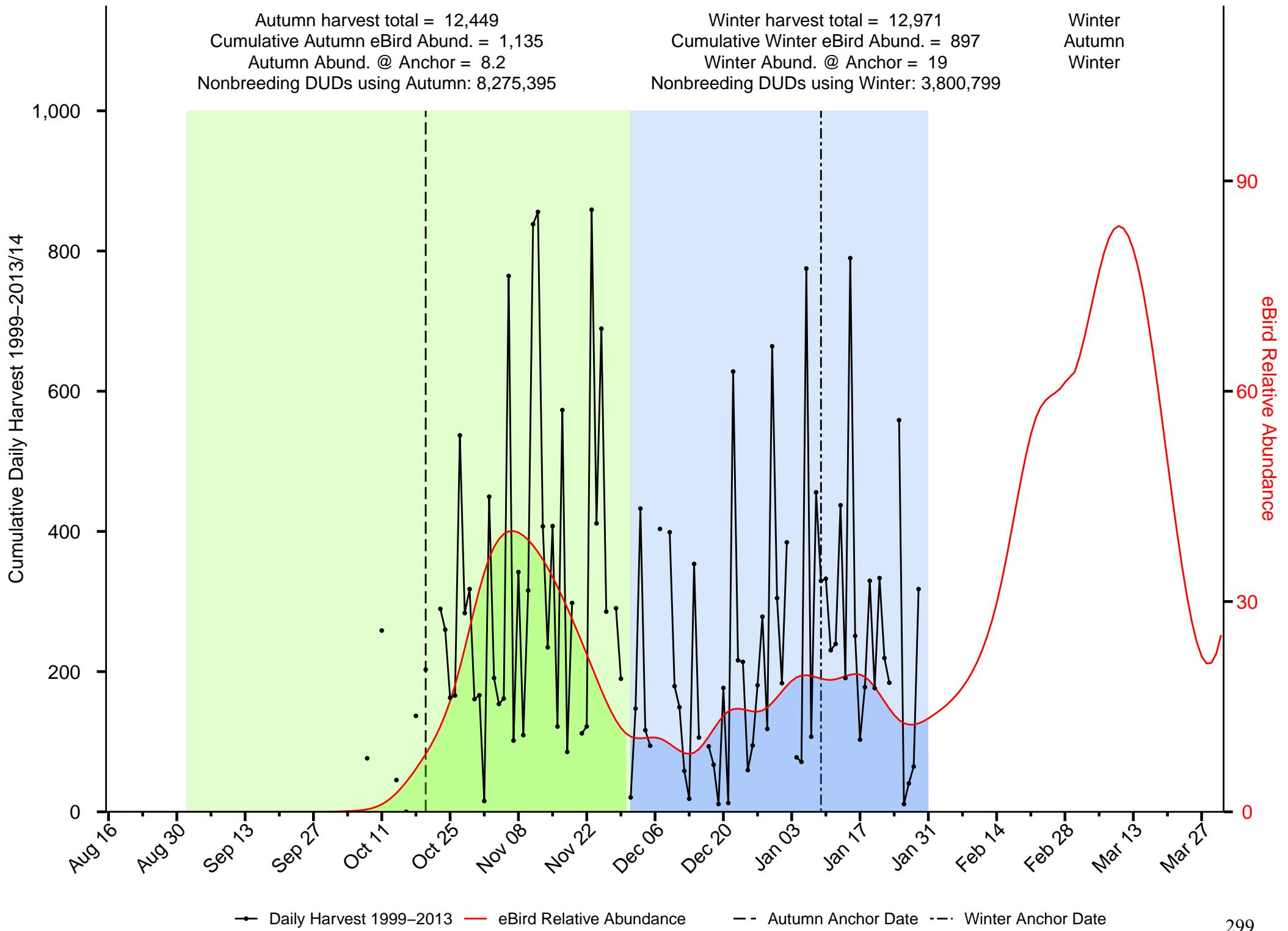
Summary of Bufflehead in the Playa Lakes JV



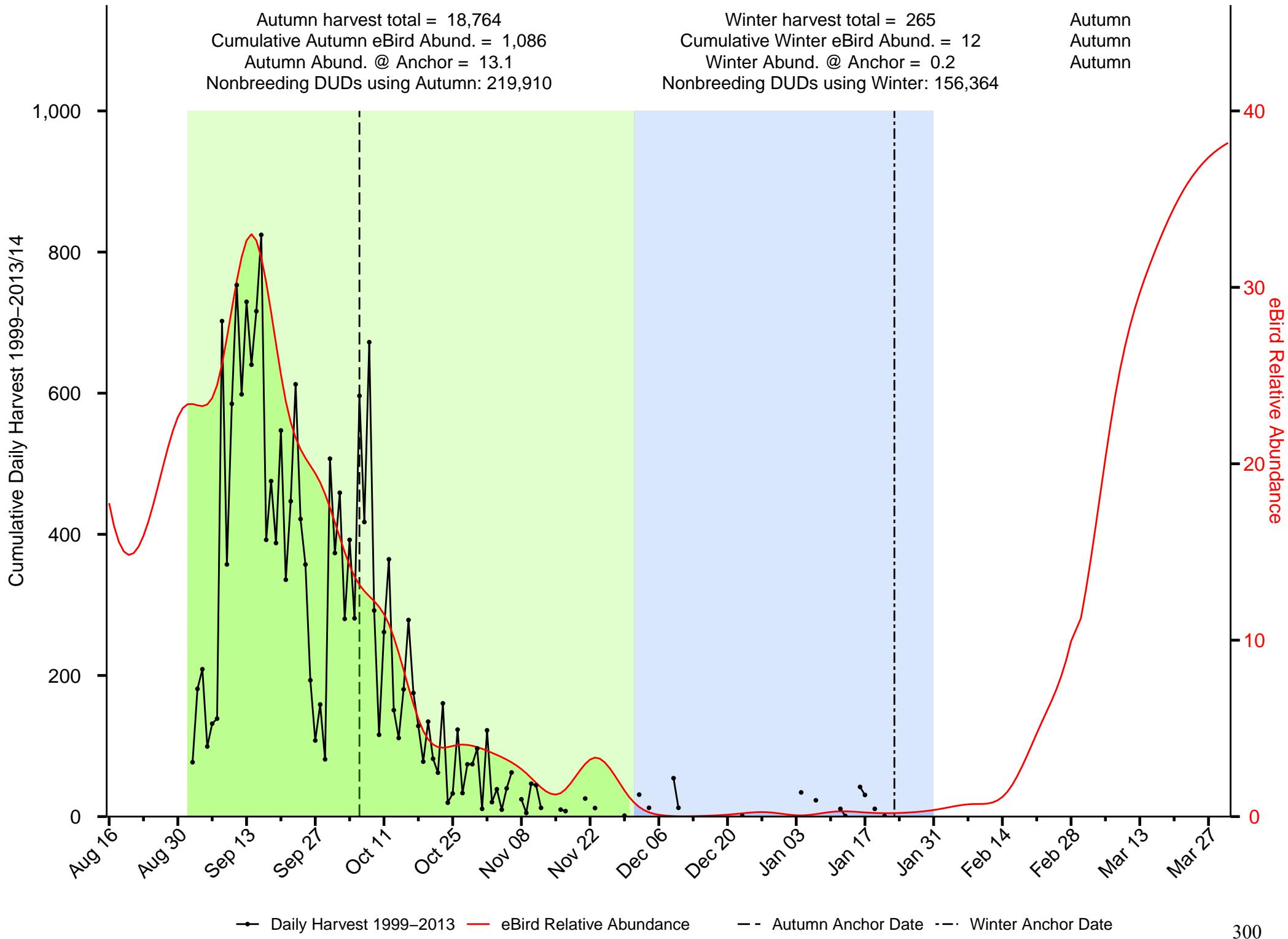
Summary of Blue-winged Teal in the Playa Lakes JV



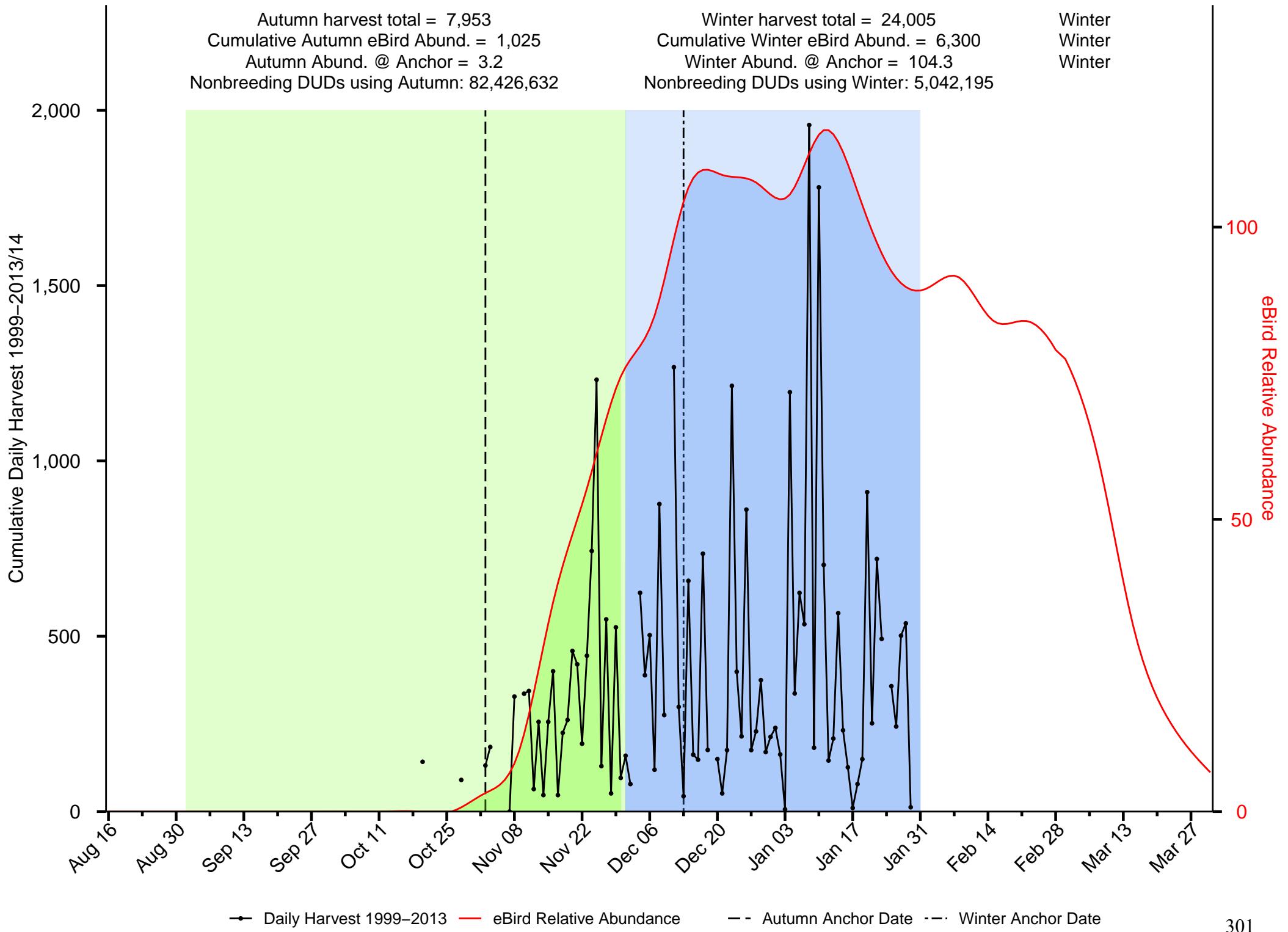
Summary of Canvasback in the Playa Lakes JV



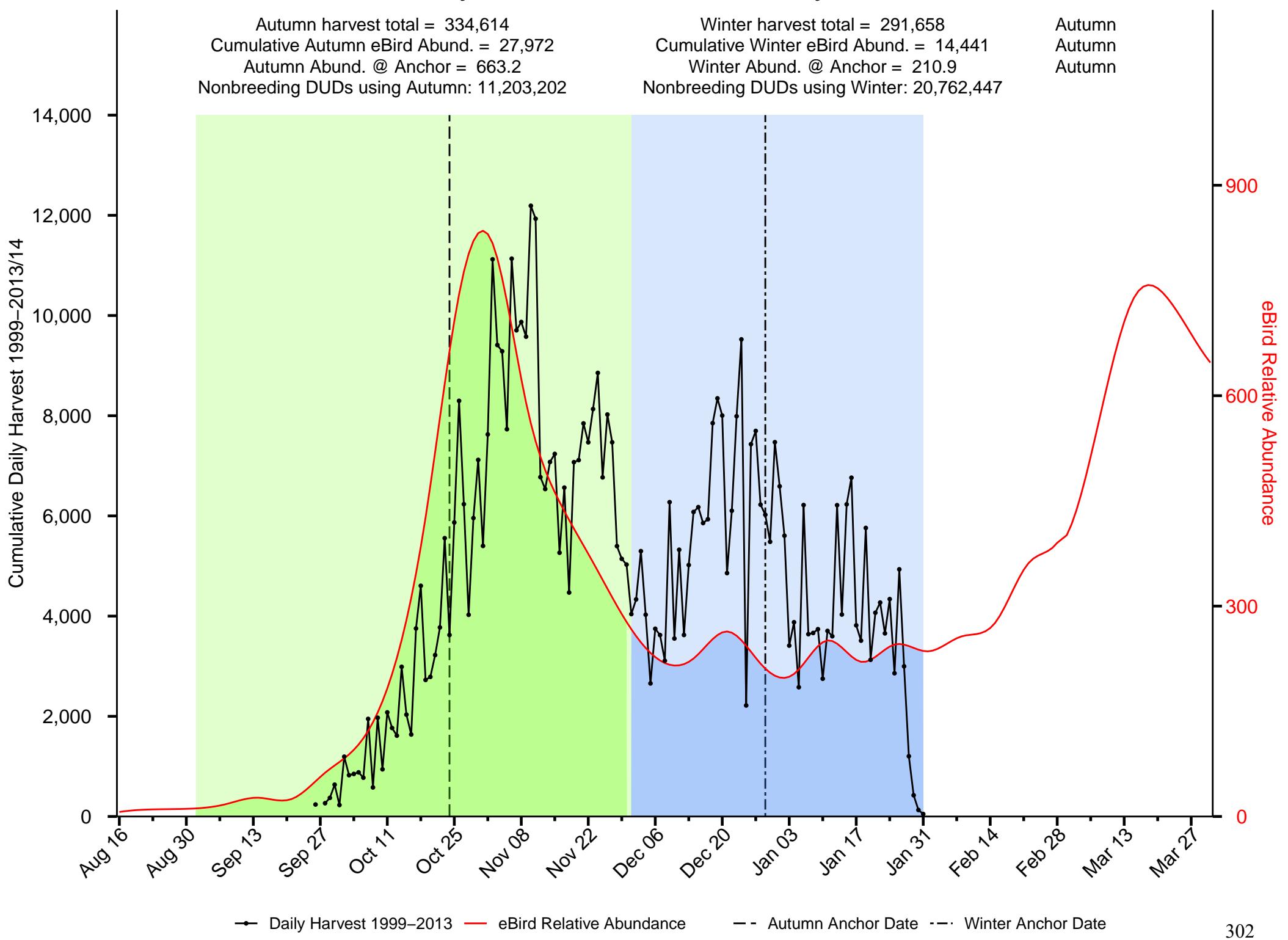
Summary of Cinnamon Teal in the Playa Lakes JV



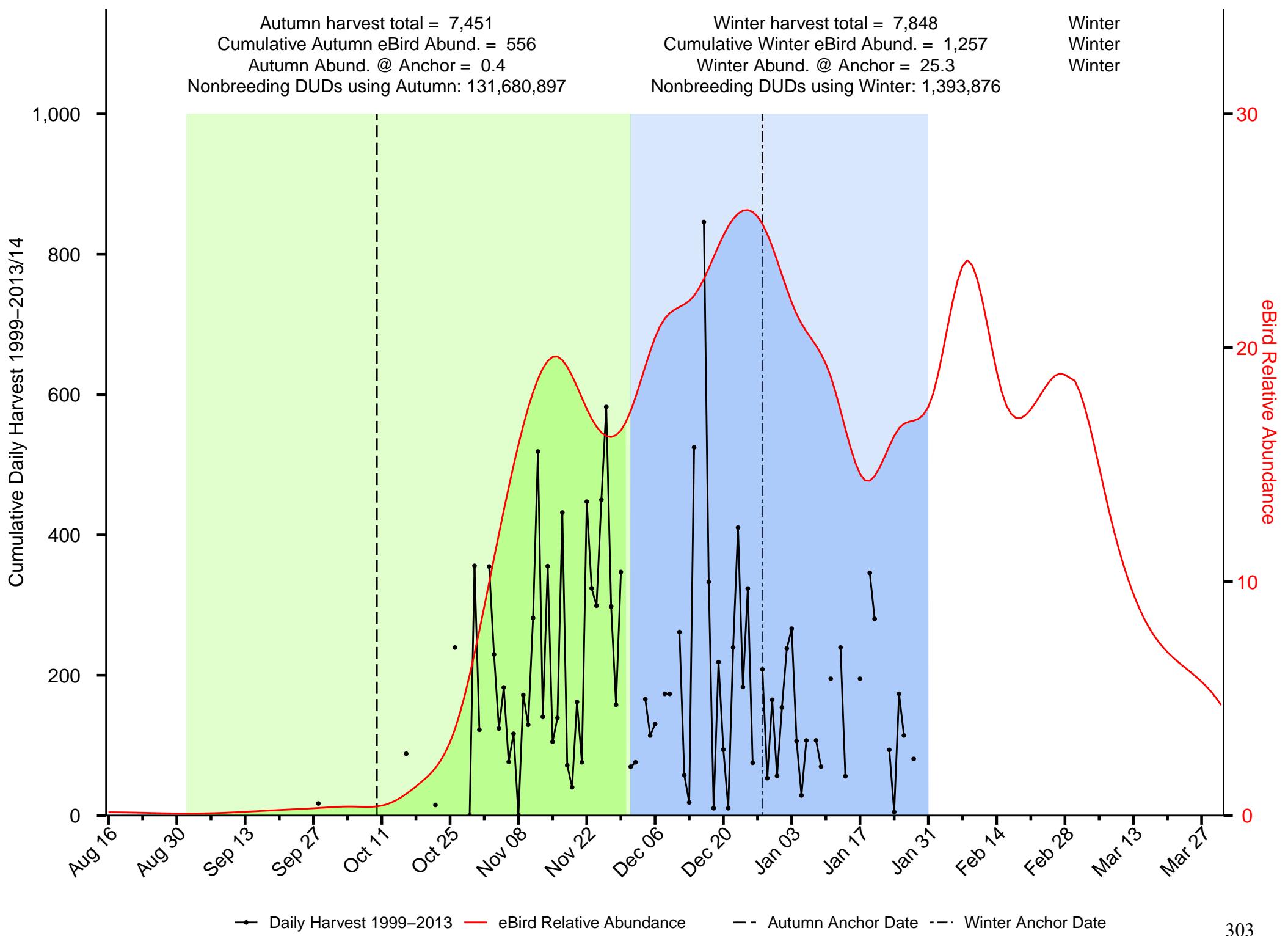
Summary of Common Goldeneye in the Playa Lakes JV



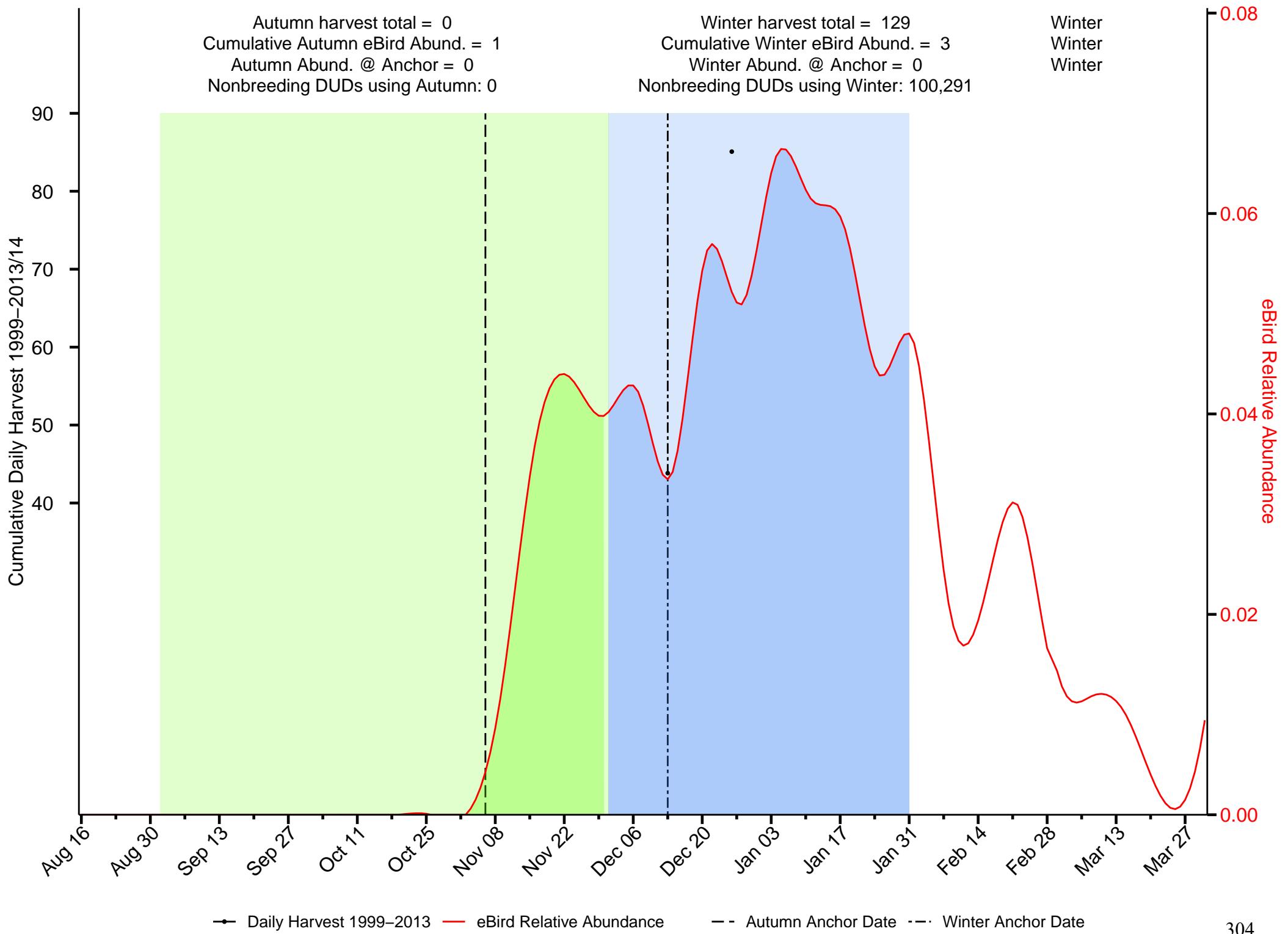
Summary of Gadwall in the Playa Lakes JV



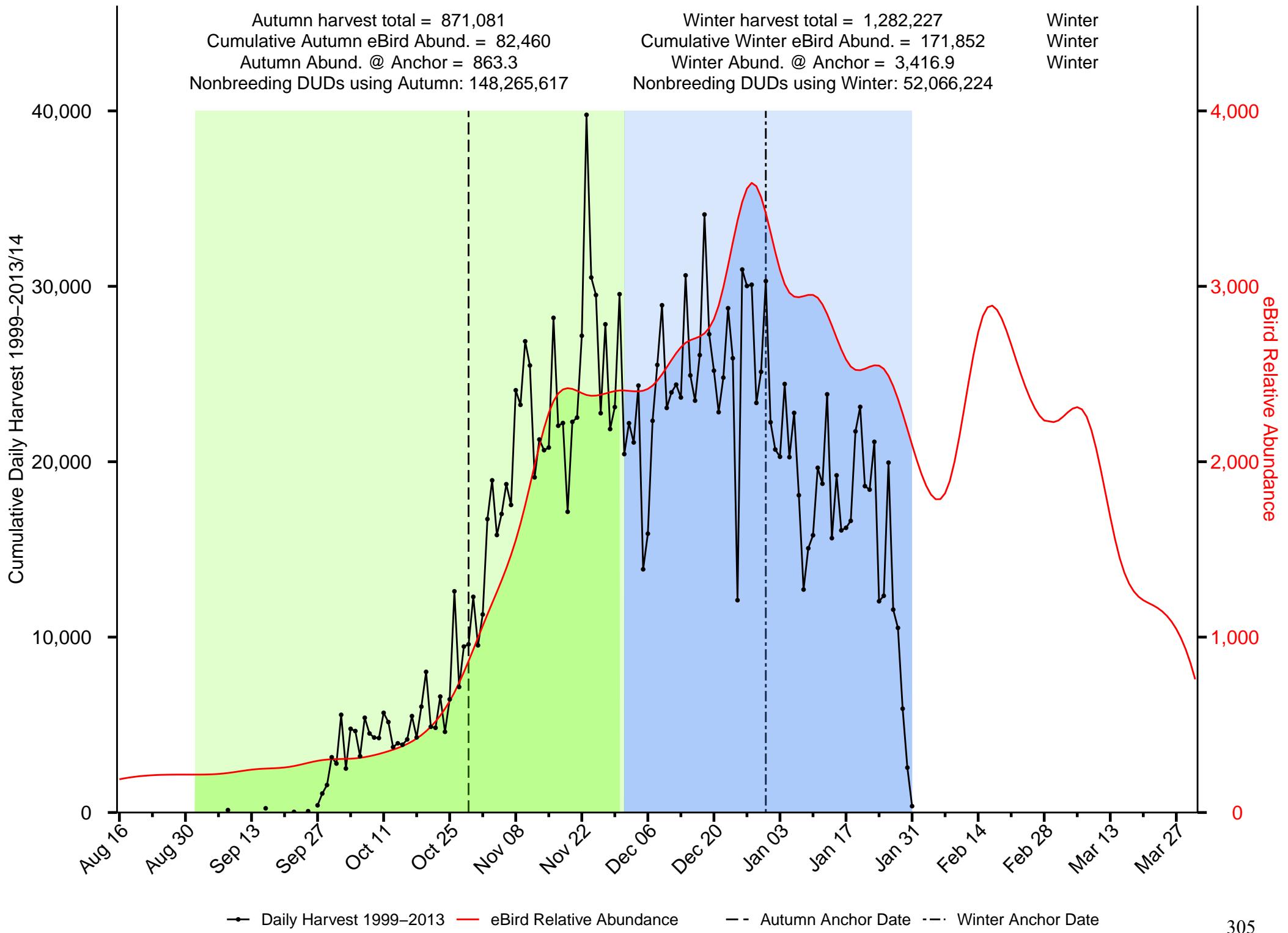
Summary of Hooded Merganser in the Playa Lakes JV



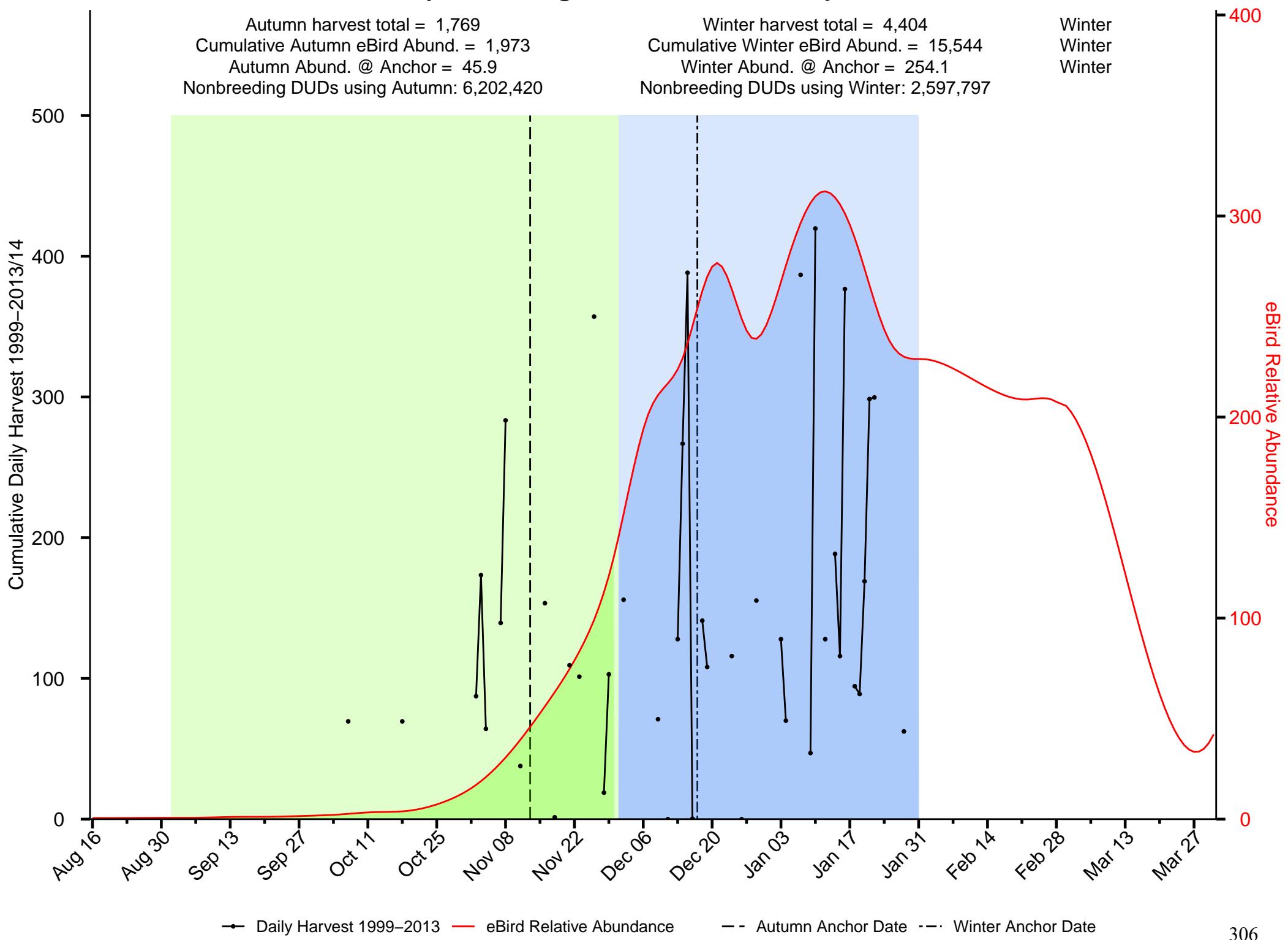
Summary of Long-tailed Duck in the Playa Lakes JV



Summary of Mallard in the Playa Lakes JV



Summary of Merganser in the Playa Lakes JV

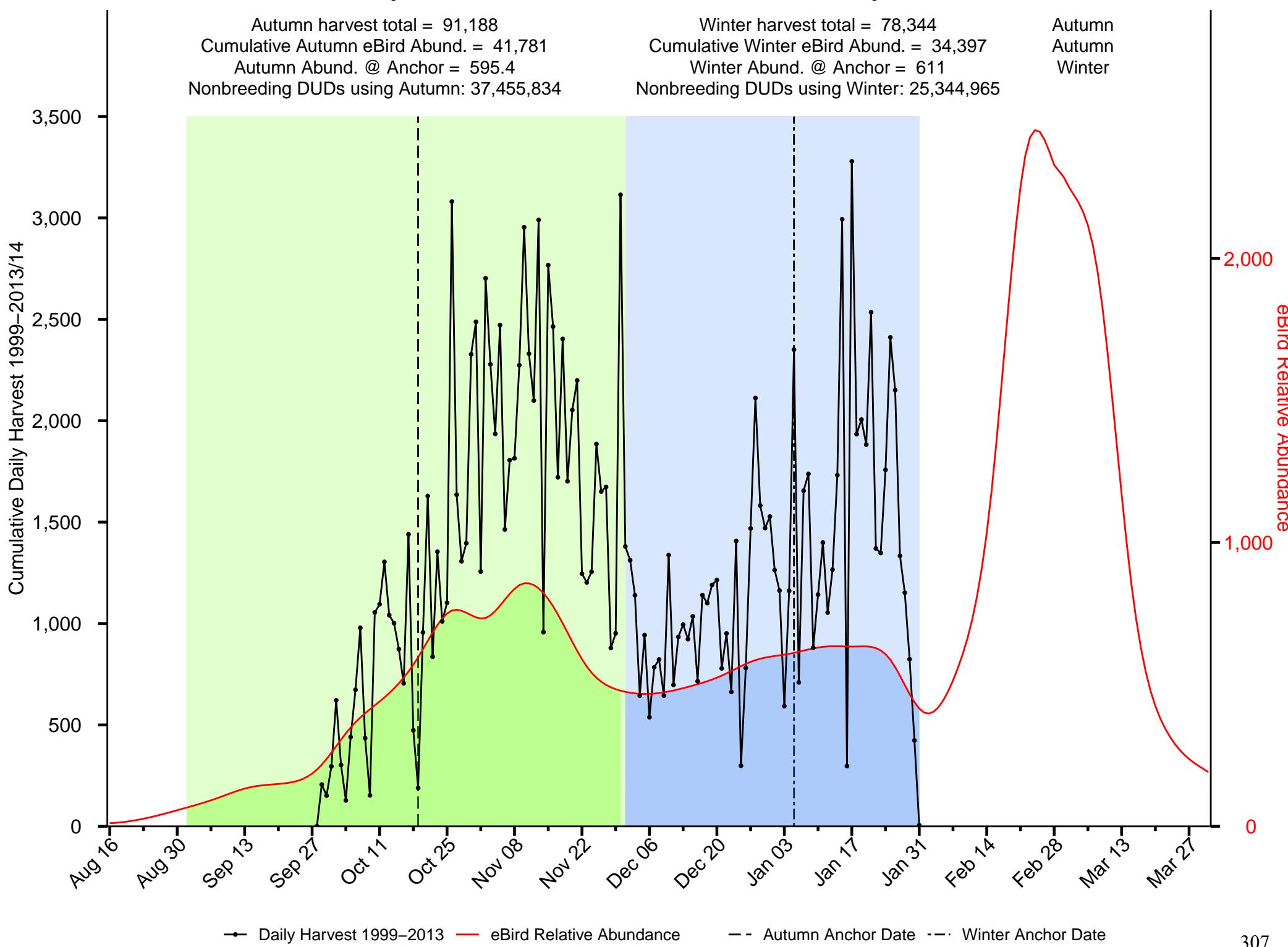


Summary of Northern Pintail in the Playa Lakes JV

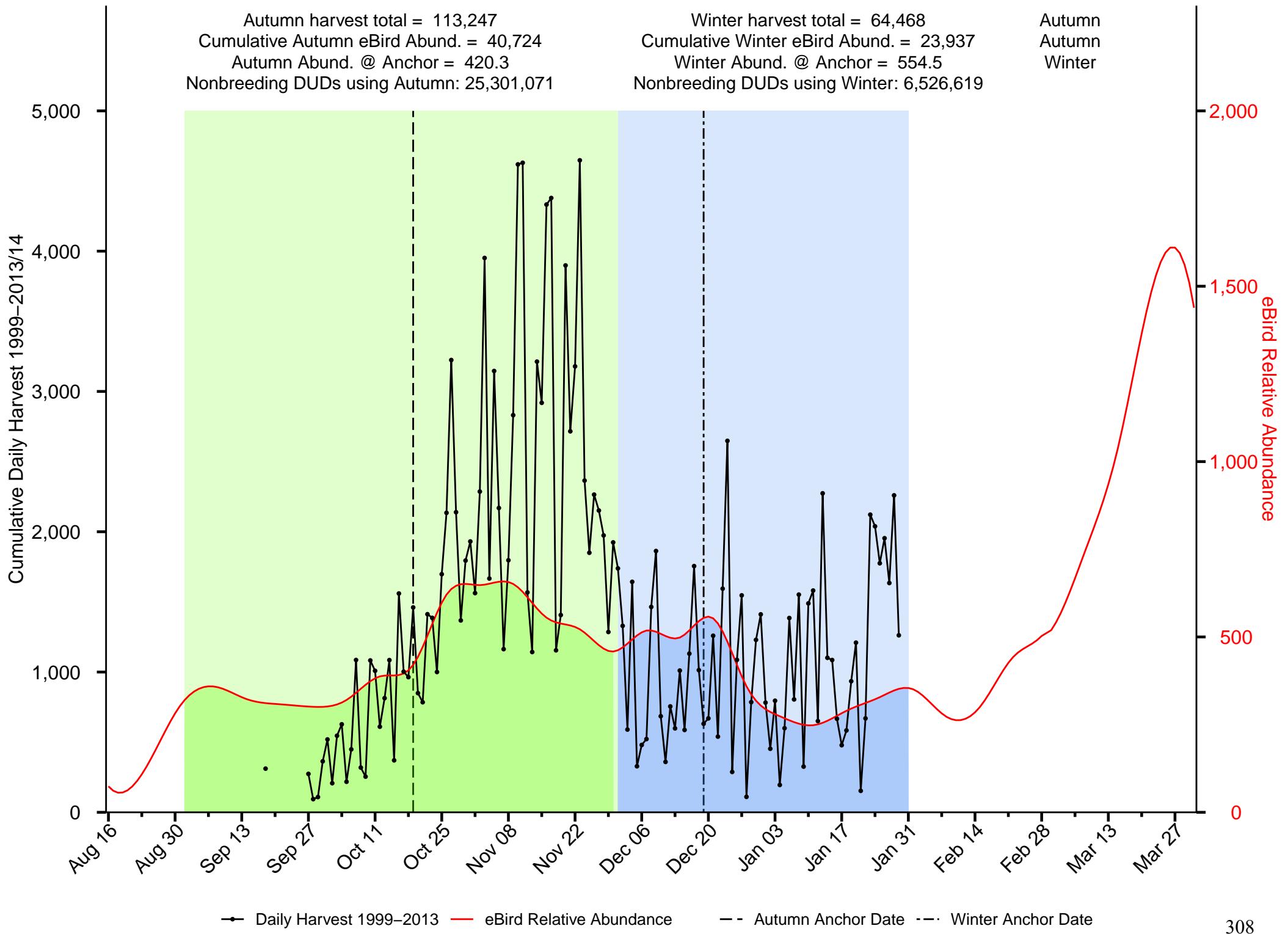
Autumn harvest total = 91,188
 Cumulative Autumn eBird Abund. = 41,781
 Autumn Abund. @ Anchor = 595.4
 Nonbreeding DUDs using Autumn: 37,455,834

Winter harvest total = 78,344
 Cumulative Winter eBird Abund. = 34,397
 Winter Abund. @ Anchor = 611
 Nonbreeding DUDs using Winter: 25,344,965

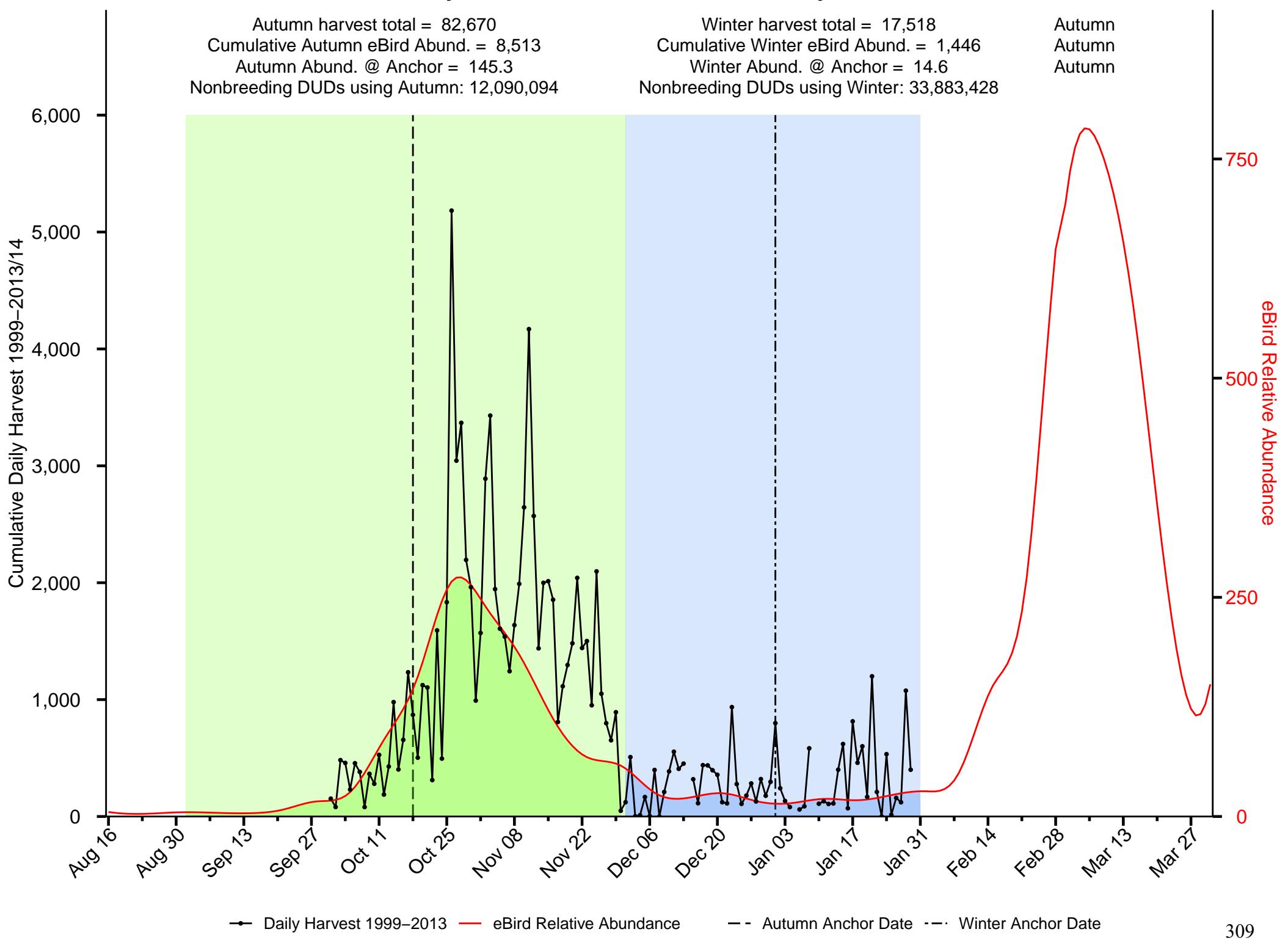
Autumn
 Autumn
 Winter



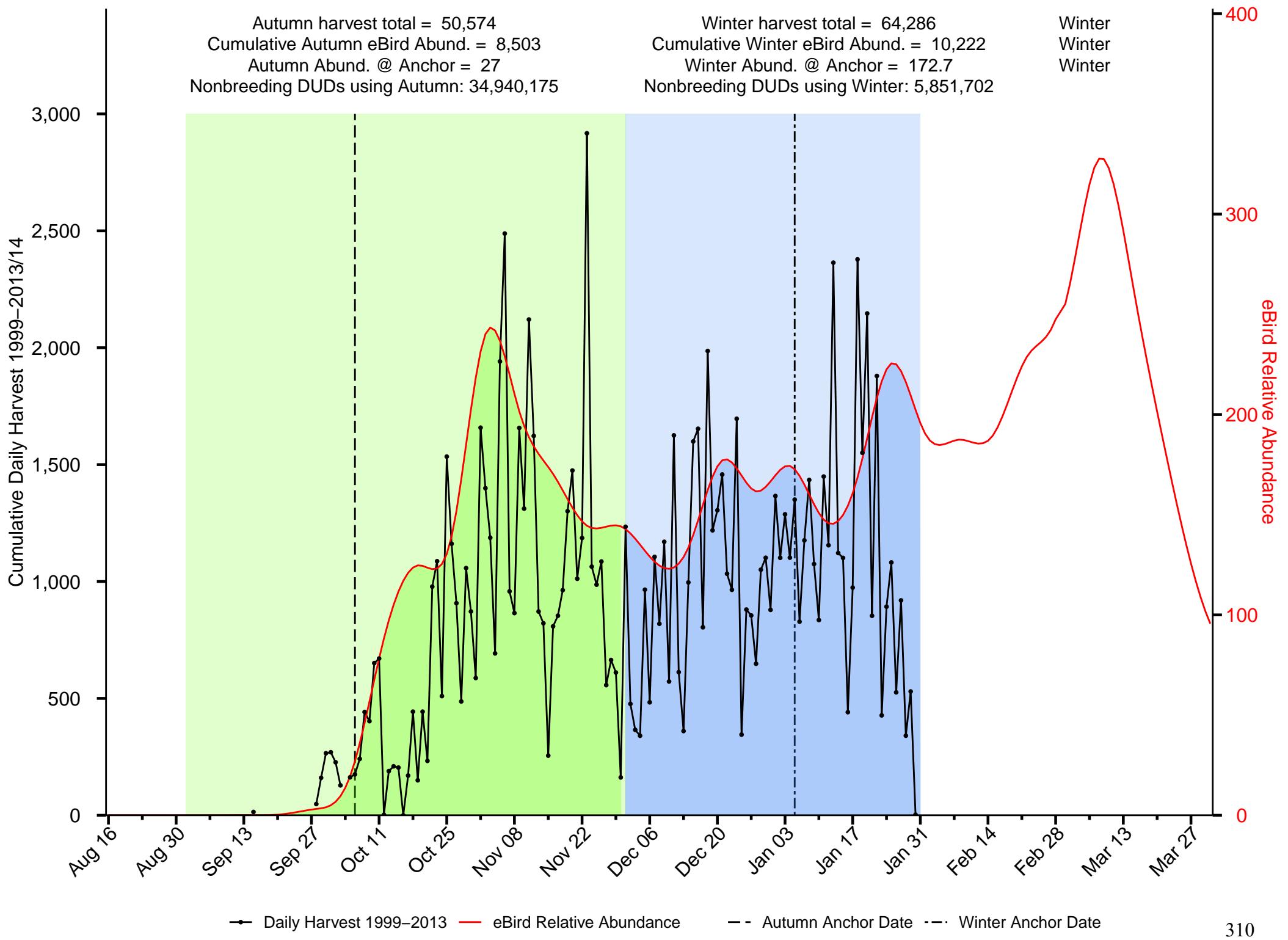
Summary of Northern Shoveler in the Playa Lakes JV



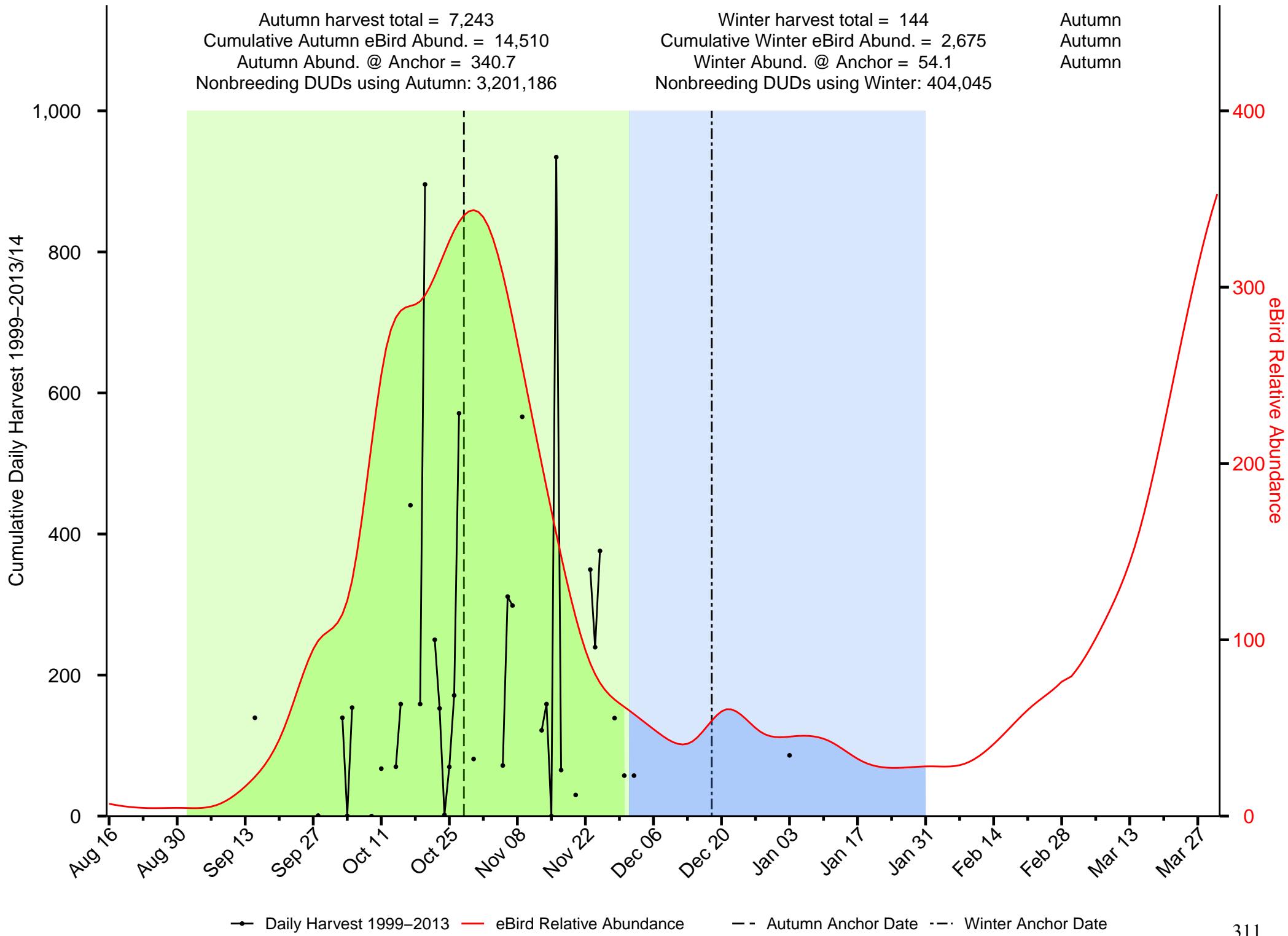
Summary of Redhead in the Playa Lakes JV



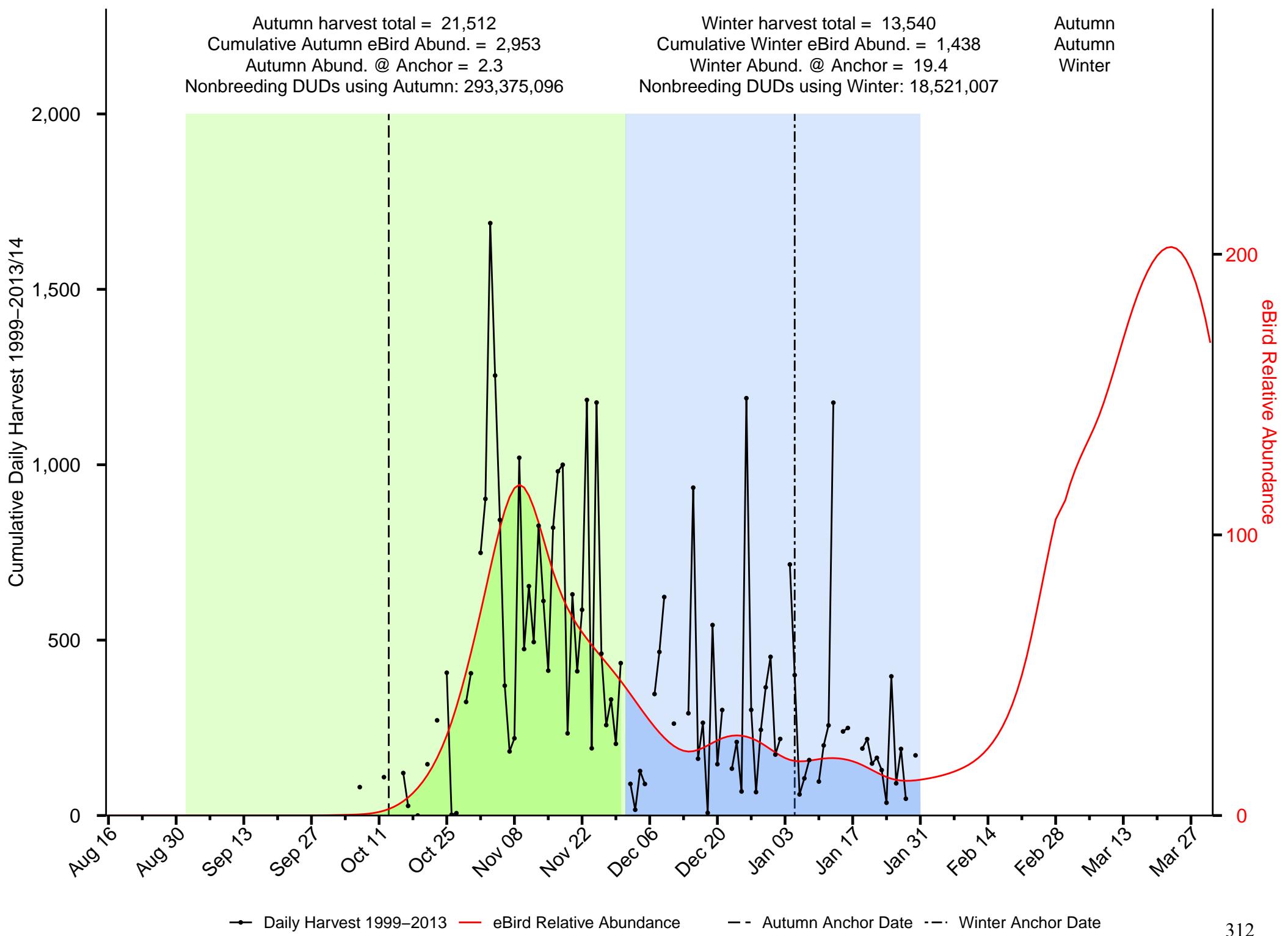
Summary of Ring-necked Duck in the Playa Lakes JV



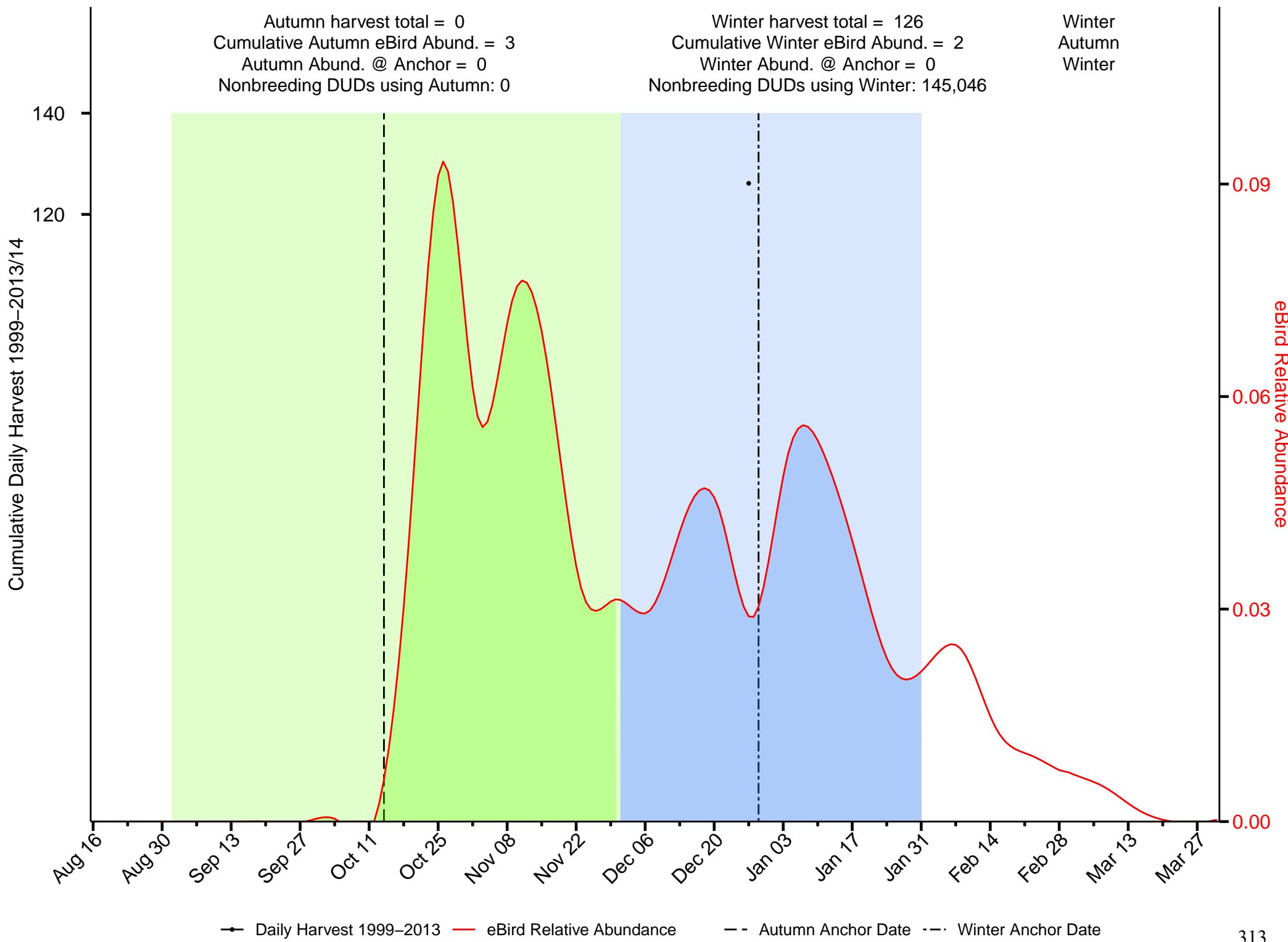
Summary of Ruddy Duck in the Playa Lakes JV



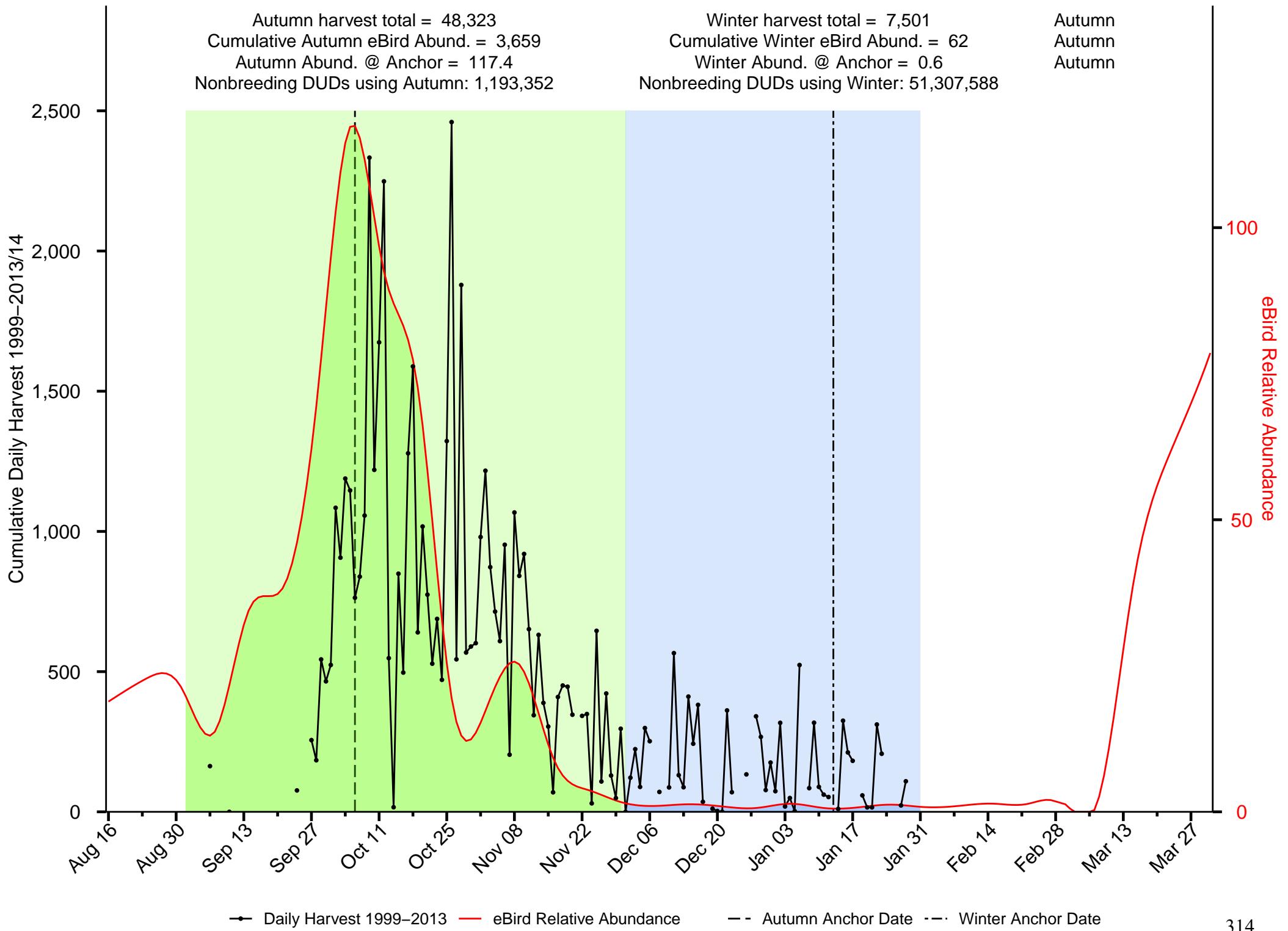
Summary of Scaup in the Playa Lakes JV



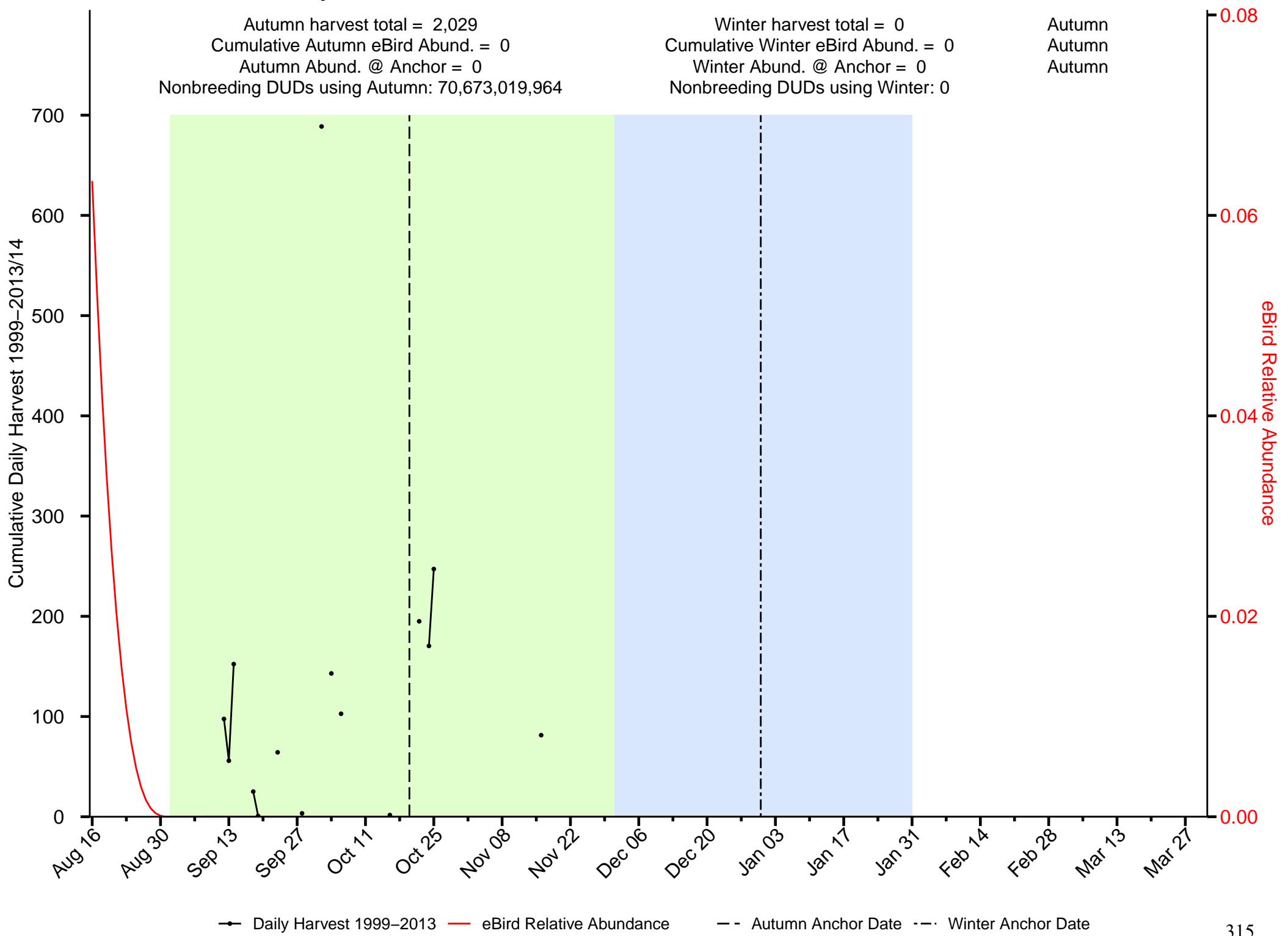
Summary of Scoter in the Playa Lakes JV



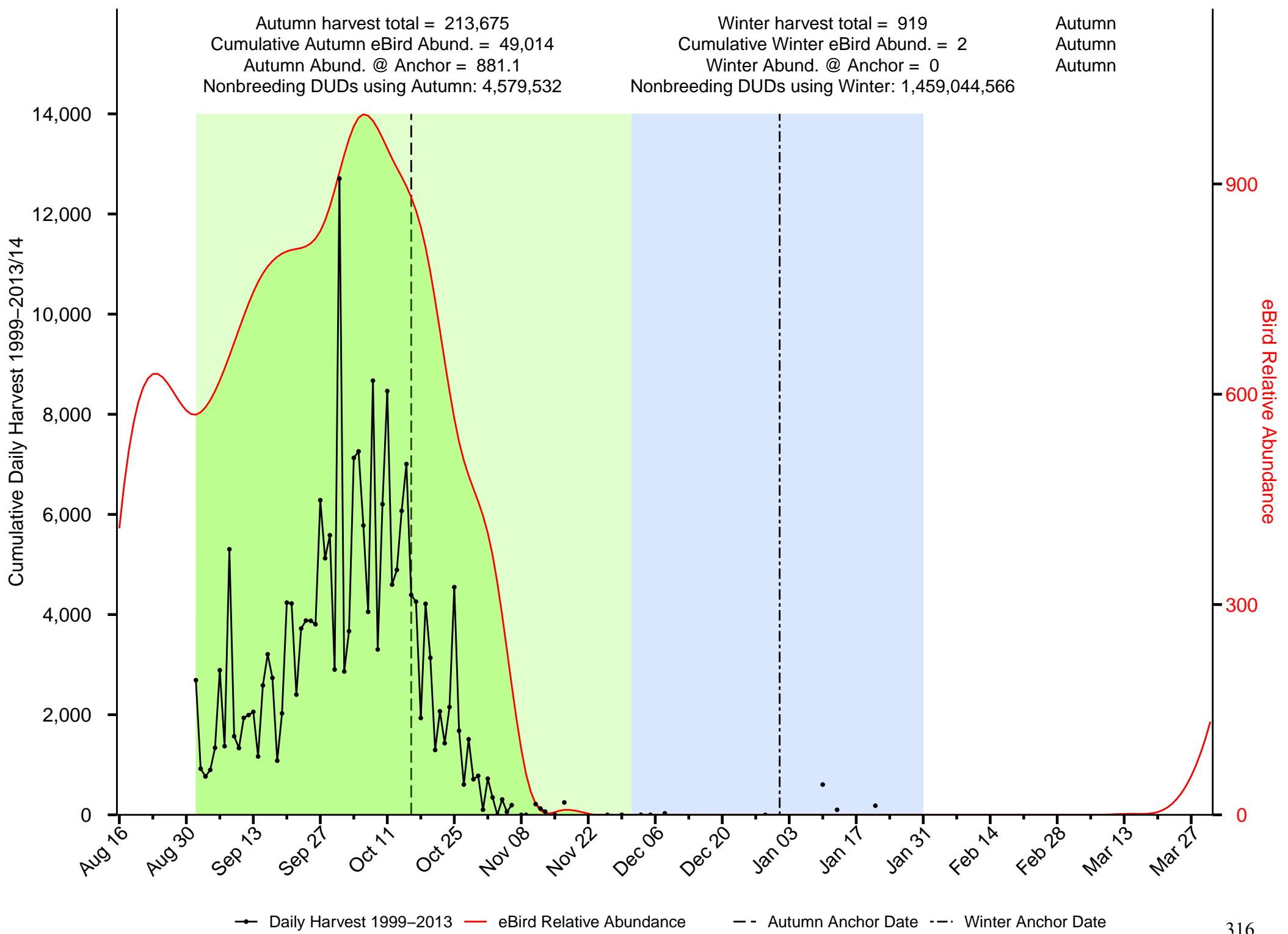
Summary of Wood Duck in the Playa Lakes JV



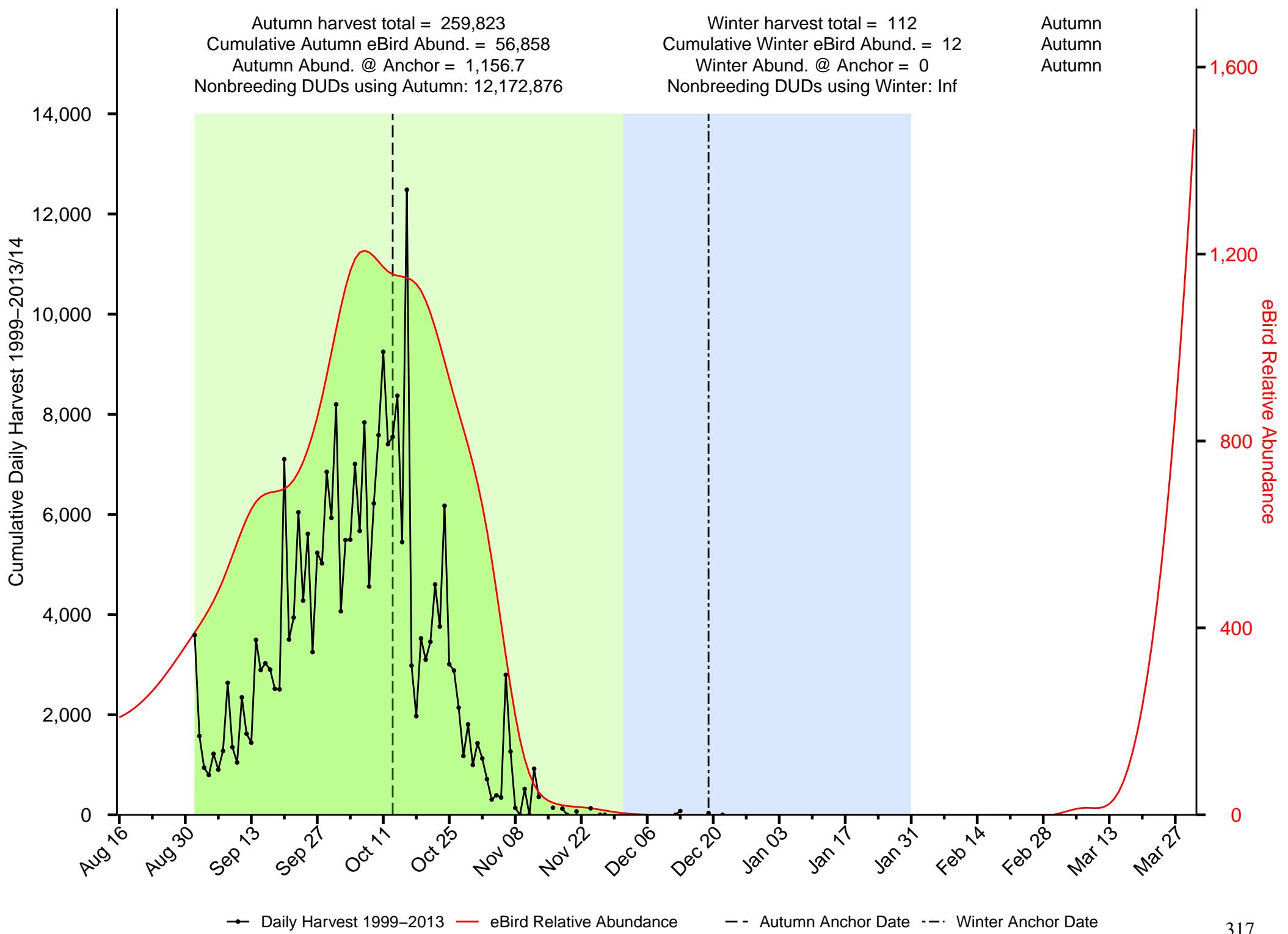
Summary of American Black Duck in the Prairie Habitat JV



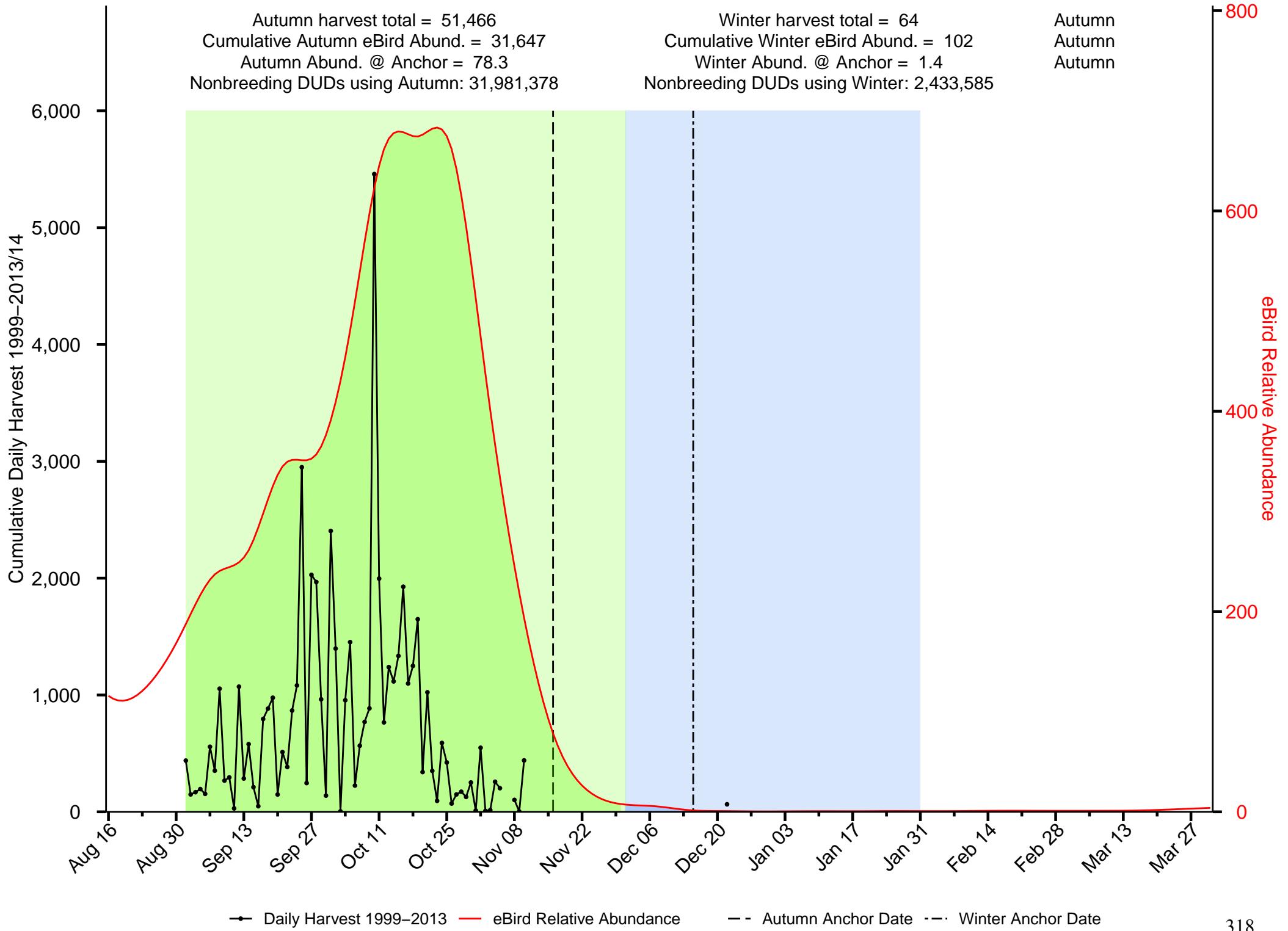
Summary of Green-winged Teal in the Prairie Habitat JV



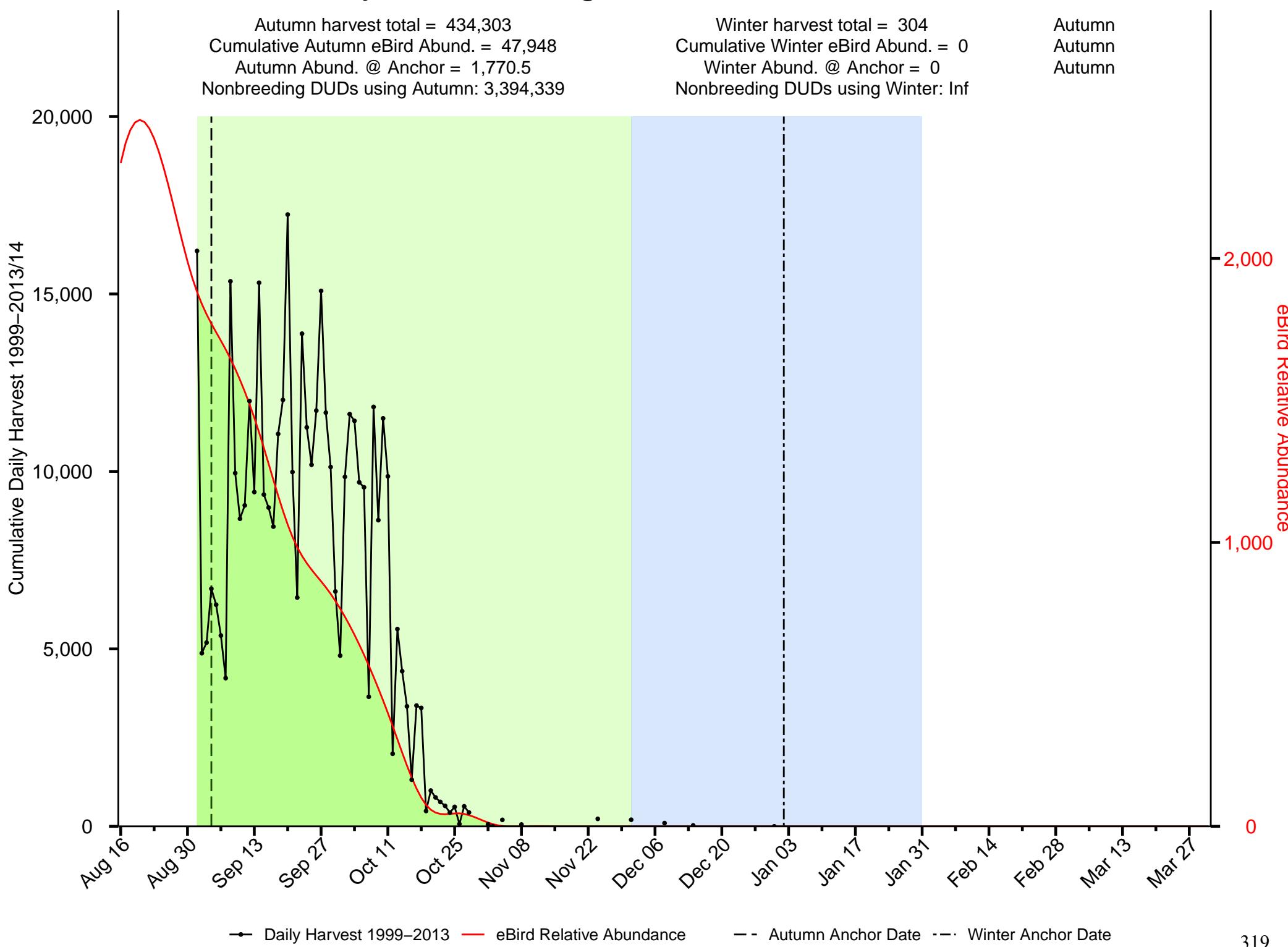
Summary of American Wigeon in the Prairie Habitat JV



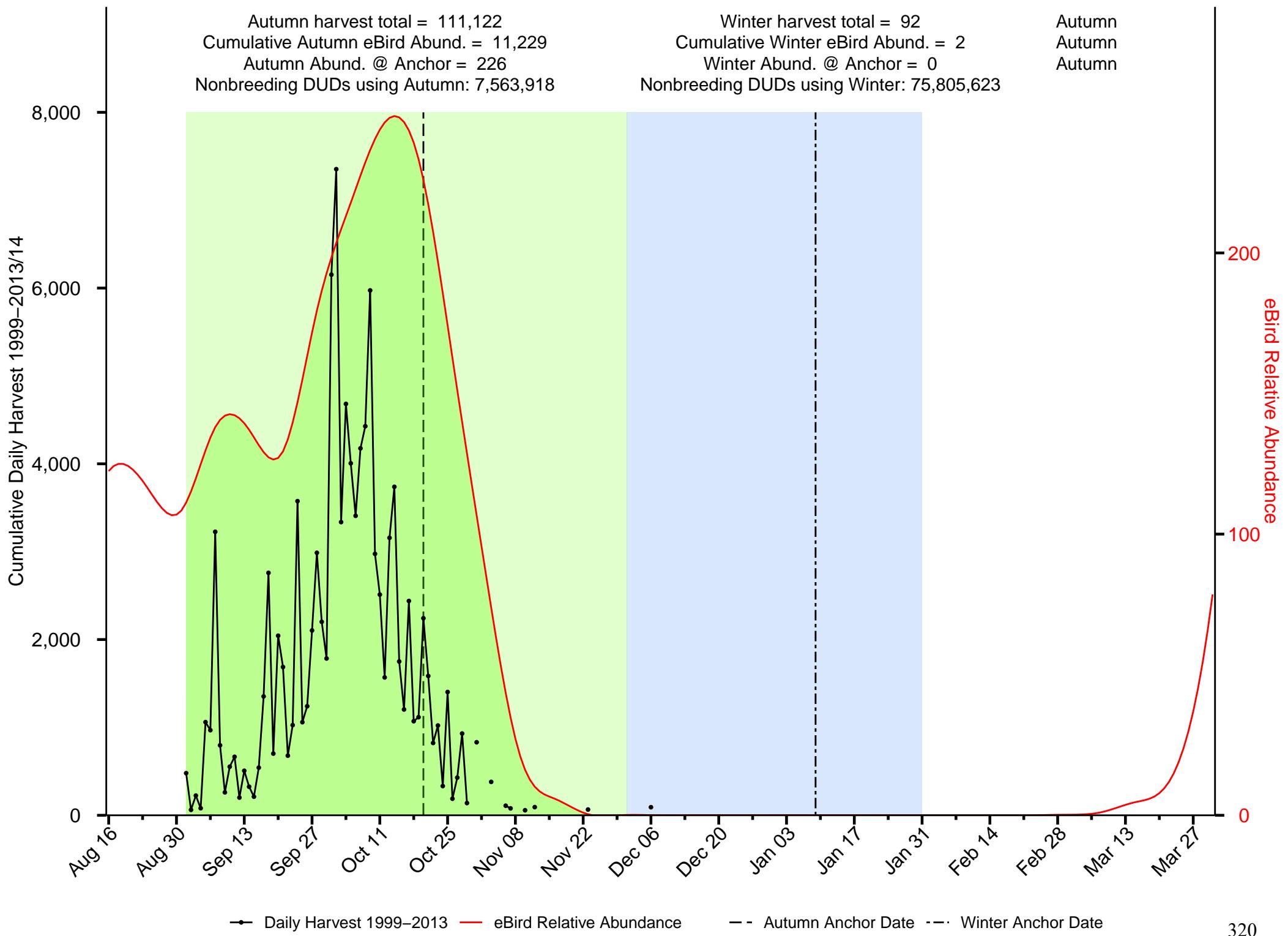
Summary of Bufflehead in the Prairie Habitat JV



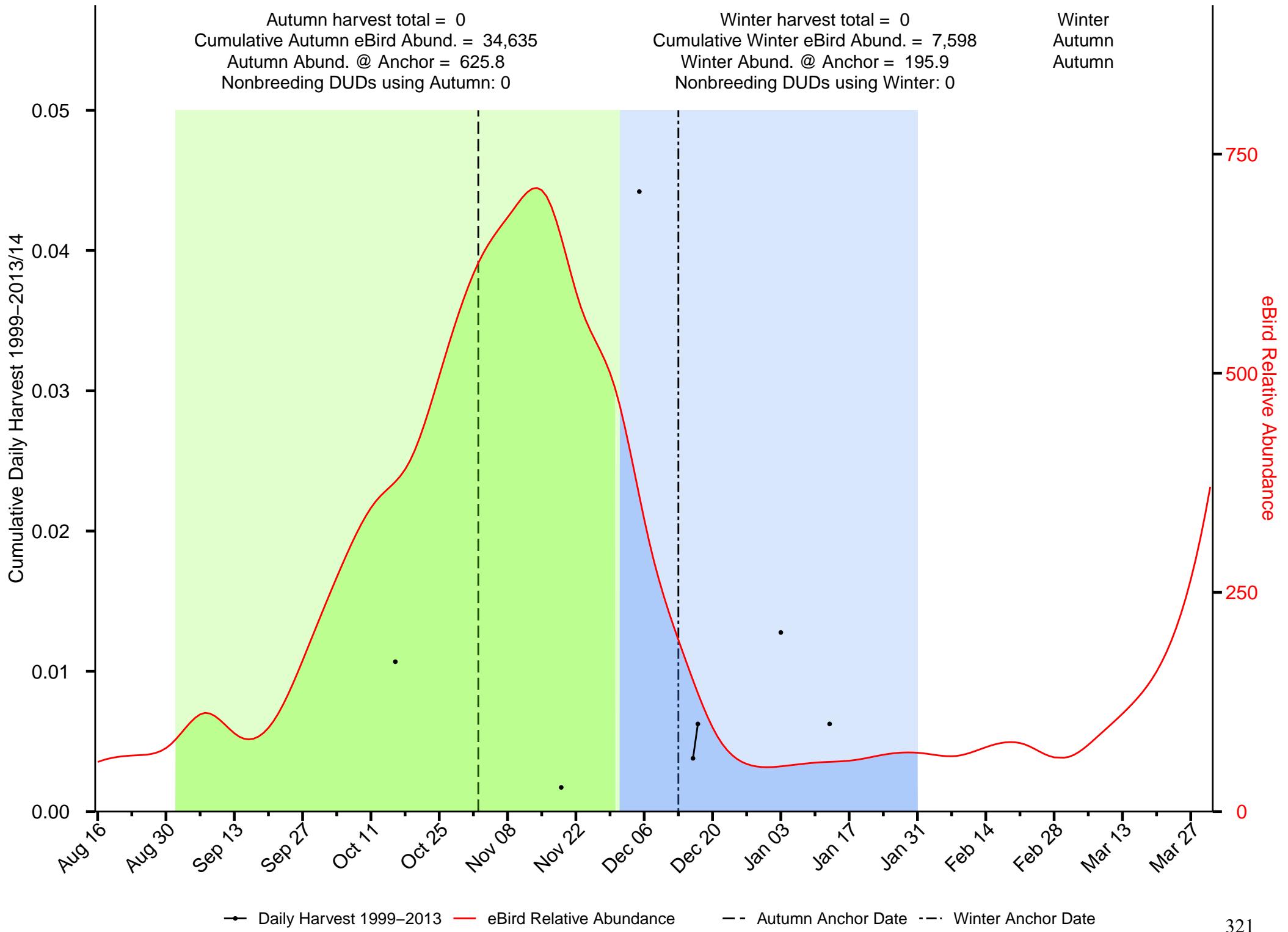
Summary of Blue-winged Teal in the Prairie Habitat JV



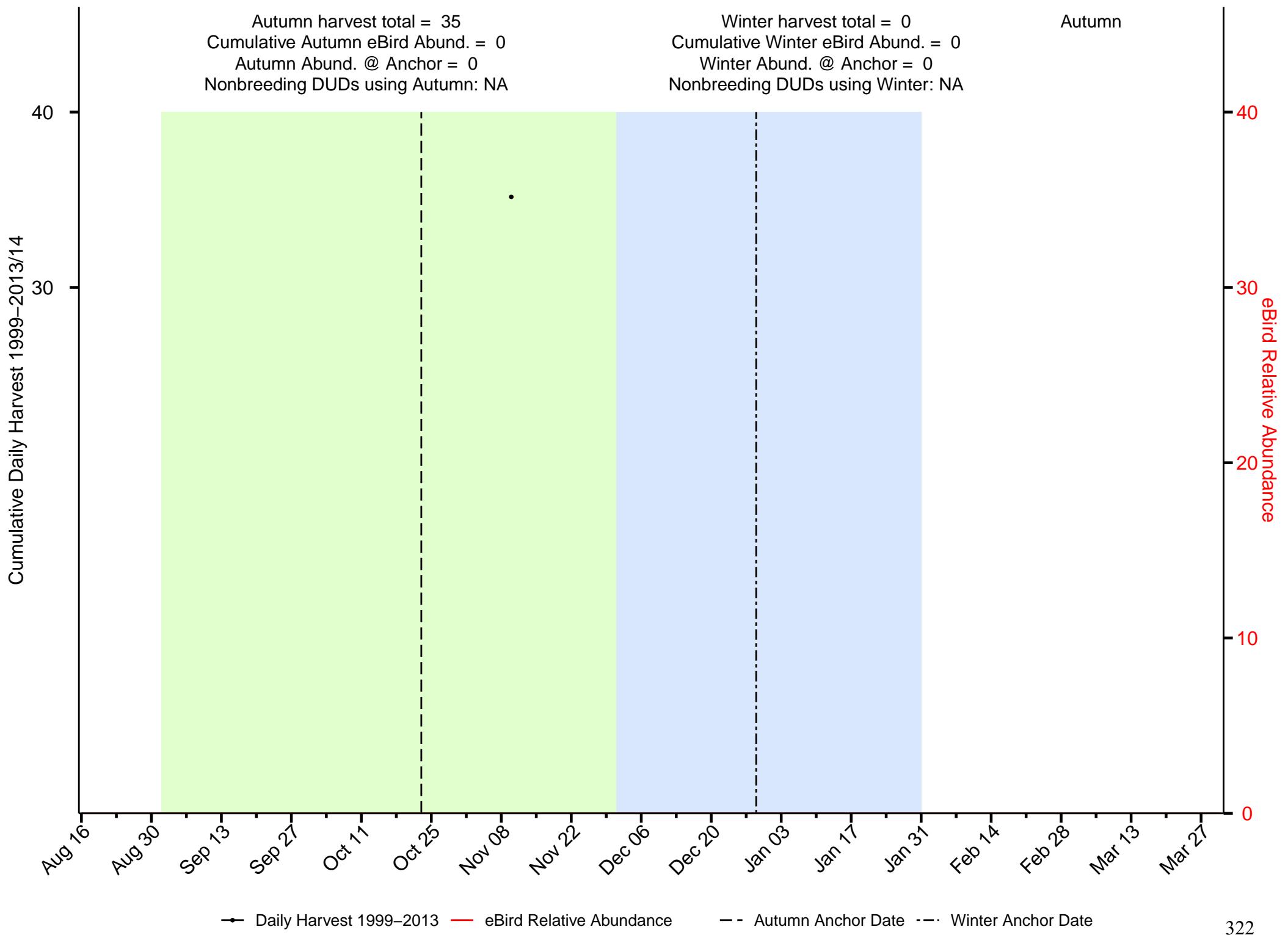
Summary of Canvasback in the Prairie Habitat JV



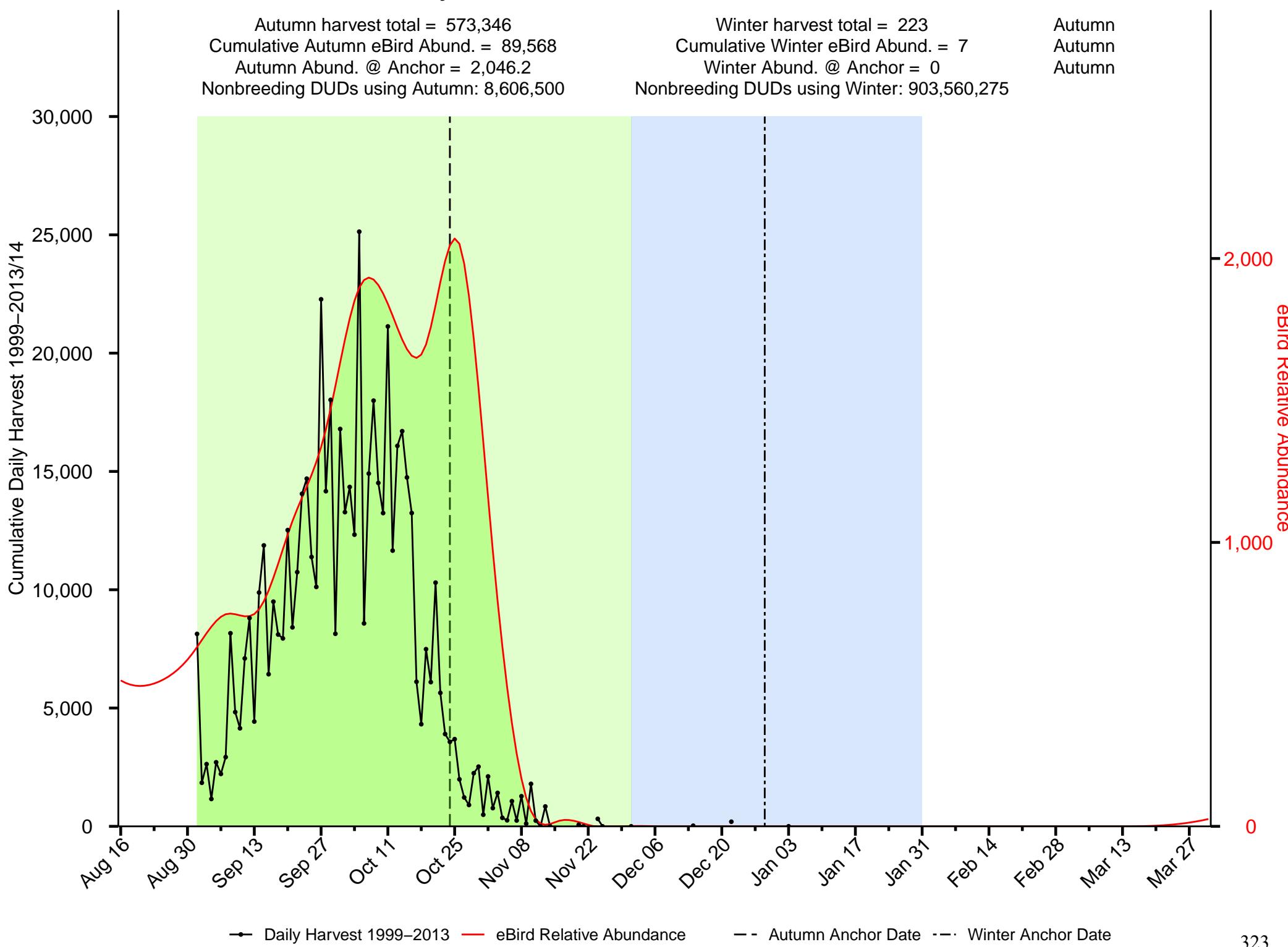
Summary of Common Goldeneye in the Prairie Habitat JV



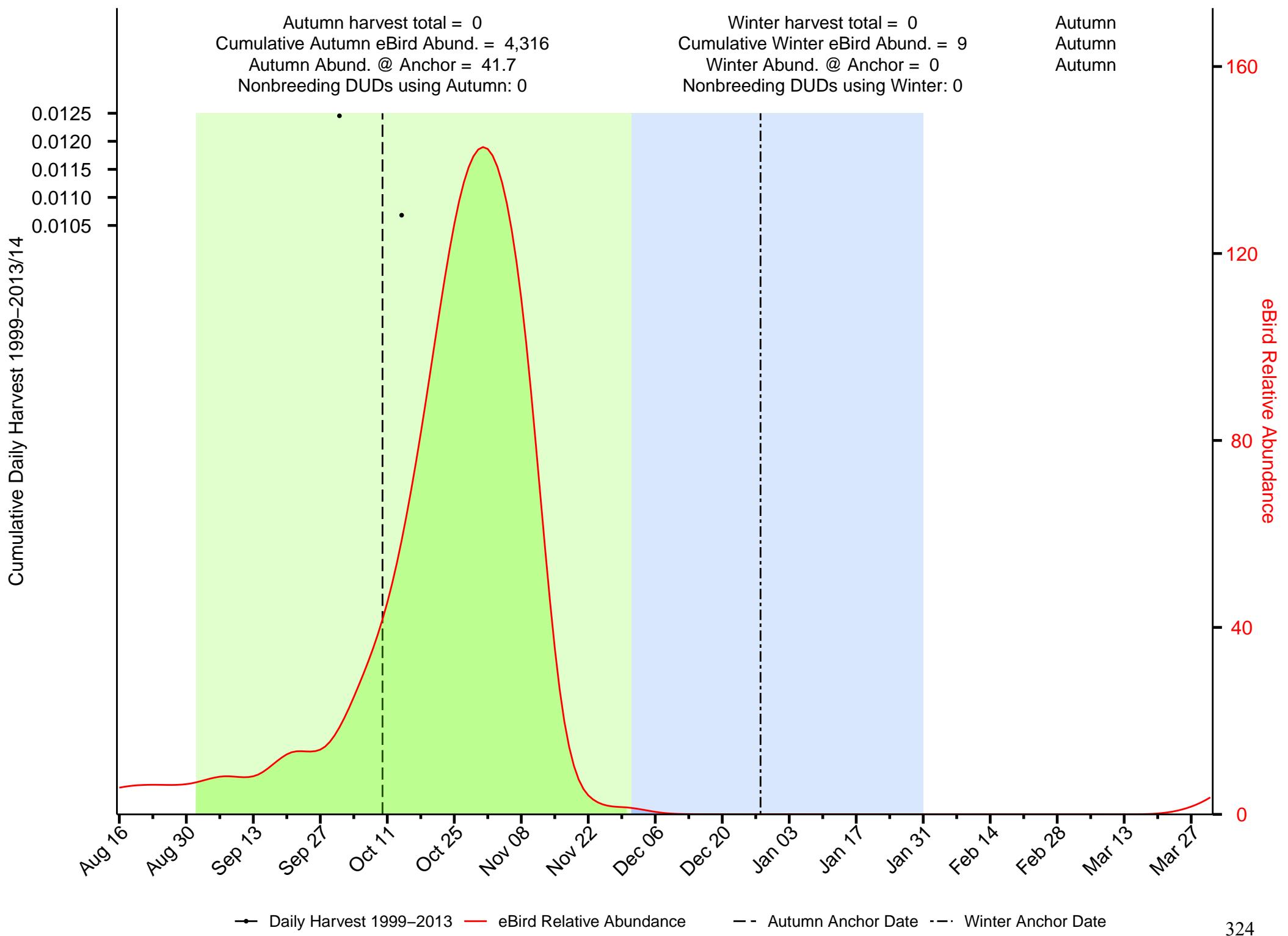
Summary of Eider in the Prairie Habitat JV



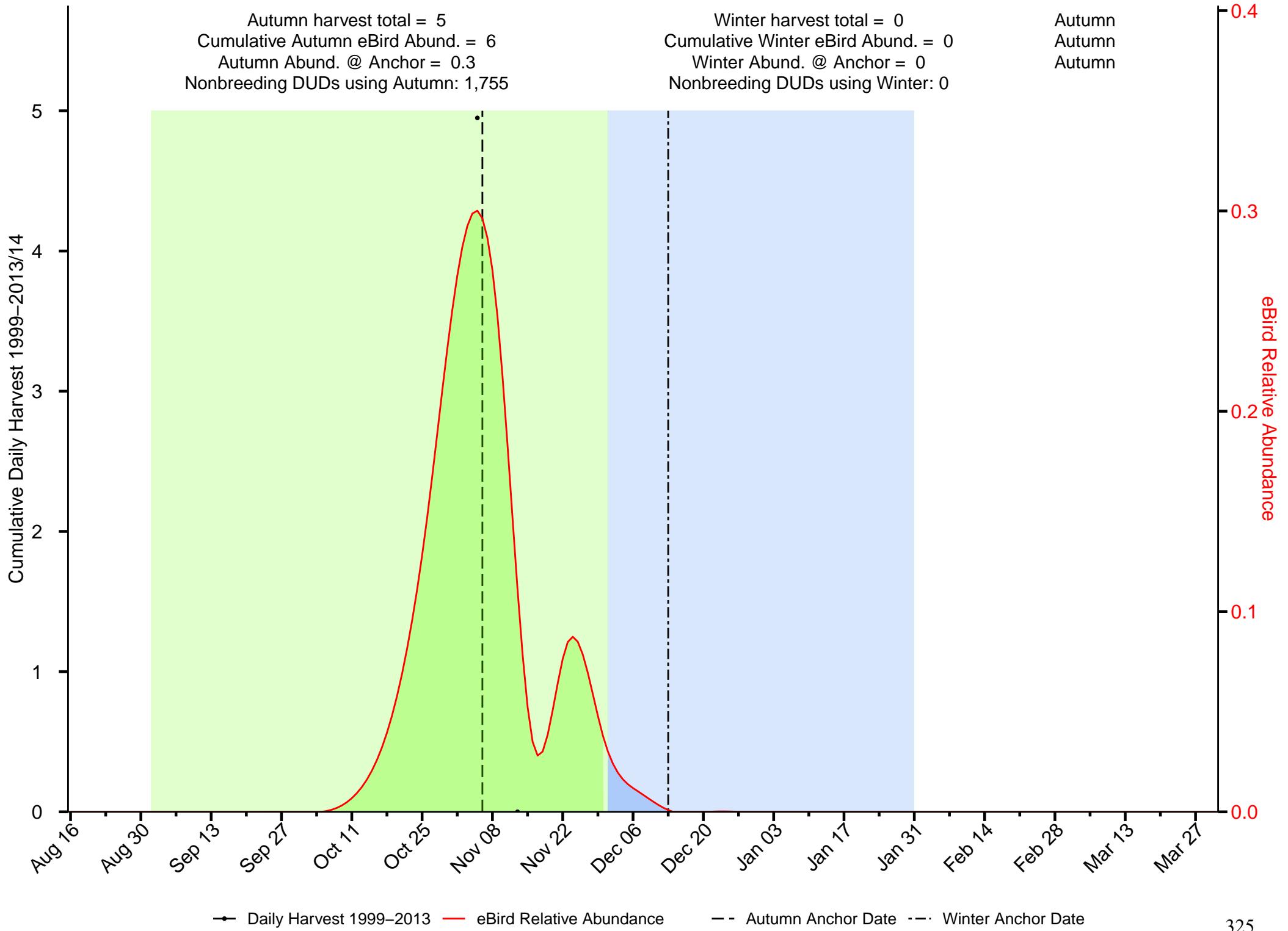
Summary of Gadwall in the Prairie Habitat JV



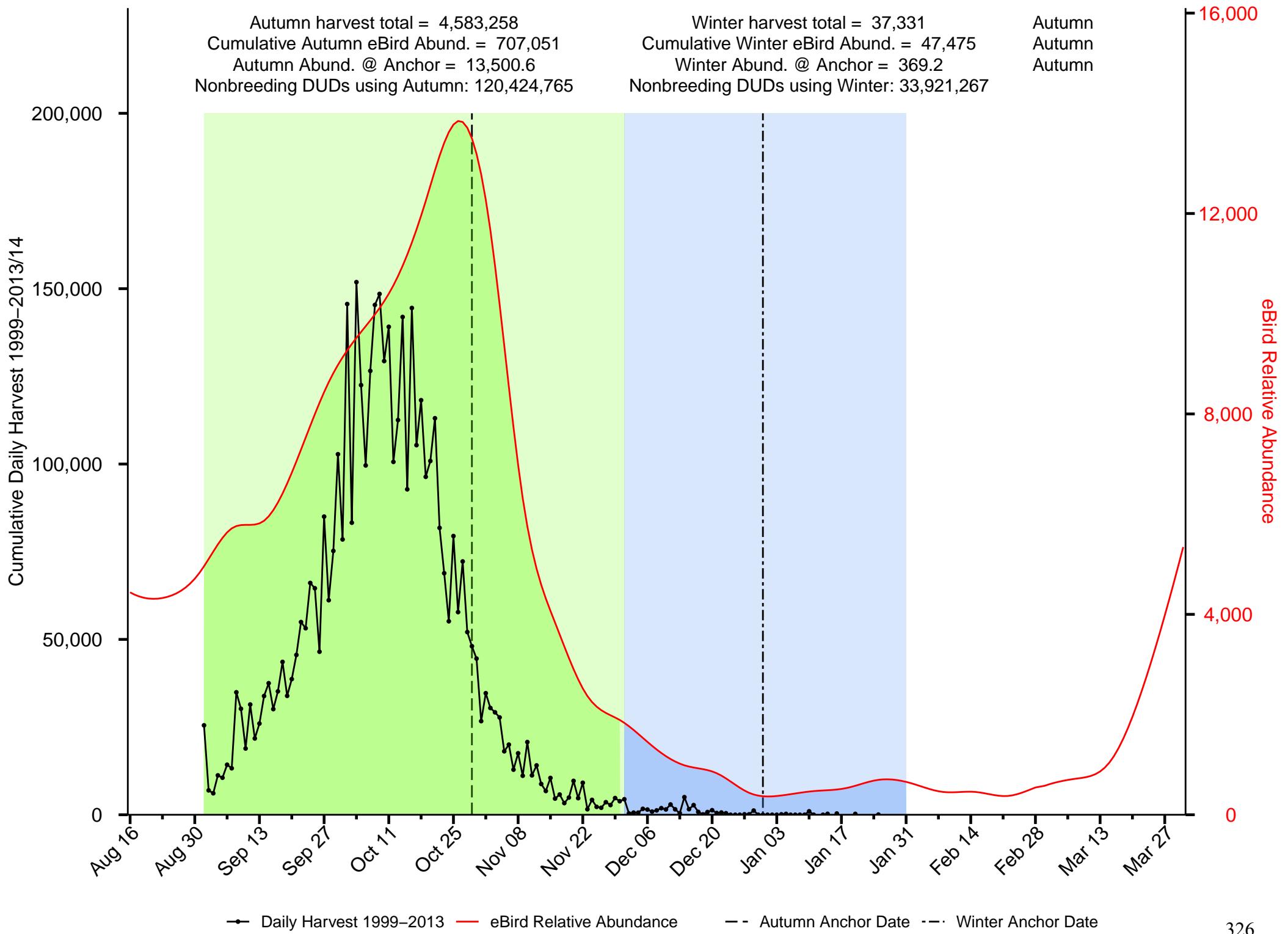
Summary of Hooded Merganser in the Prairie Habitat JV



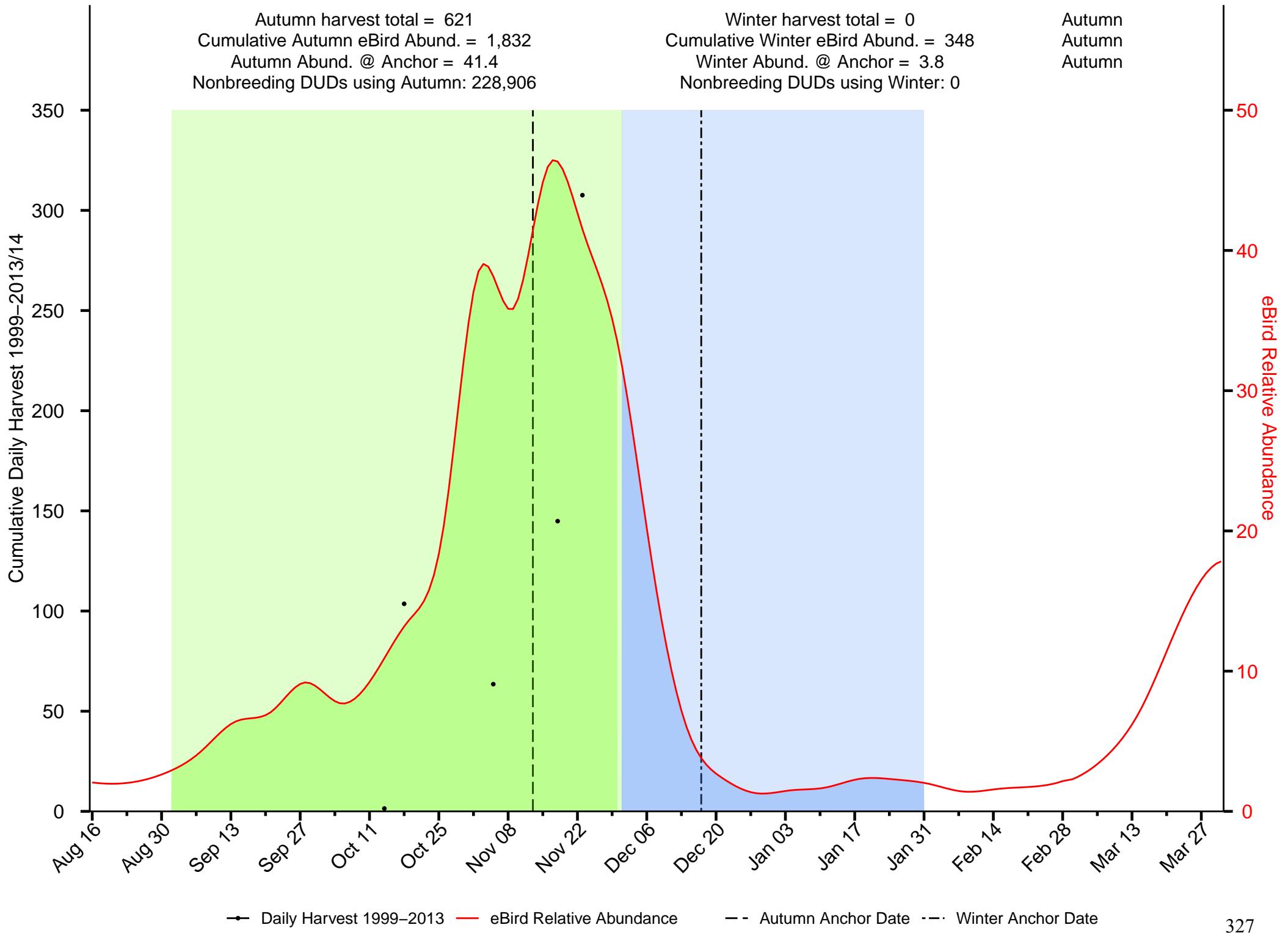
Summary of Long-tailed Duck in the Prairie Habitat JV



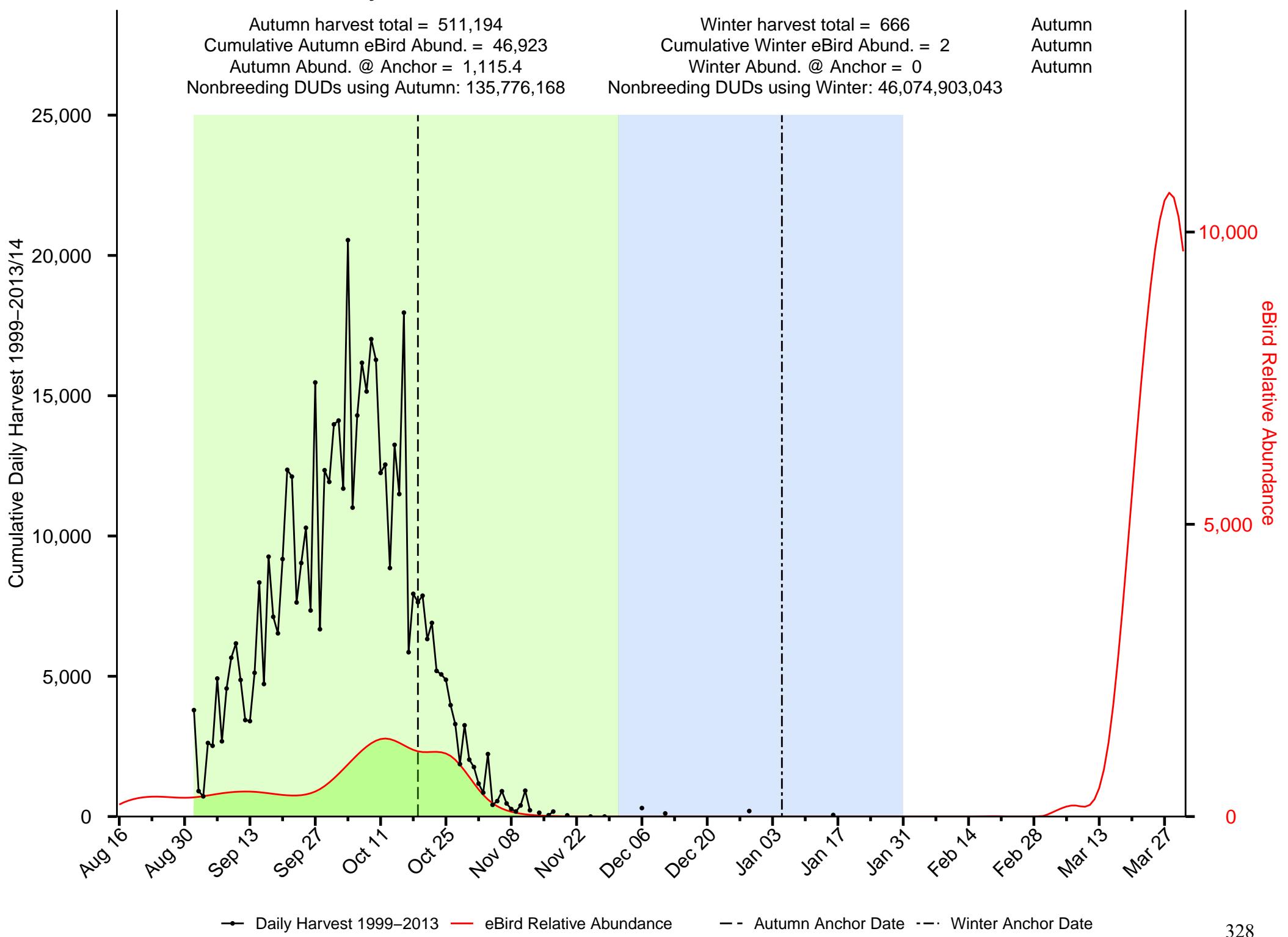
Summary of Mallard in the Prairie Habitat JV



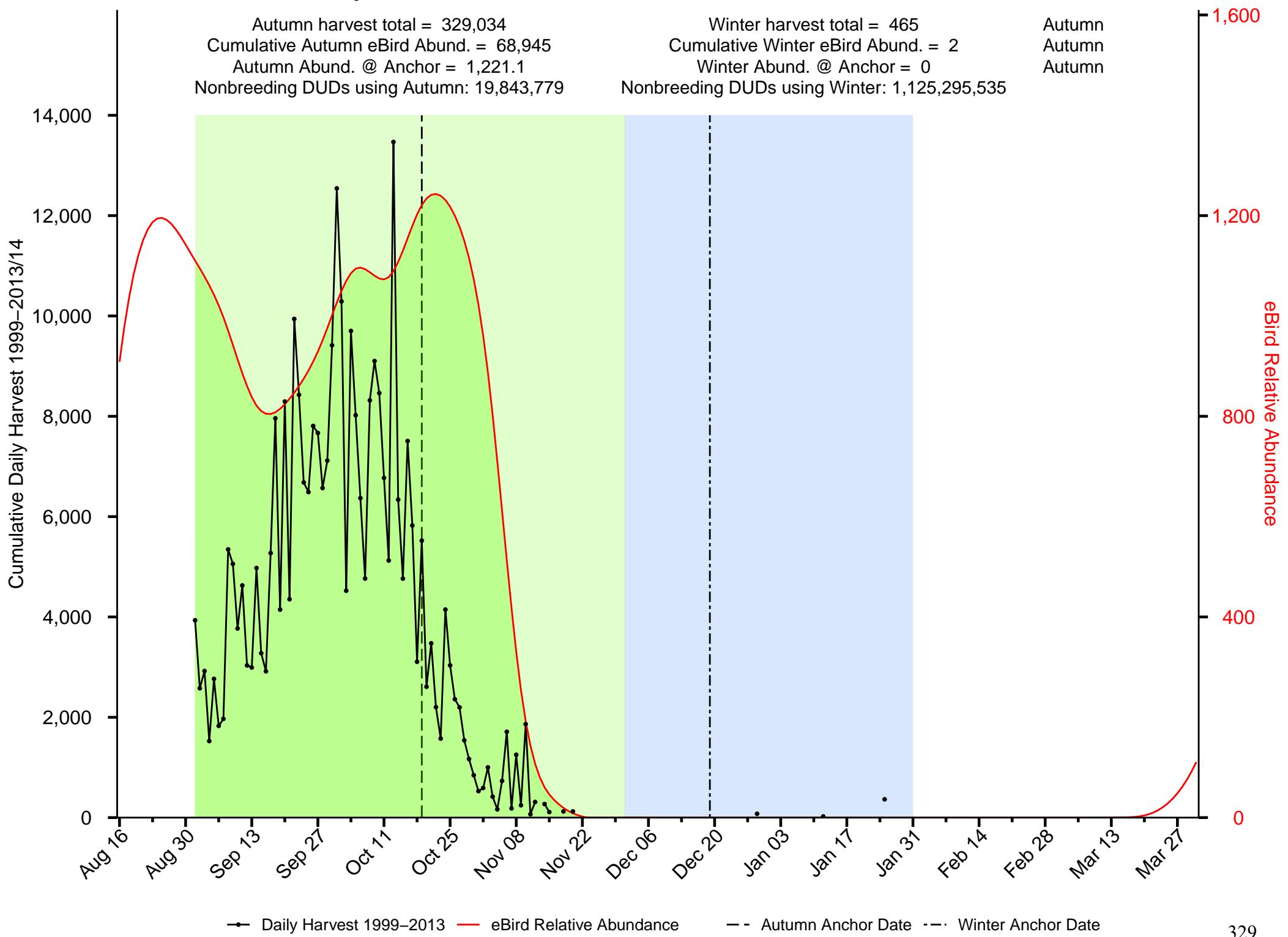
Summary of Merganser in the Prairie Habitat JV



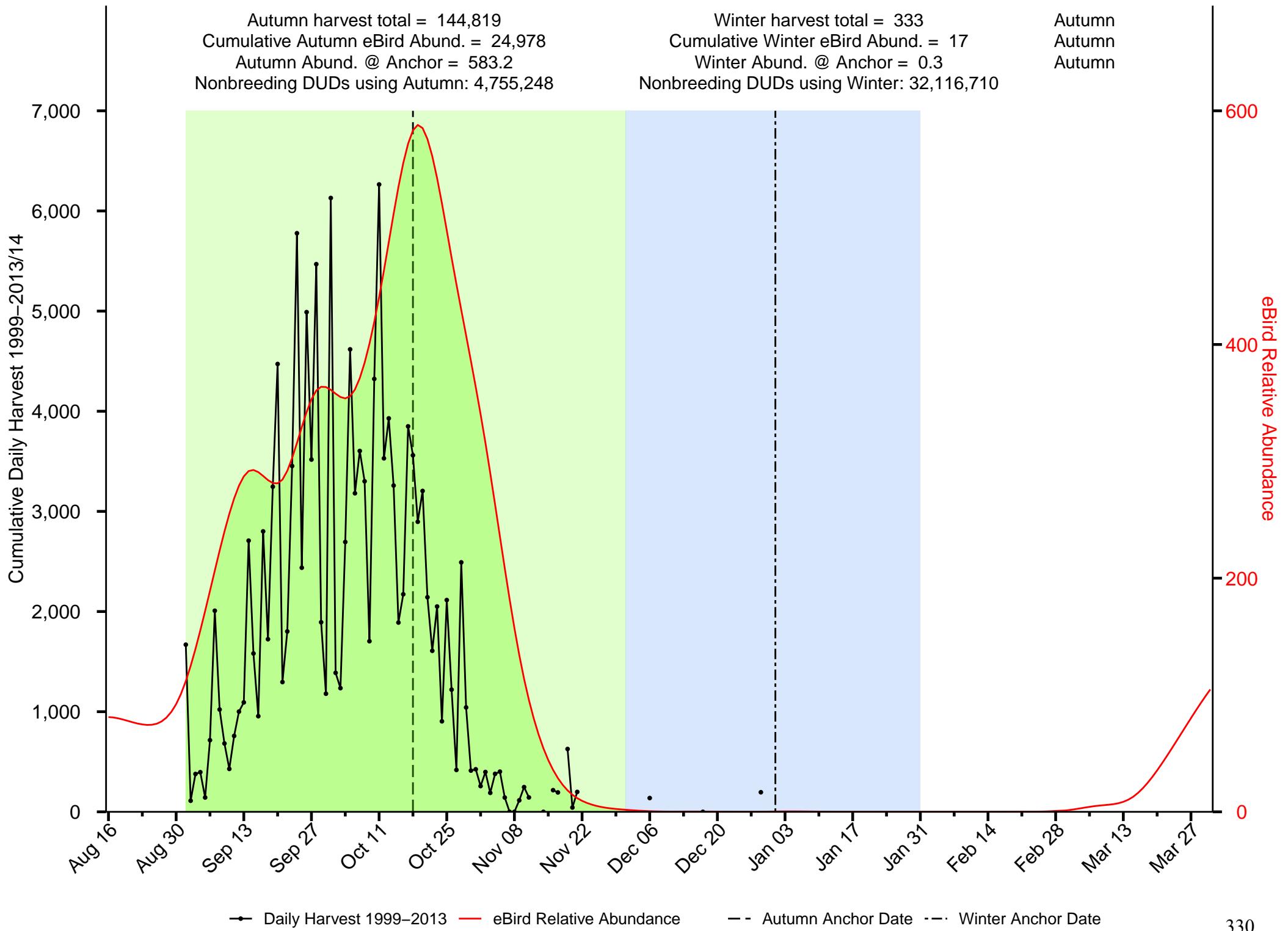
Summary of Northern Pintail in the Prairie Habitat JV



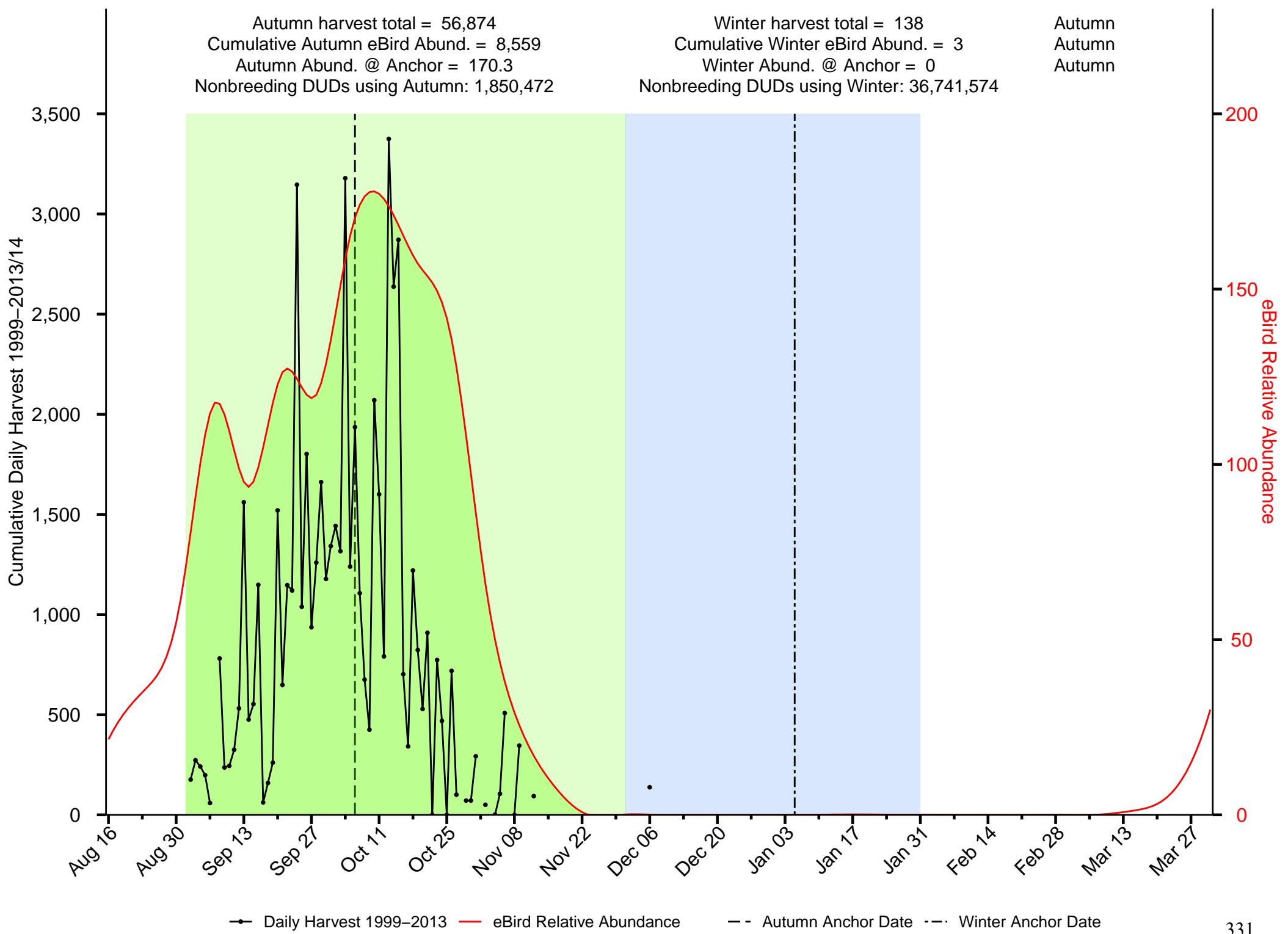
Summary of Northern Shoveler in the Prairie Habitat JV



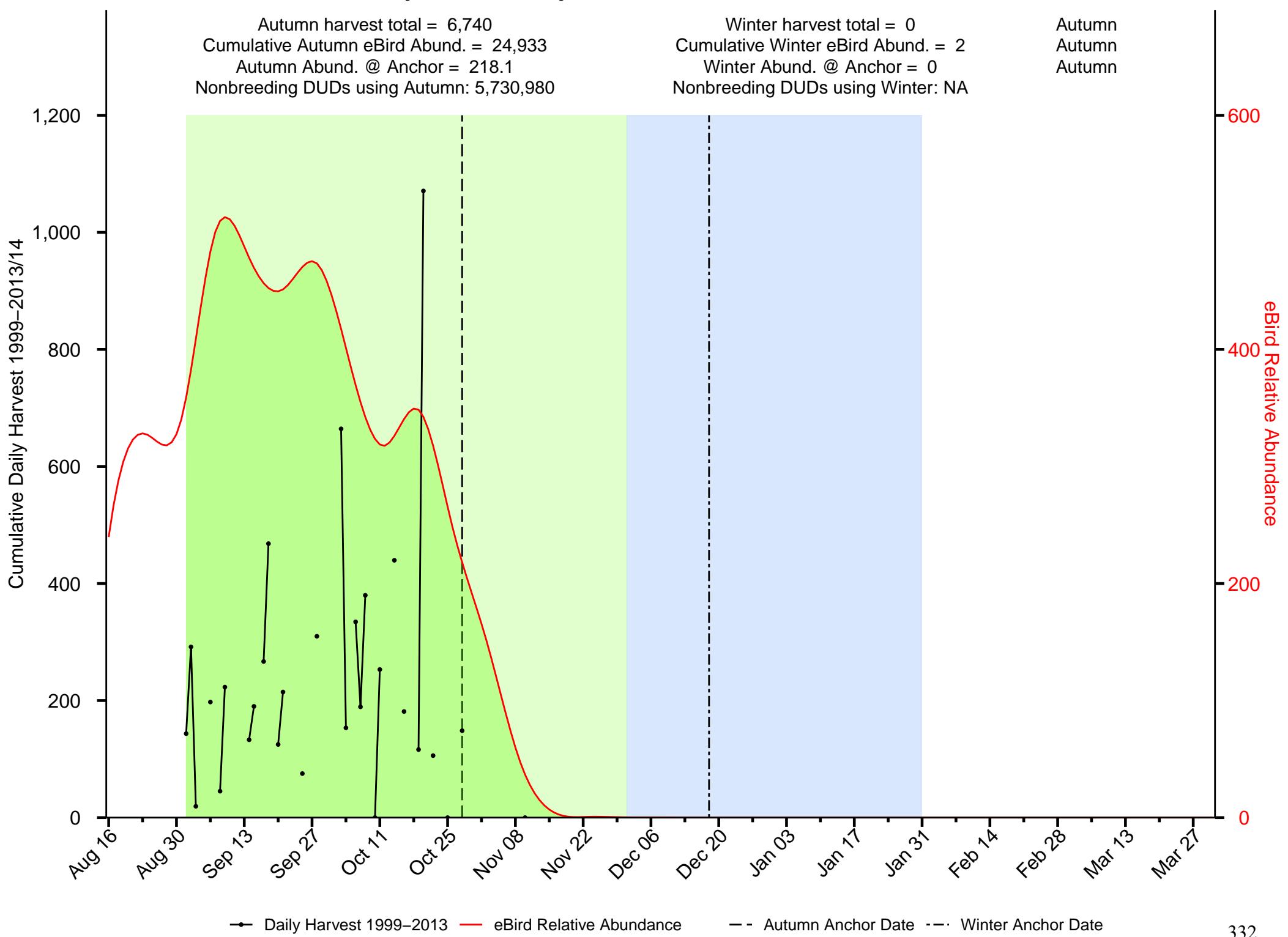
Summary of Redhead in the Prairie Habitat JV



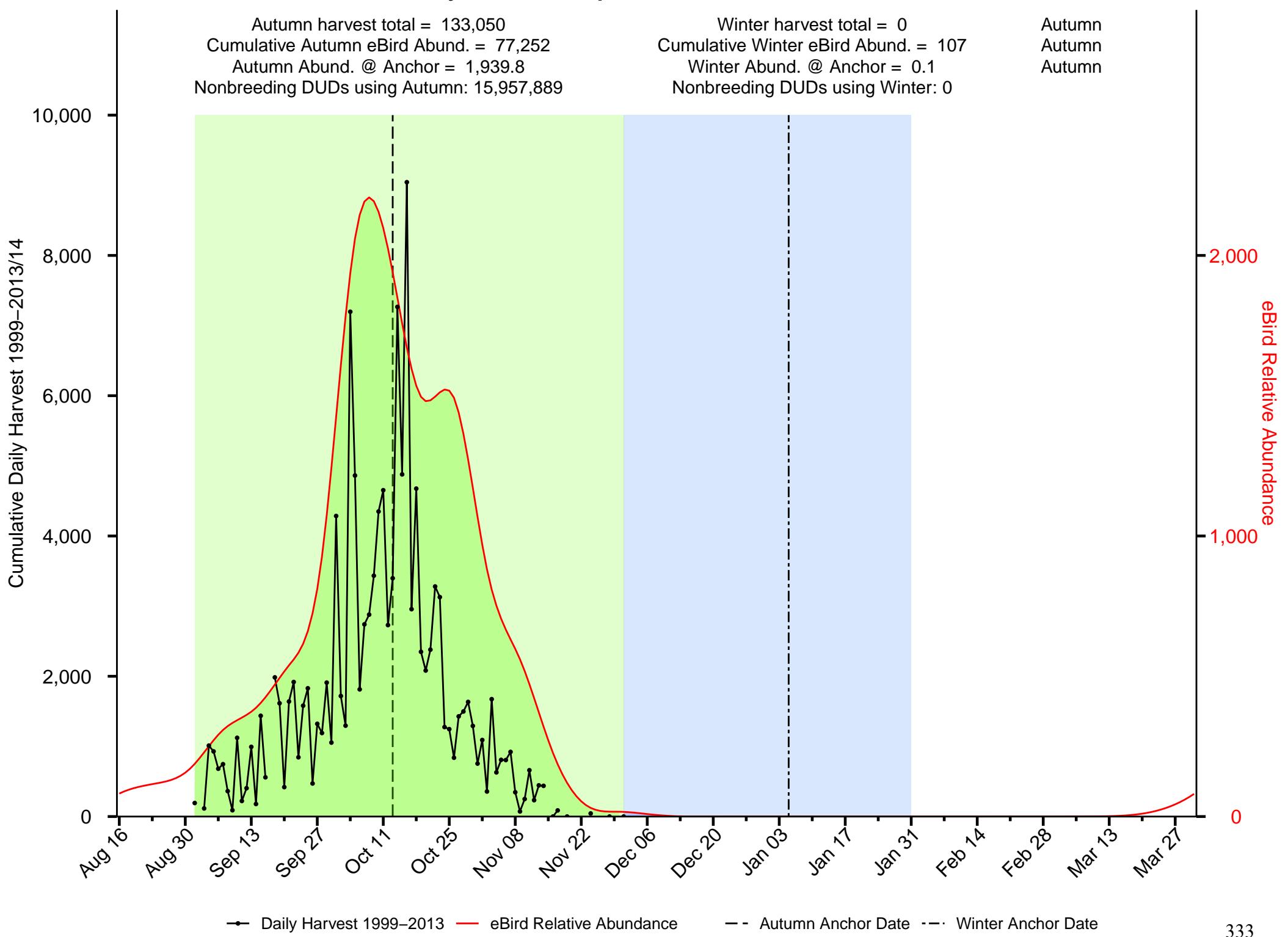
Summary of Ring-necked Duck in the Prairie Habitat JV



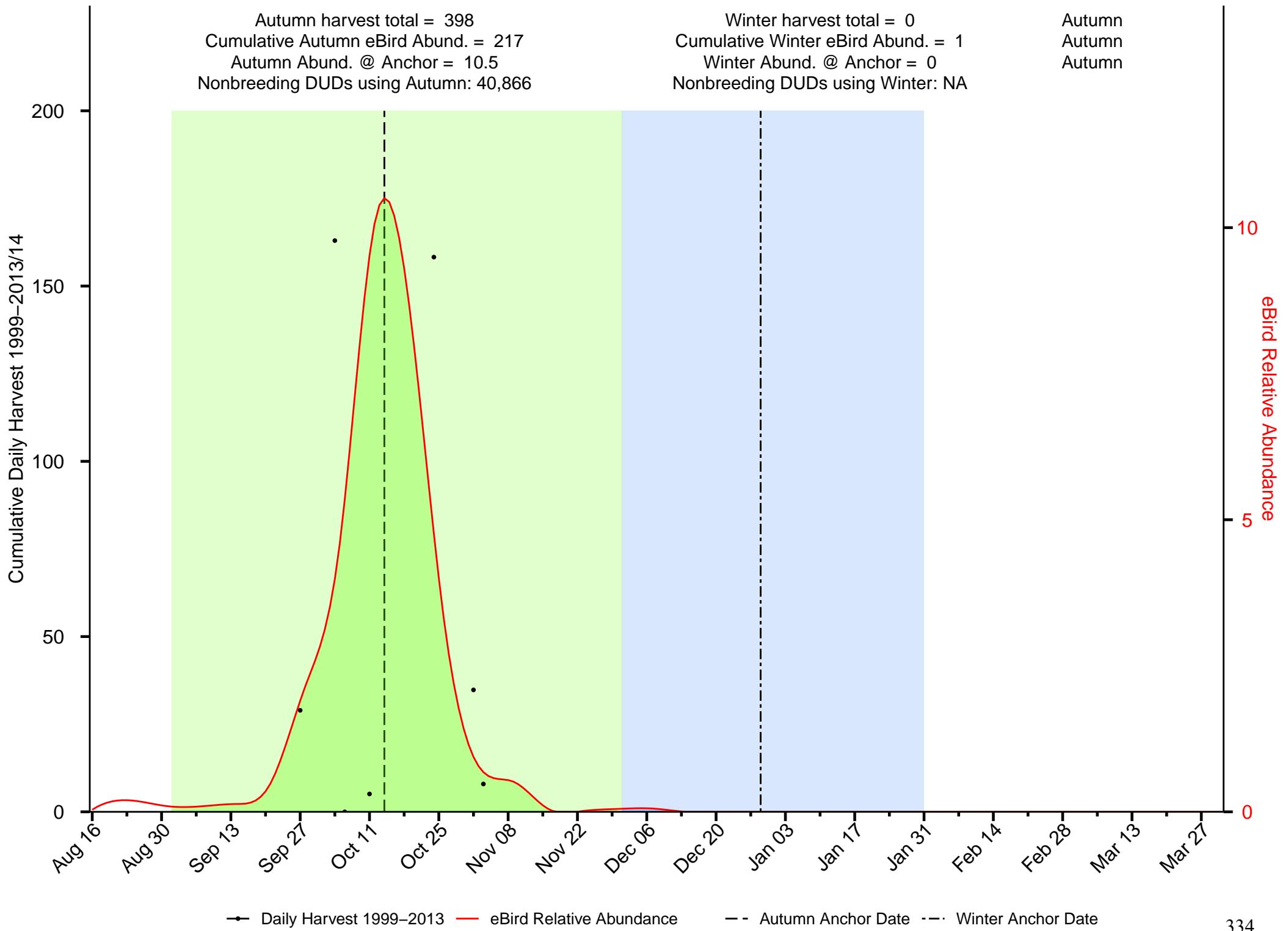
Summary of Ruddy Duck in the Prairie Habitat JV



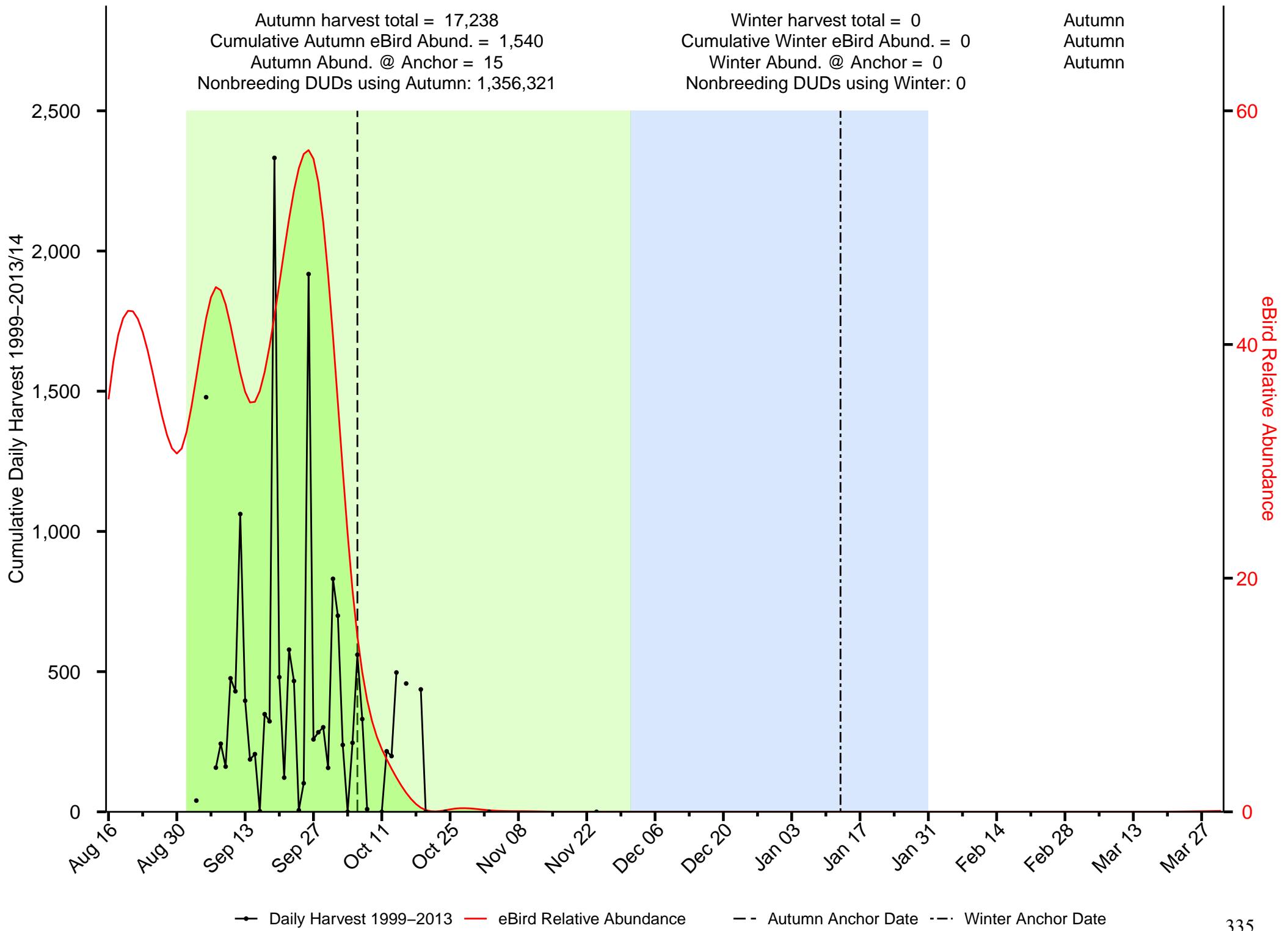
Summary of Scaup in the Prairie Habitat JV



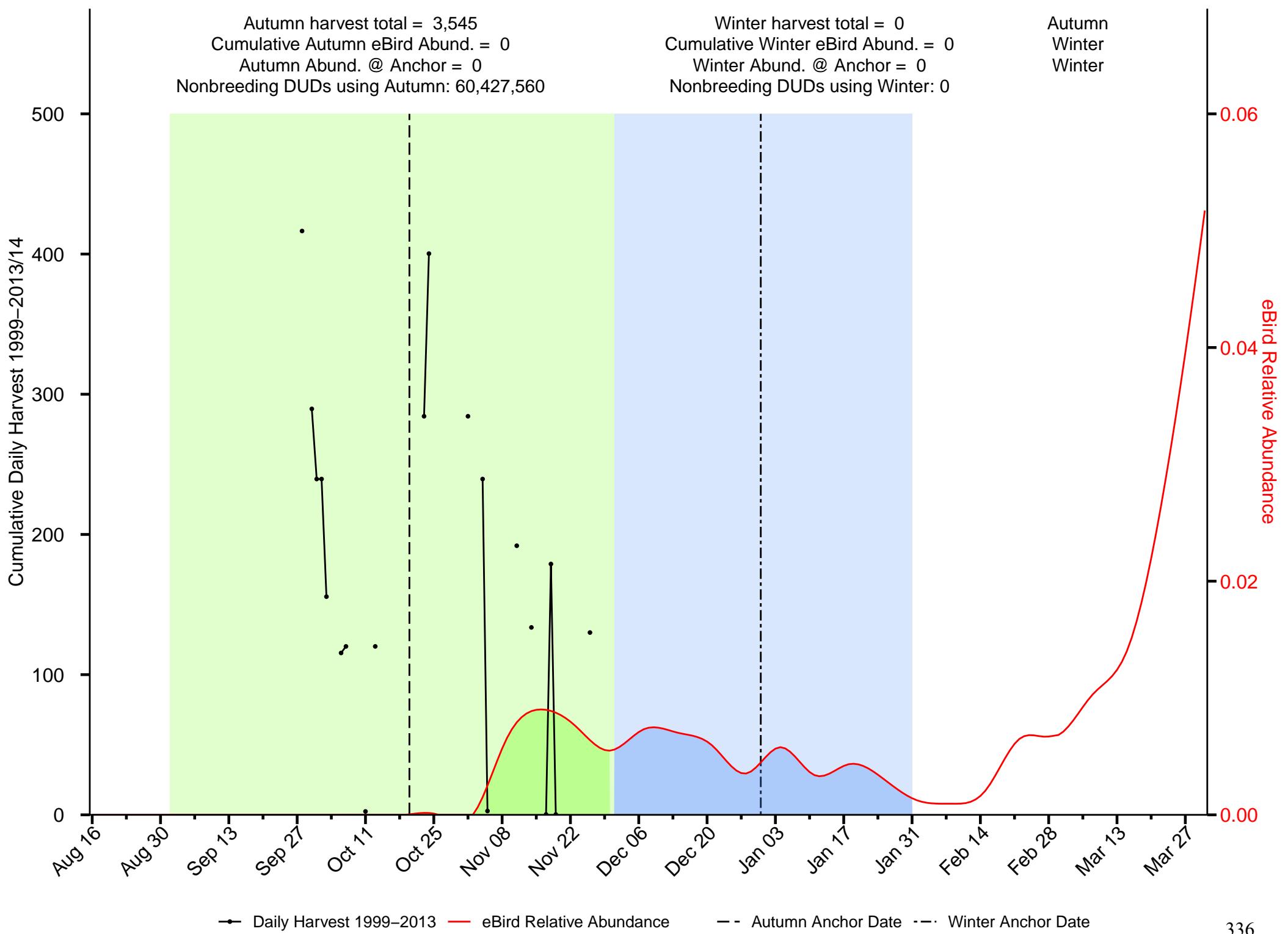
Summary of Scoter in the Prairie Habitat JV



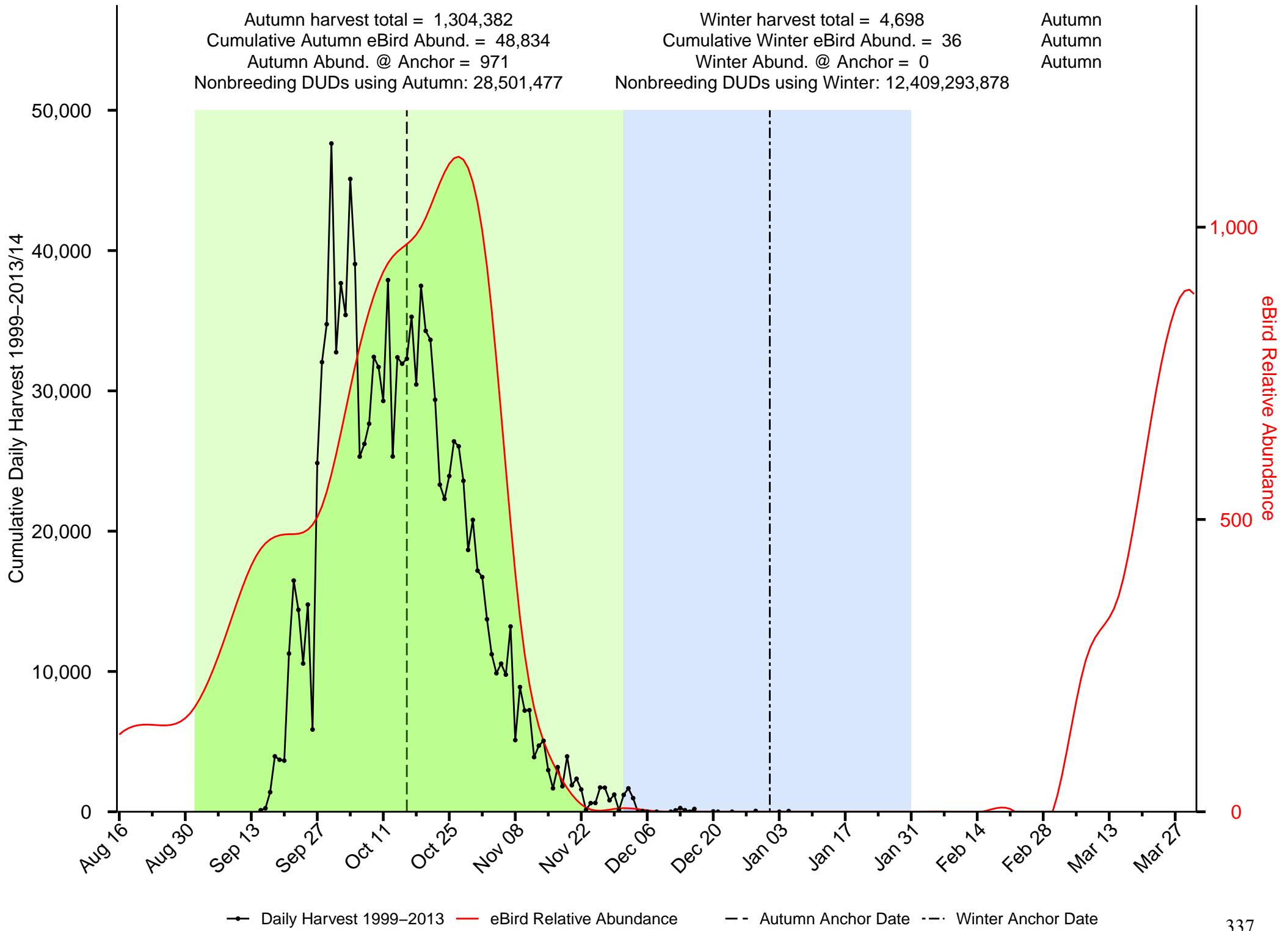
Summary of Wood Duck in the Prairie Habitat JV



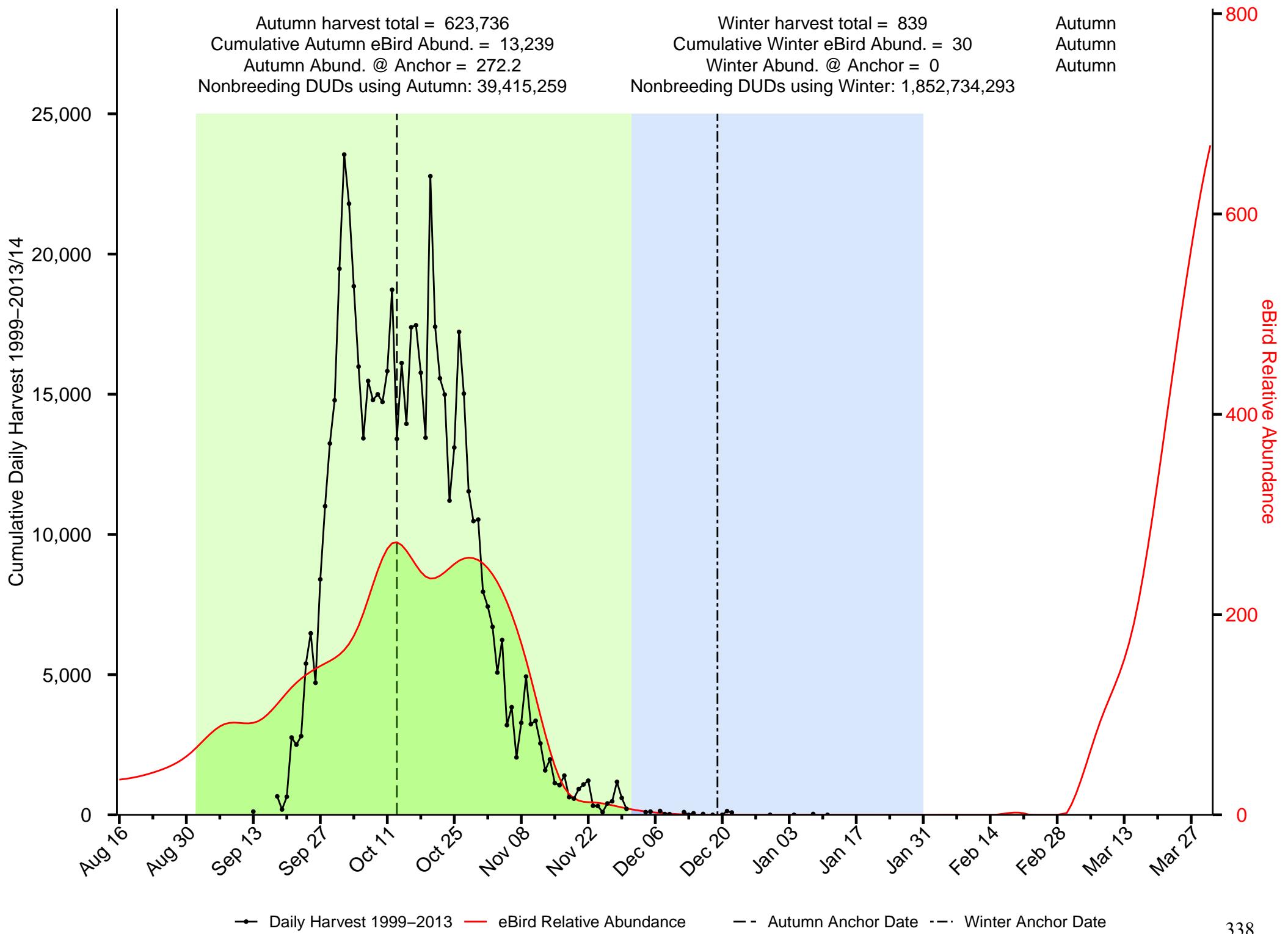
Summary of American Black Duck in the Prairie Pothole JV



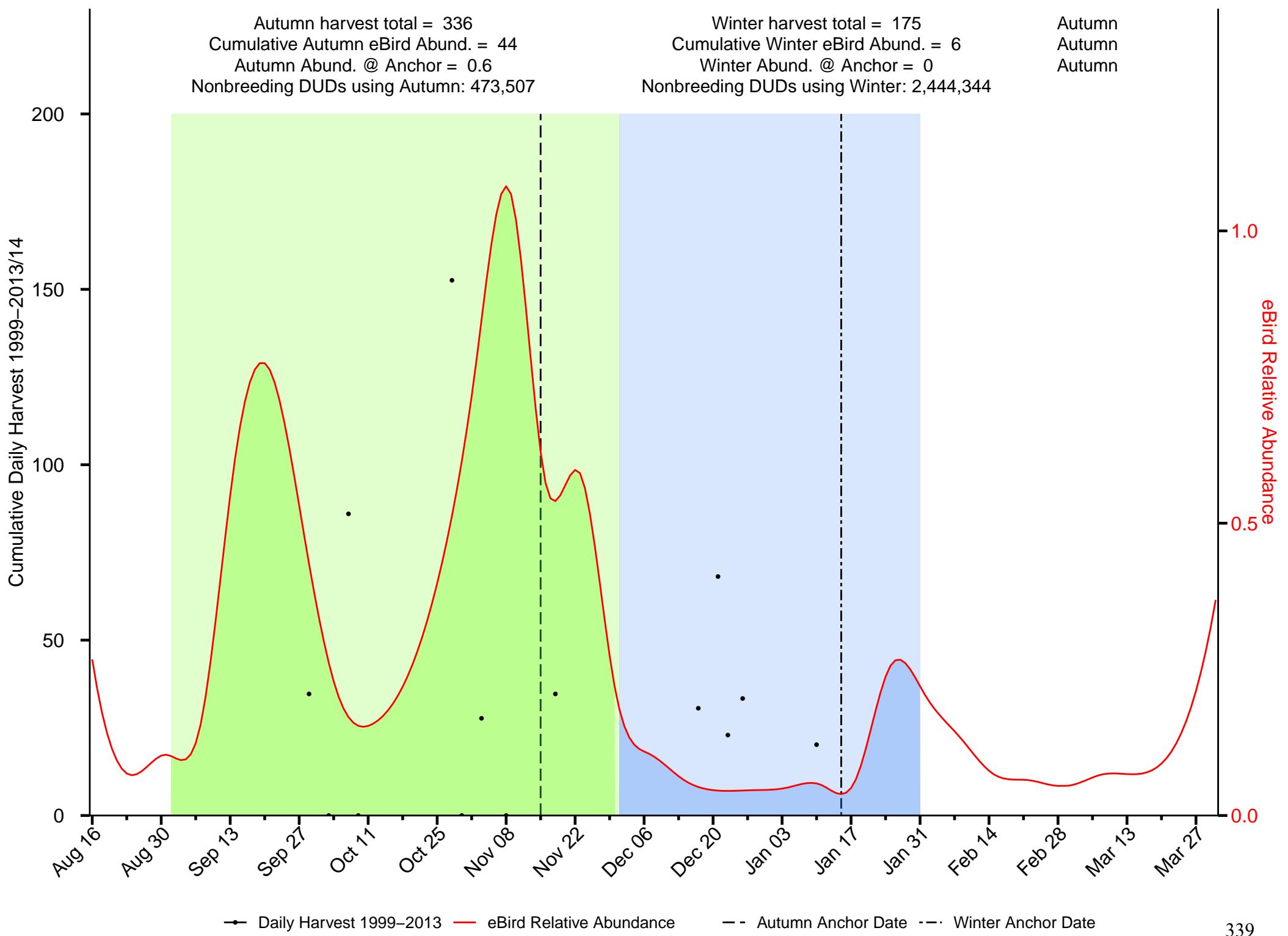
Summary of Green-winged Teal in the Prairie Pothole JV



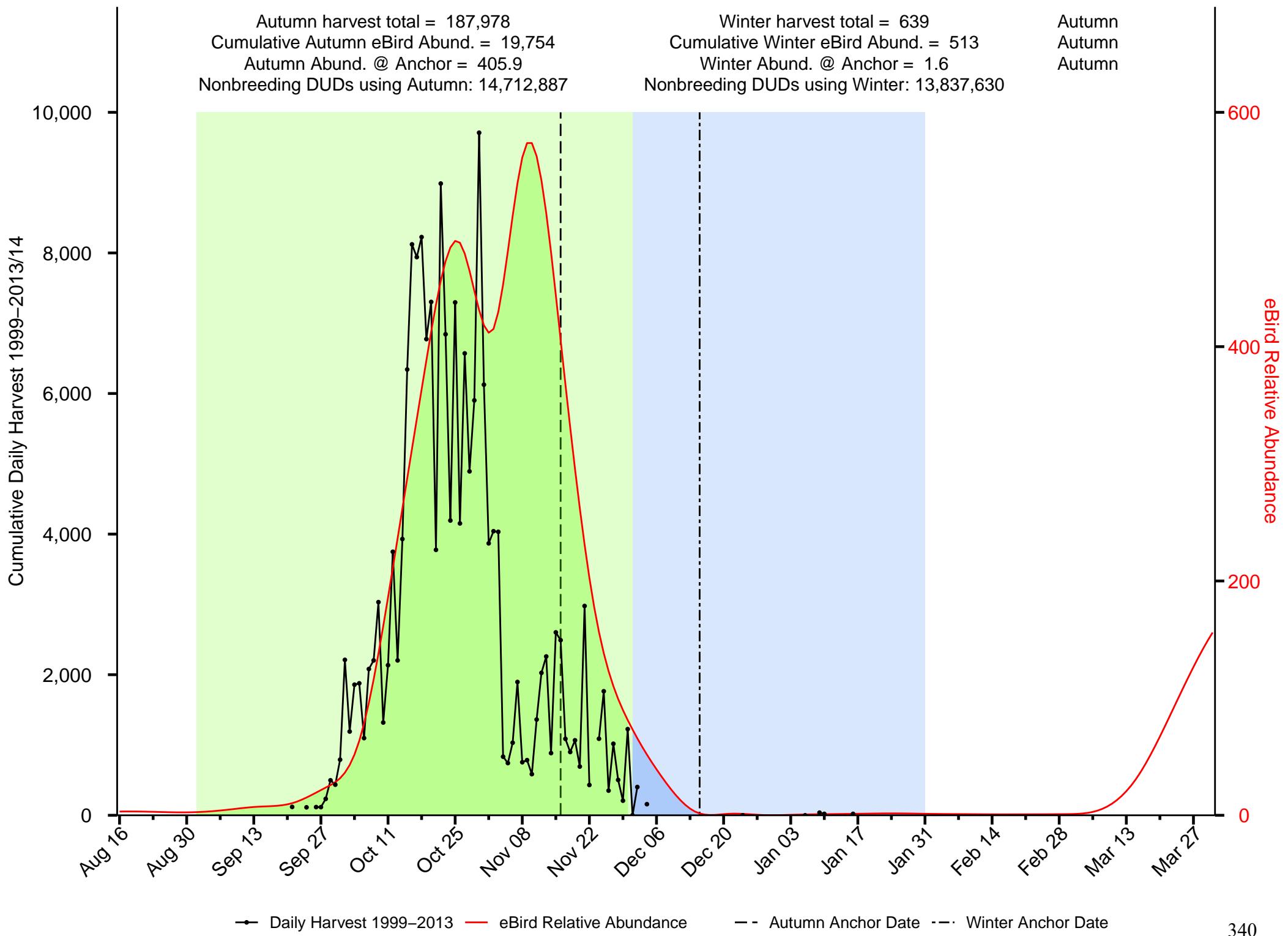
Summary of American Wigeon in the Prairie Pothole JV



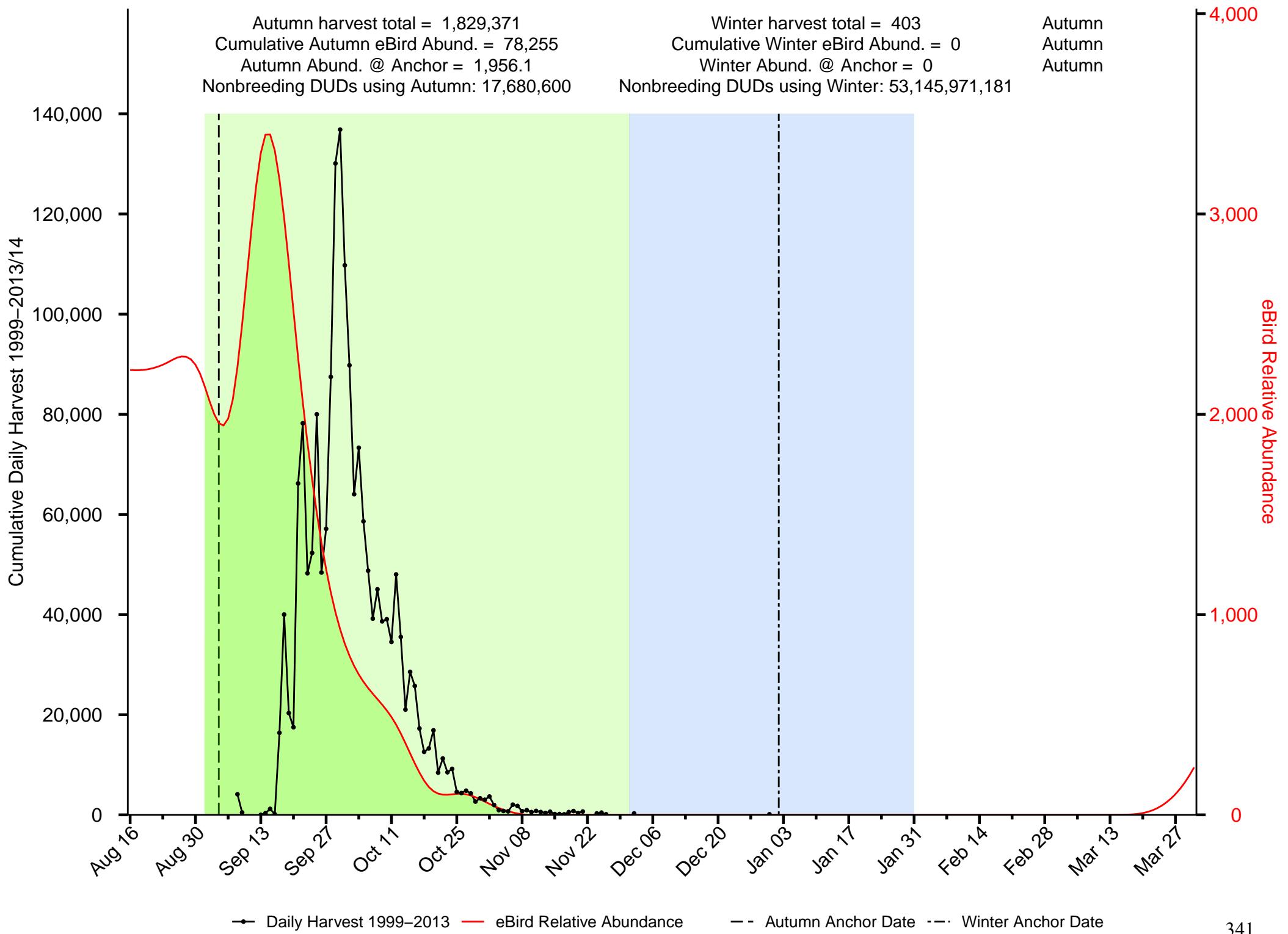
Summary of Barrow's Goldeneye in the Prairie Pothole JV



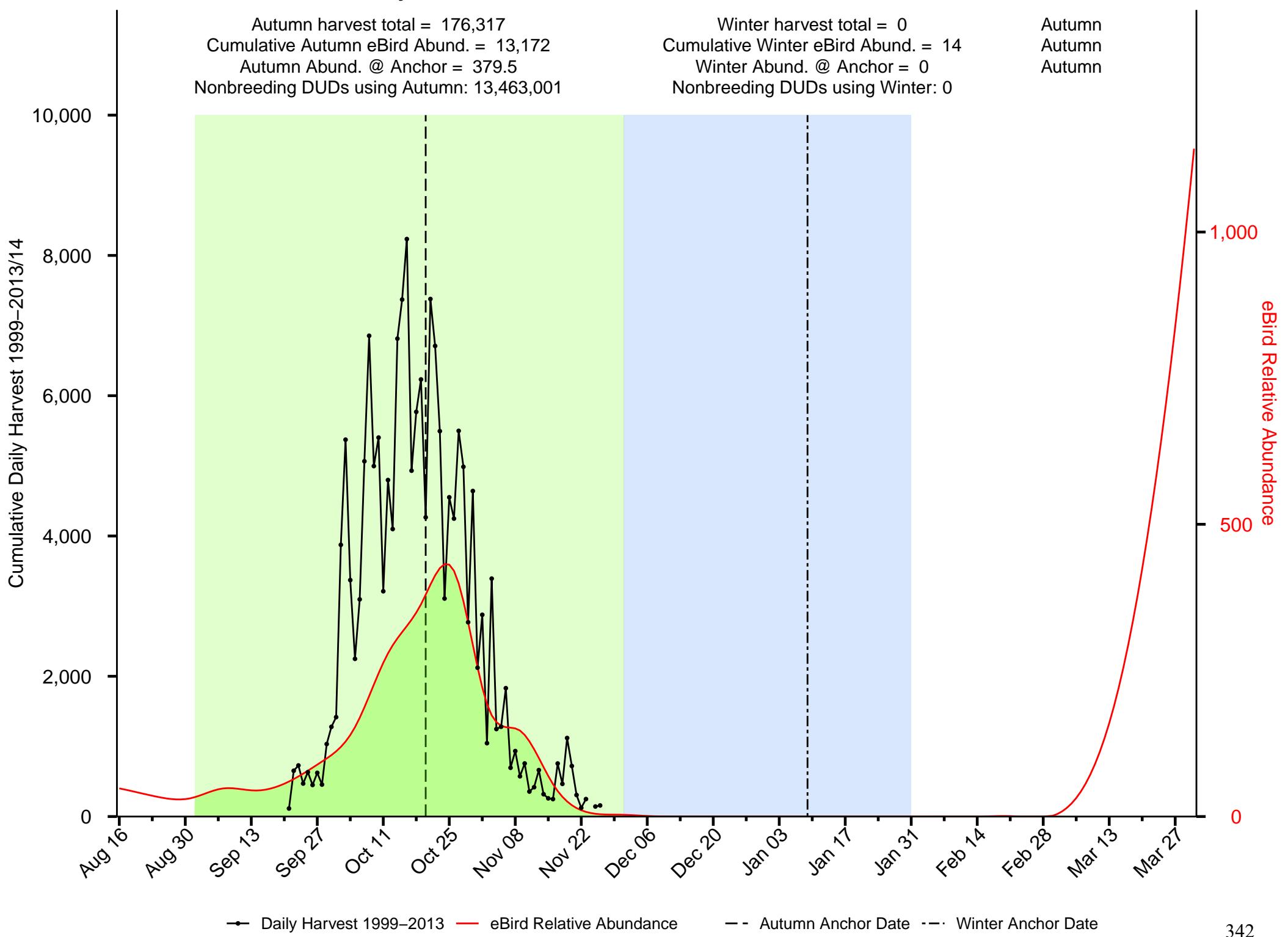
Summary of Bufflehead in the Prairie Pothole JV



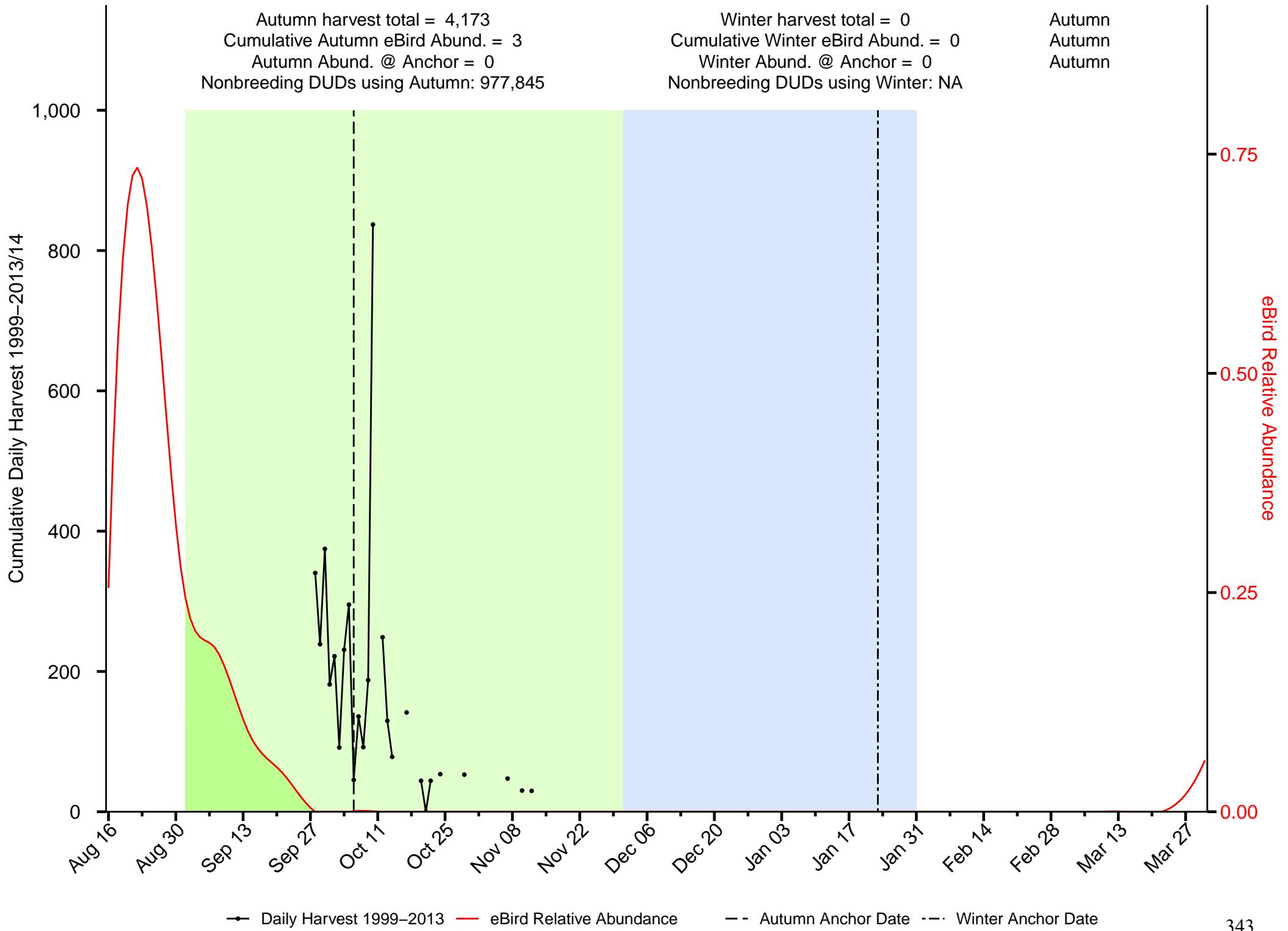
Summary of Blue-winged Teal in the Prairie Pothole JV



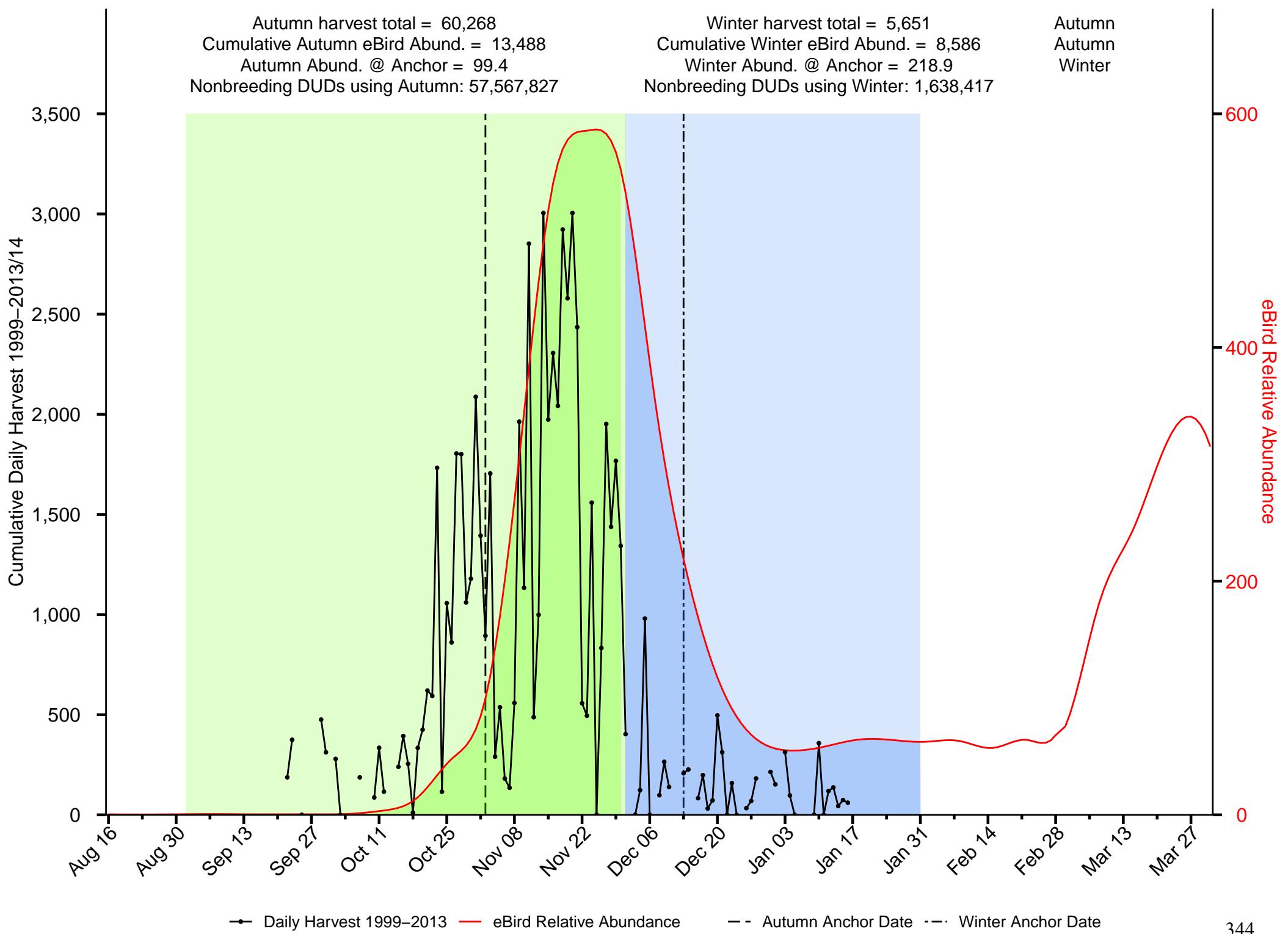
Summary of Canvasback in the Prairie Pothole JV



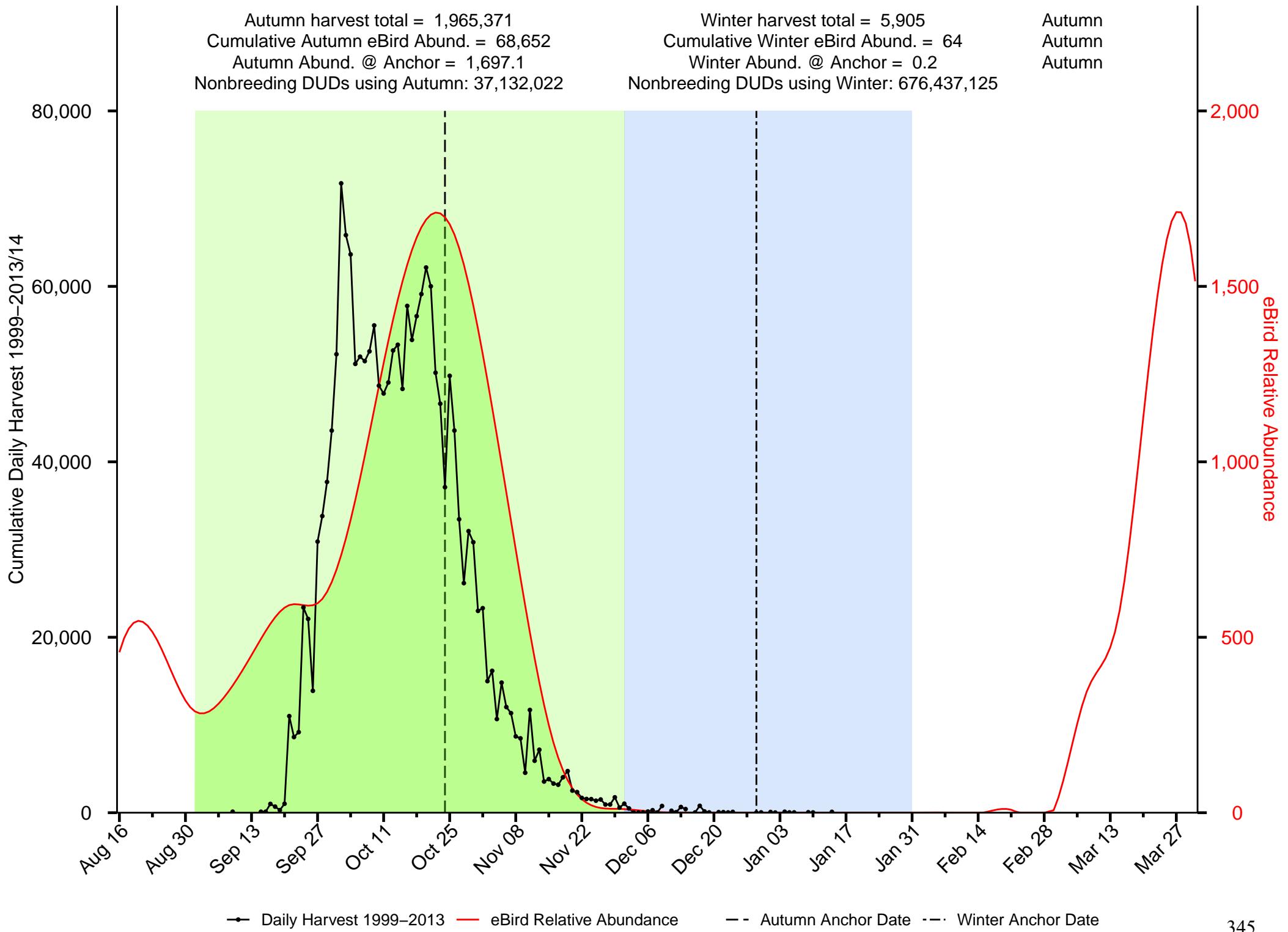
Summary of Cinnamon Teal in the Prairie Pothole JV



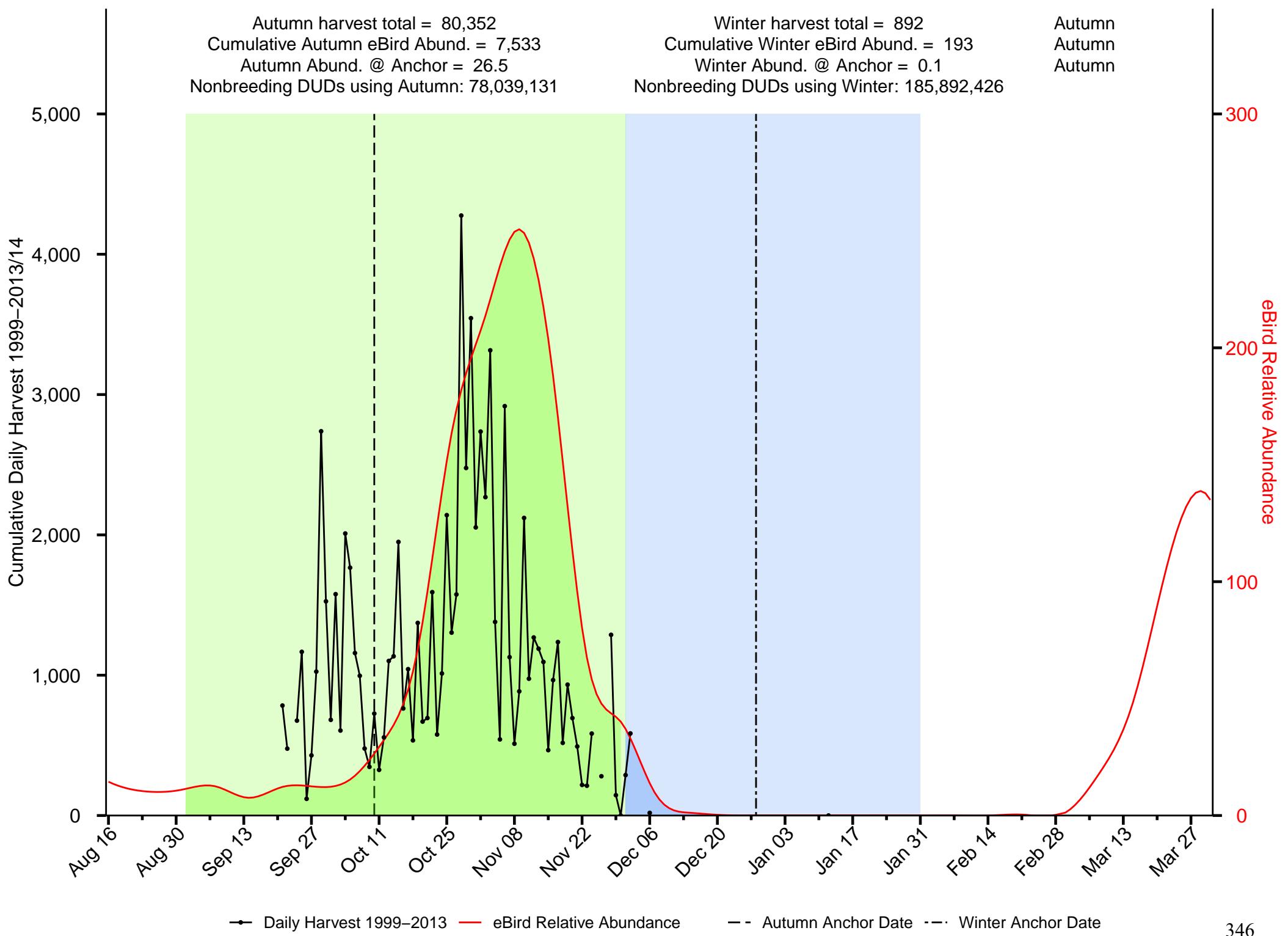
Summary of Common Goldeneye in the Prairie Pothole JV



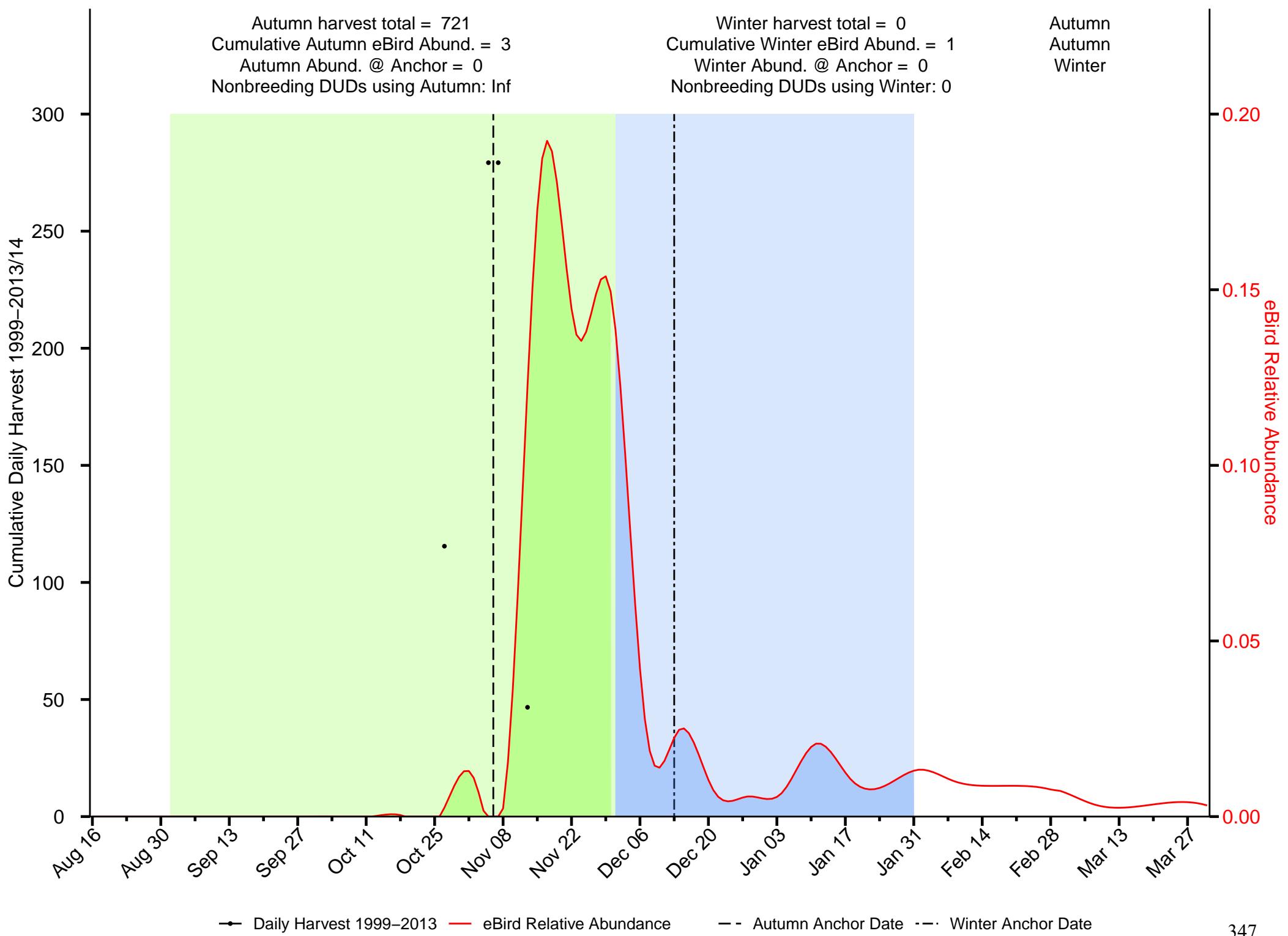
Summary of Gadwall in the Prairie Pothole JV



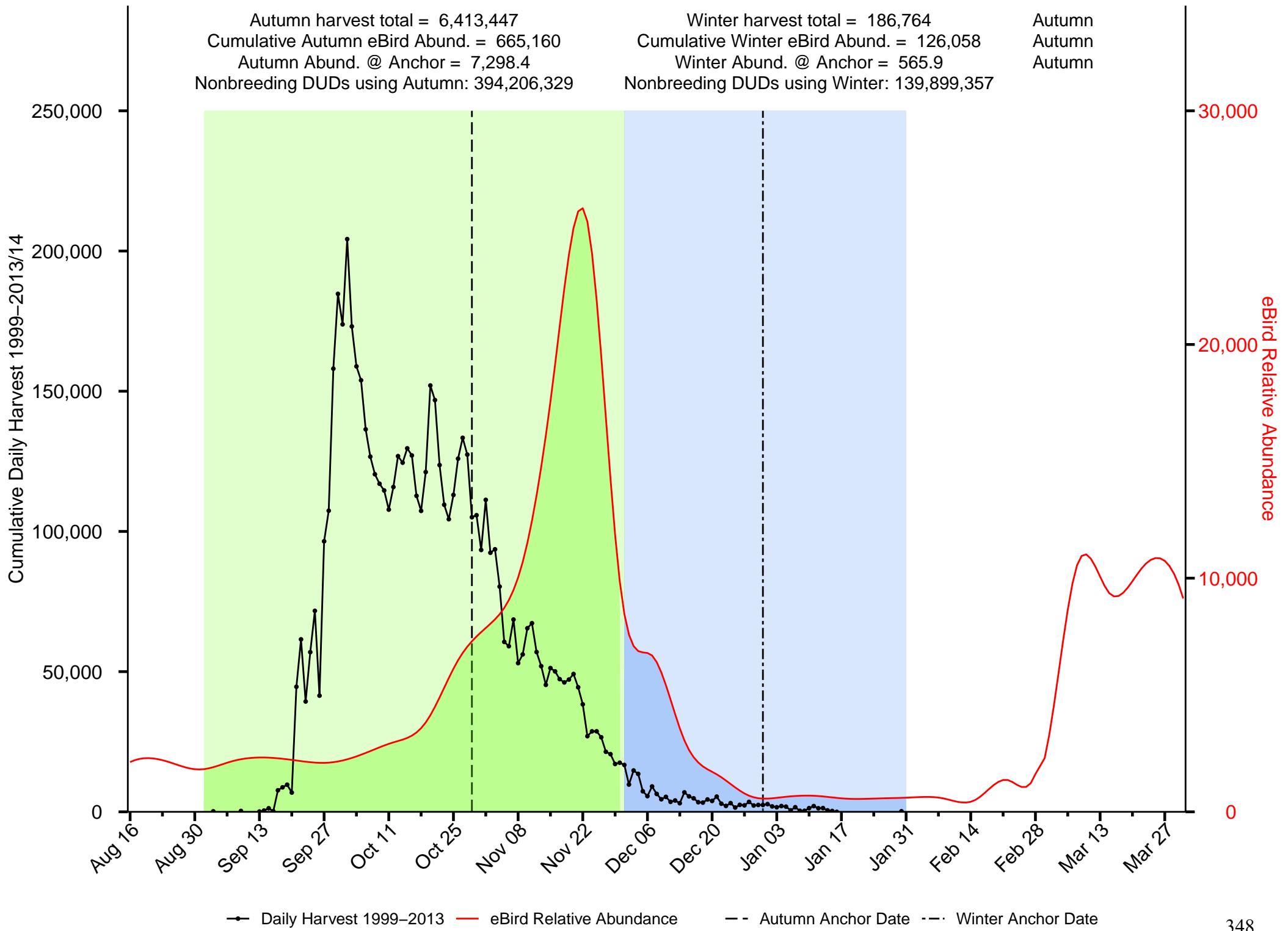
Summary of Hooded Merganser in the Prairie Pothole JV



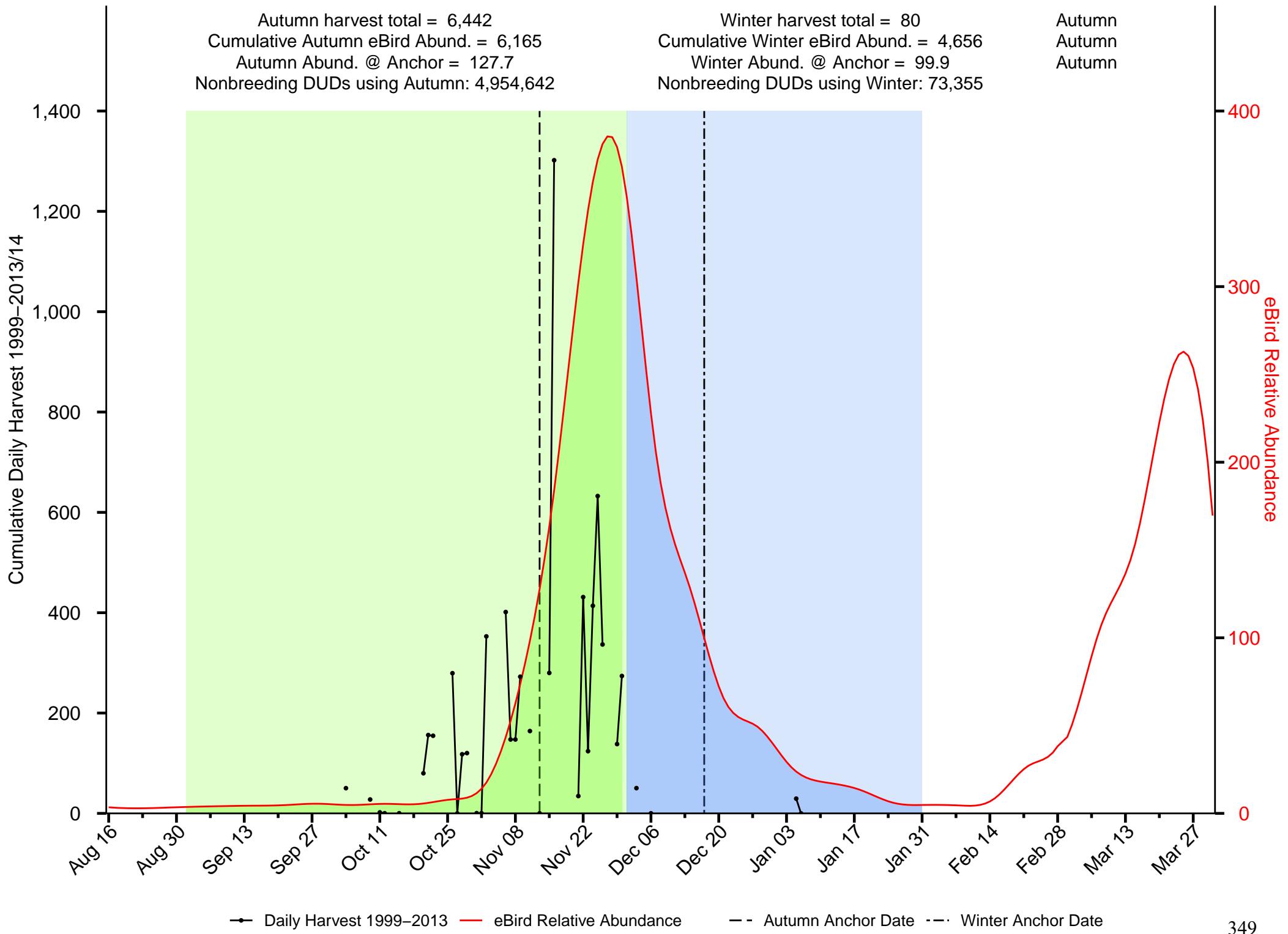
Summary of Long-tailed Duck in the Prairie Pothole JV



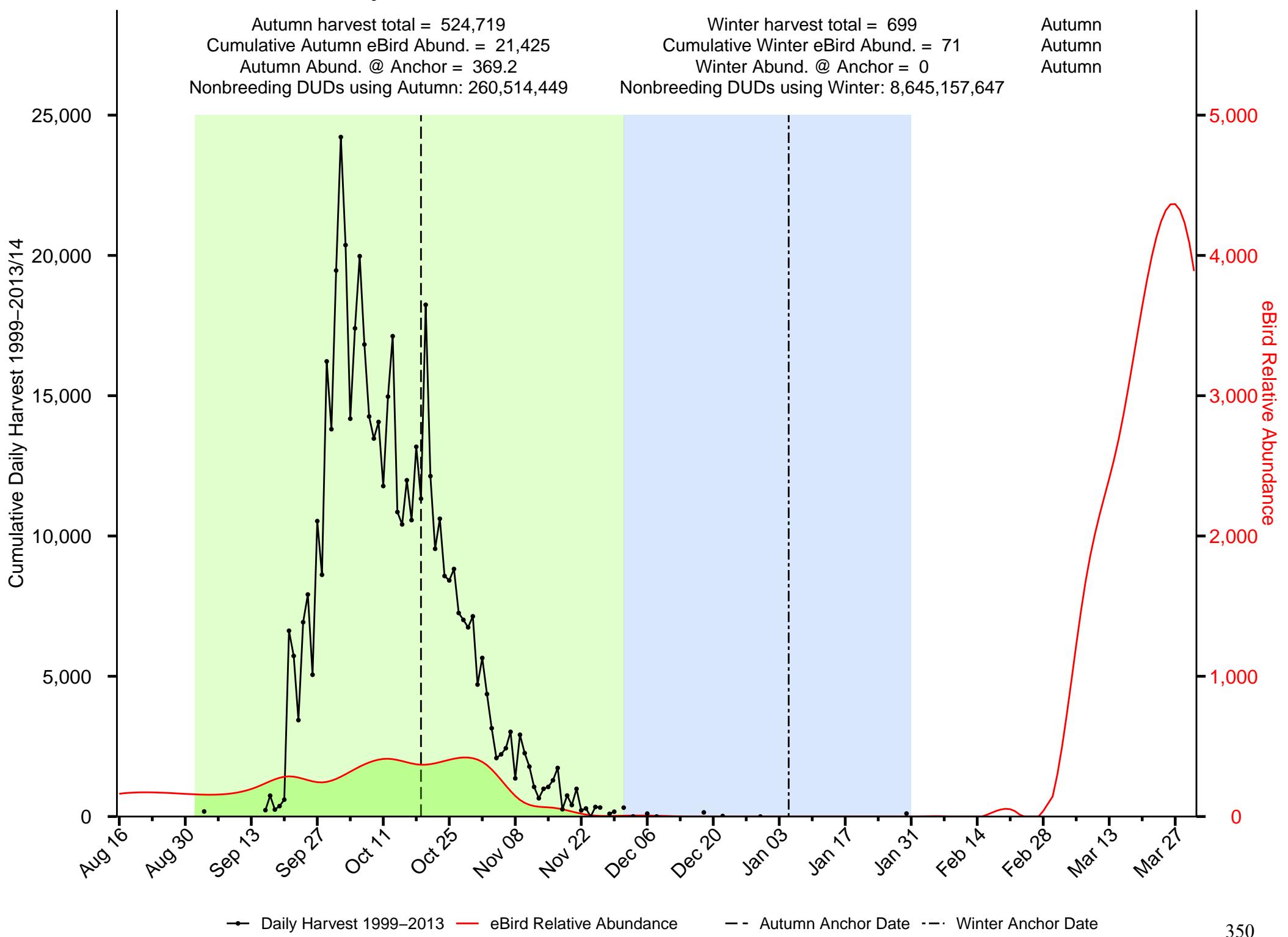
Summary of Mallard in the Prairie Pothole JV



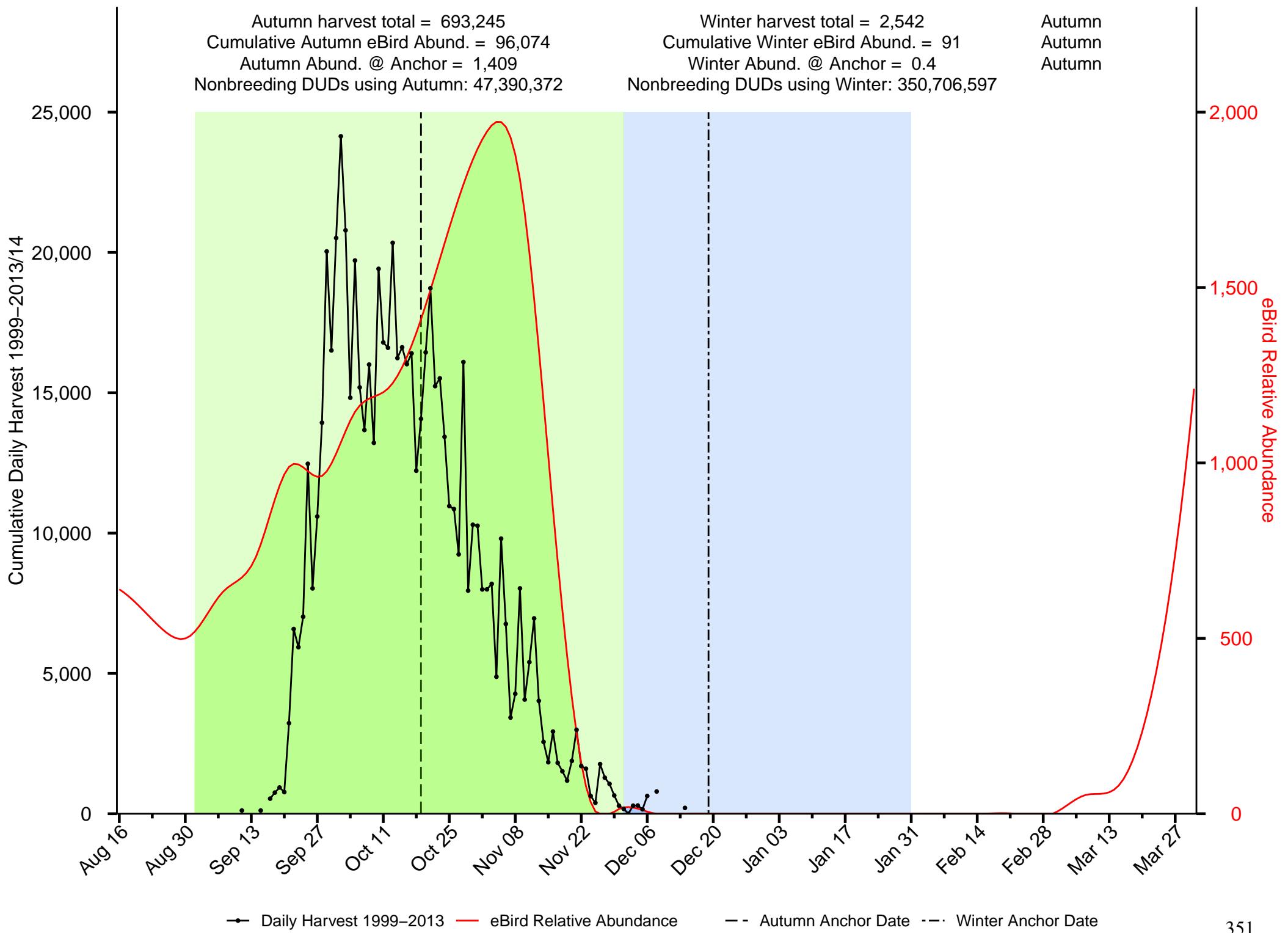
Summary of Merganser in the Prairie Pothole JV



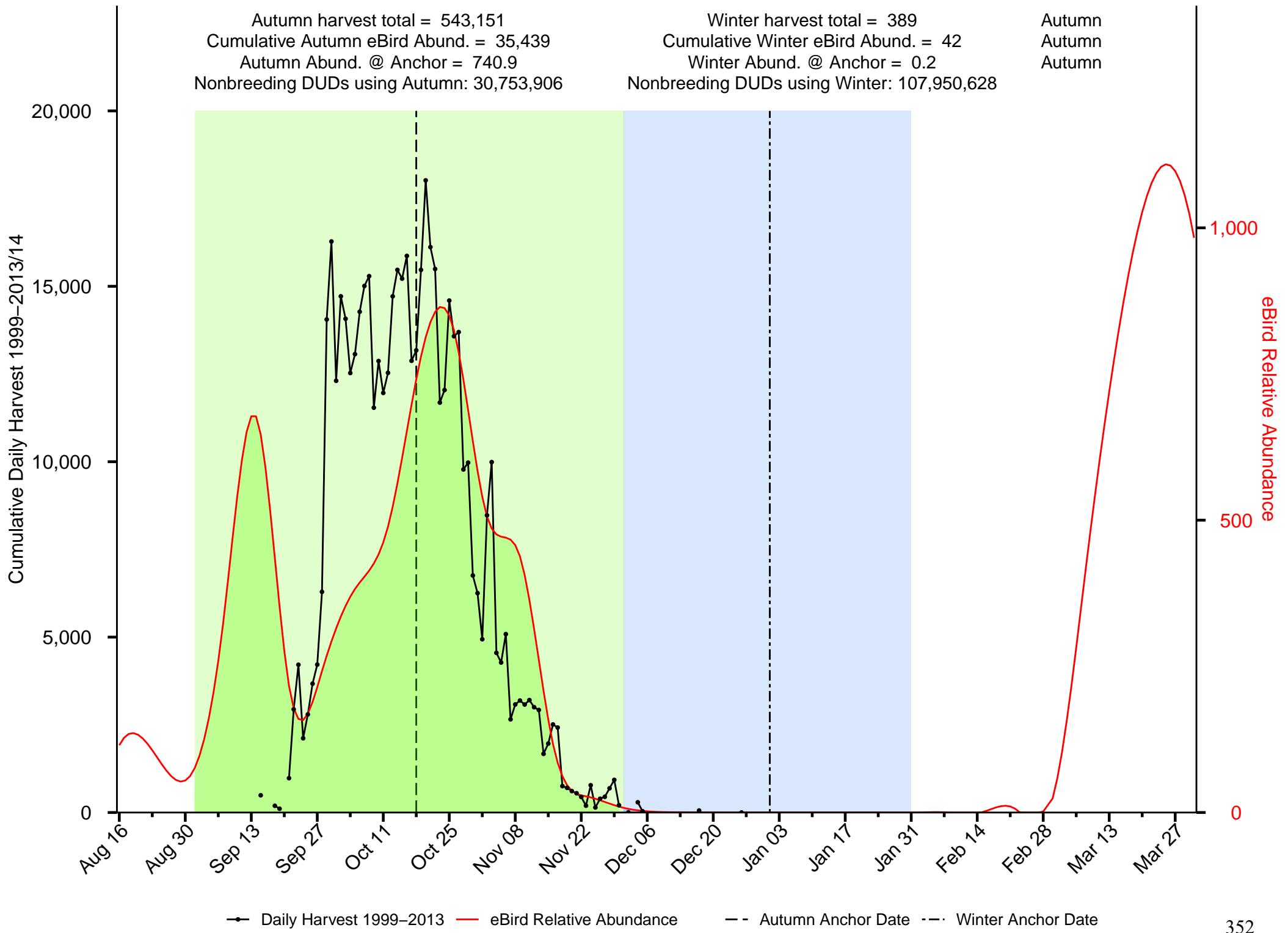
Summary of Northern Pintail in the Prairie Pothole JV



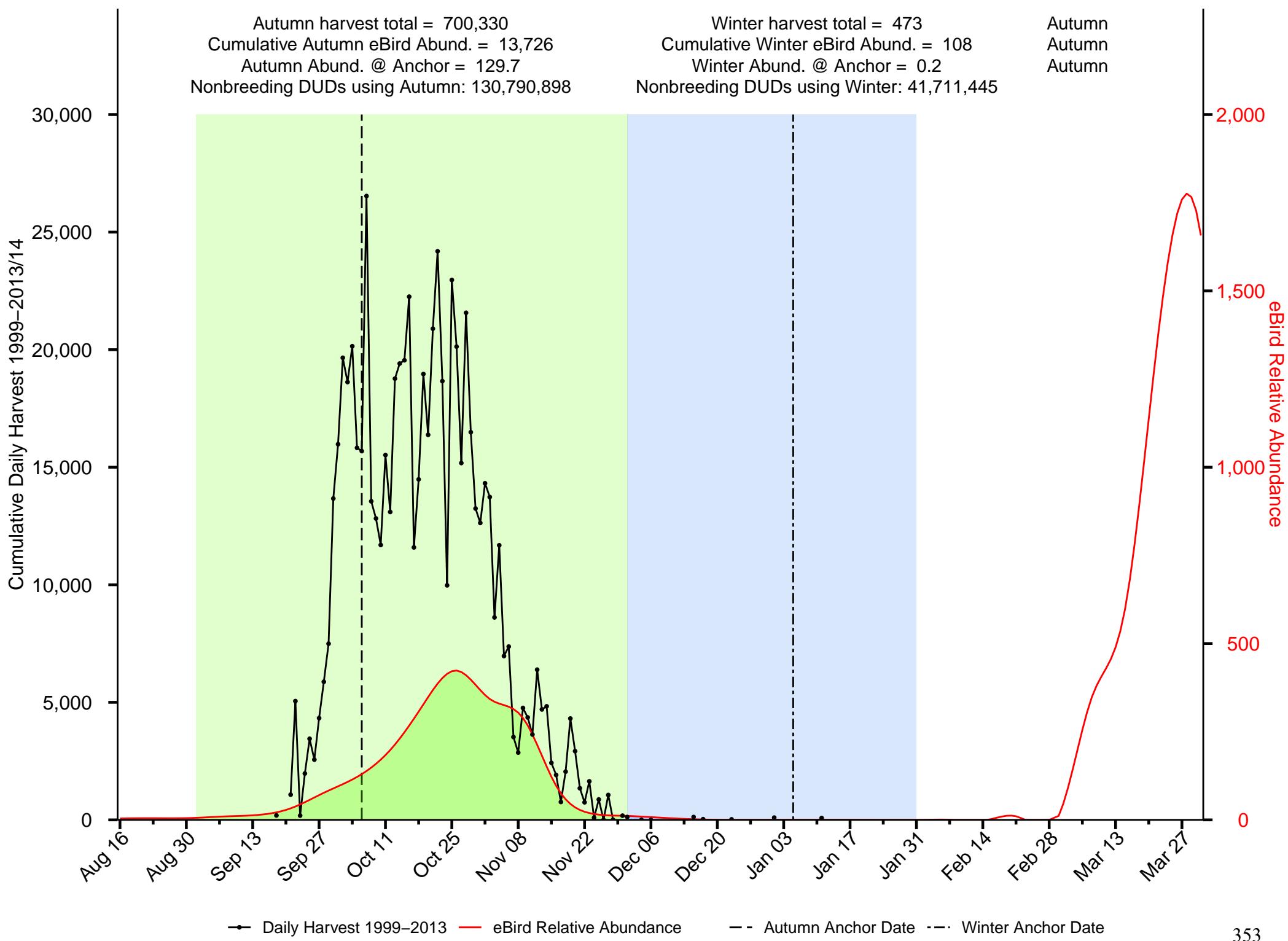
Summary of Northern Shoveler in the Prairie Pothole JV



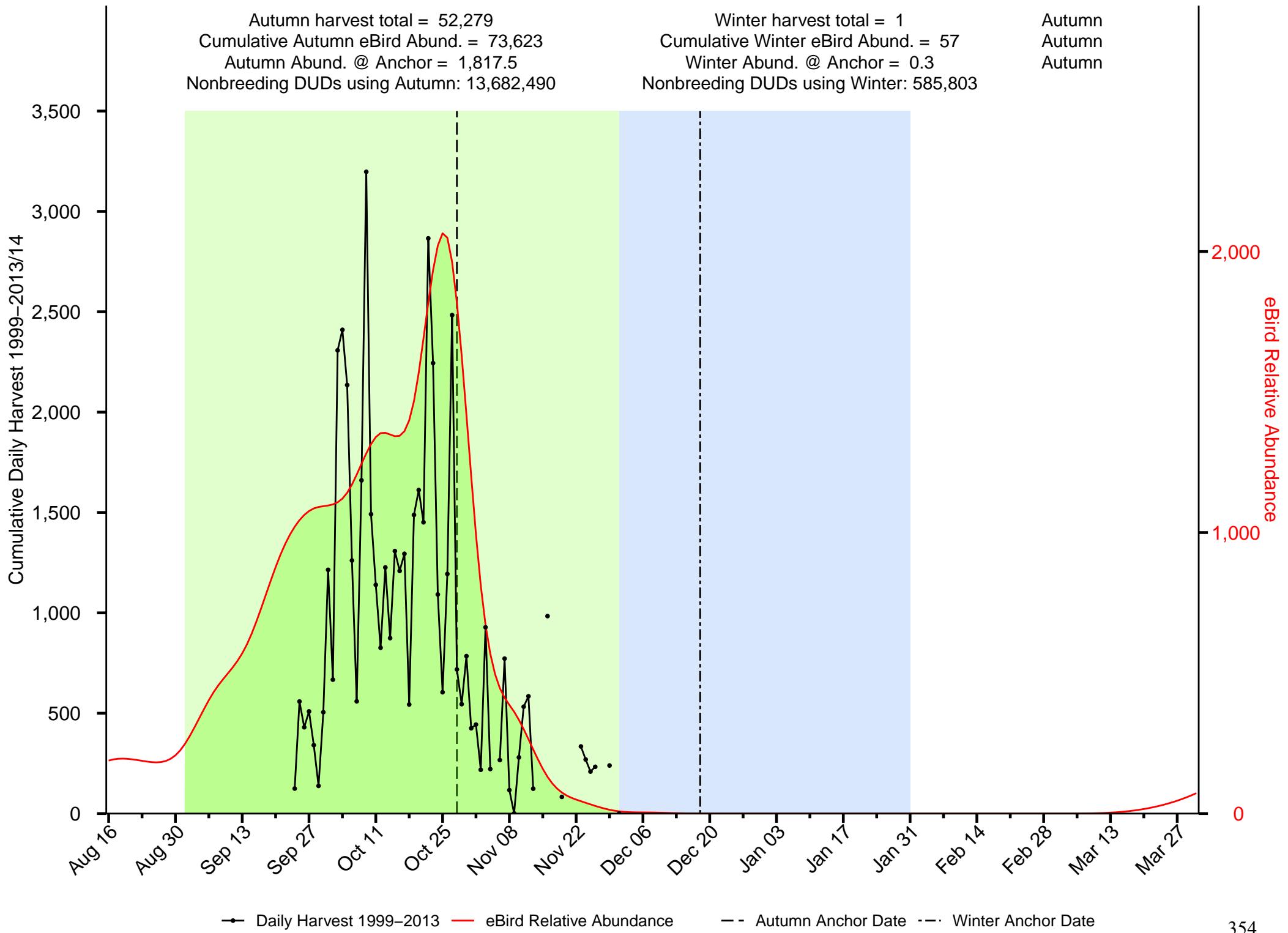
Summary of Redhead in the Prairie Pothole JV



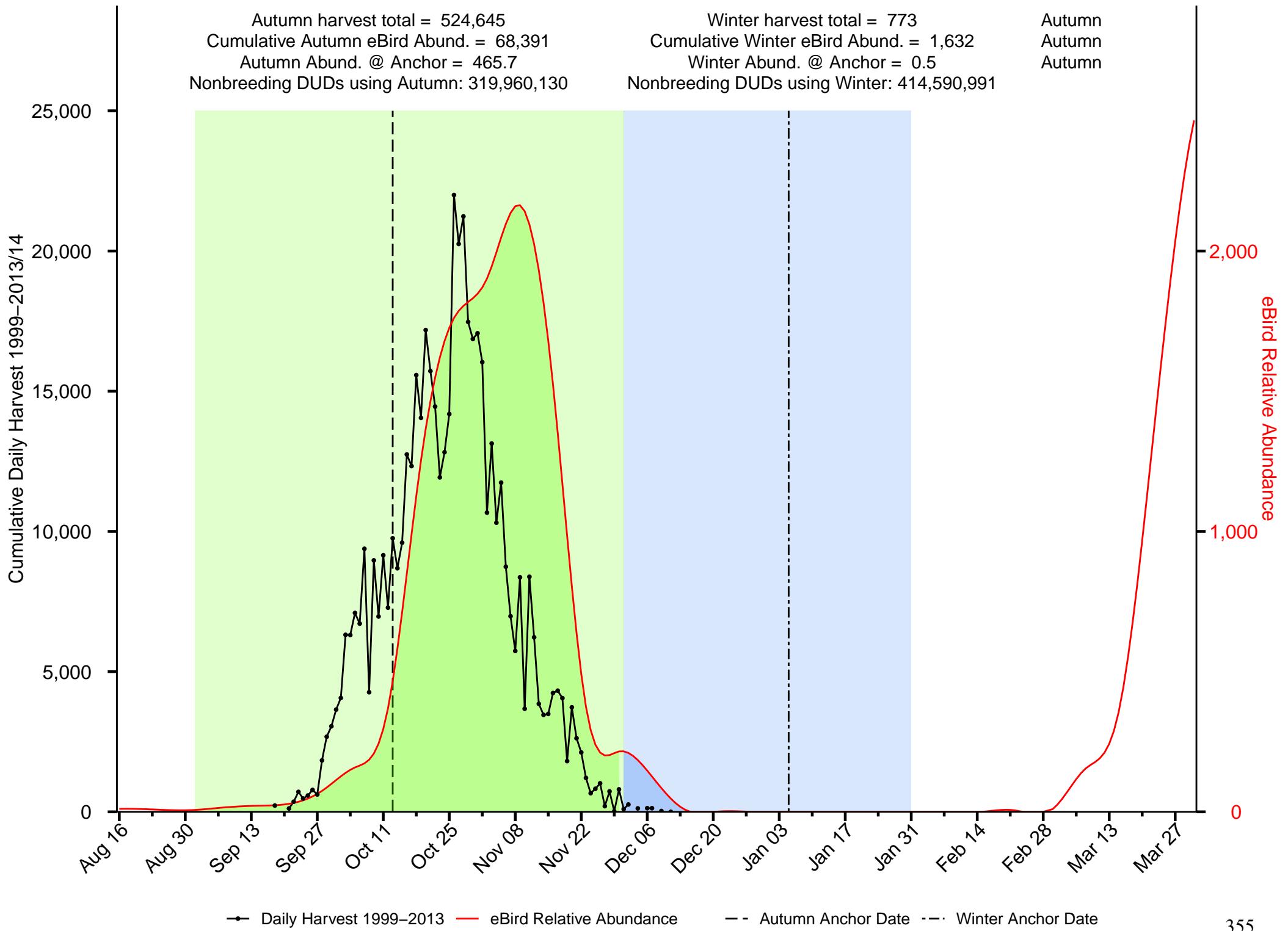
Summary of Ring-necked Duck in the Prairie Pothole JV



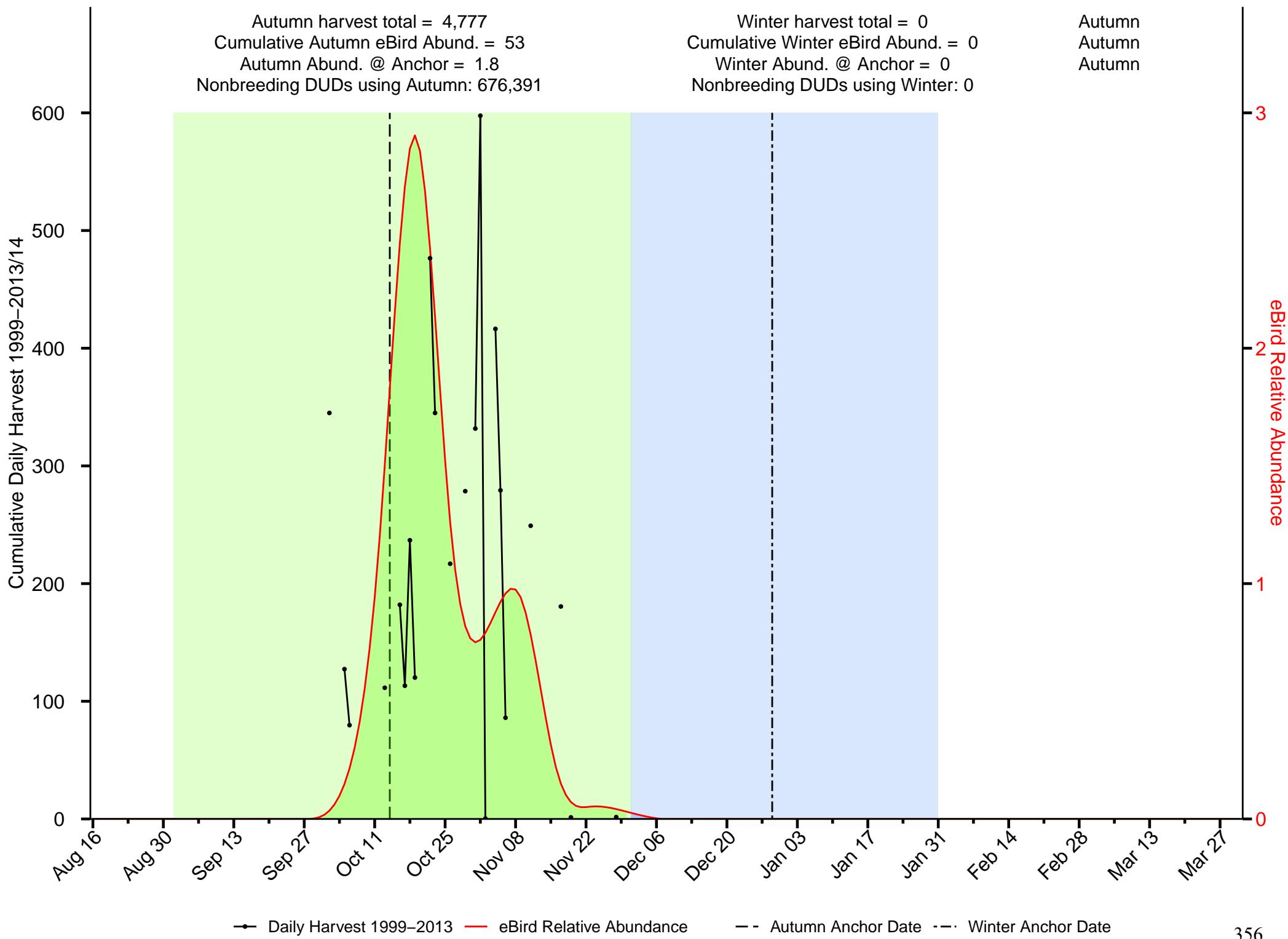
Summary of Ruddy Duck in the Prairie Pothole JV



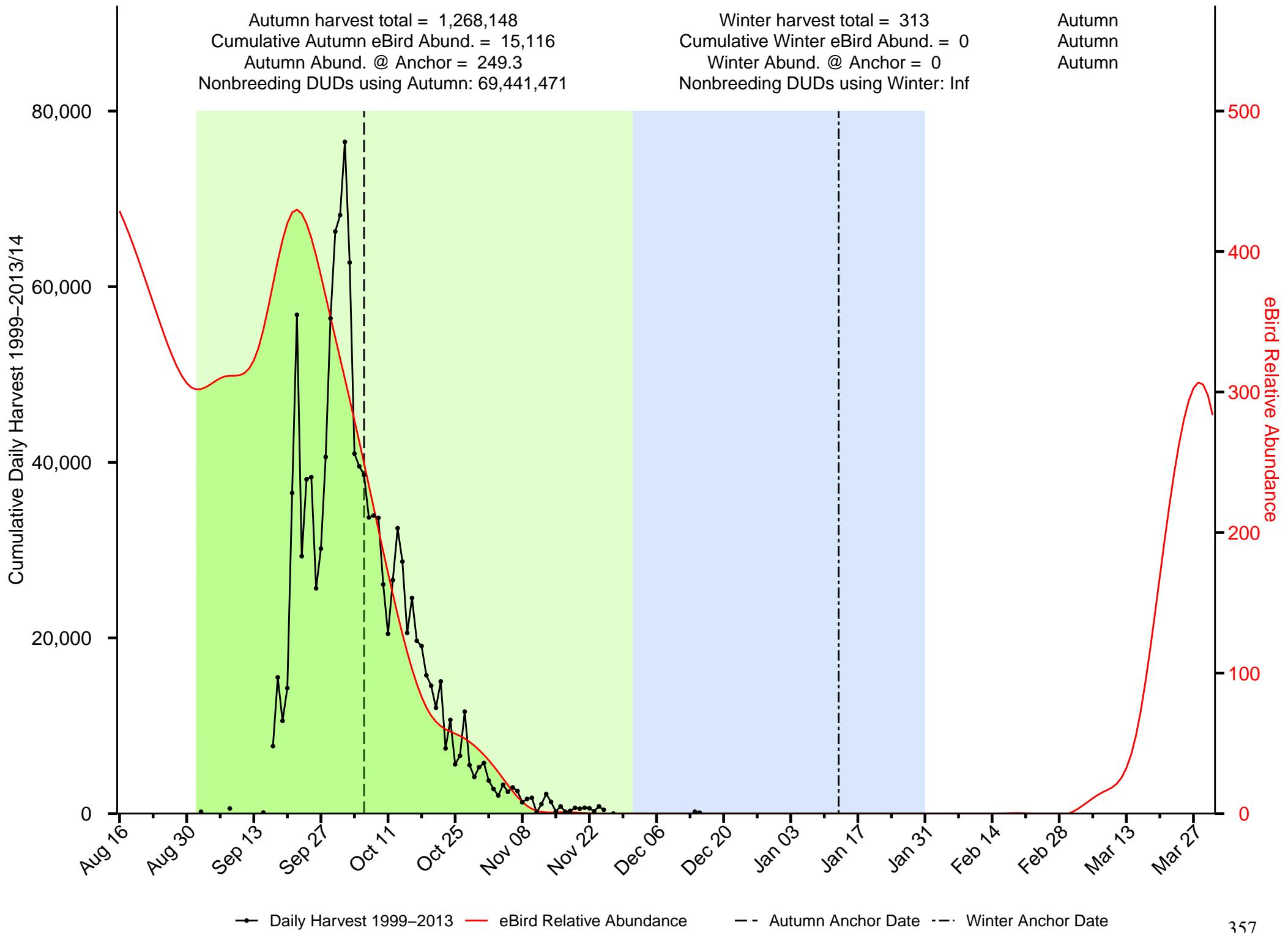
Summary of Scaup in the Prairie Pothole JV



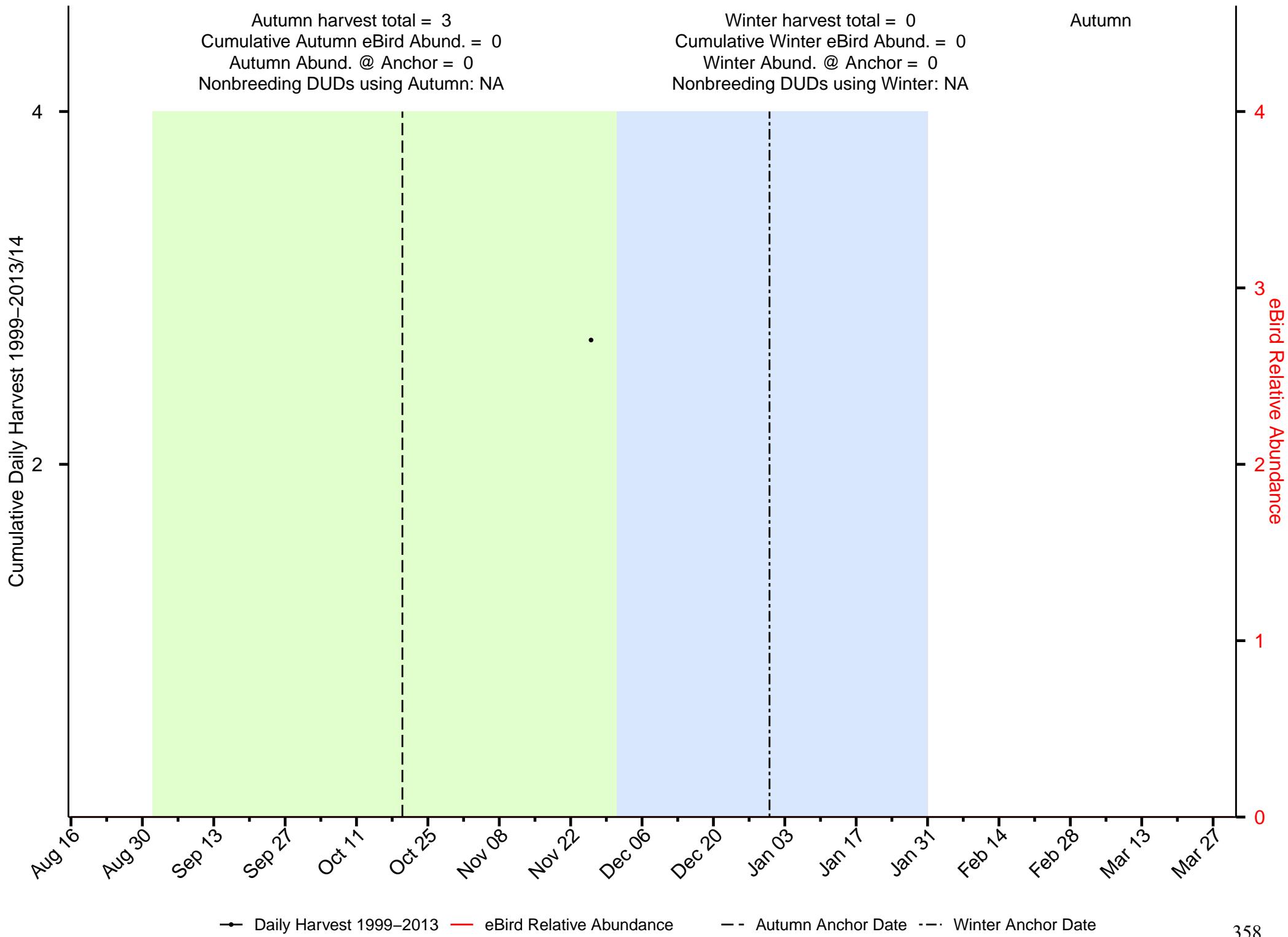
Summary of Scoter in the Prairie Pothole JV



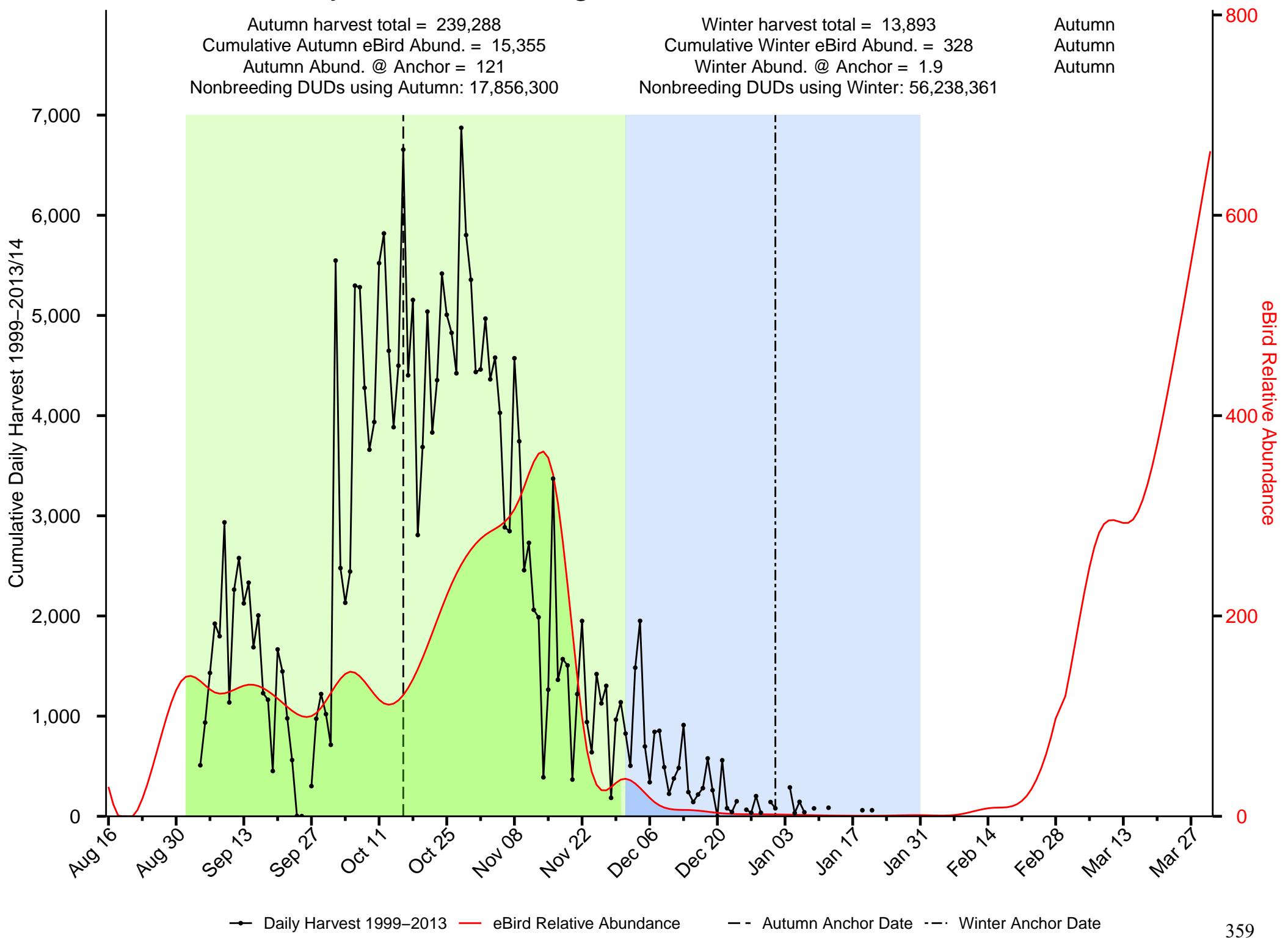
Summary of Wood Duck in the Prairie Pothole JV



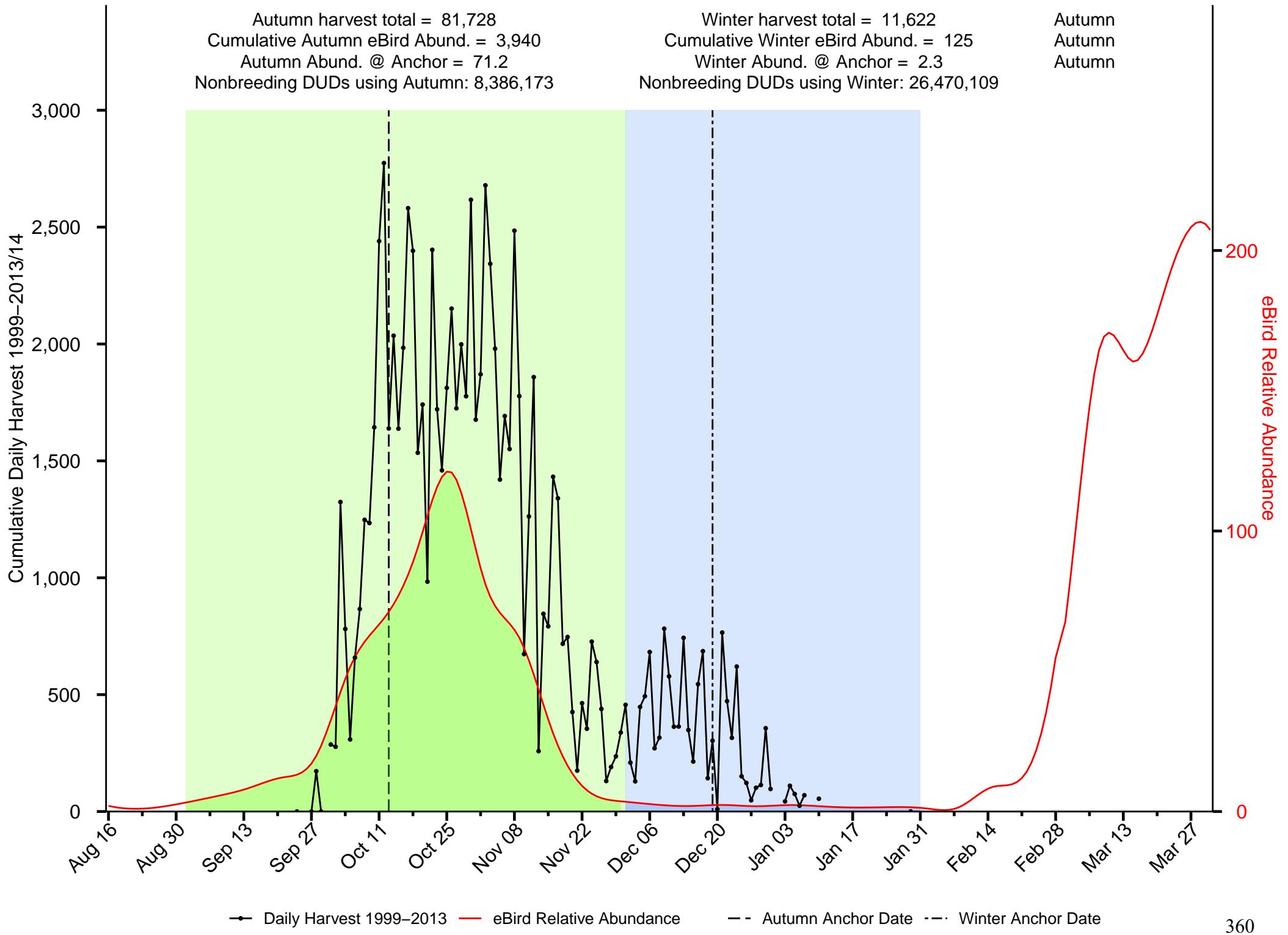
Summary of American Black Duck in the Rainwater Basin JV



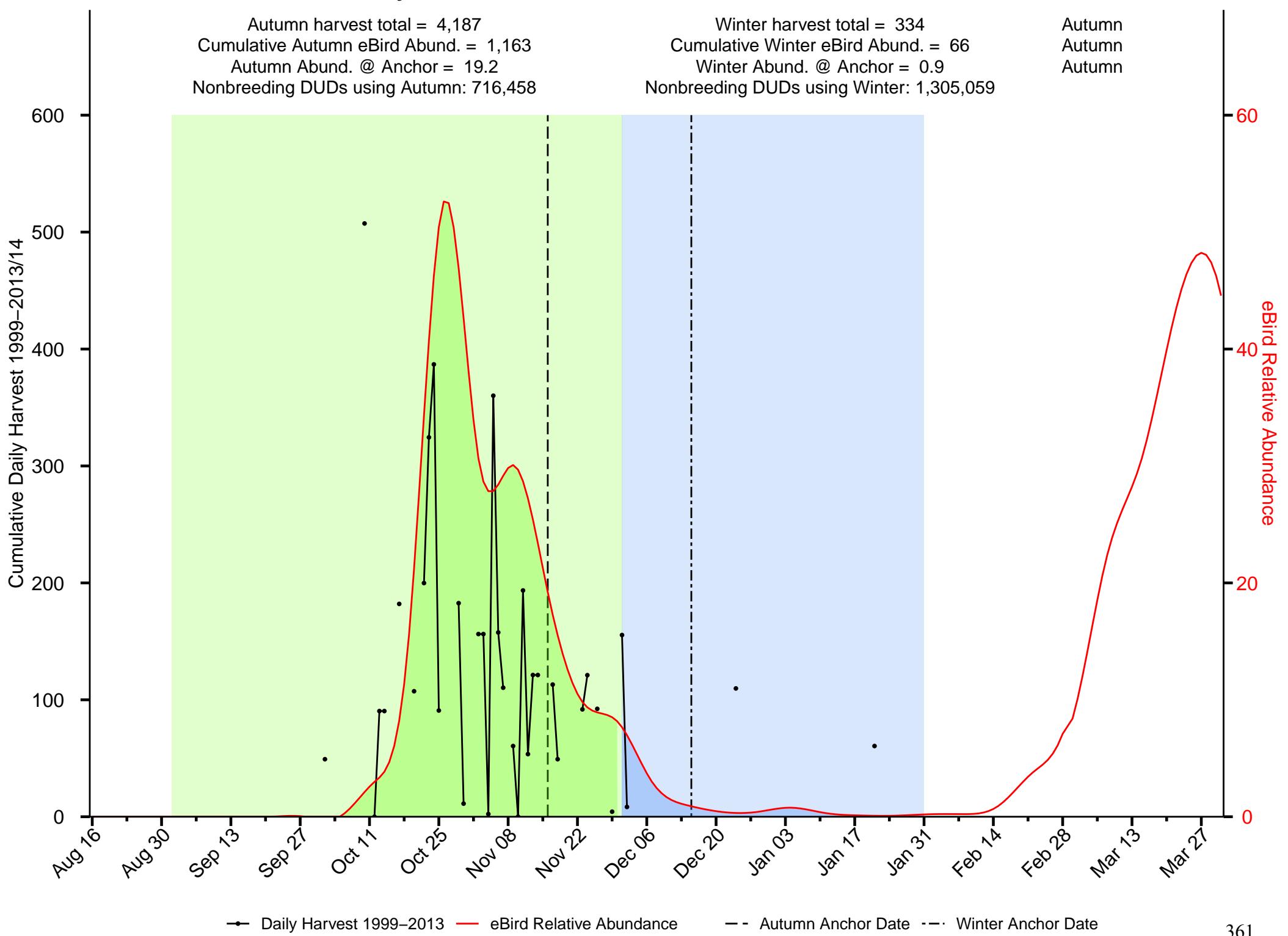
Summary of Green-winged Teal in the Rainwater Basin JV



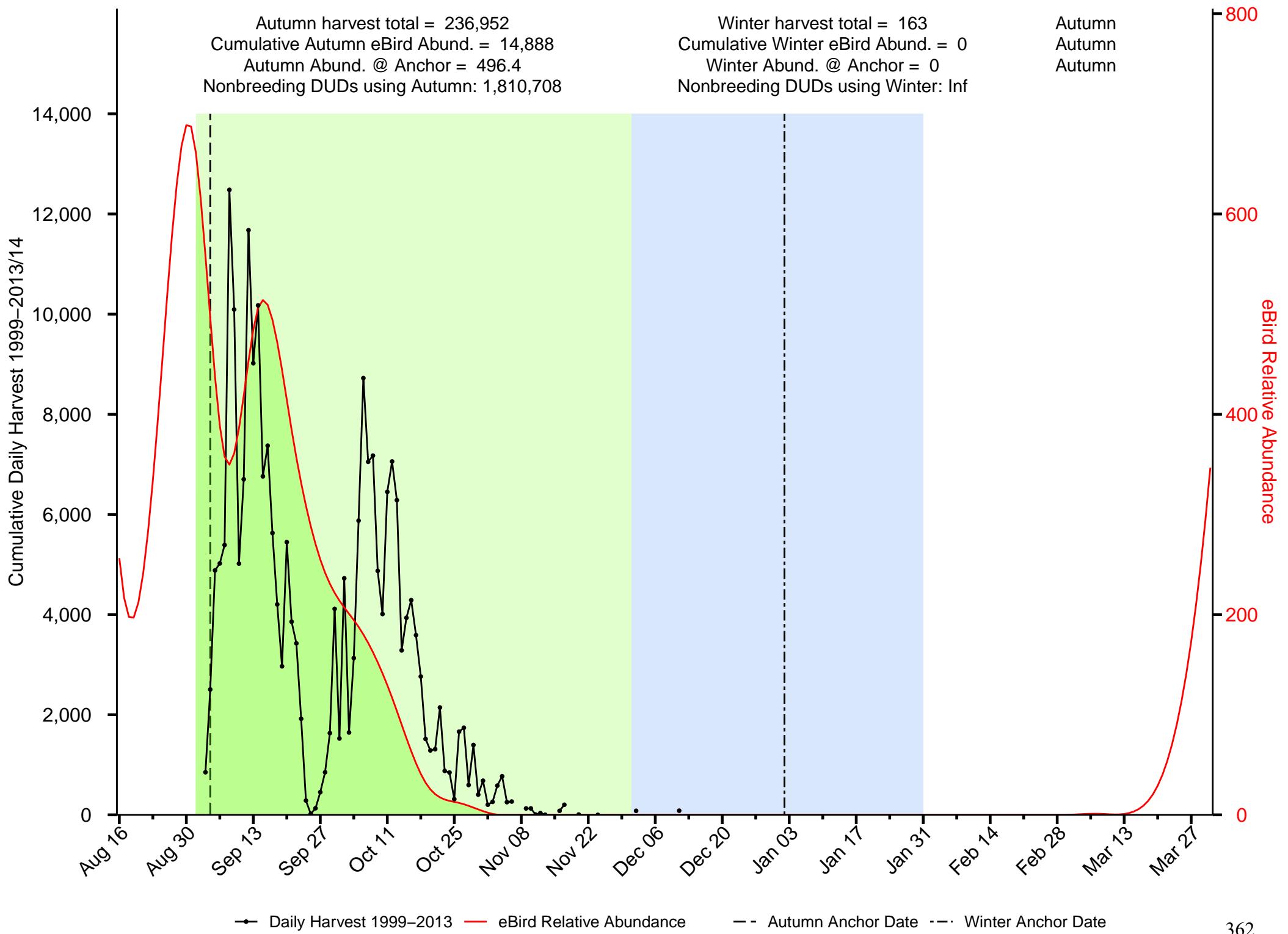
Summary of American Wigeon in the Rainwater Basin JV



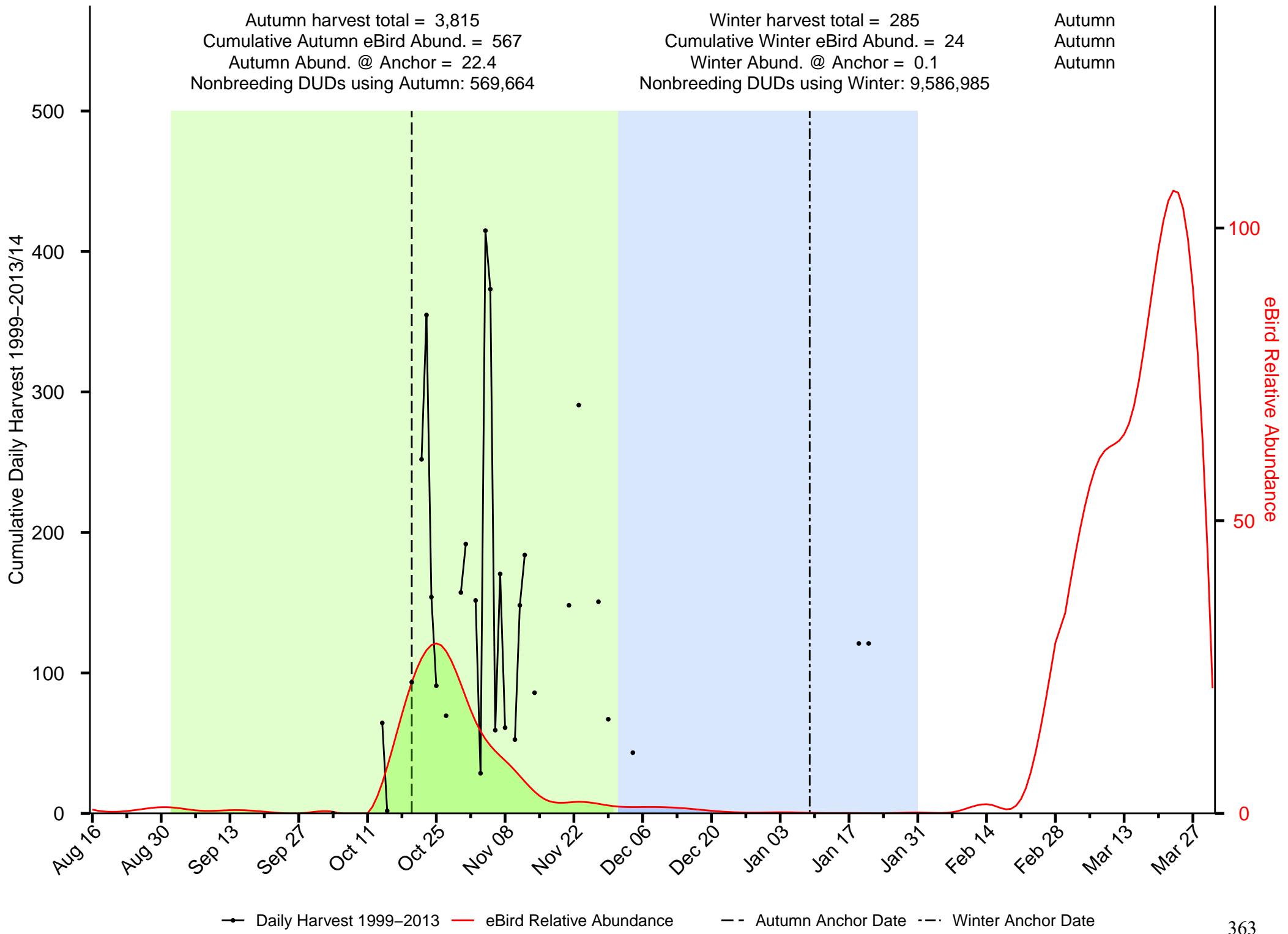
Summary of Bufflehead in the Rainwater Basin JV



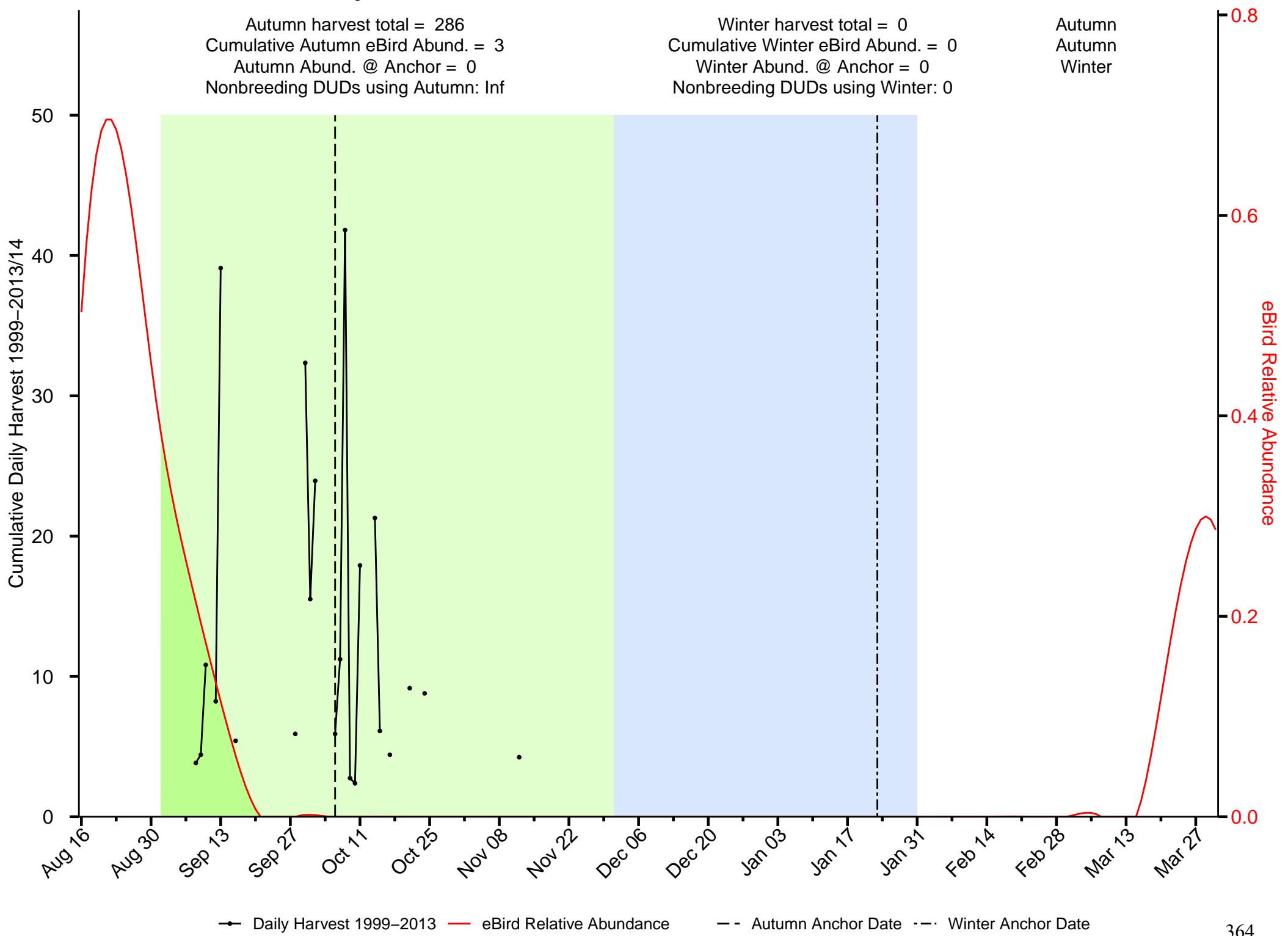
Summary of Blue-winged Teal in the Rainwater Basin JV



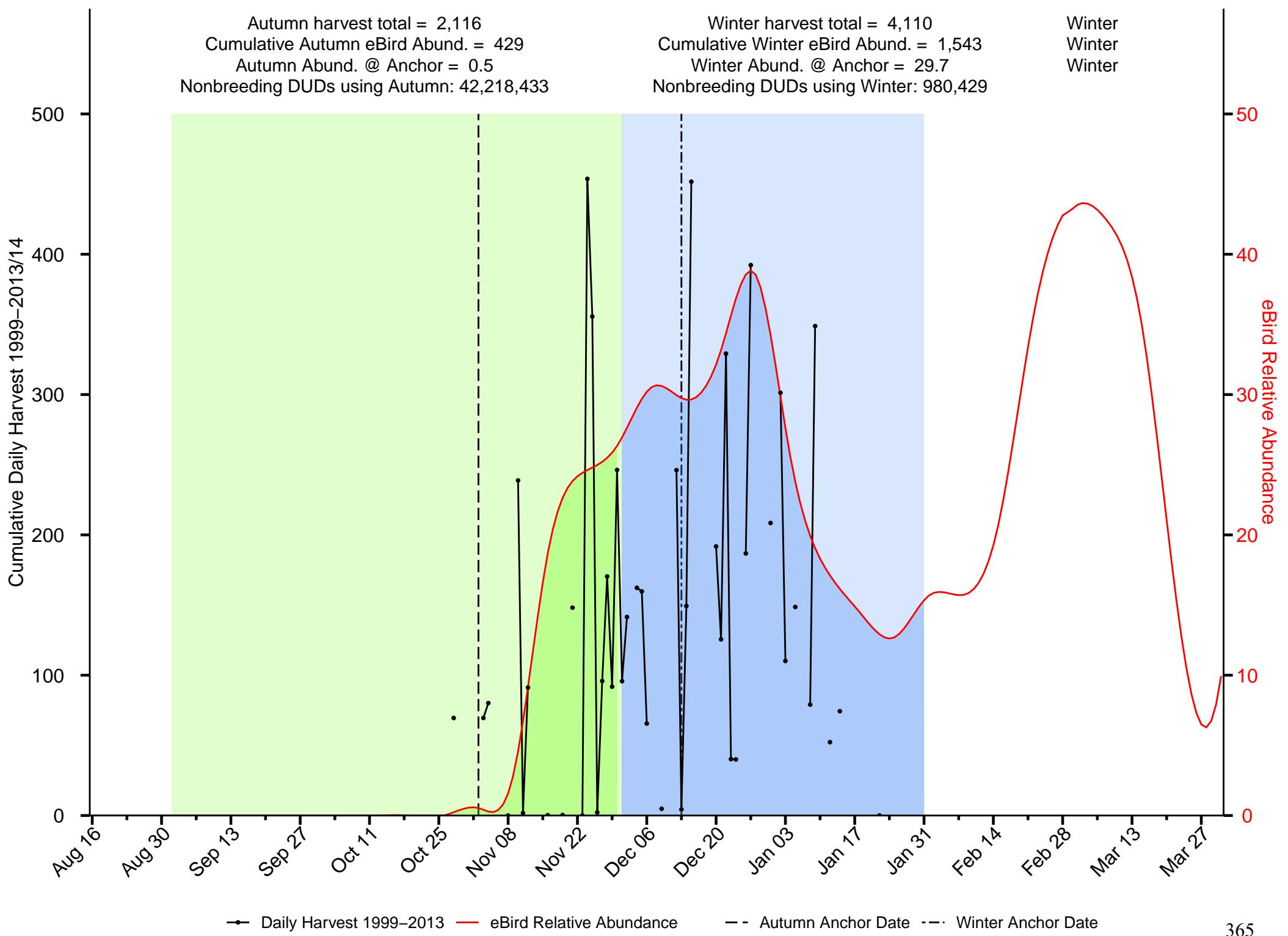
Summary of Canvasback in the Rainwater Basin JV



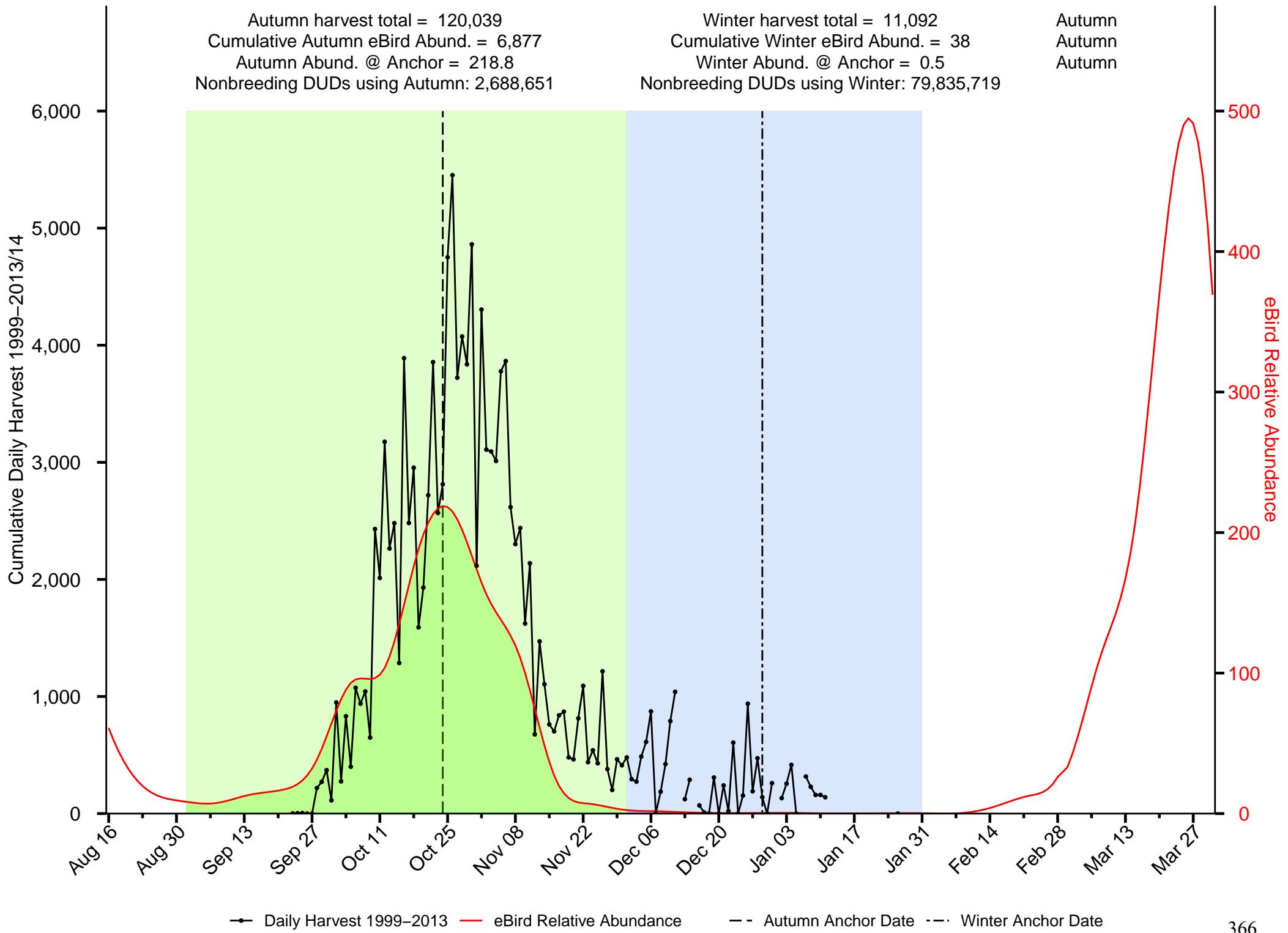
Summary of Cinnamon Teal in the Rainwater Basin JV



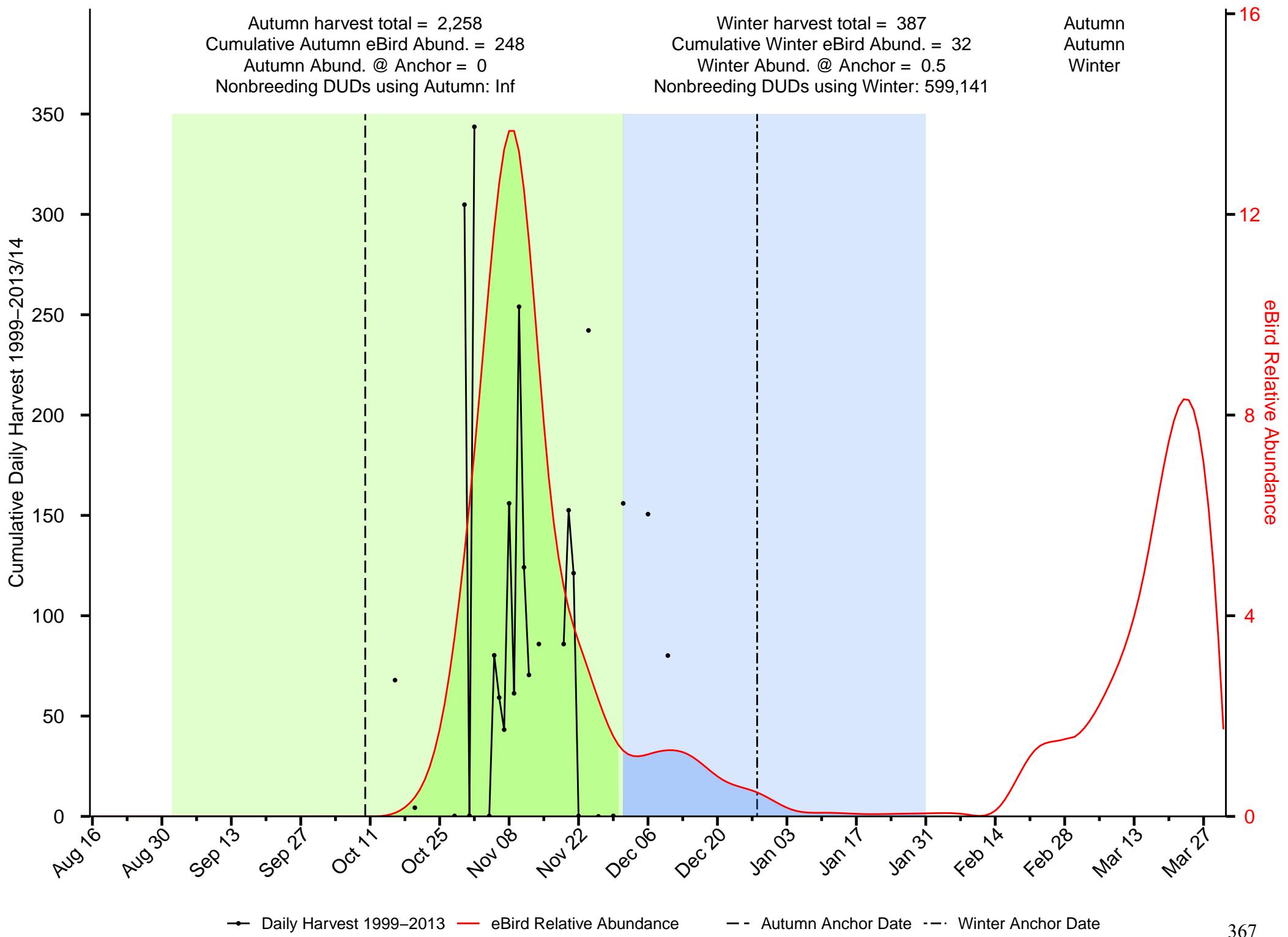
Summary of Common Goldeneye in the Rainwater Basin JV



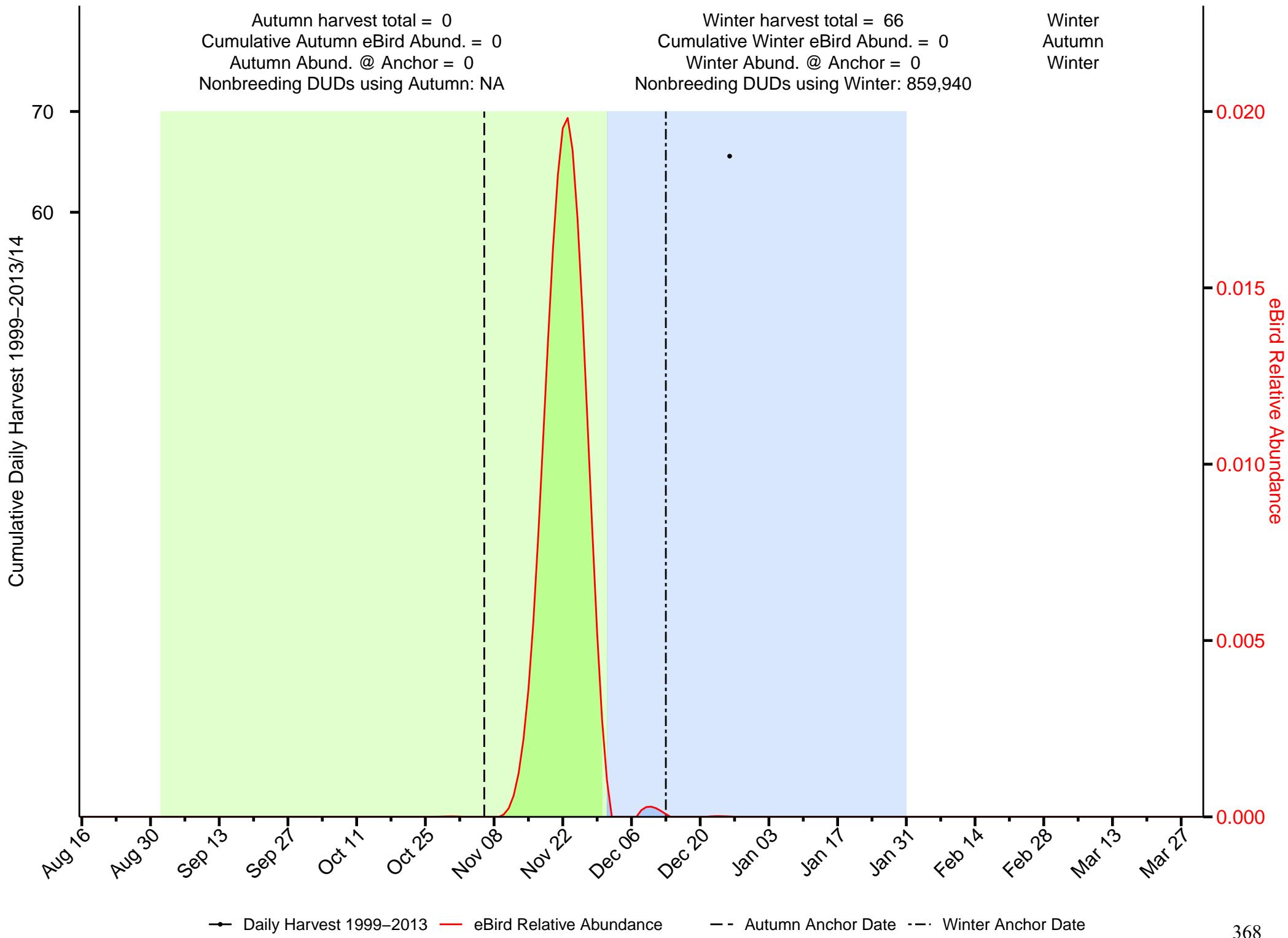
Summary of Gadwall in the Rainwater Basin JV



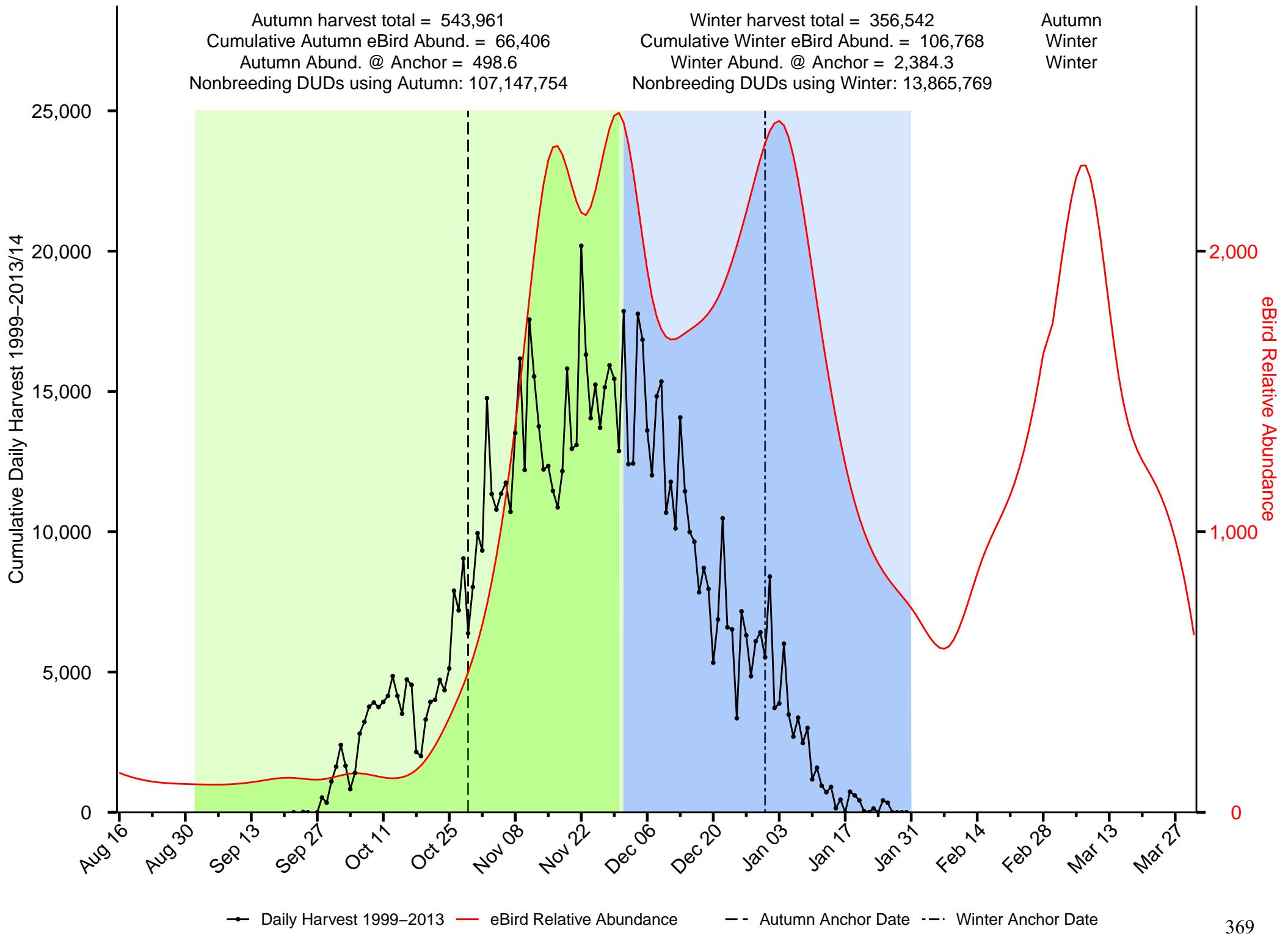
Summary of Hooded Merganser in the Rainwater Basin JV



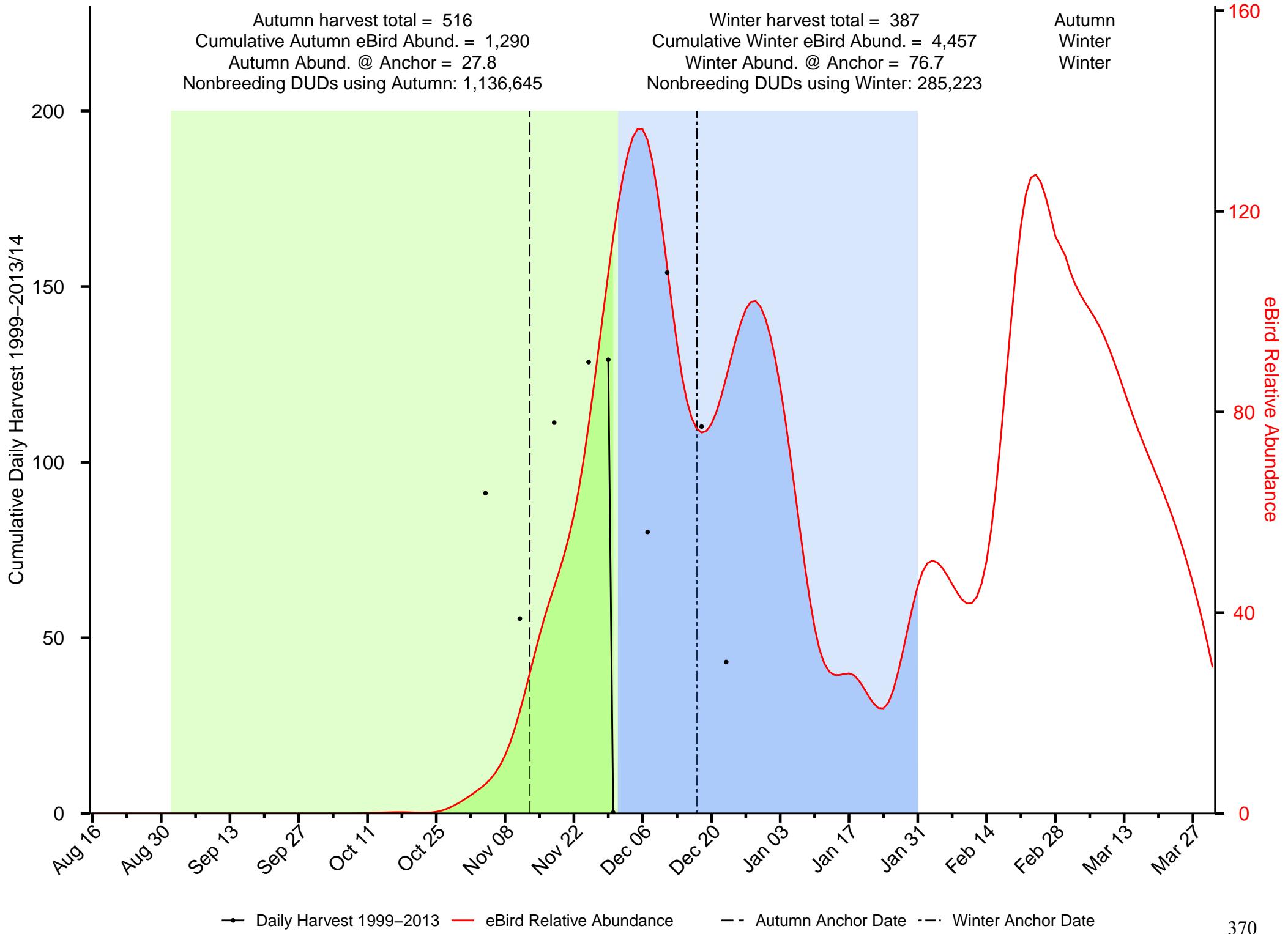
Summary of Long-tailed Duck in the Rainwater Basin JV



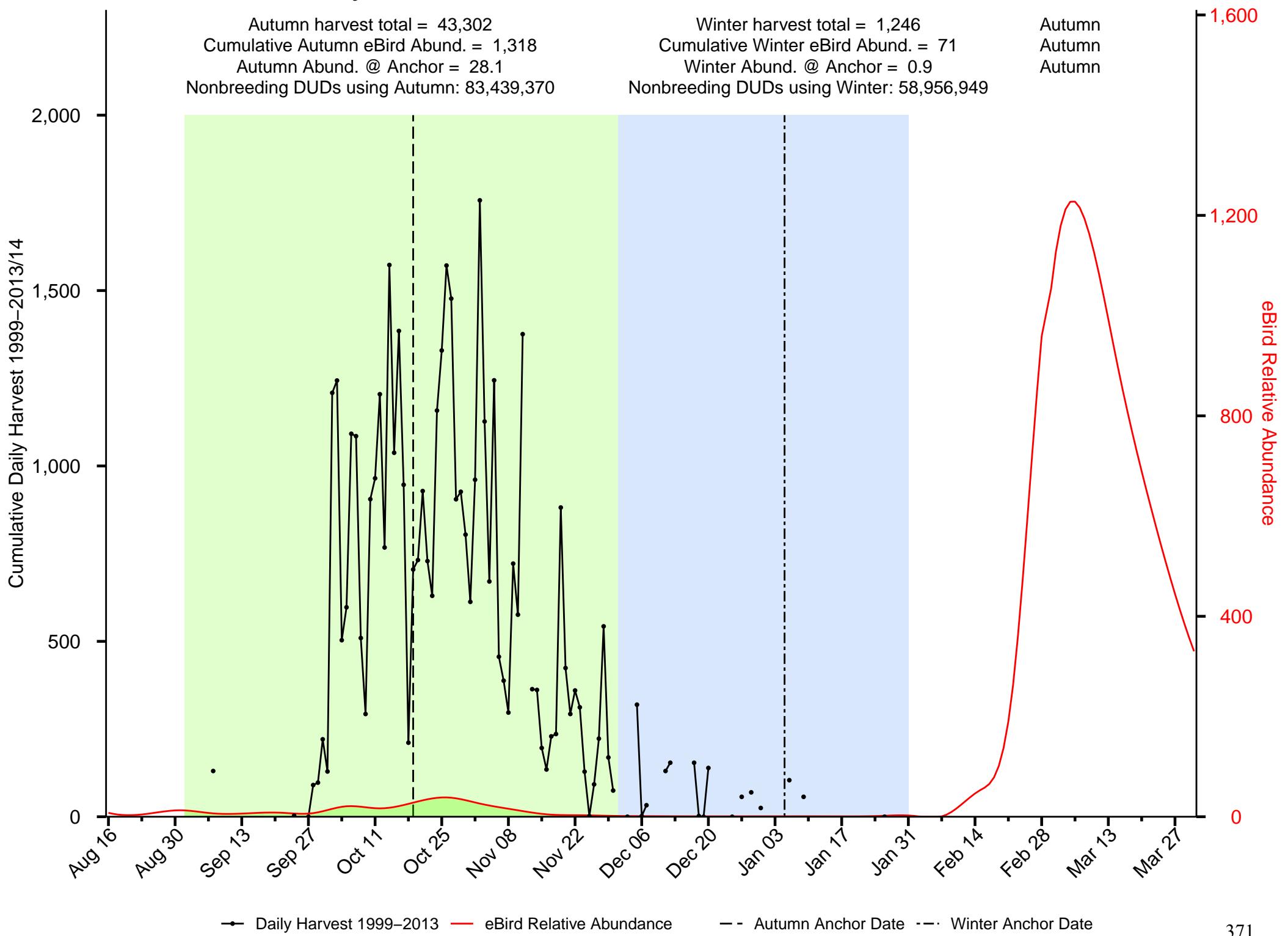
Summary of Mallard in the Rainwater Basin JV



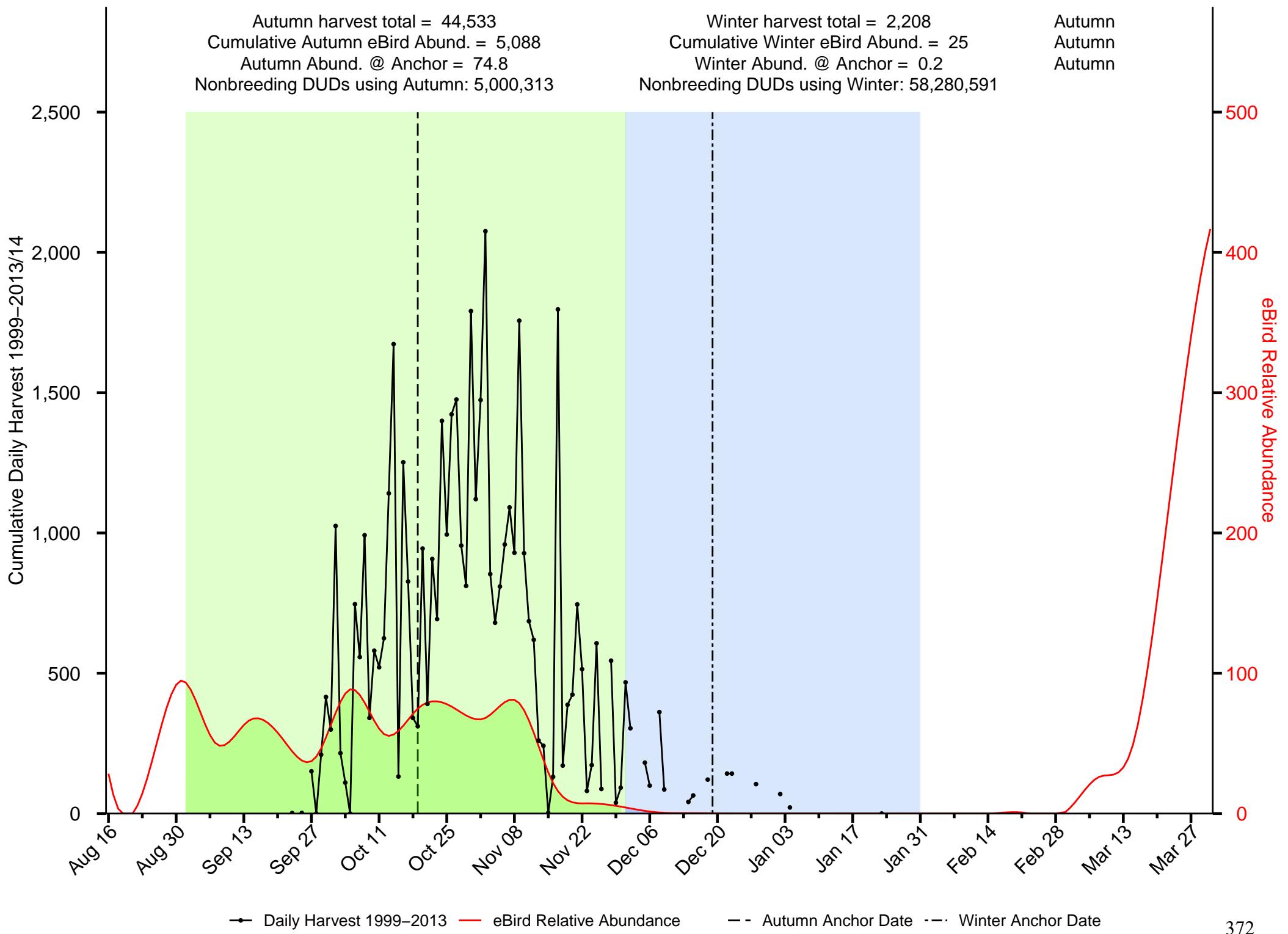
Summary of Merganser in the Rainwater Basin JV



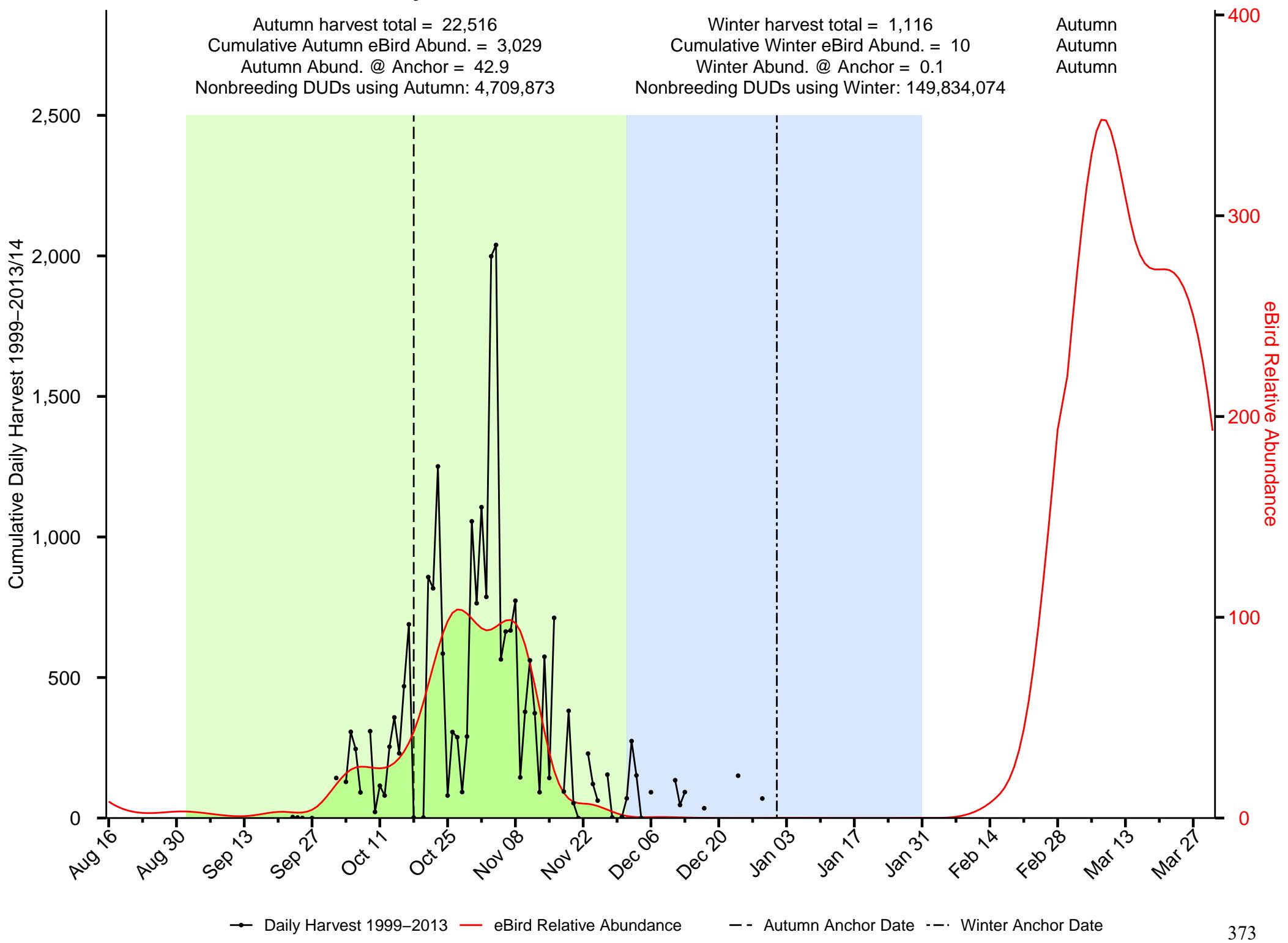
Summary of Northern Pintail in the Rainwater Basin JV



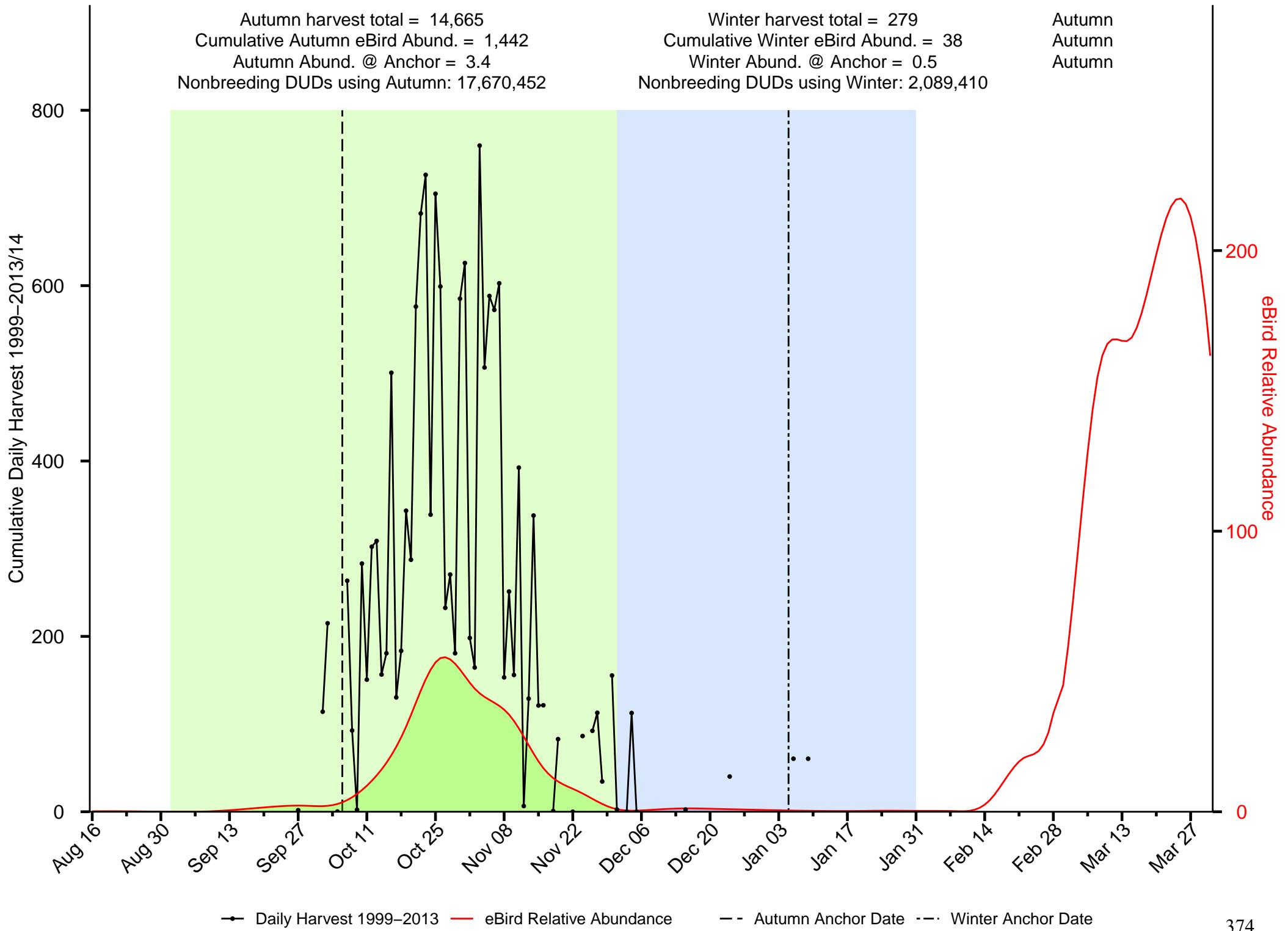
Summary of Northern Shoveler in the Rainwater Basin JV



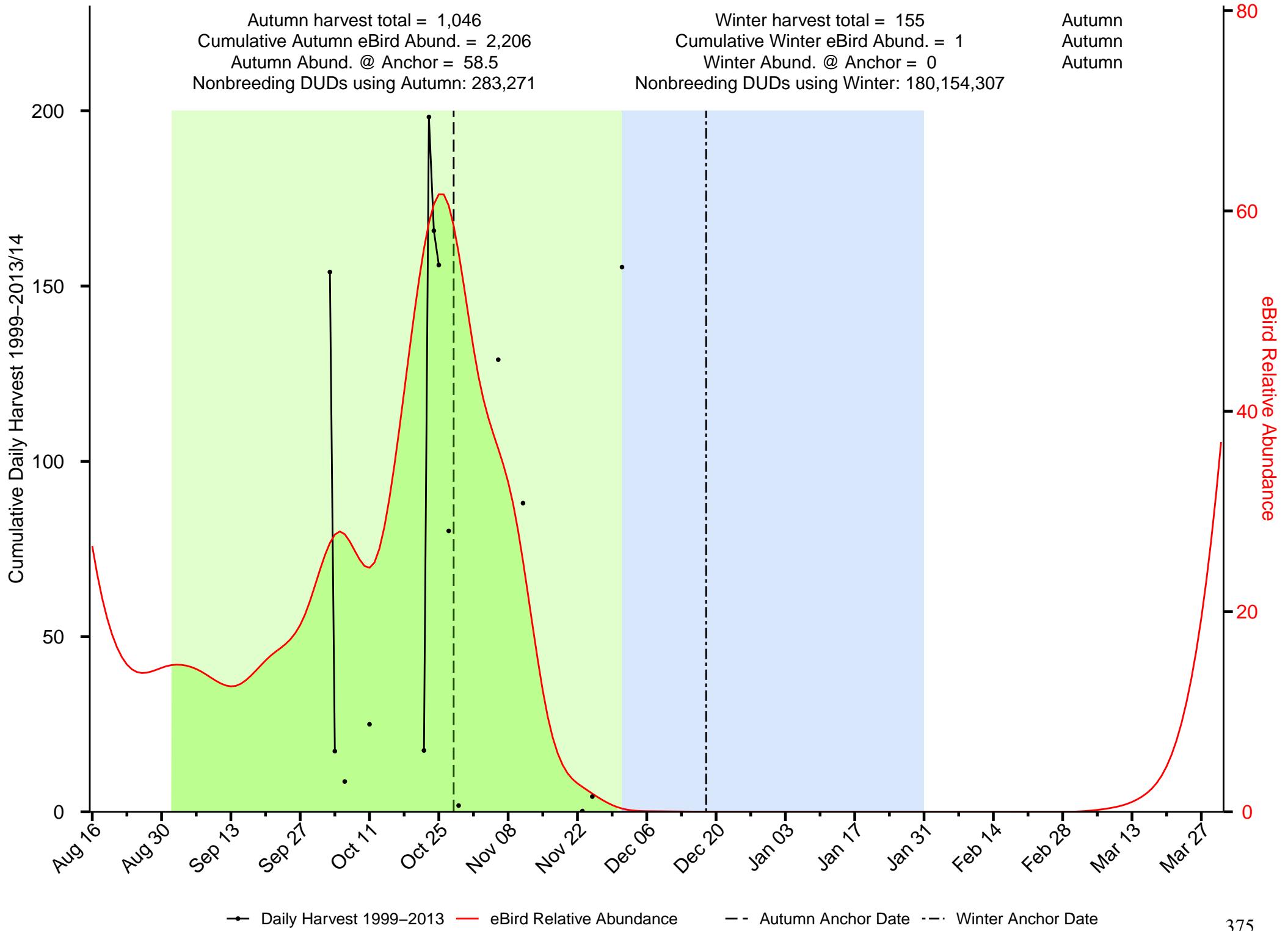
Summary of Redhead in the Rainwater Basin JV



Summary of Ring-necked Duck in the Rainwater Basin JV



Summary of Ruddy Duck in the Rainwater Basin JV



Summary of Scaup in the Rainwater Basin JV

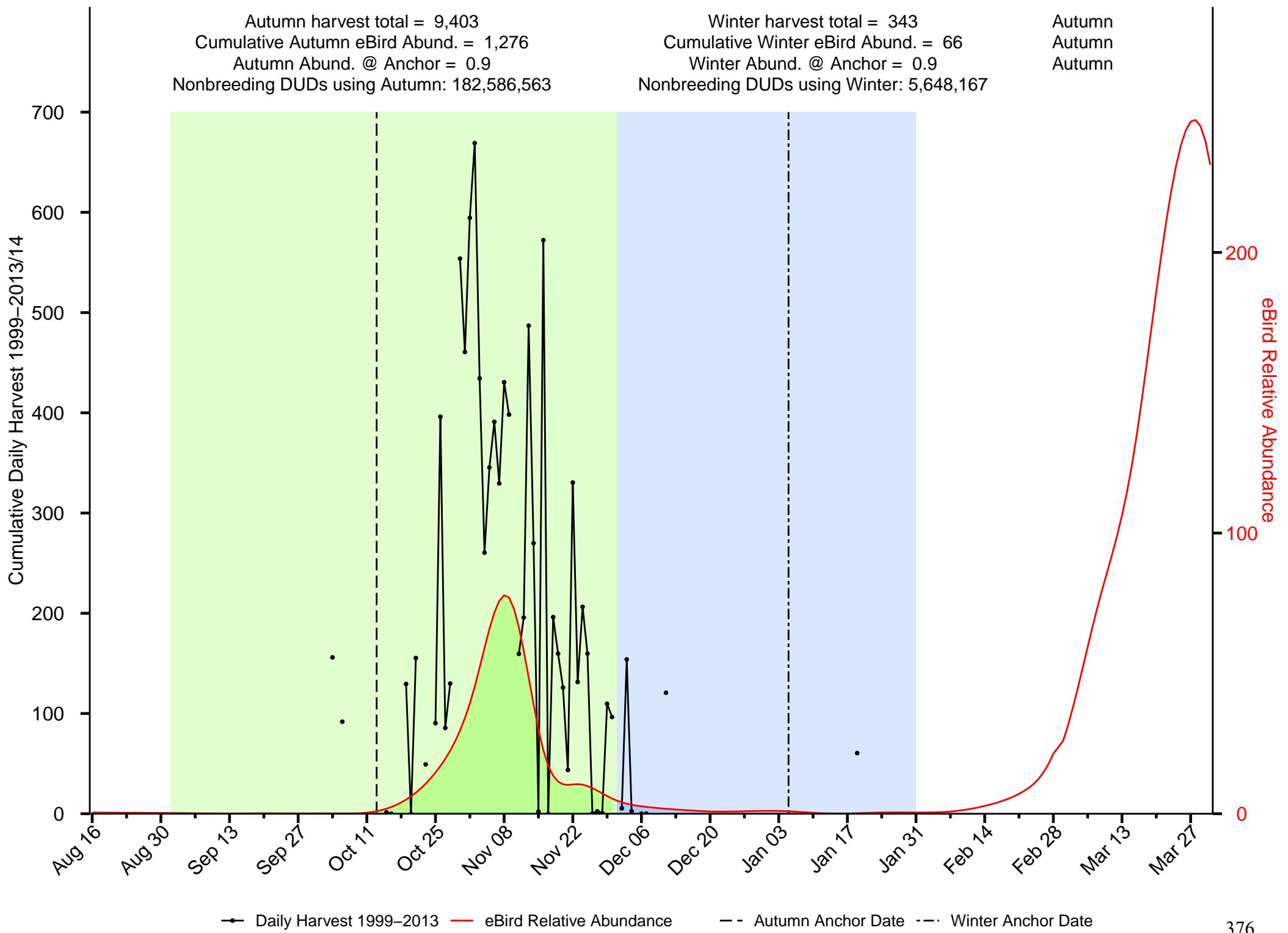
Autumn harvest total = 9,403
Cumulative Autumn eBird Abund. = 1,276
Autumn Abund. @ Anchor = 0.9
Nonbreeding DUDs using Autumn: 182,586,563

Winter harvest total = 343
Cumulative Winter eBird Abund. = 66
Winter Abund. @ Anchor = 0.9
Nonbreeding DUDs using Winter: 5,648,167

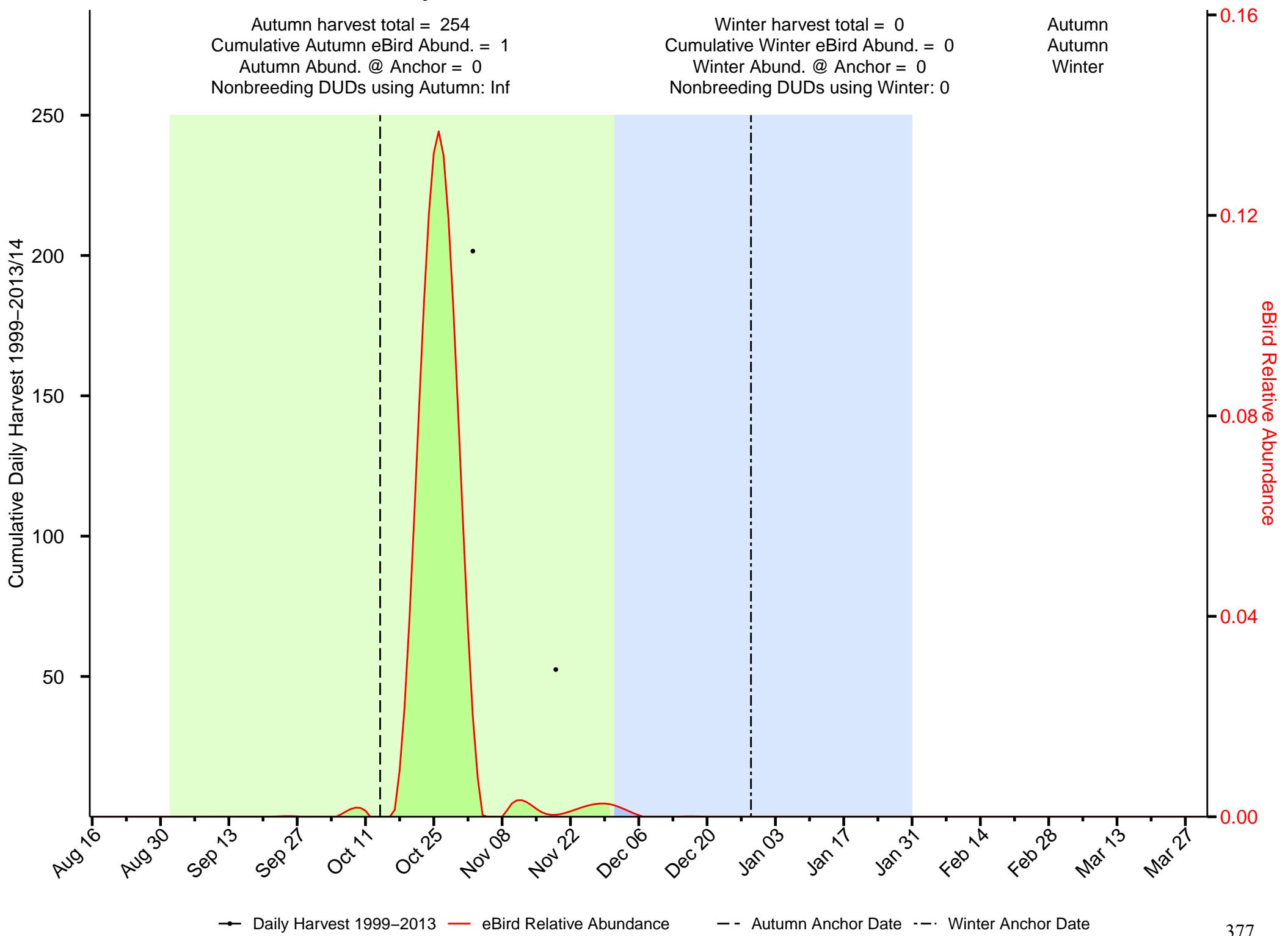
Autumn

Autumn

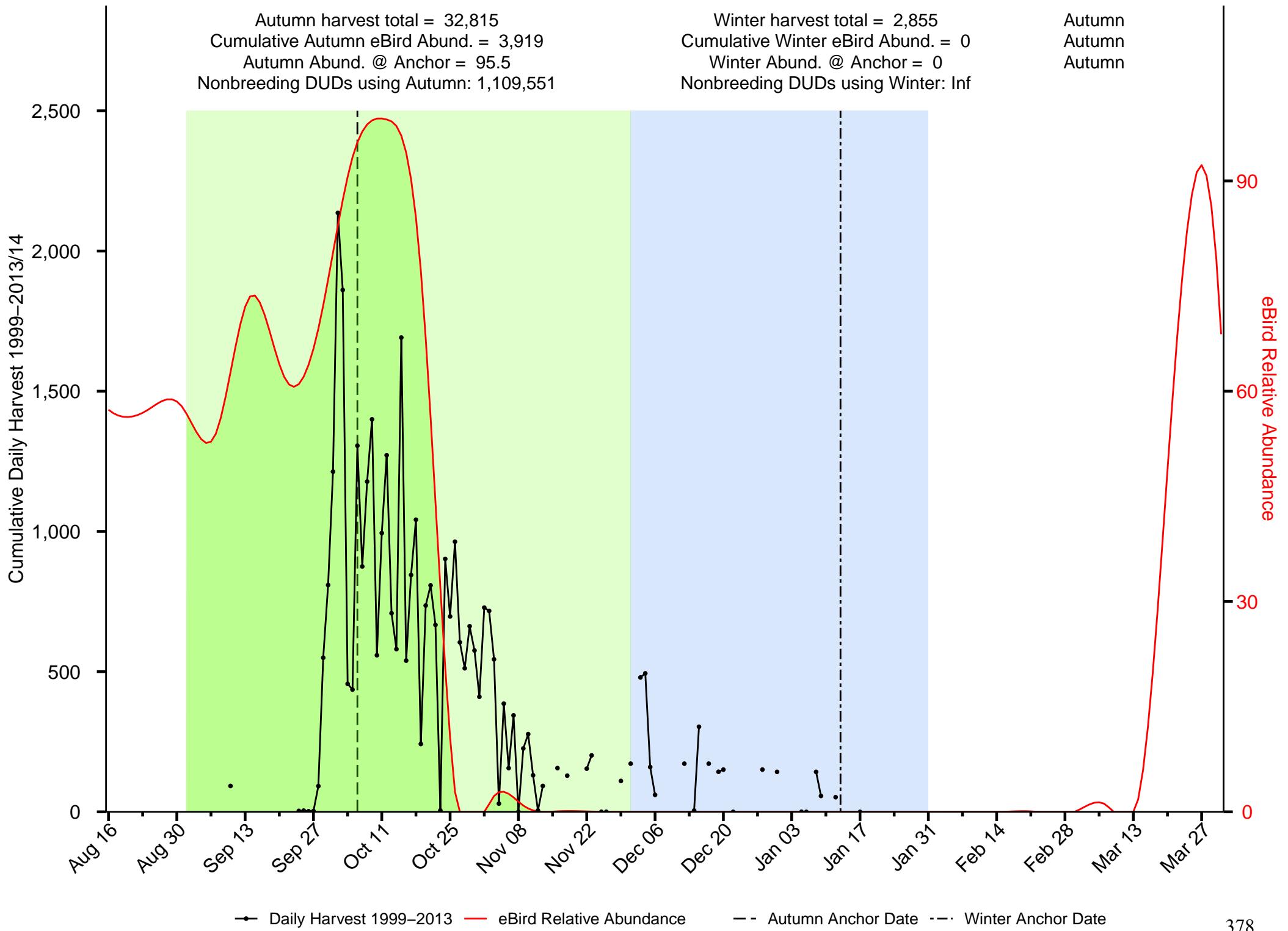
Autumn



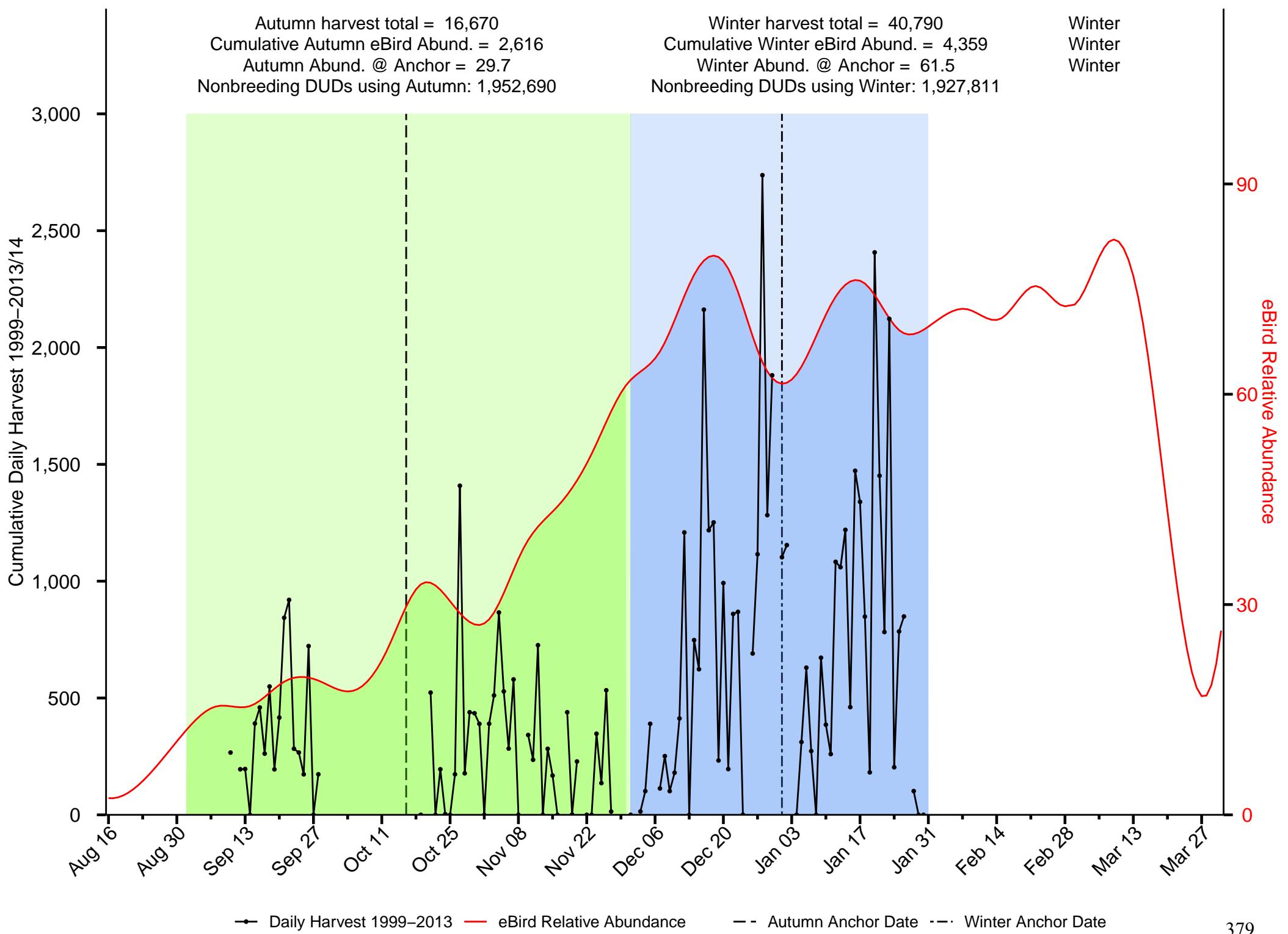
Summary of Scoter in the Rainwater Basin JV



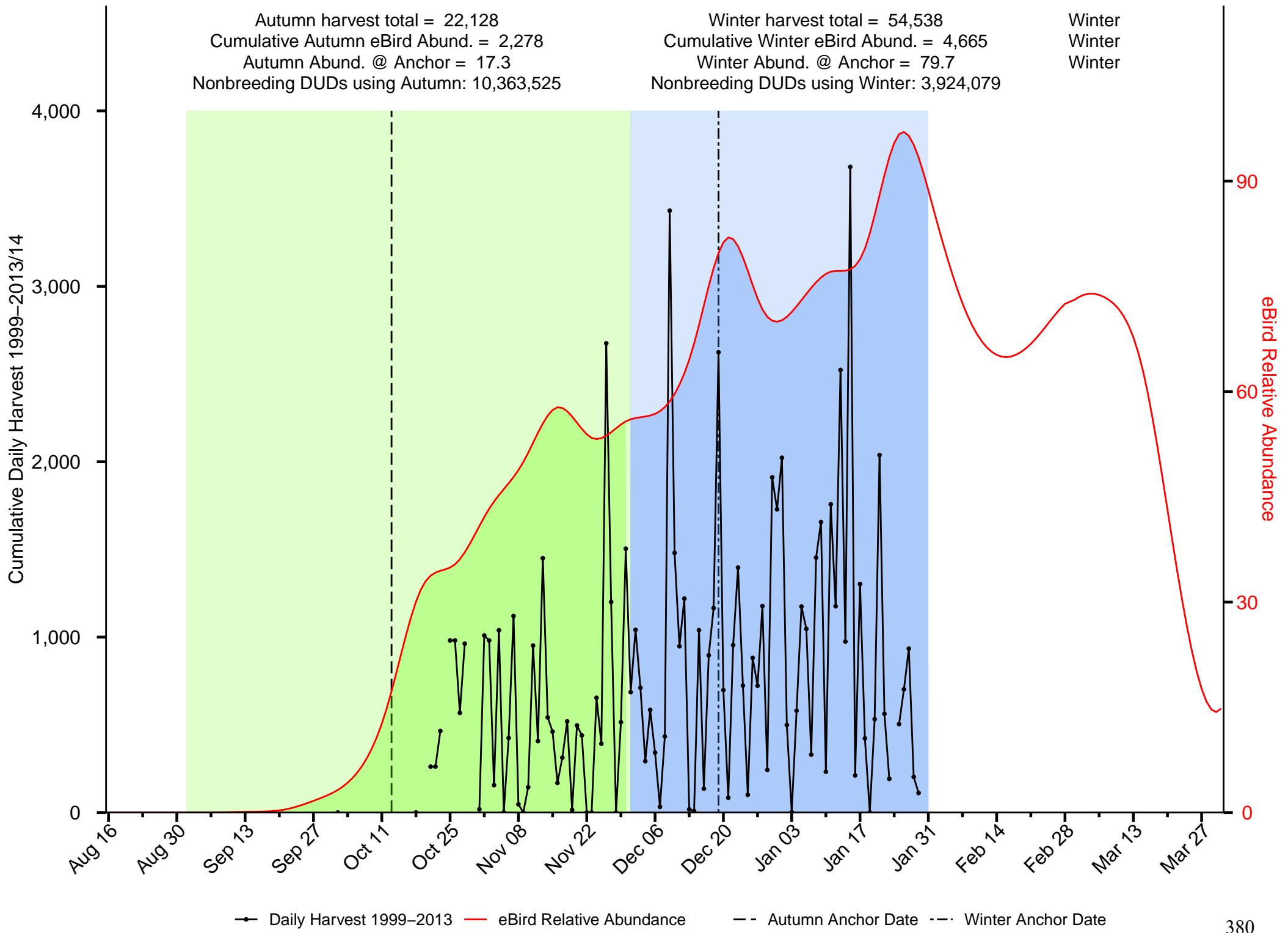
Summary of Wood Duck in the Rainwater Basin JV



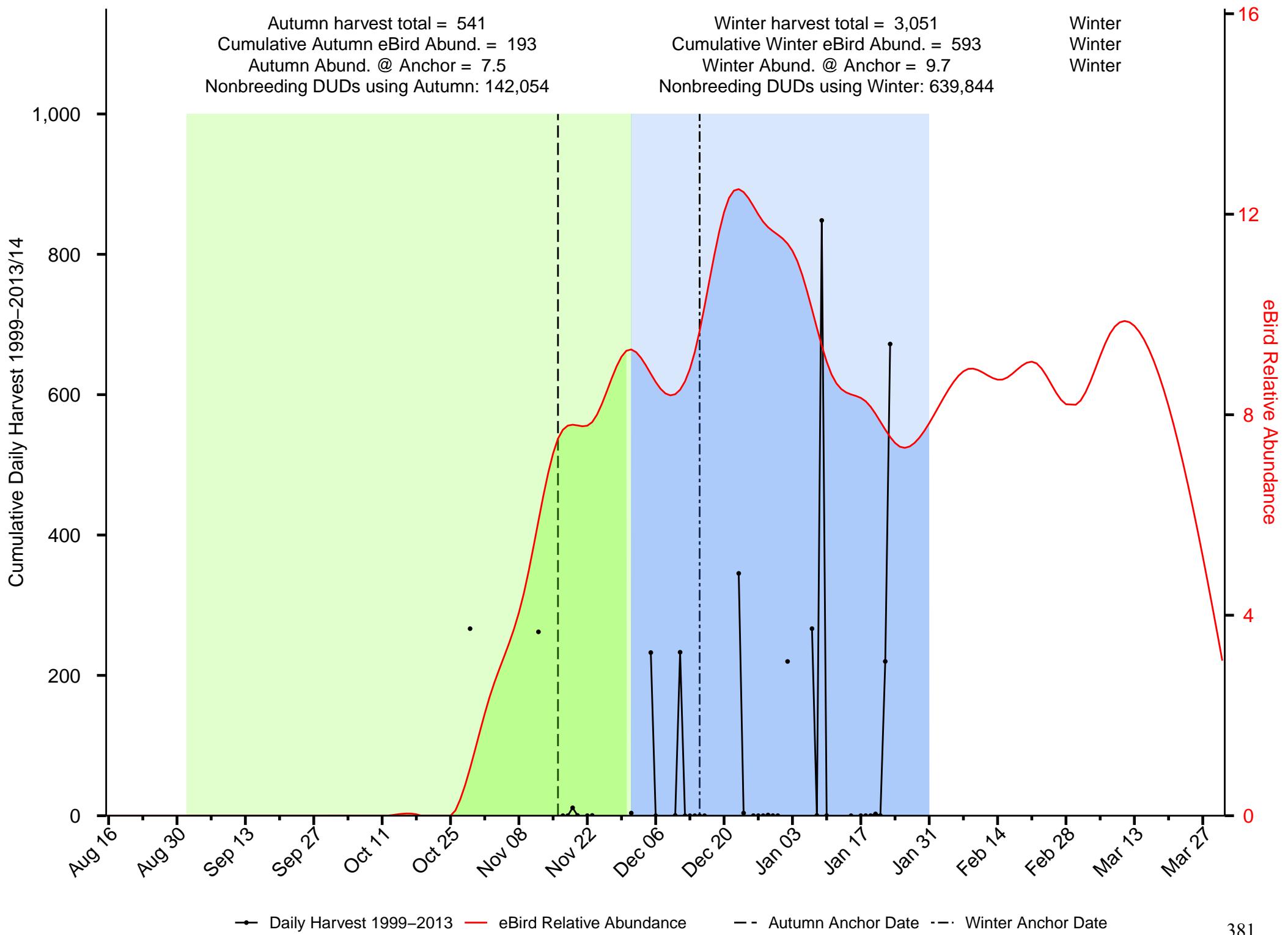
Summary of Green-winged Teal in the Rio Grande JV



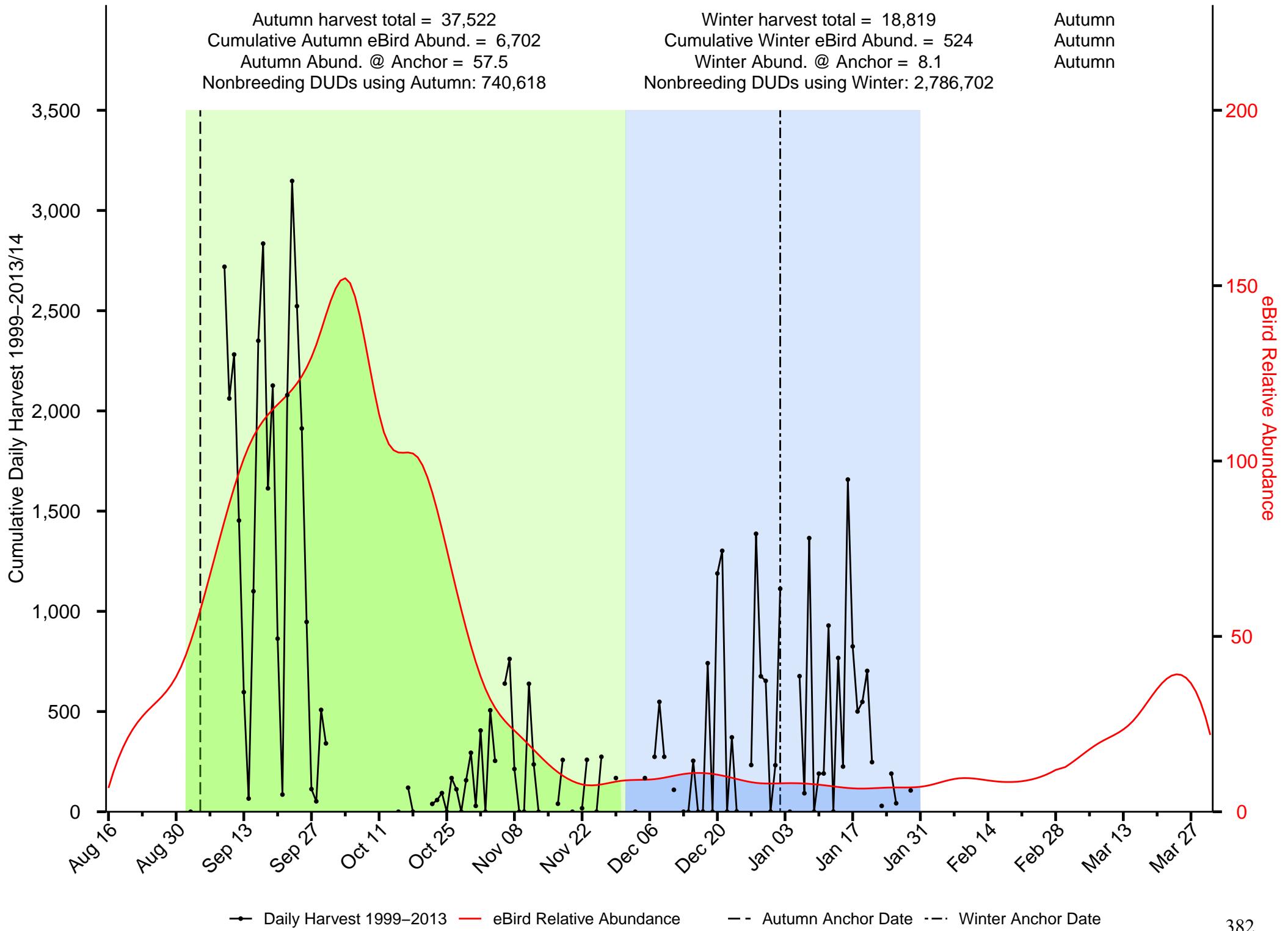
Summary of American Wigeon in the Rio Grande JV



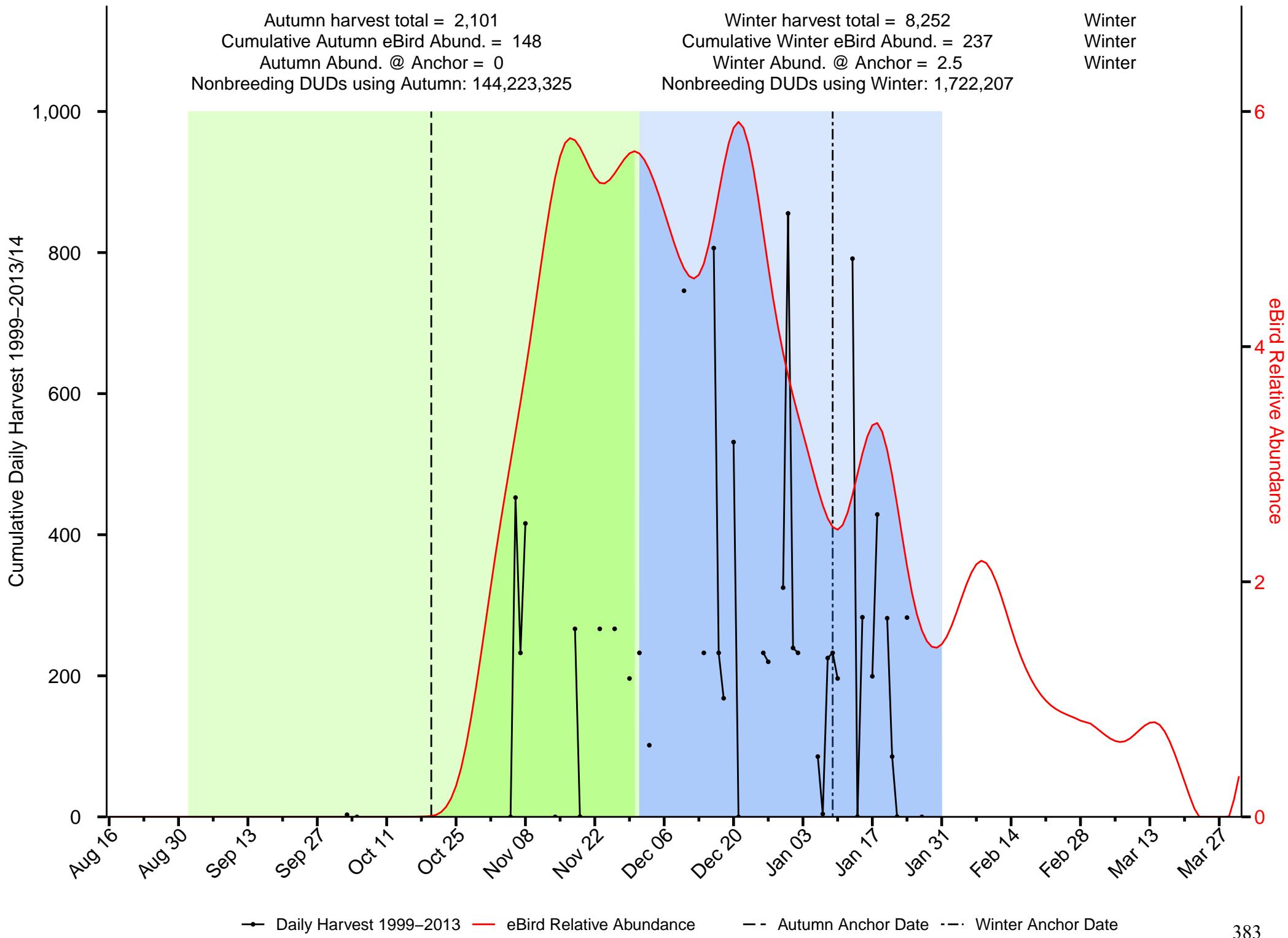
Summary of Bufflehead in the Rio Grande JV



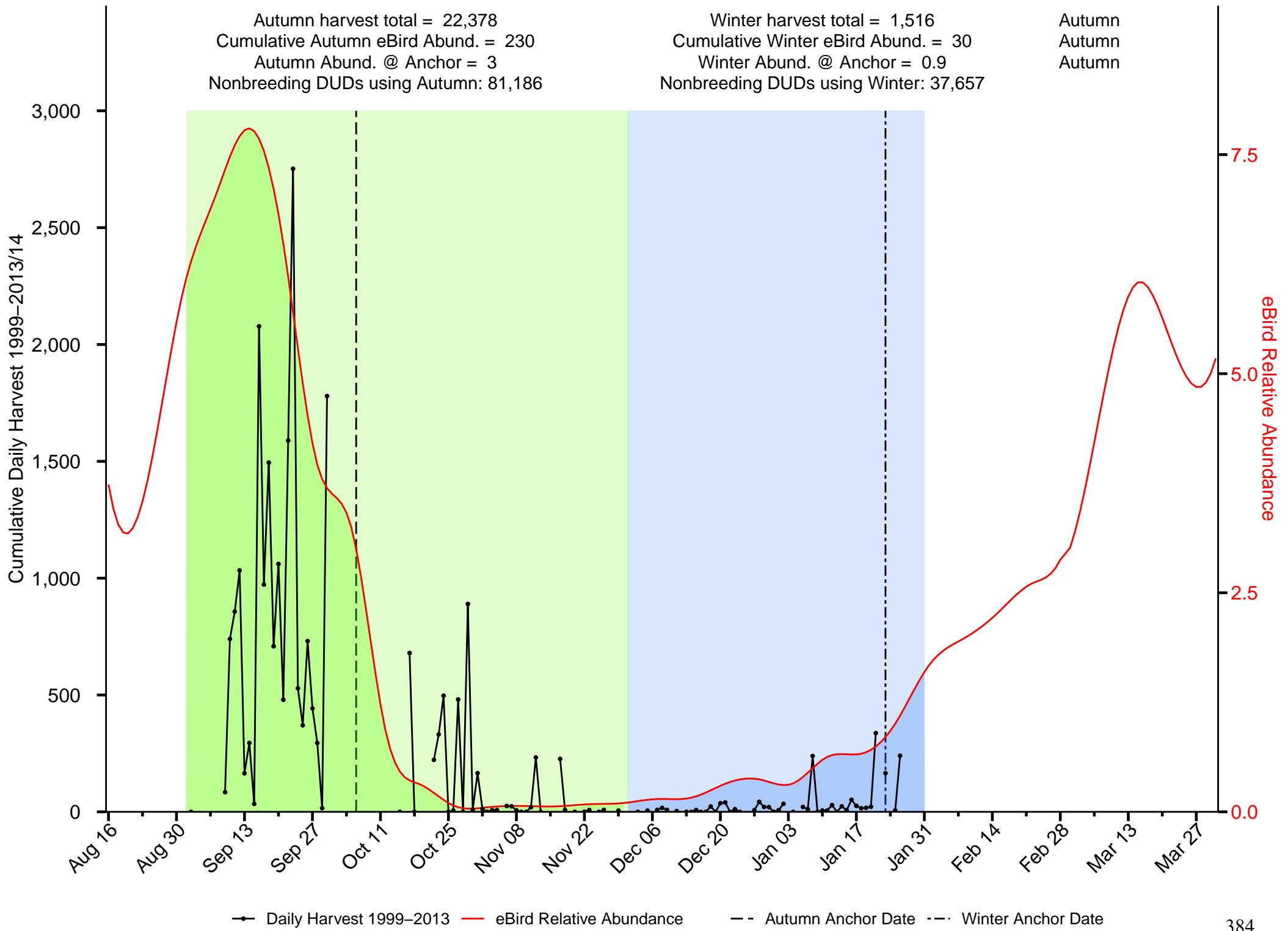
Summary of Blue-winged Teal in the Rio Grande JV



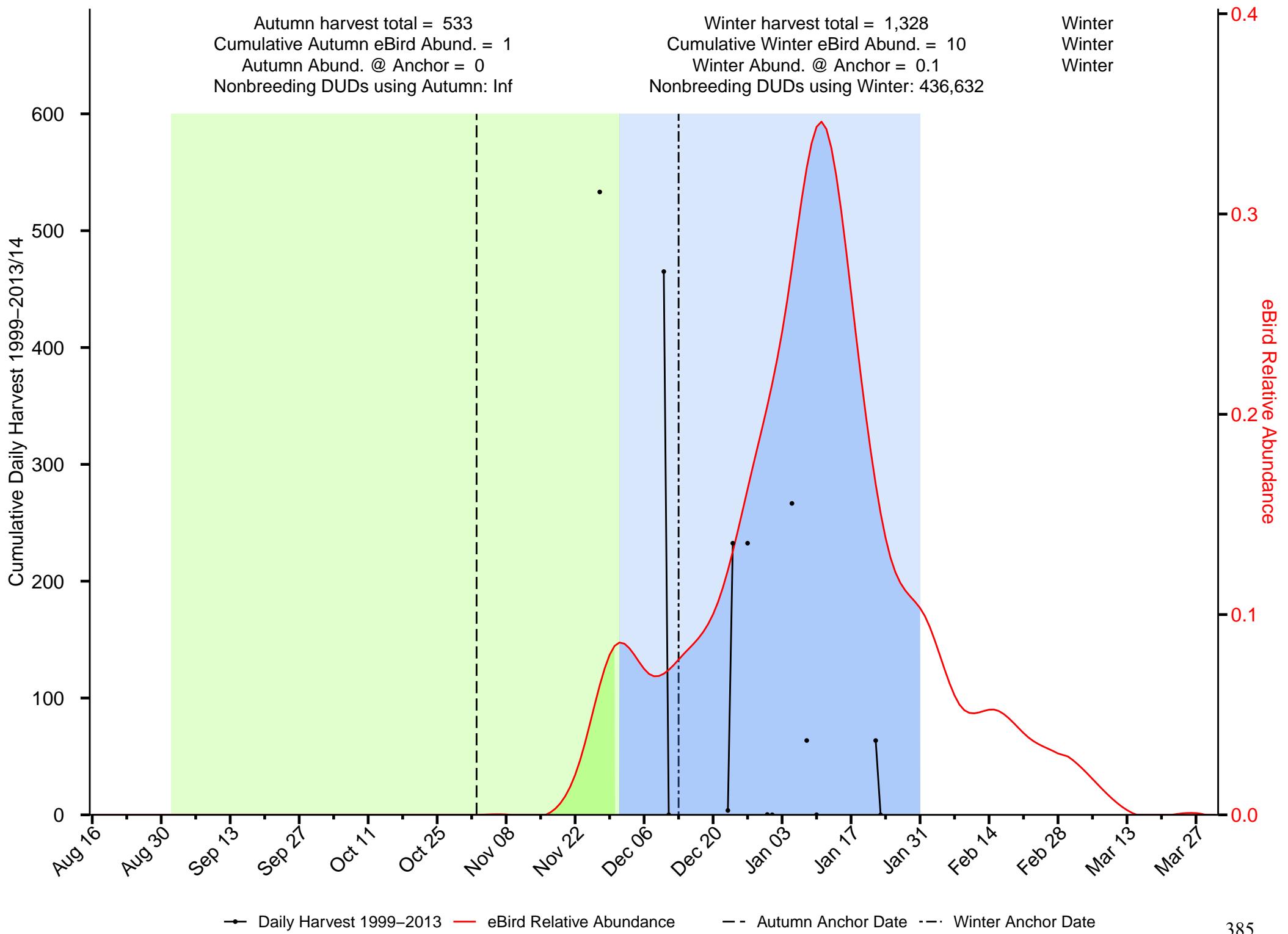
Summary of Canvasback in the Rio Grande JV



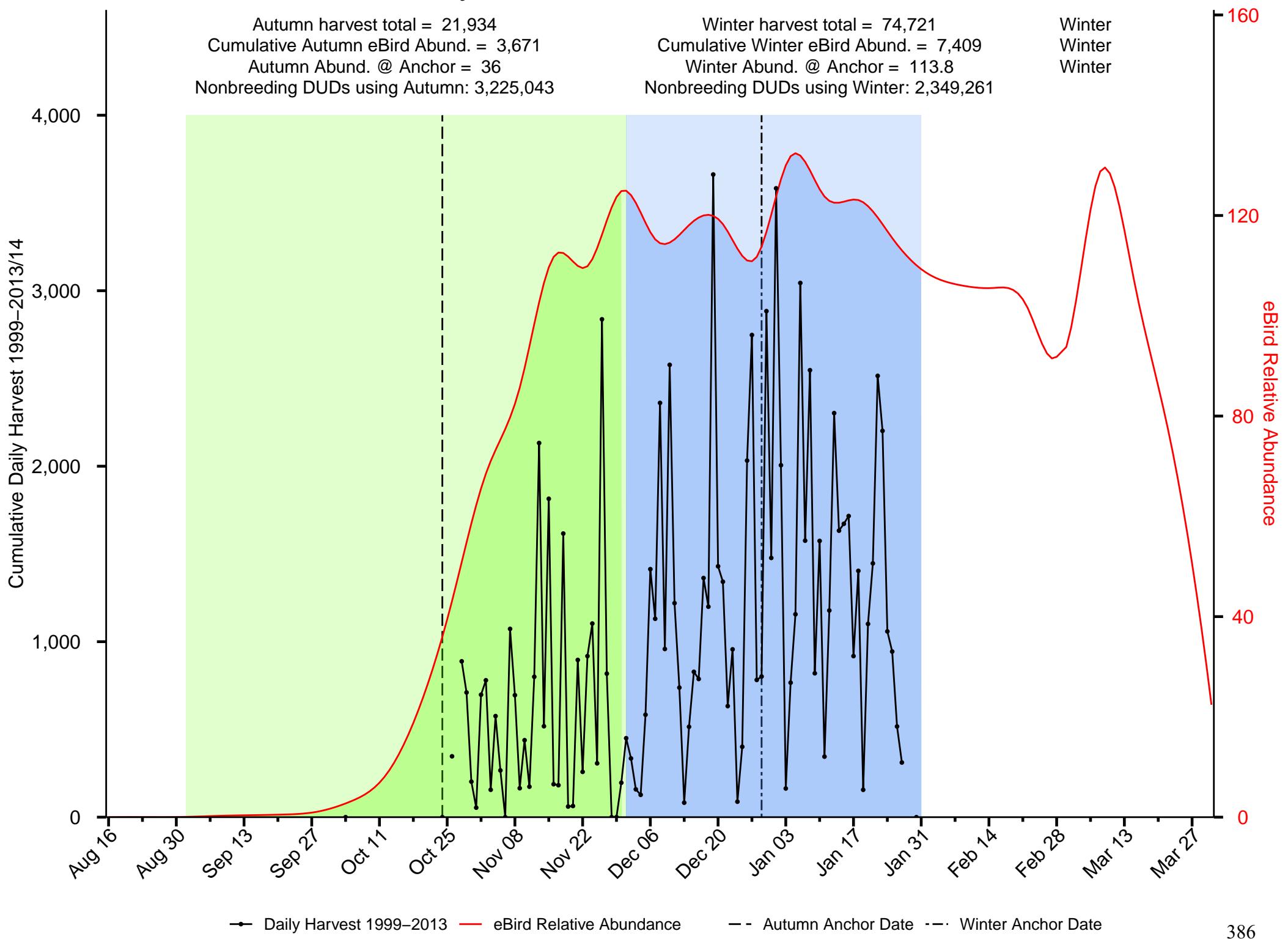
Summary of Cinnamon Teal in the Rio Grande JV



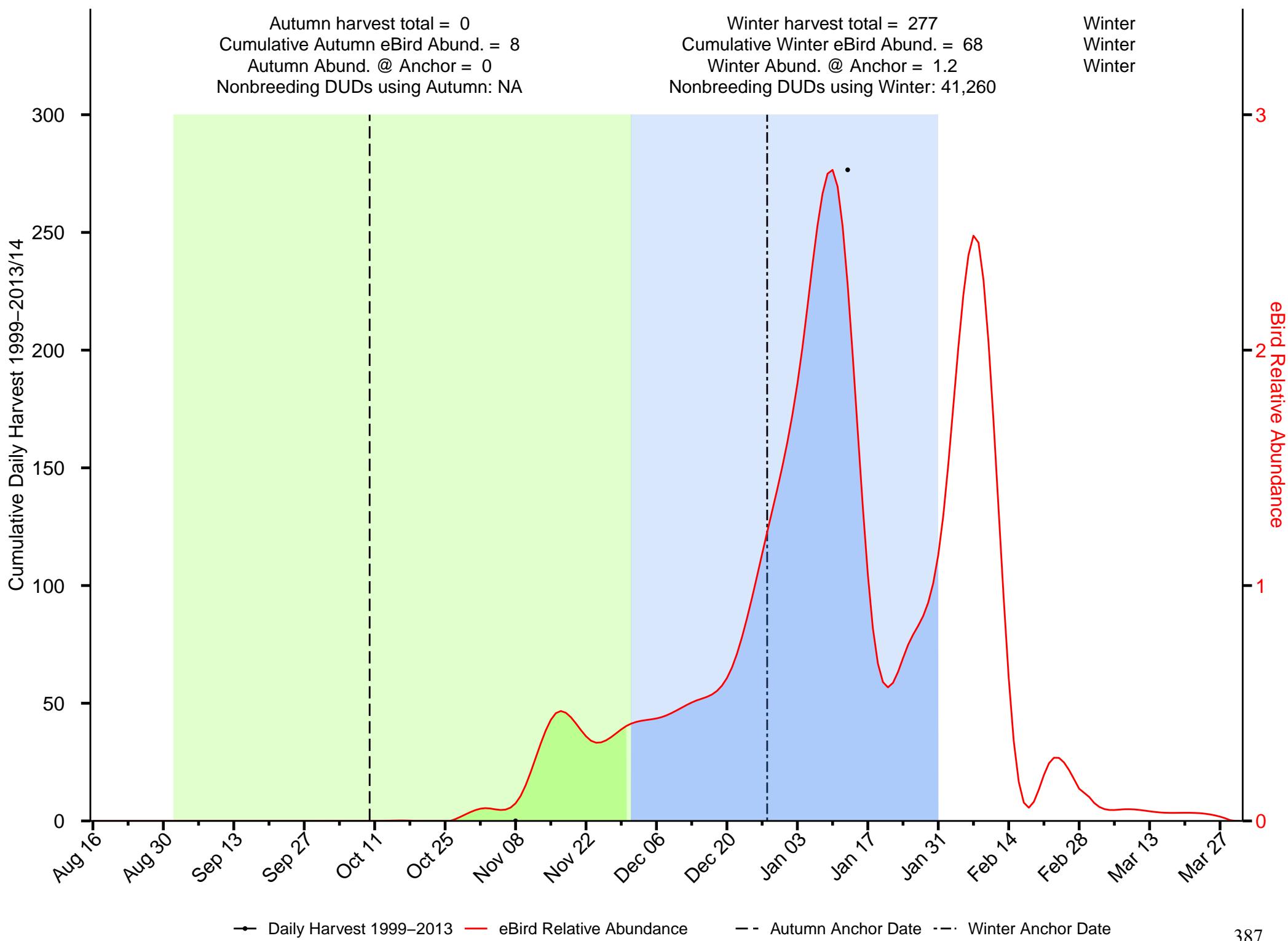
Summary of Common Goldeneye in the Rio Grande JV



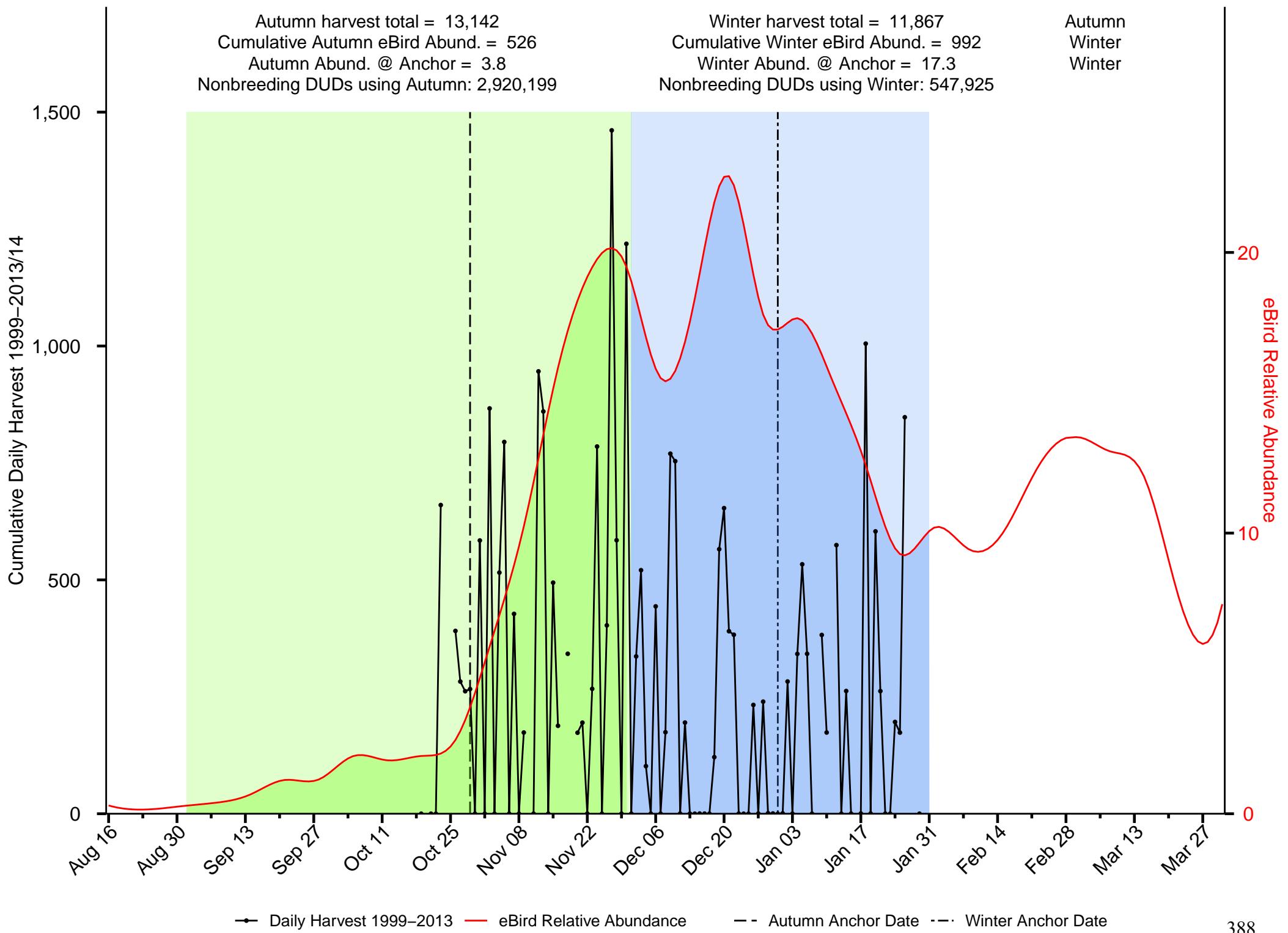
Summary of Gadwall in the Rio Grande JV



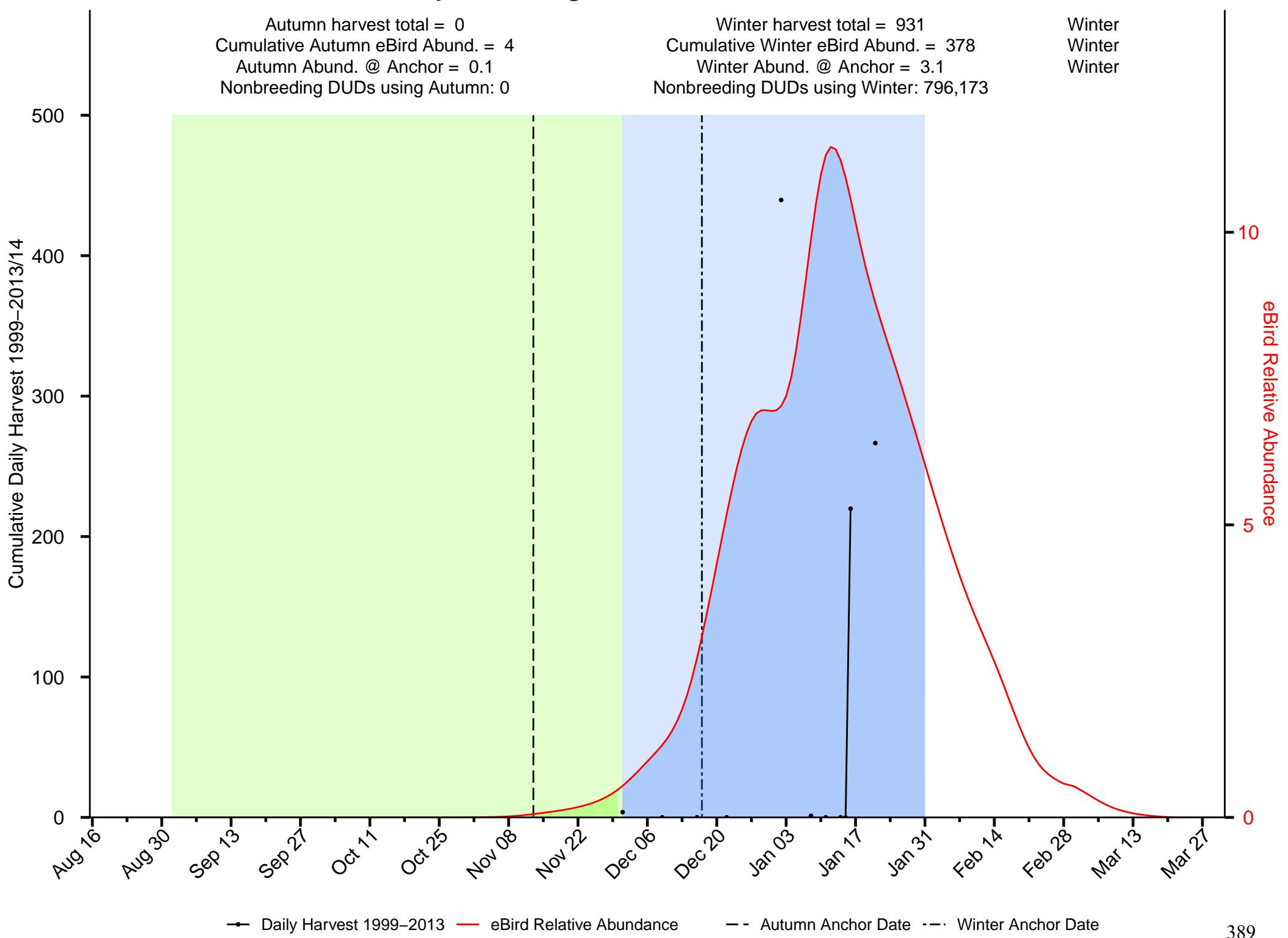
Summary of Hooded Merganser in the Rio Grande JV



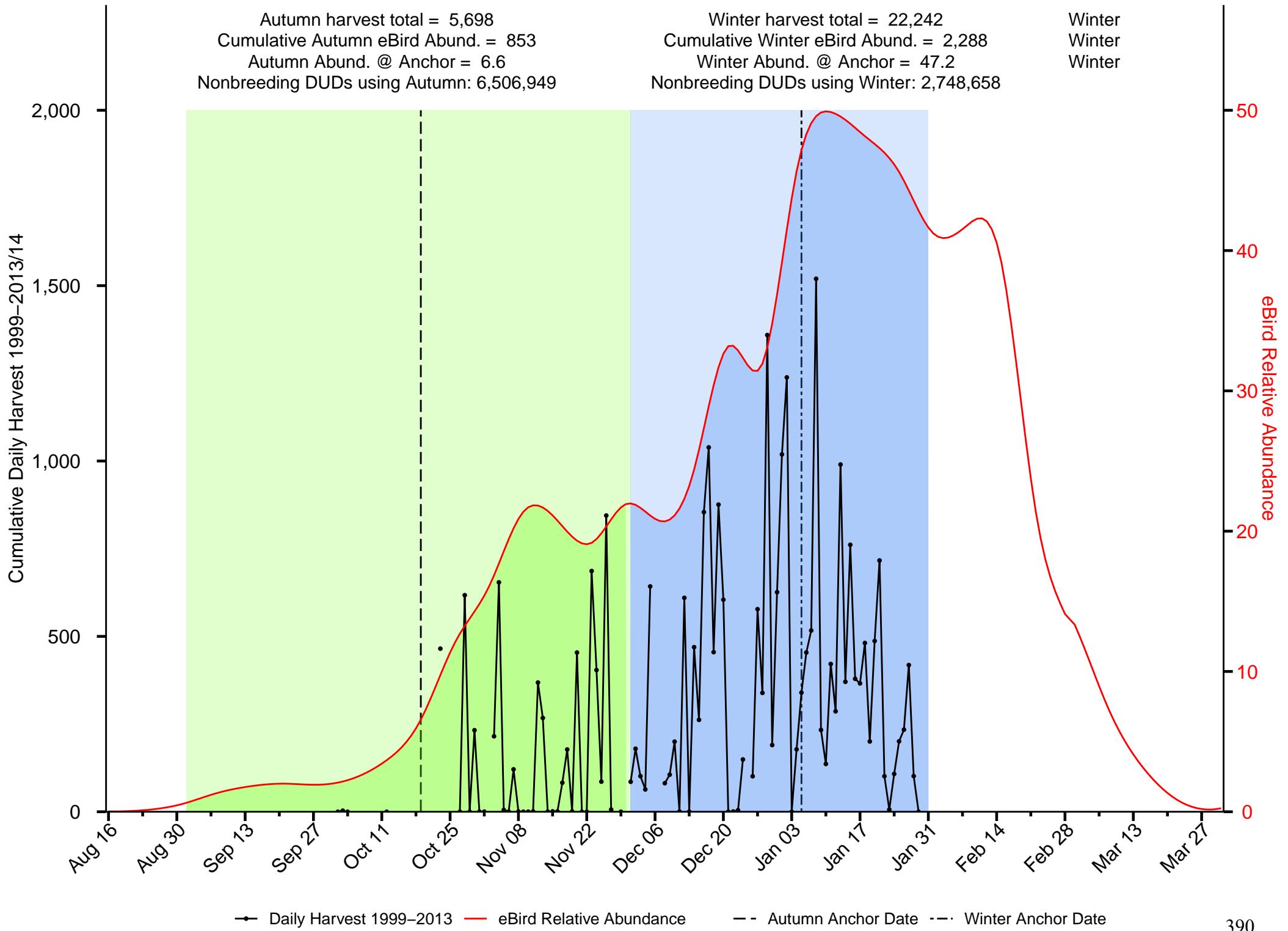
Summary of Mallard in the Rio Grande JV



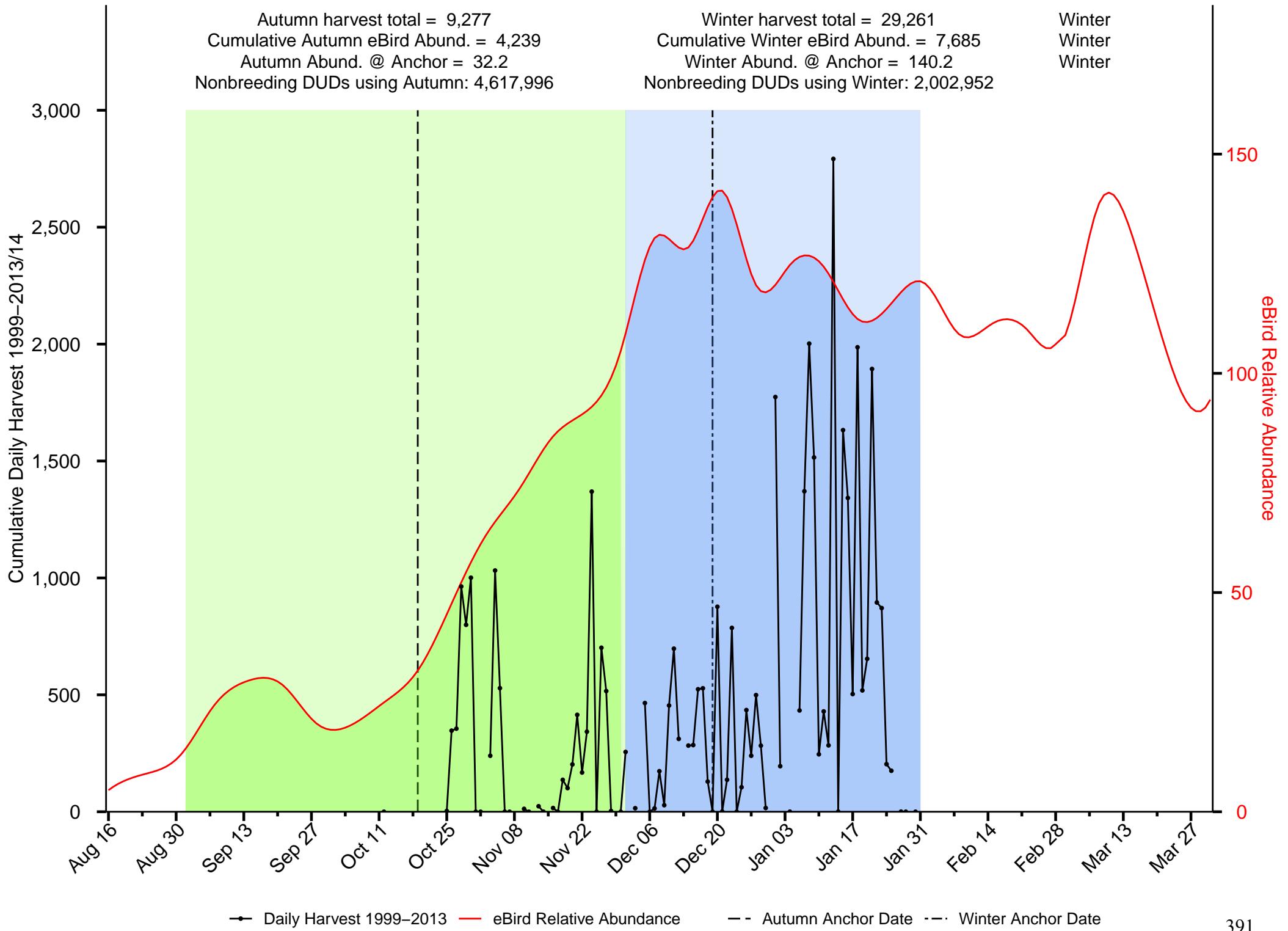
Summary of Merganser in the Rio Grande JV



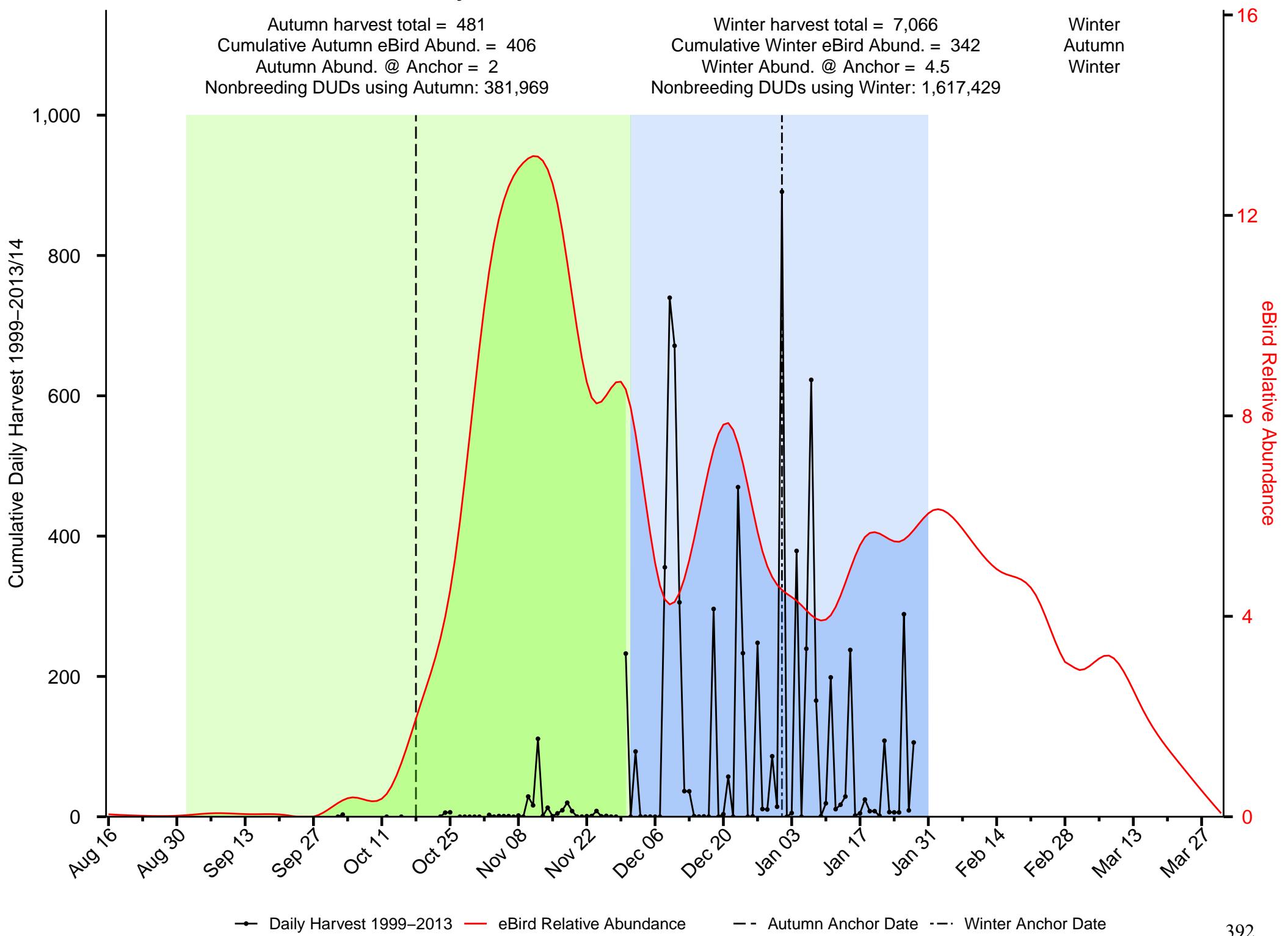
Summary of Northern Pintail in the Rio Grande JV



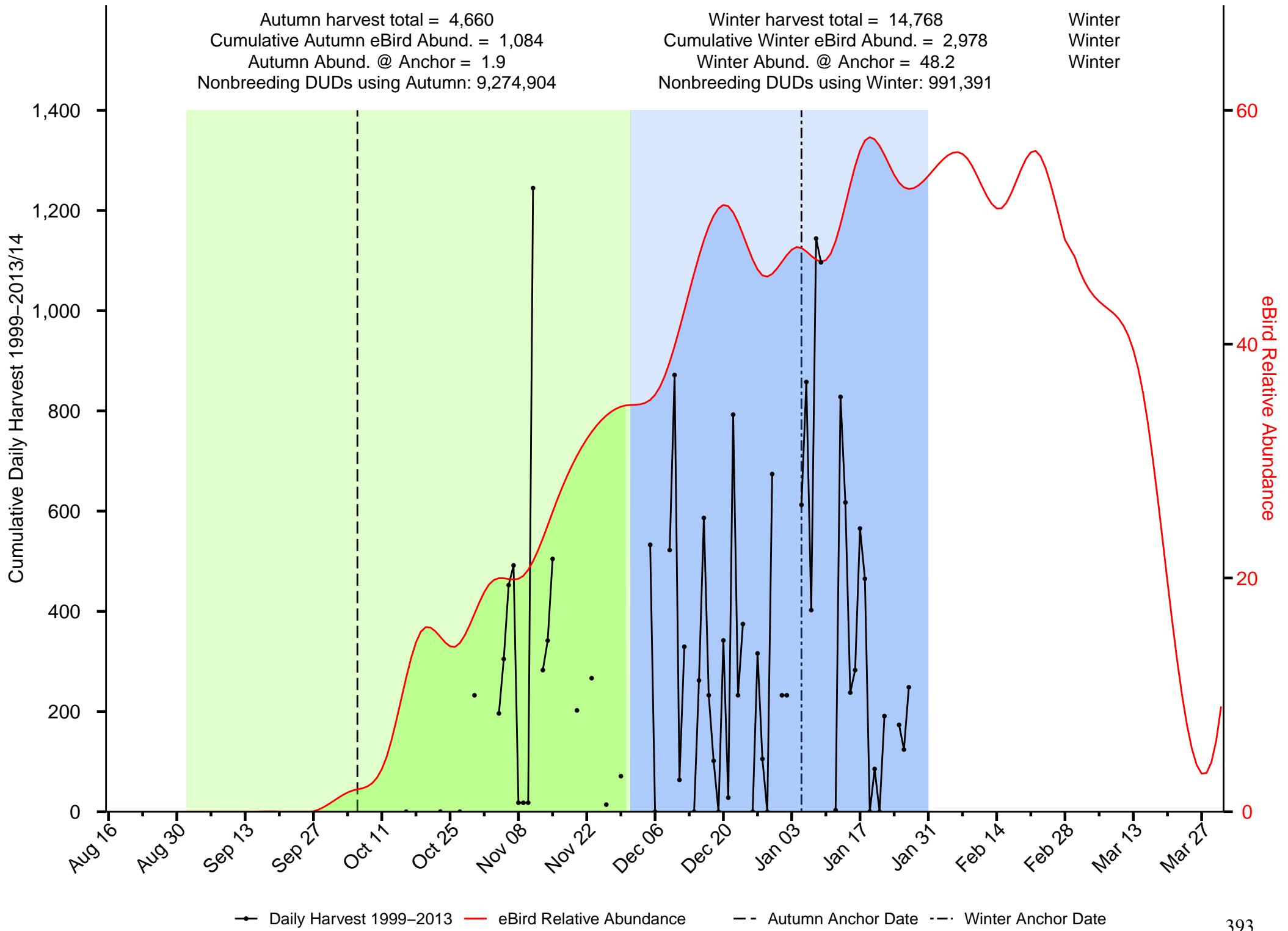
Summary of Northern Shoveler in the Rio Grande JV



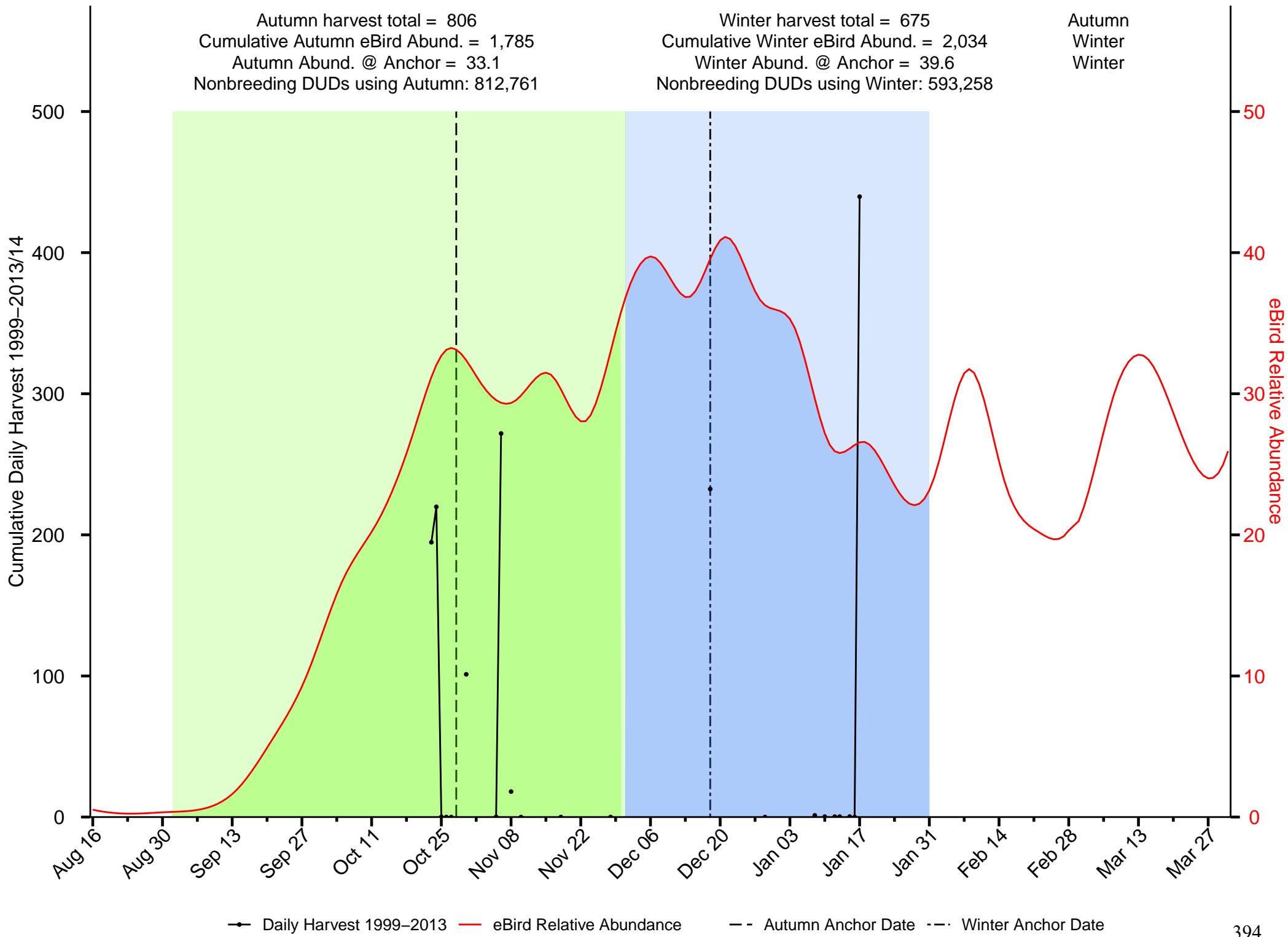
Summary of Redhead in the Rio Grande JV



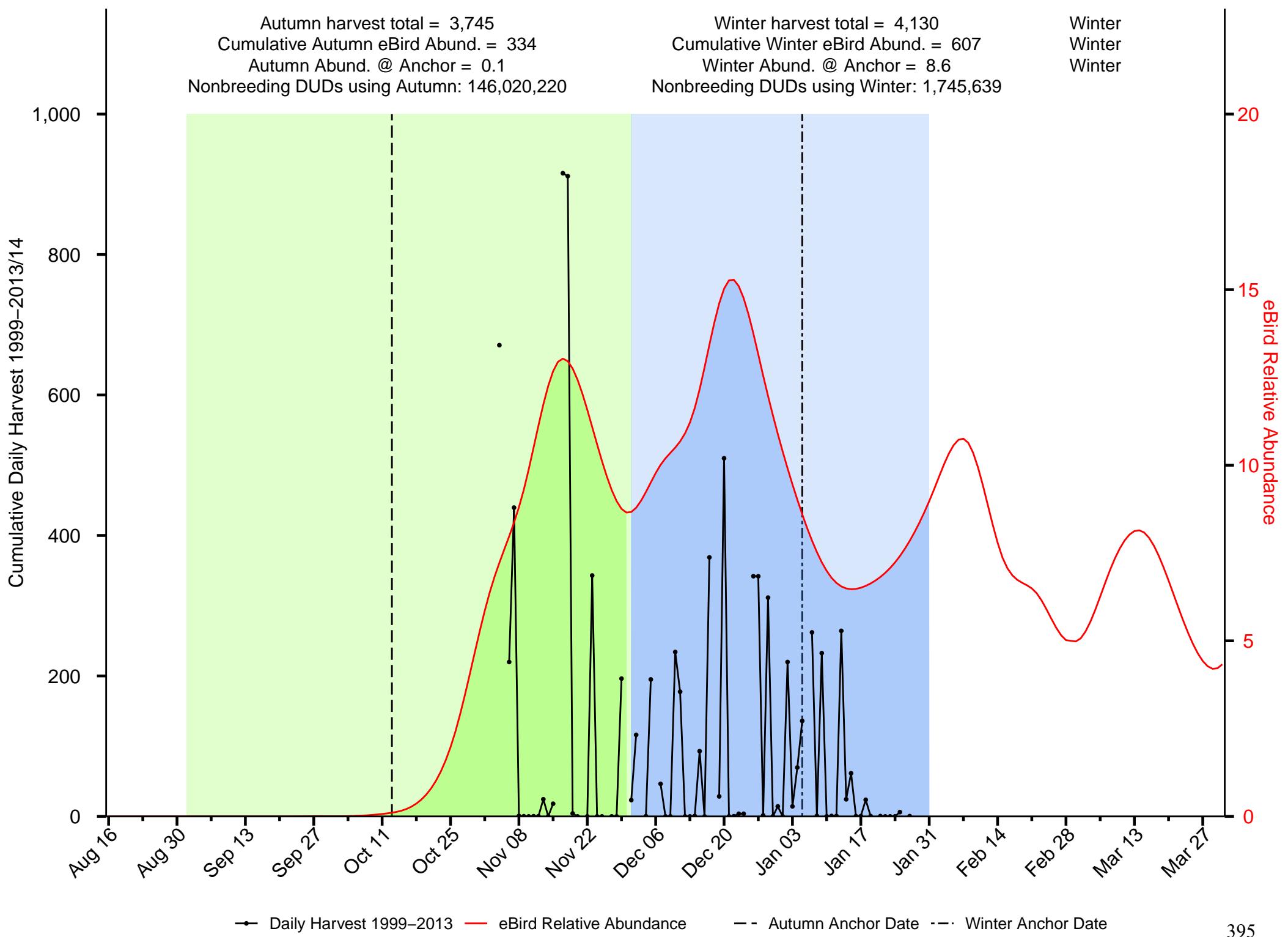
Summary of Ring-necked Duck in the Rio Grande JV



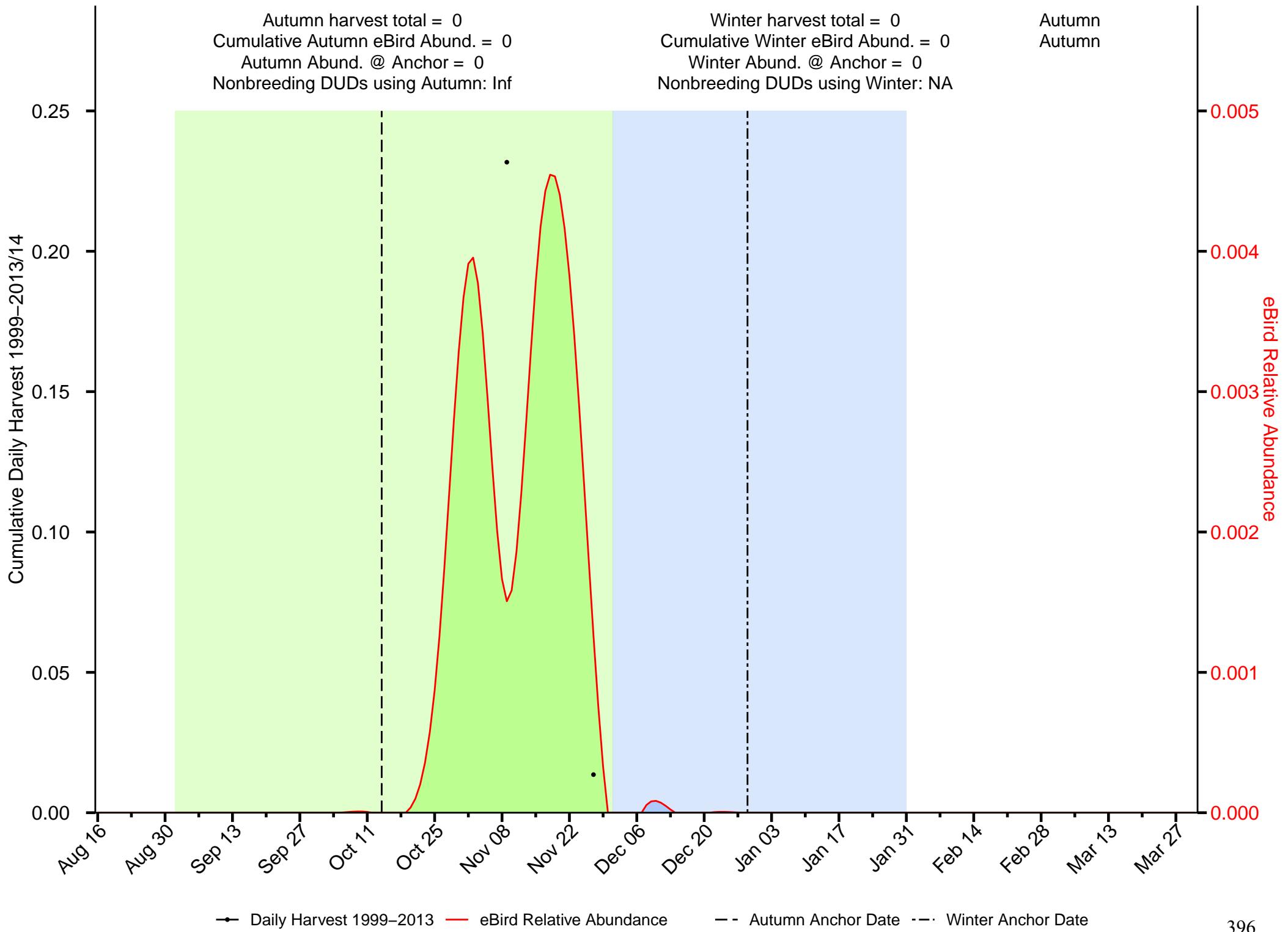
Summary of Ruddy Duck in the Rio Grande JV



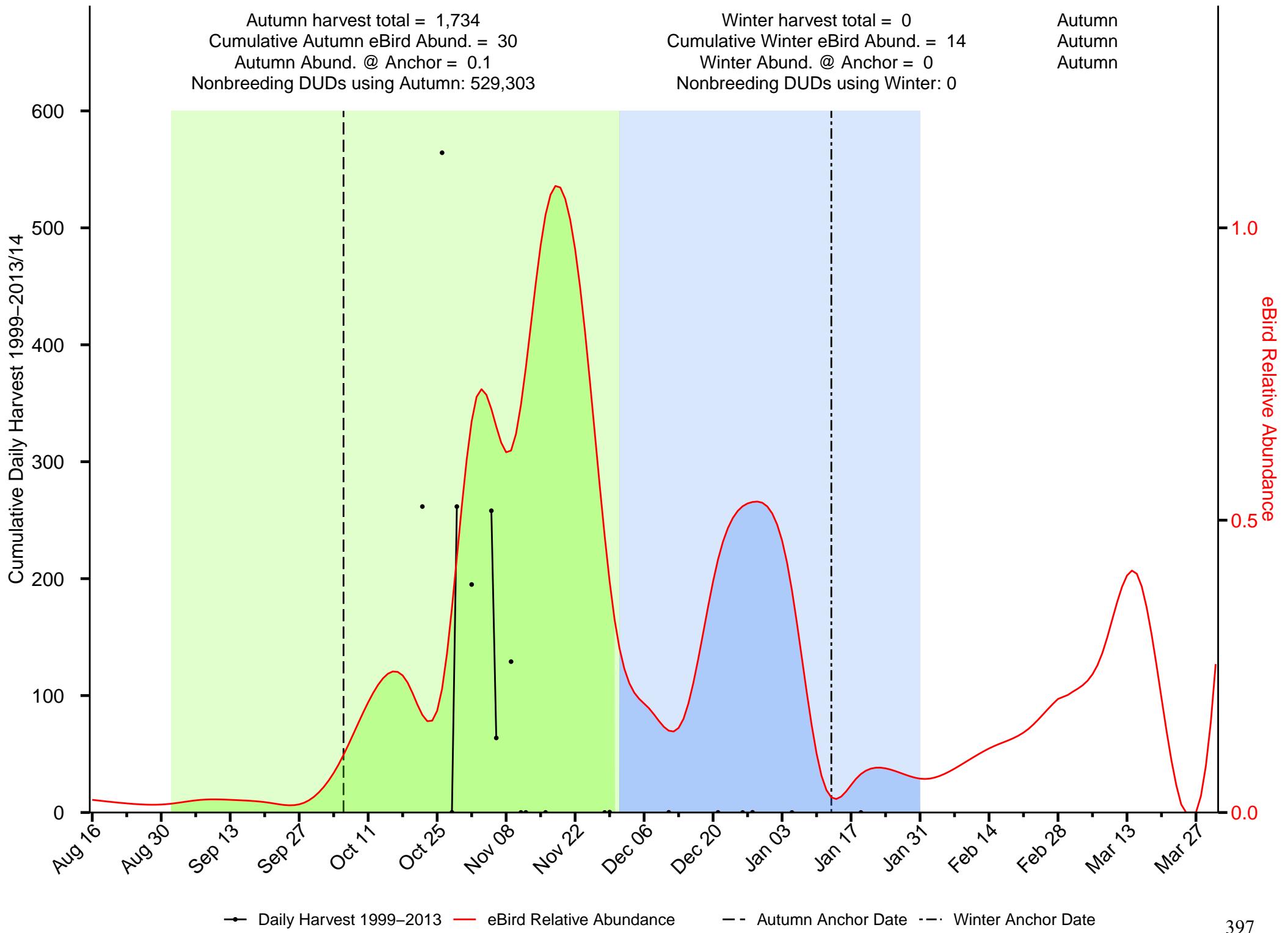
Summary of Scaup in the Rio Grande JV



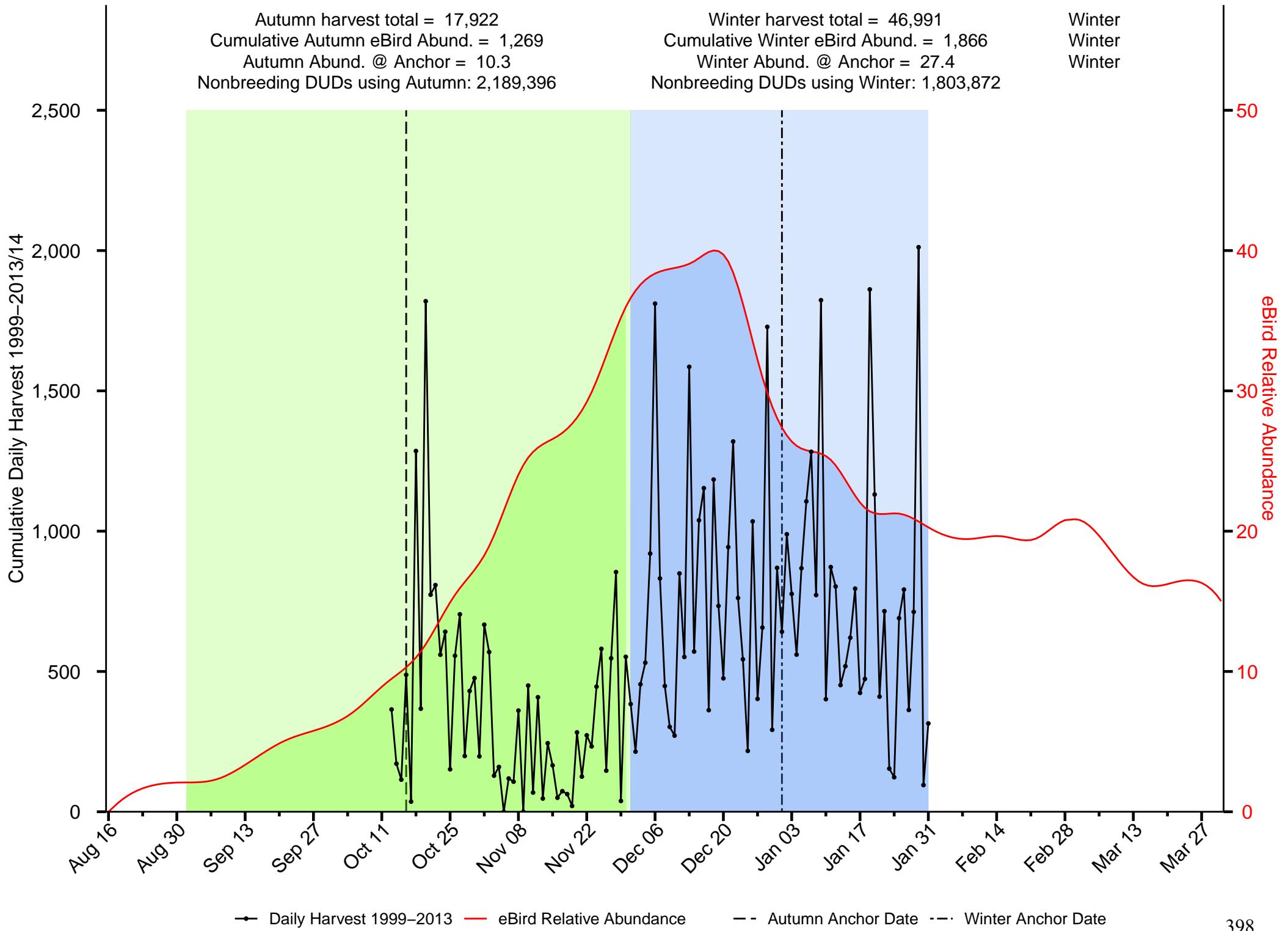
Summary of Scoter in the Rio Grande JV



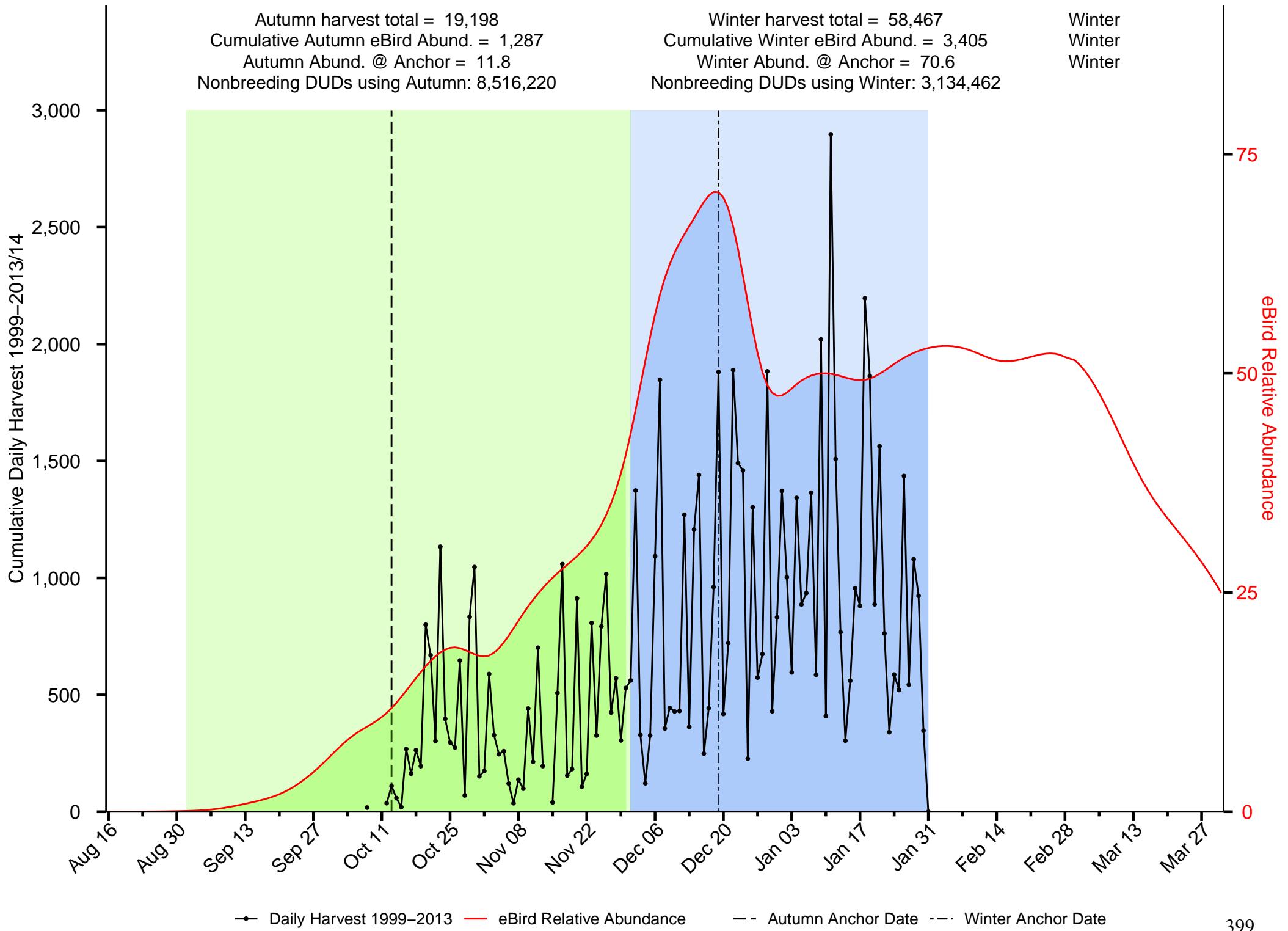
Summary of Wood Duck in the Rio Grande JV



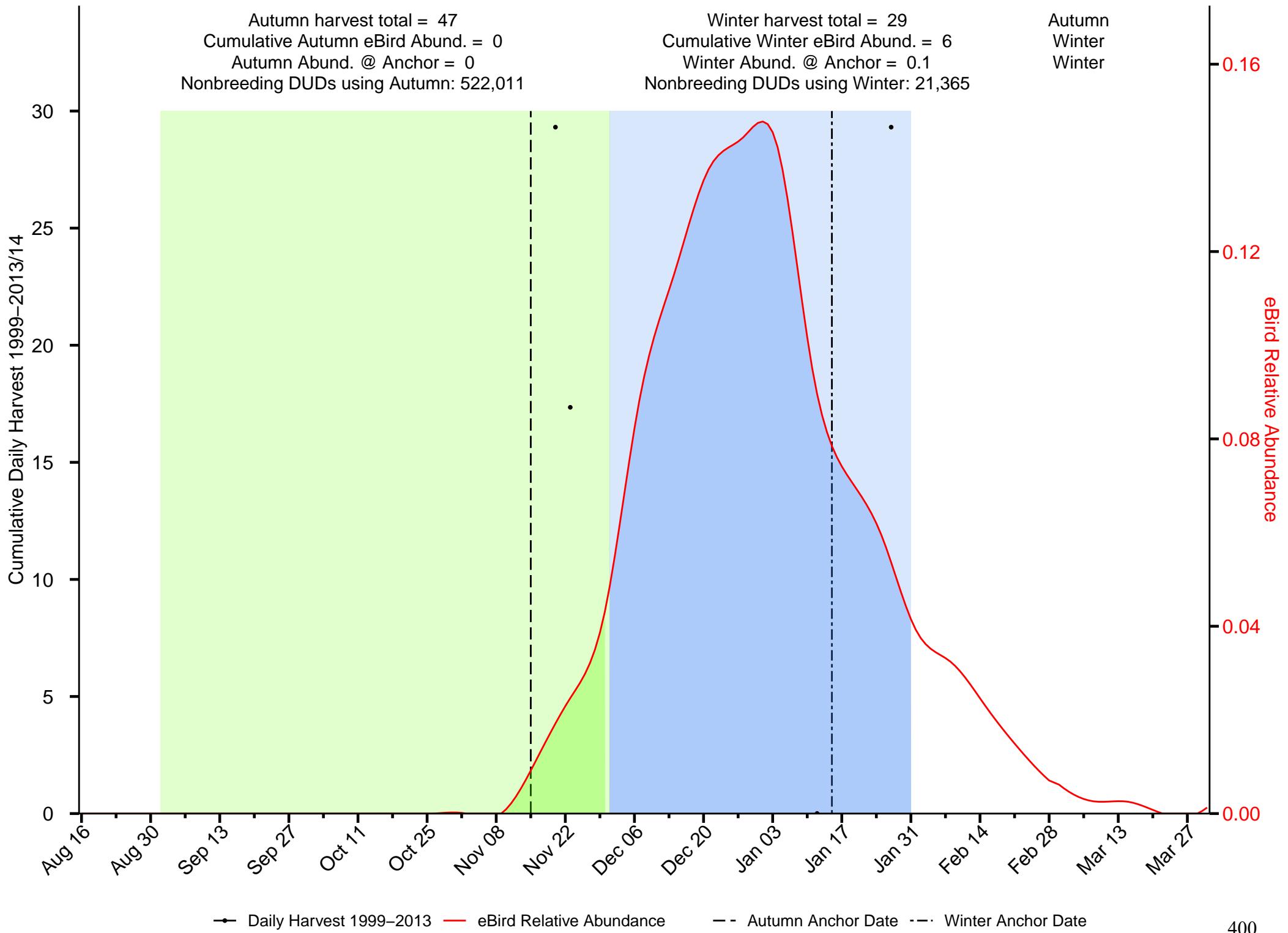
Summary of Green-winged Teal in the San Francisco Bay JV



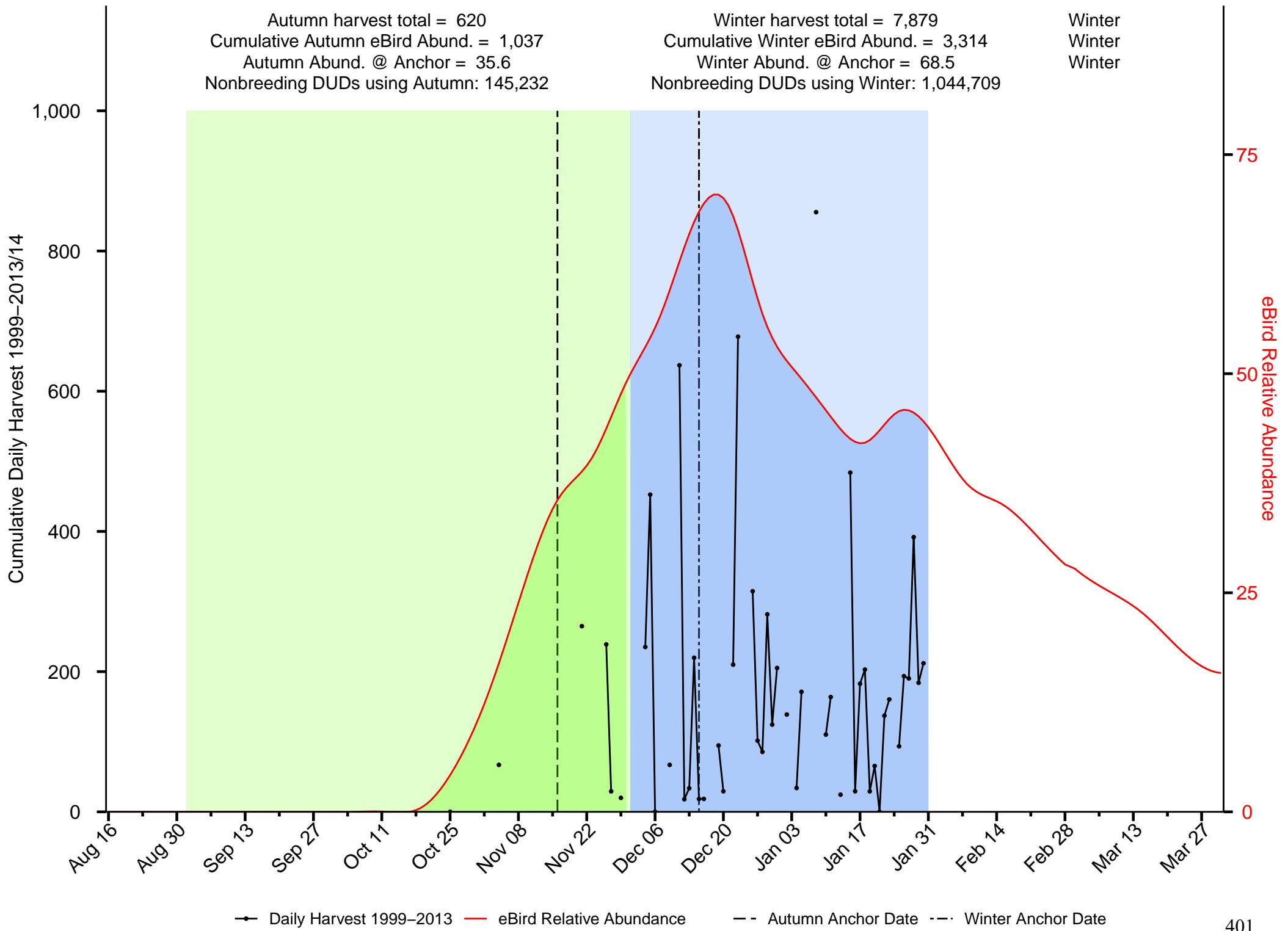
Summary of American Wigeon in the San Francisco Bay JV



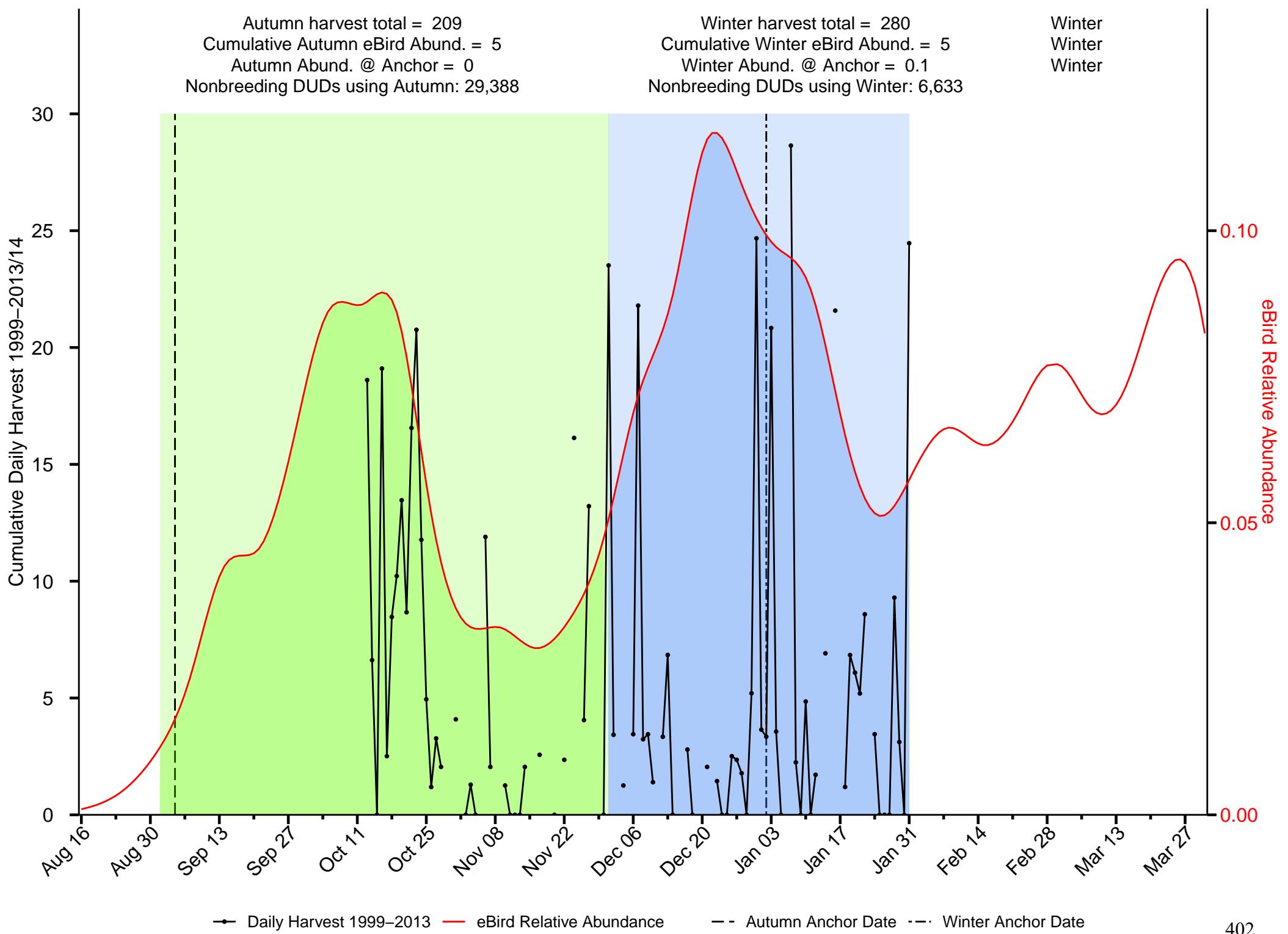
Summary of Barrow's Goldeneye in the San Francisco Bay JV



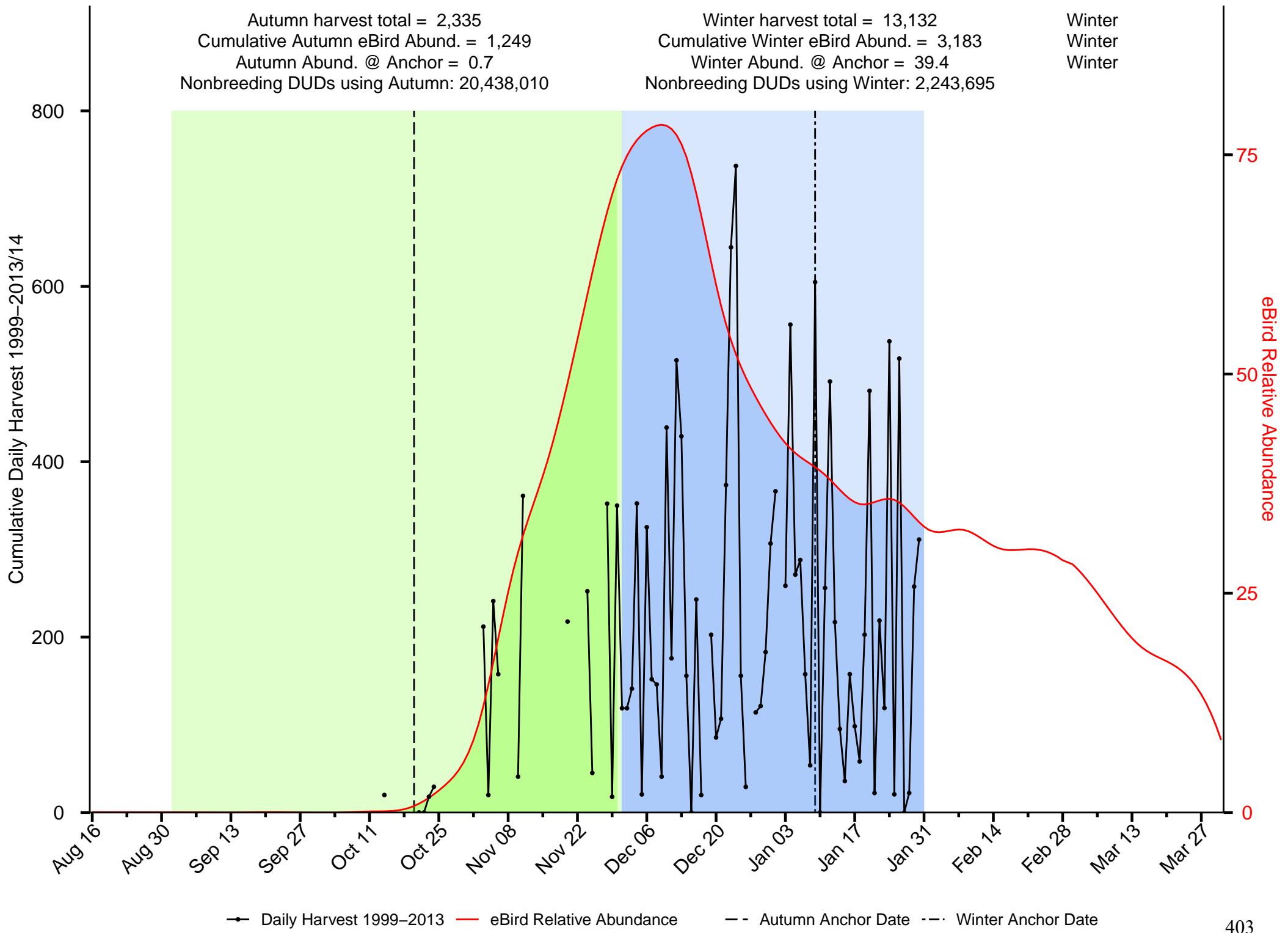
Summary of Bufflehead in the San Francisco Bay JV



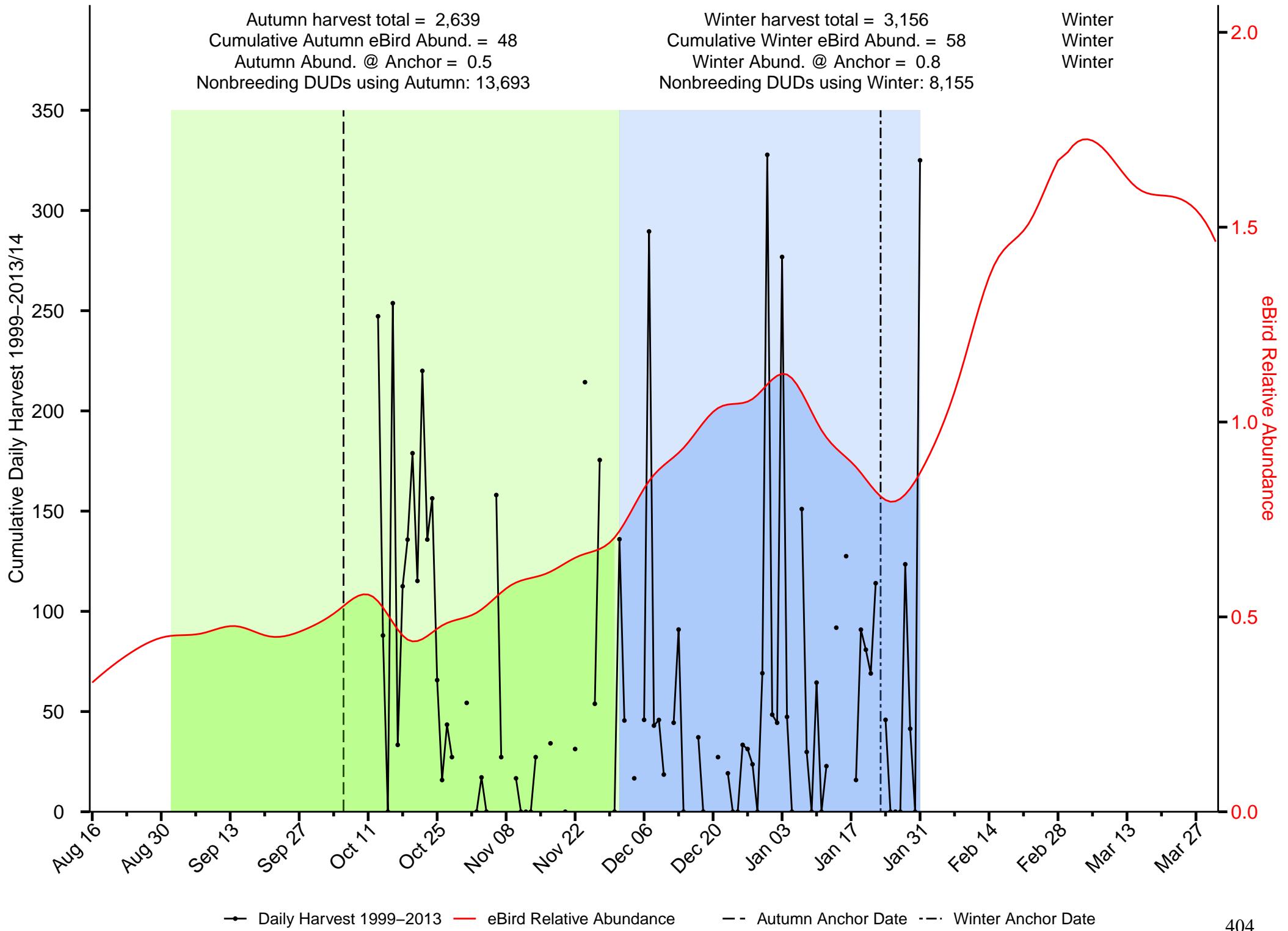
Summary of Blue-winged Teal in the San Francisco Bay JV



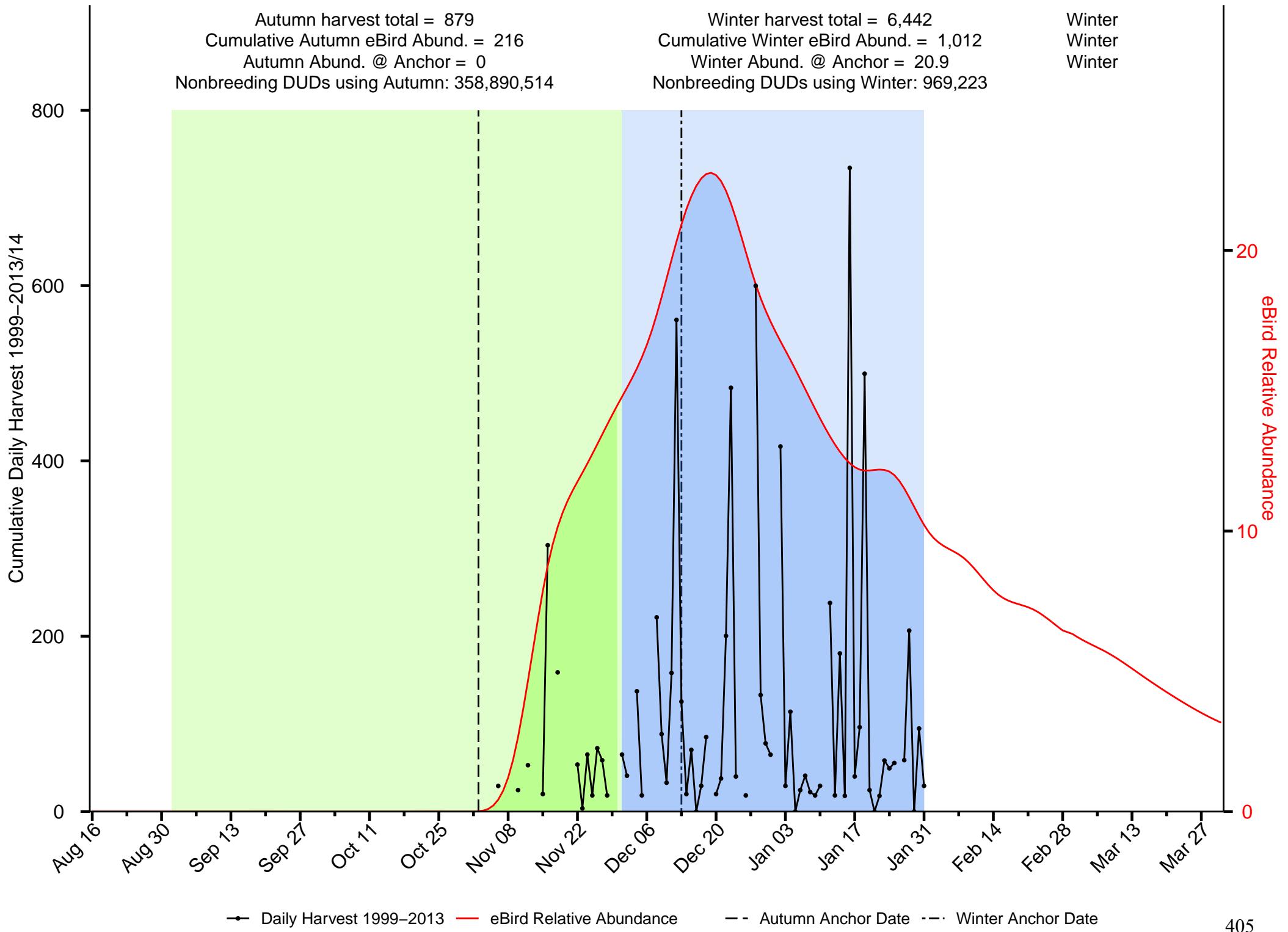
Summary of Canvasback in the San Francisco Bay JV



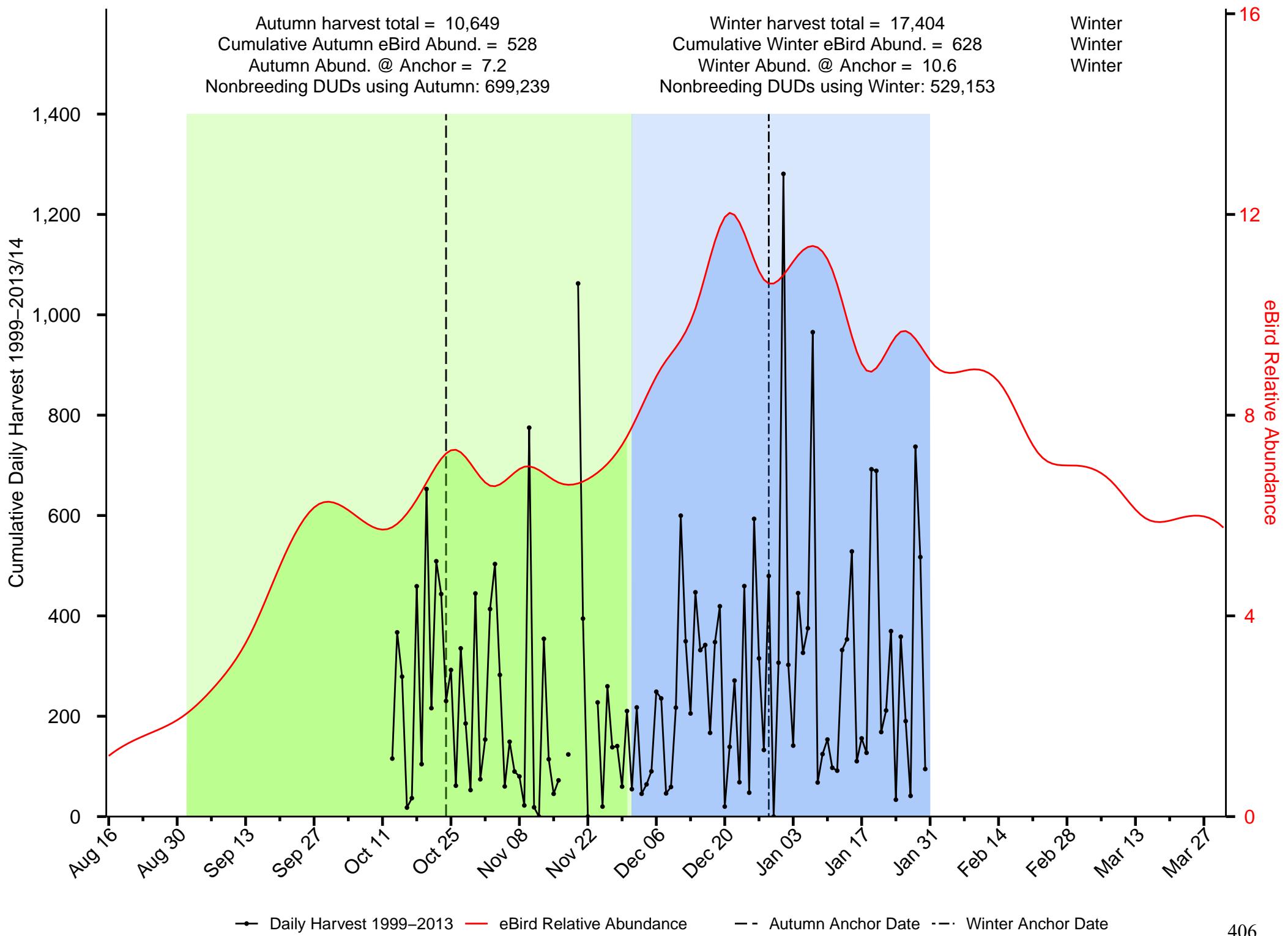
Summary of Cinnamon Teal in the San Francisco Bay JV



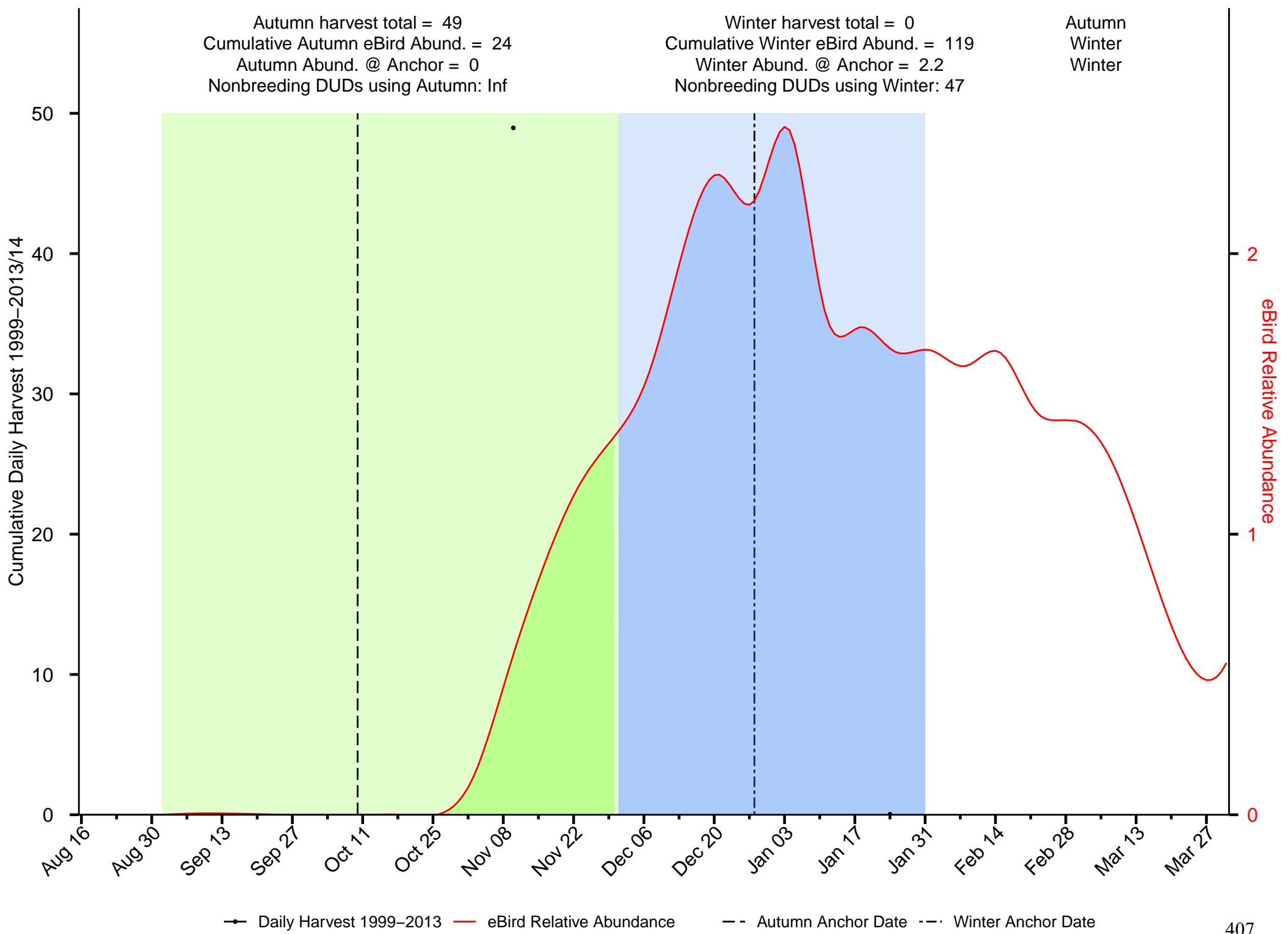
Summary of Common Goldeneye in the San Francisco Bay JV



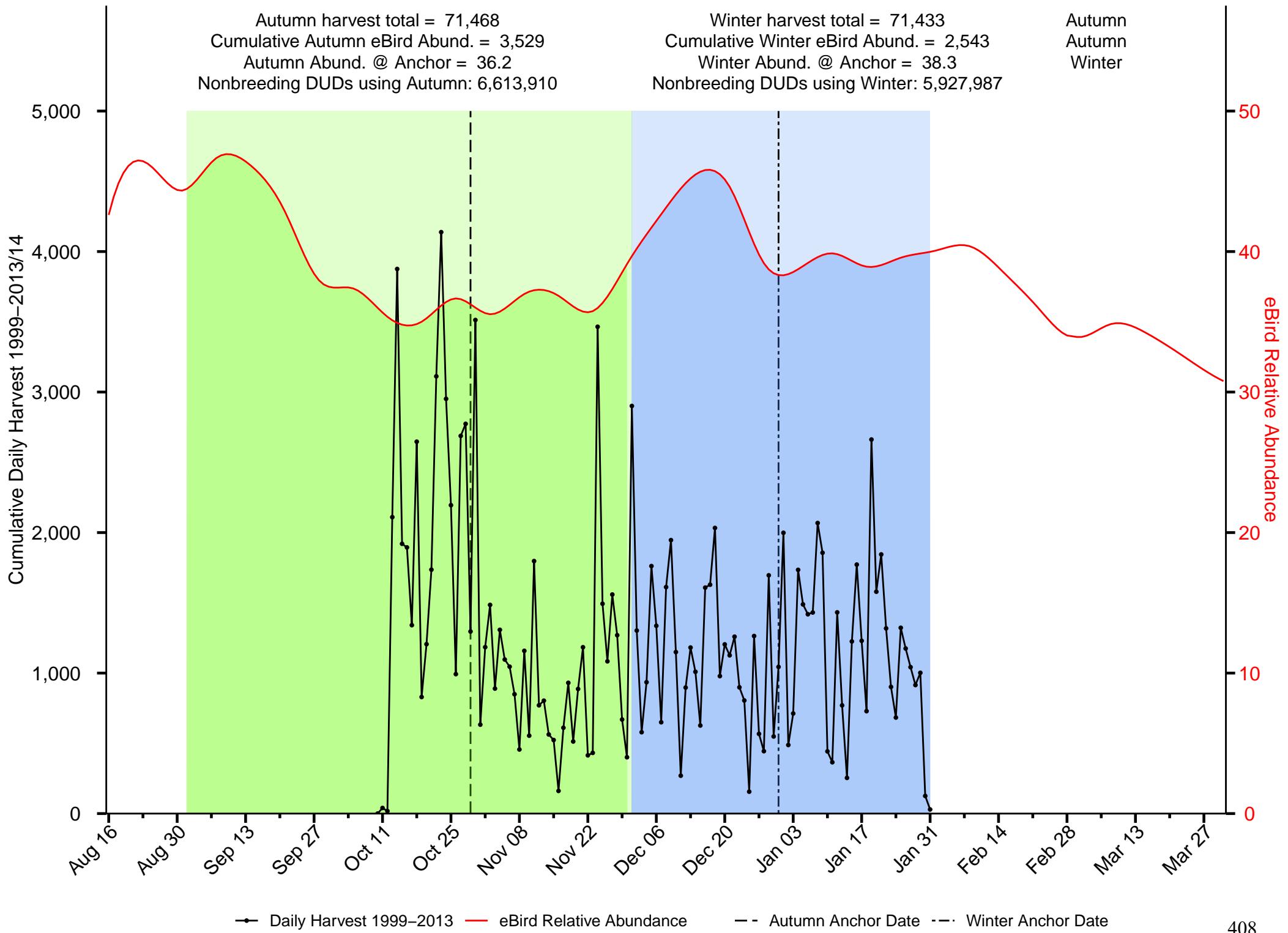
Summary of Gadwall in the San Francisco Bay JV



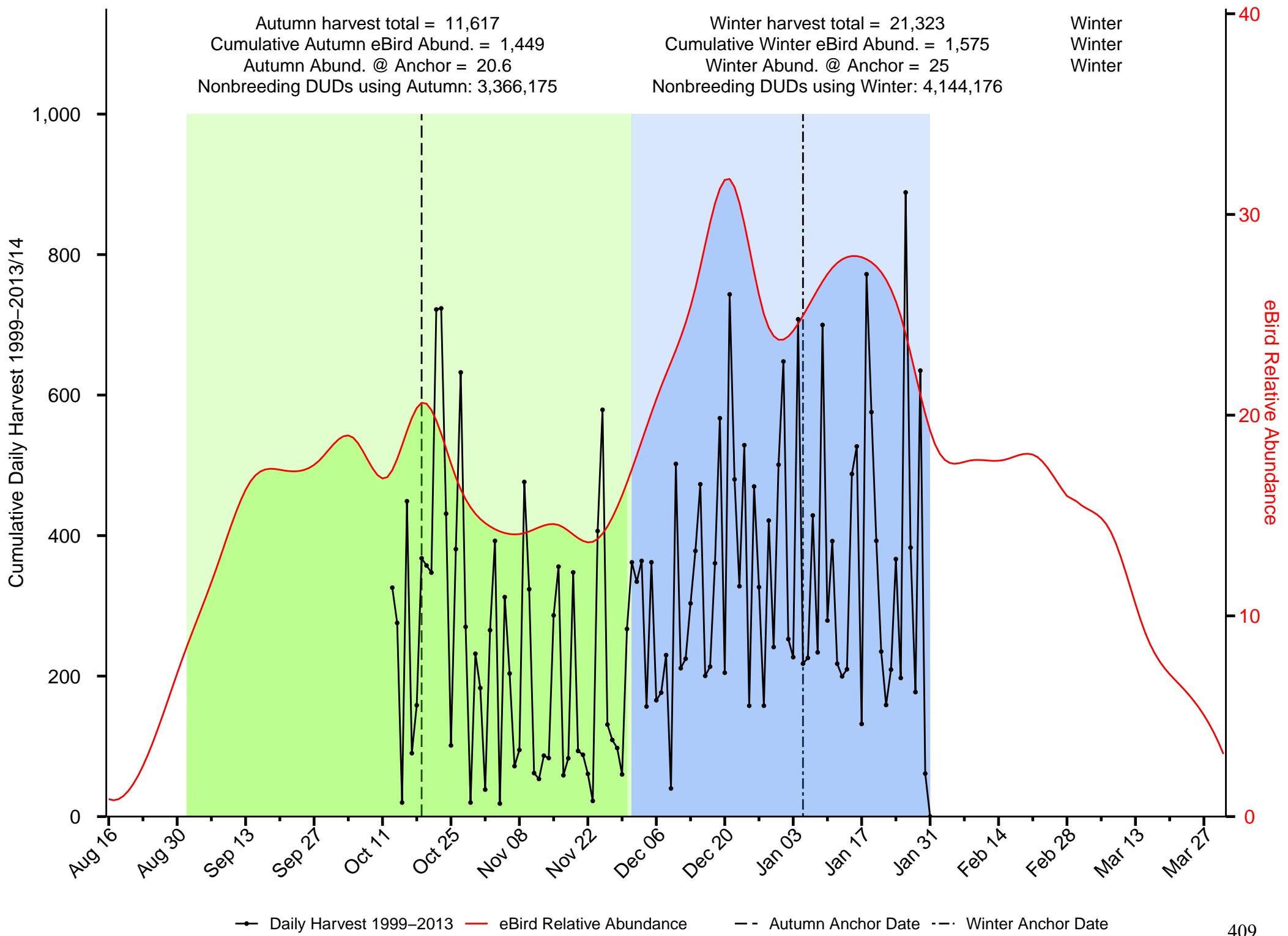
Summary of Hooded Merganser in the San Francisco Bay JV



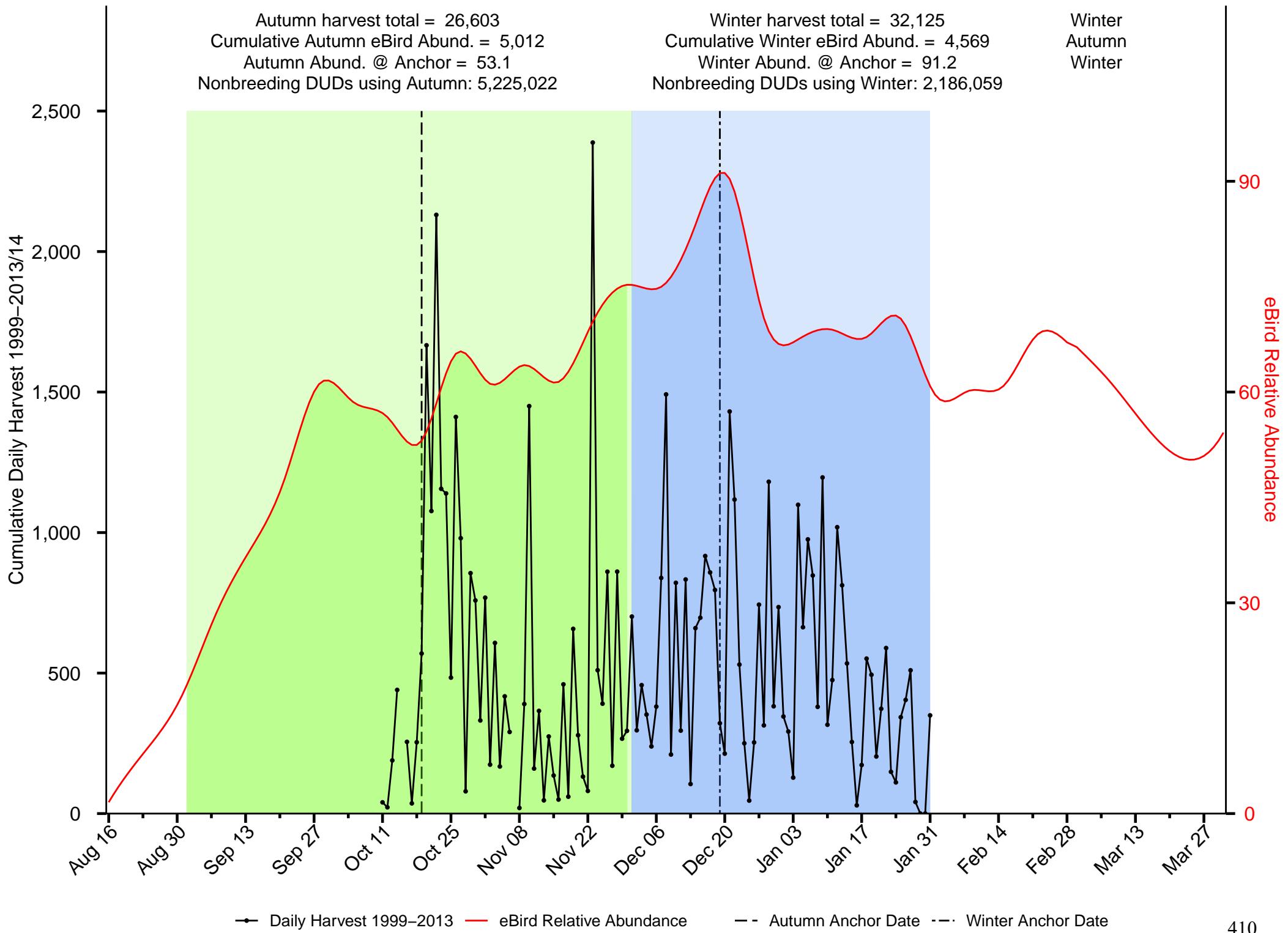
Summary of Mallard in the San Francisco Bay JV



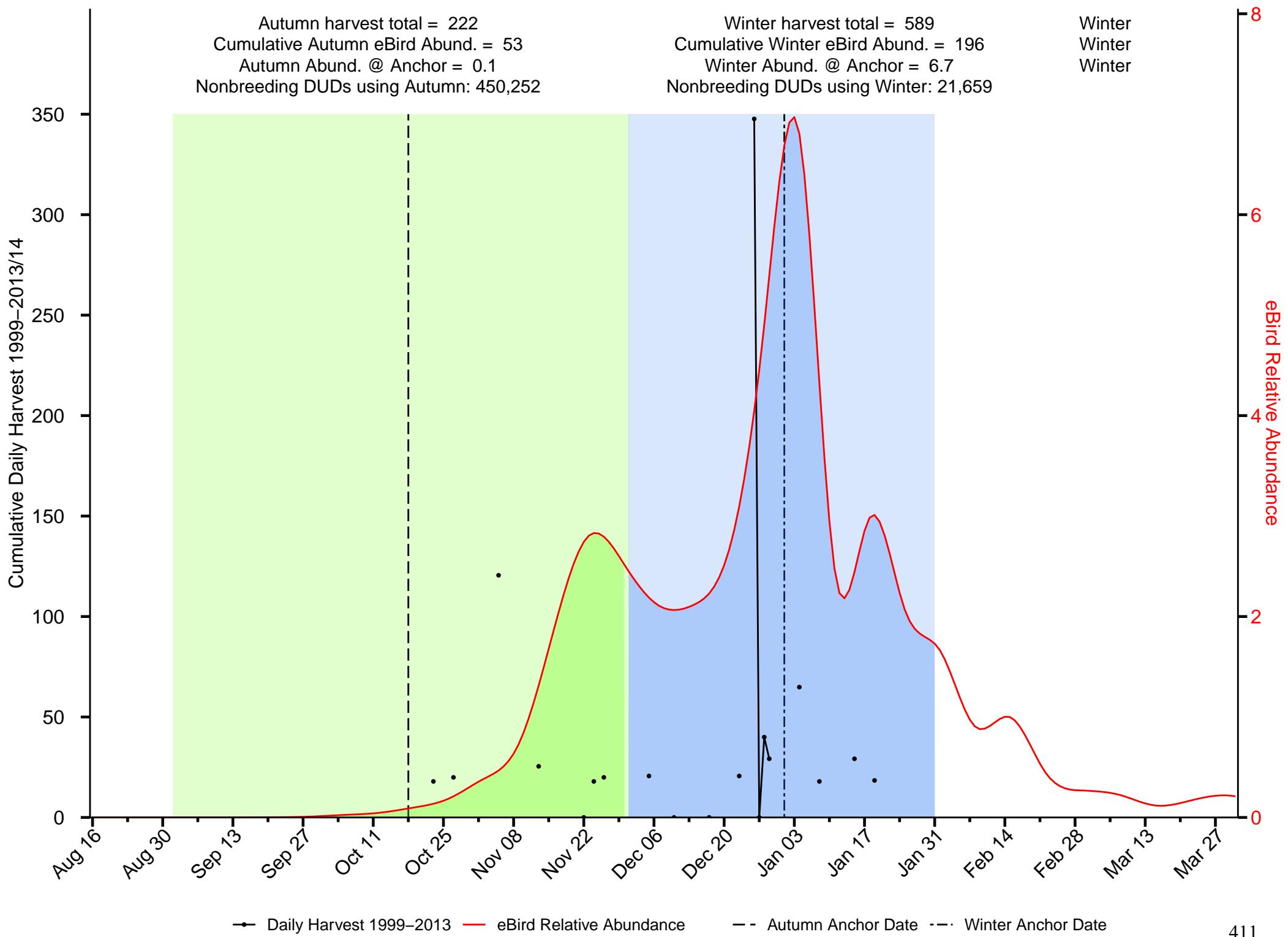
Summary of Northern Pintail in the San Francisco Bay JV



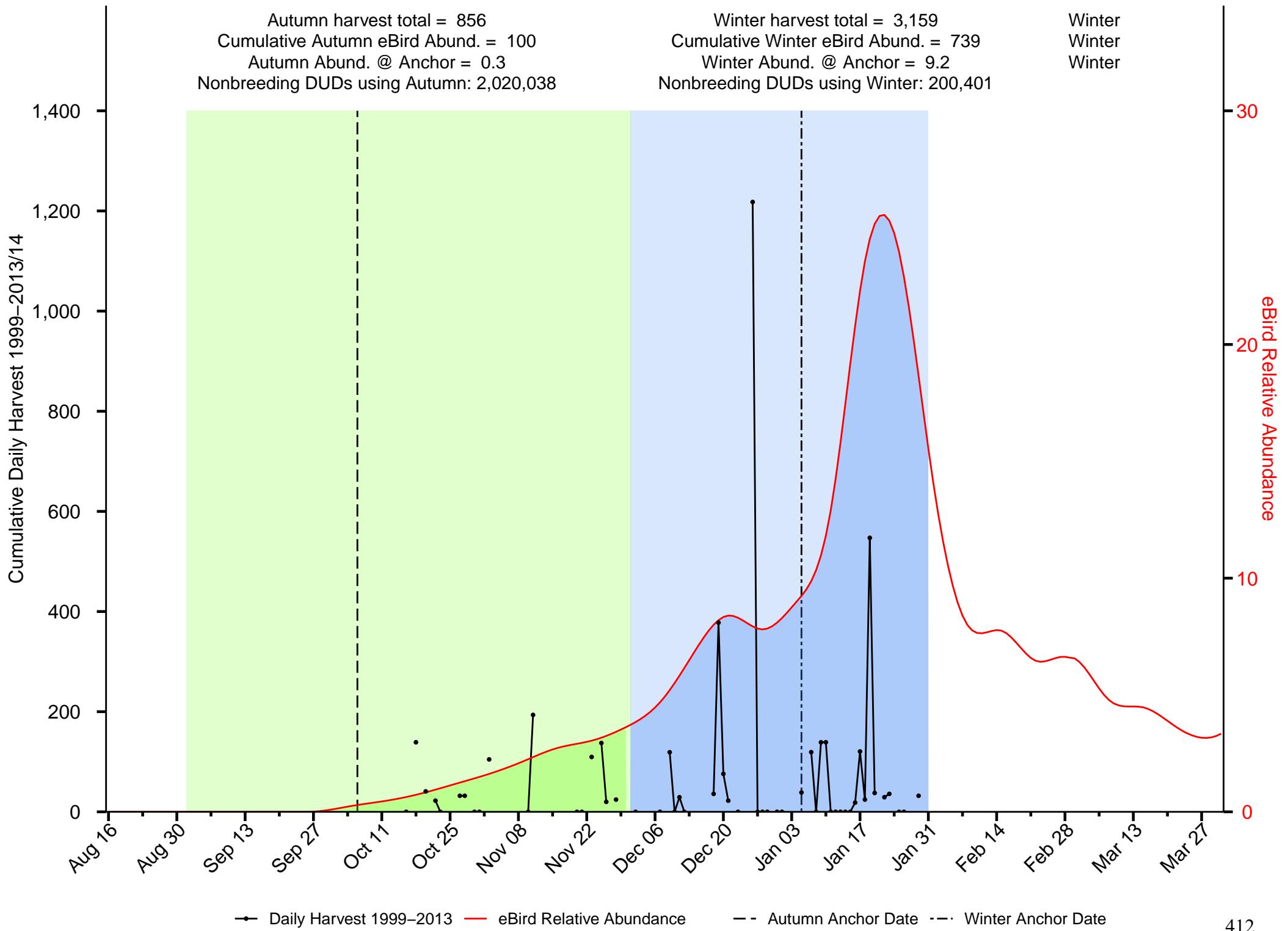
Summary of Northern Shoveler in the San Francisco Bay JV



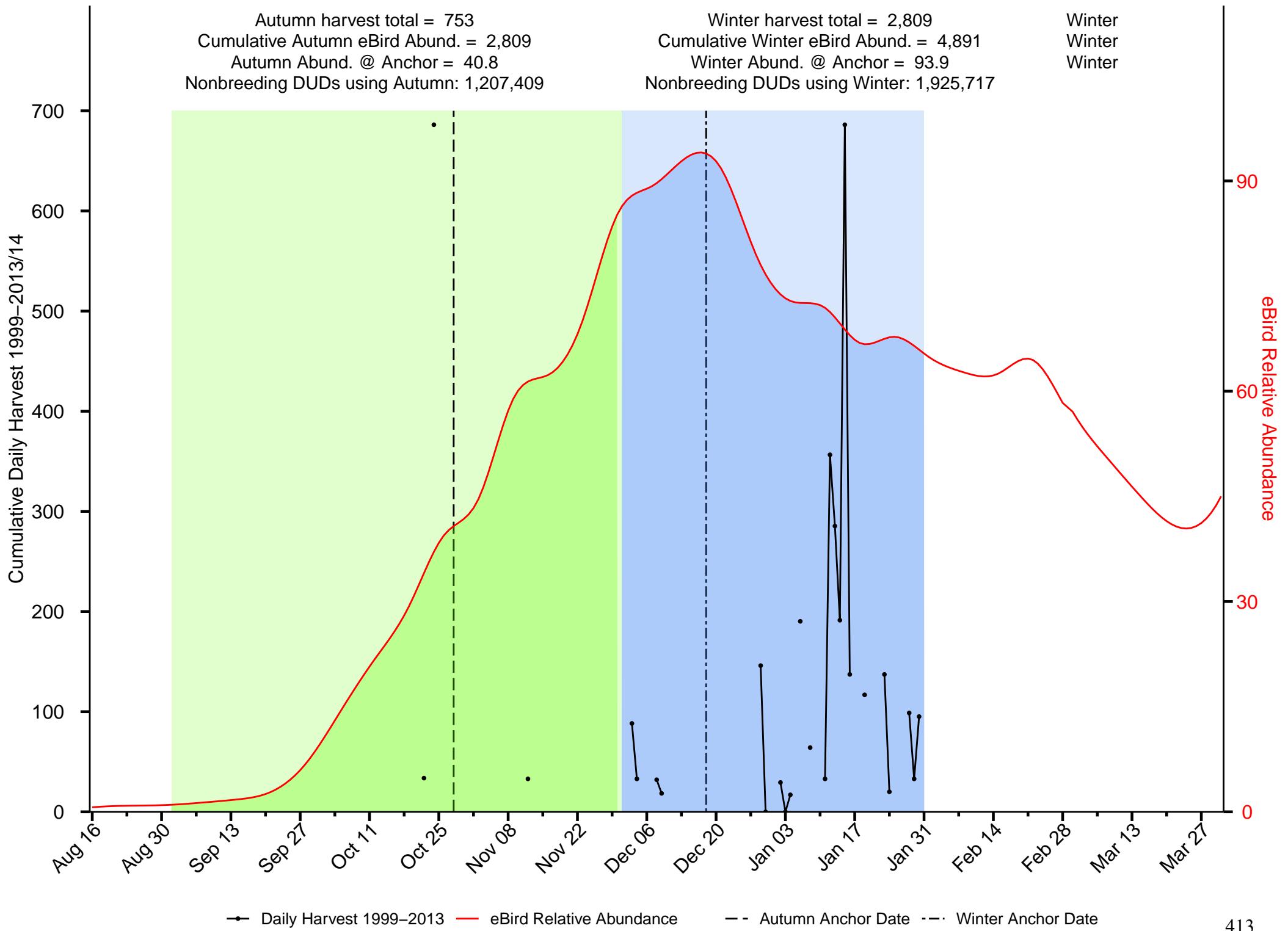
Summary of Redhead in the San Francisco Bay JV



Summary of Ring-necked Duck in the San Francisco Bay JV



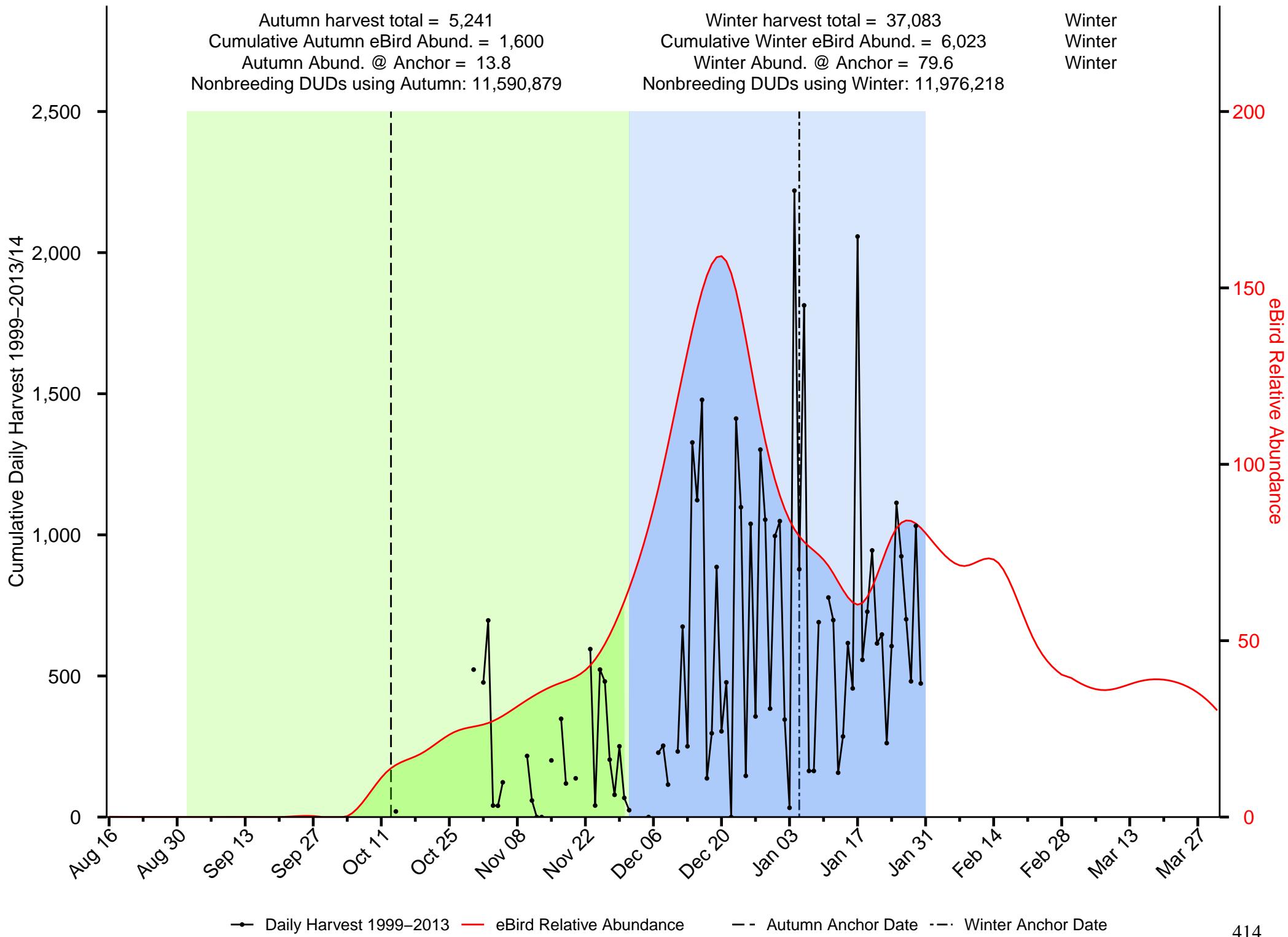
Summary of Ruddy Duck in the San Francisco Bay JV



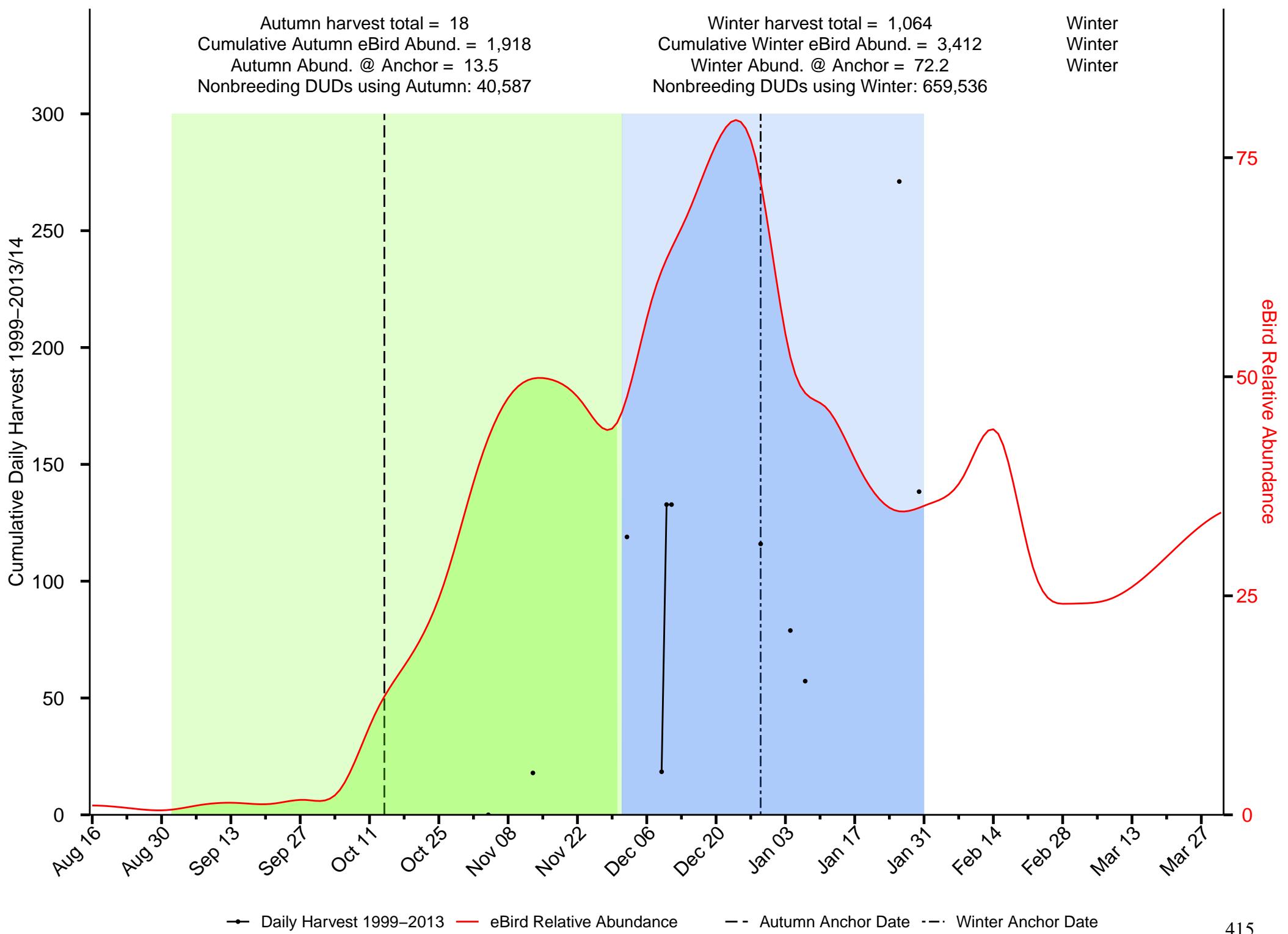
● Daily Harvest 1999–2013 — eBird Relative Abundance

-- Autumn Anchor Date - - Winter Anchor Date

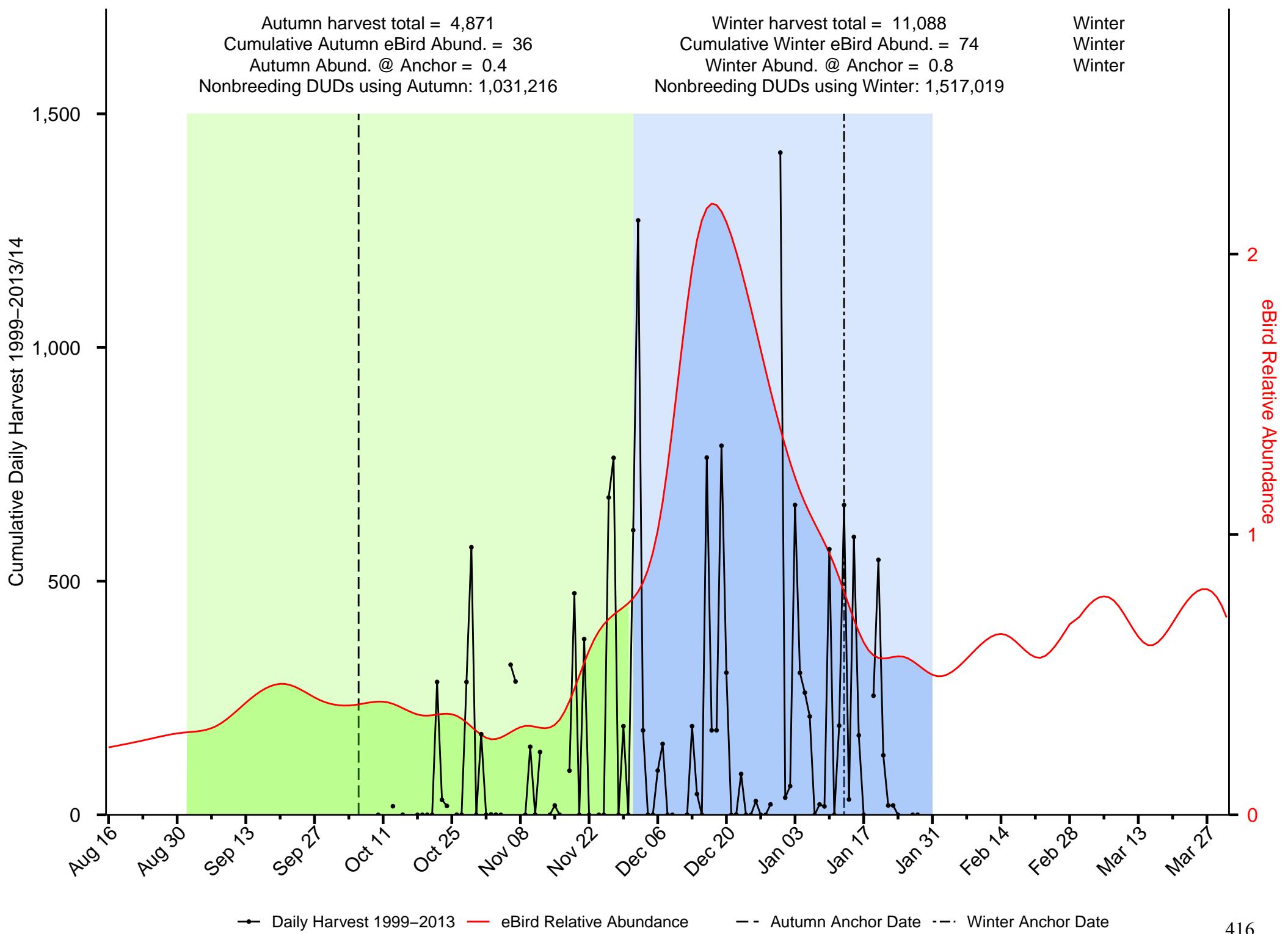
Summary of Scaup in the San Francisco Bay JV



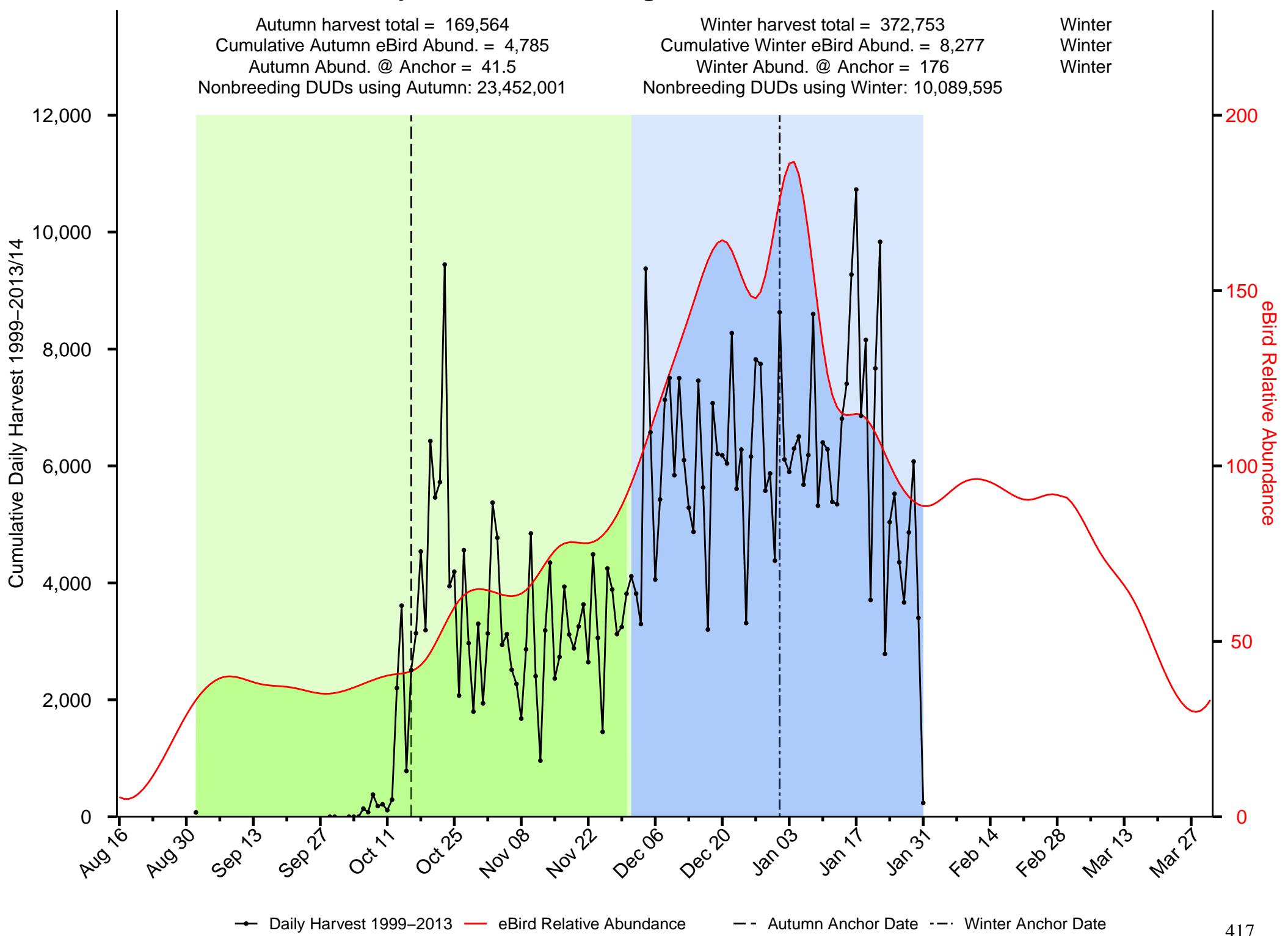
Summary of Scoter in the San Francisco Bay JV



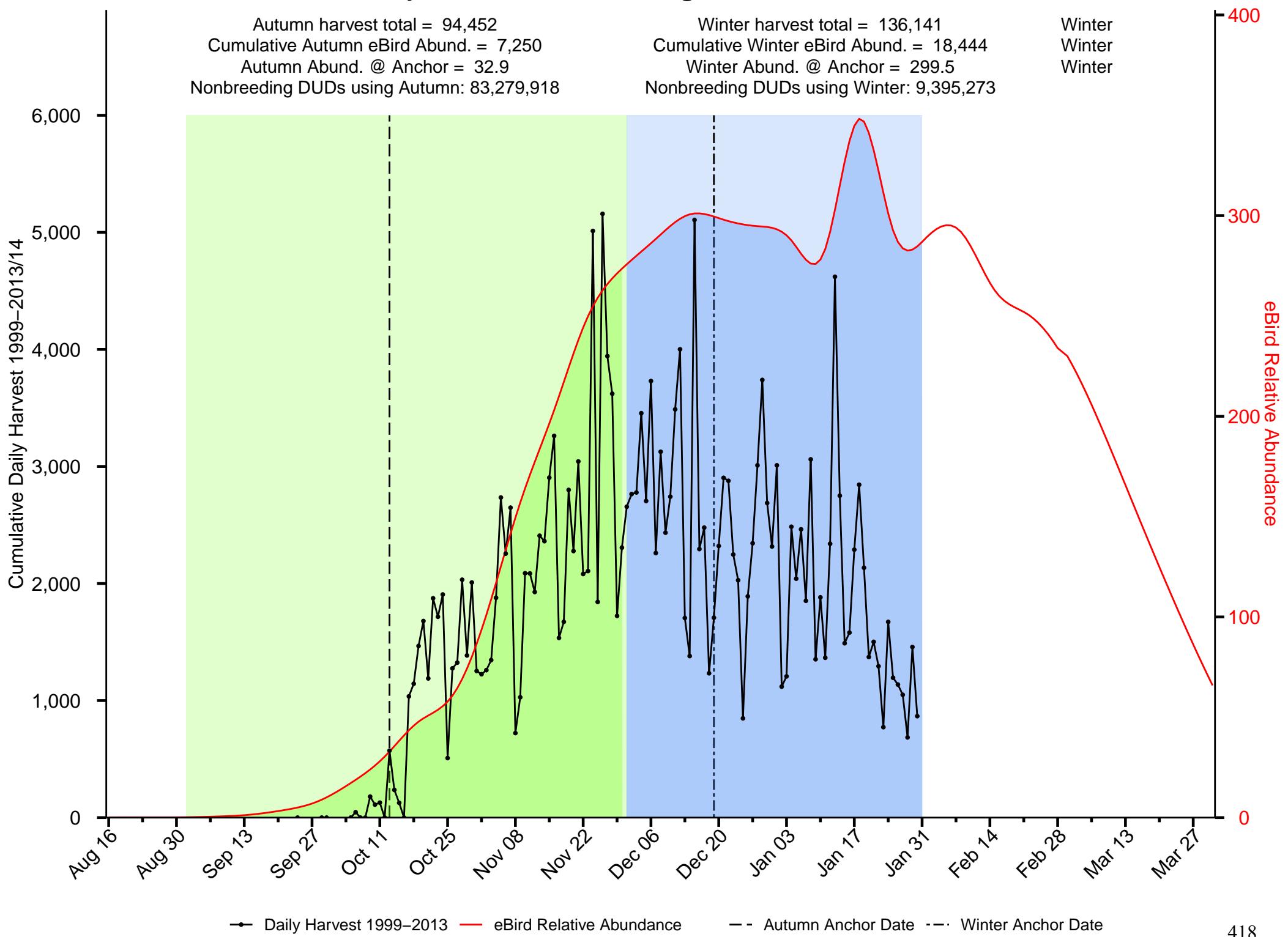
Summary of Wood Duck in the San Francisco Bay JV



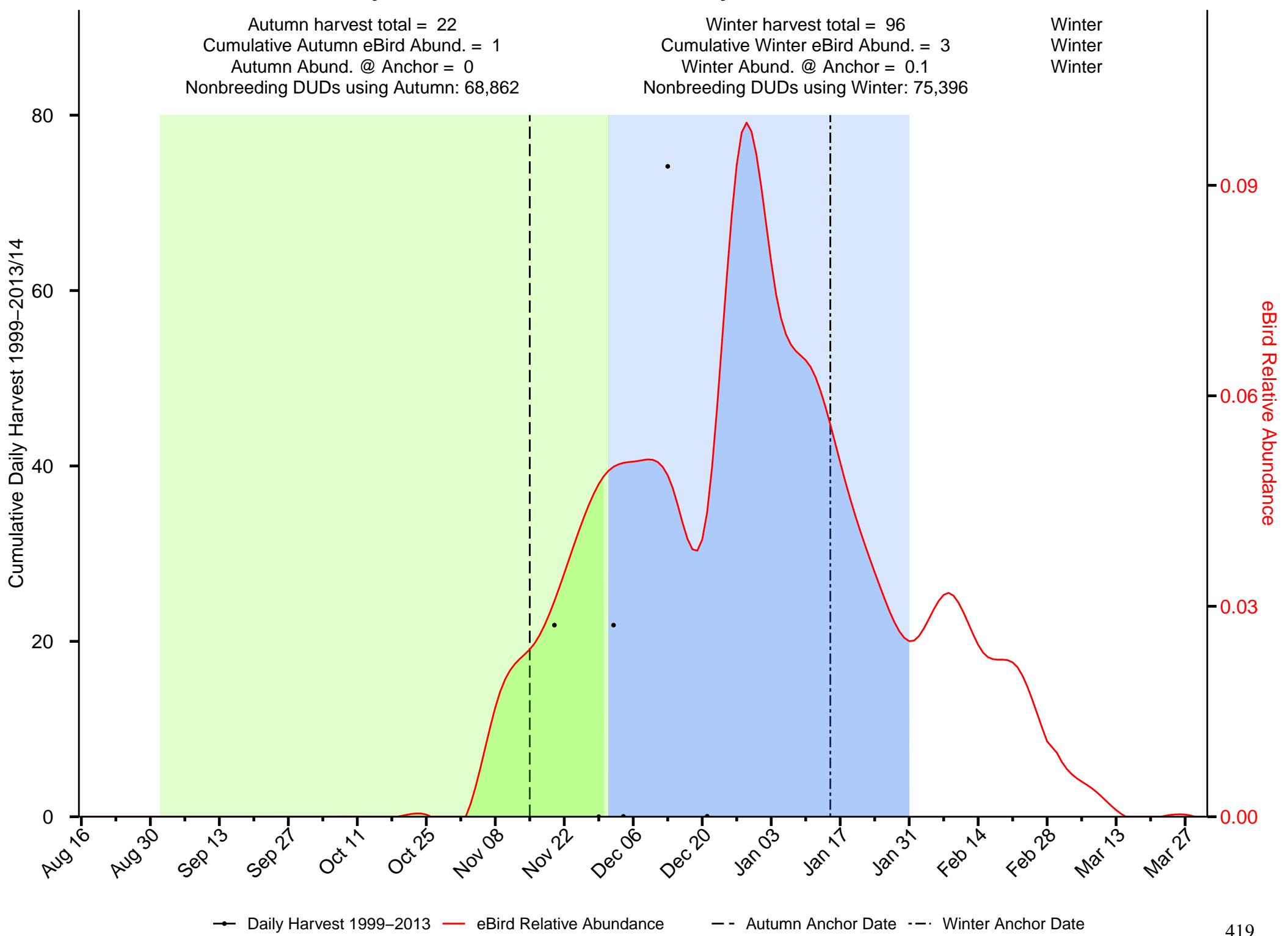
Summary of Green-winged Teal in the Sonoran JV



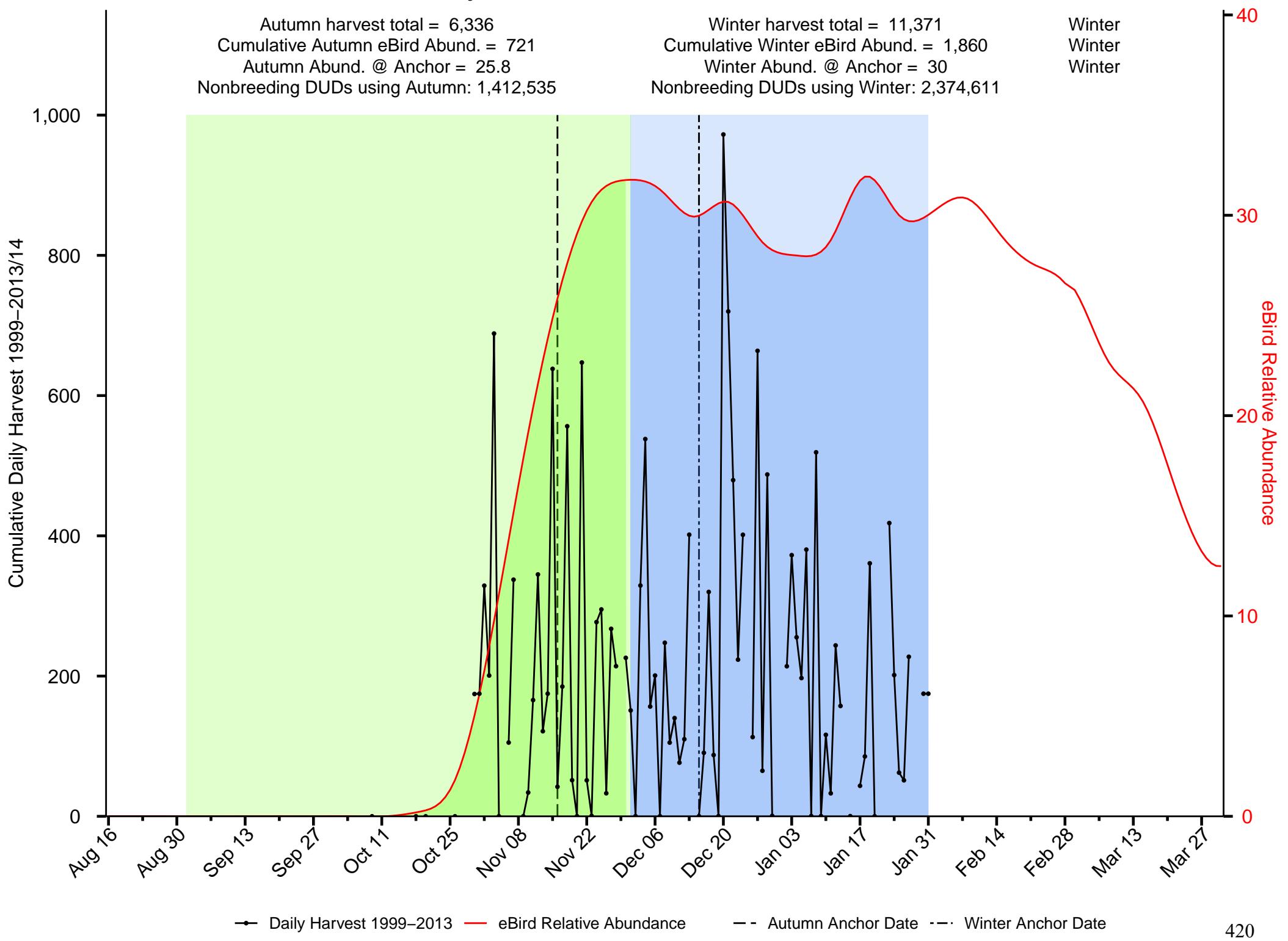
Summary of American Wigeon in the Sonoran JV



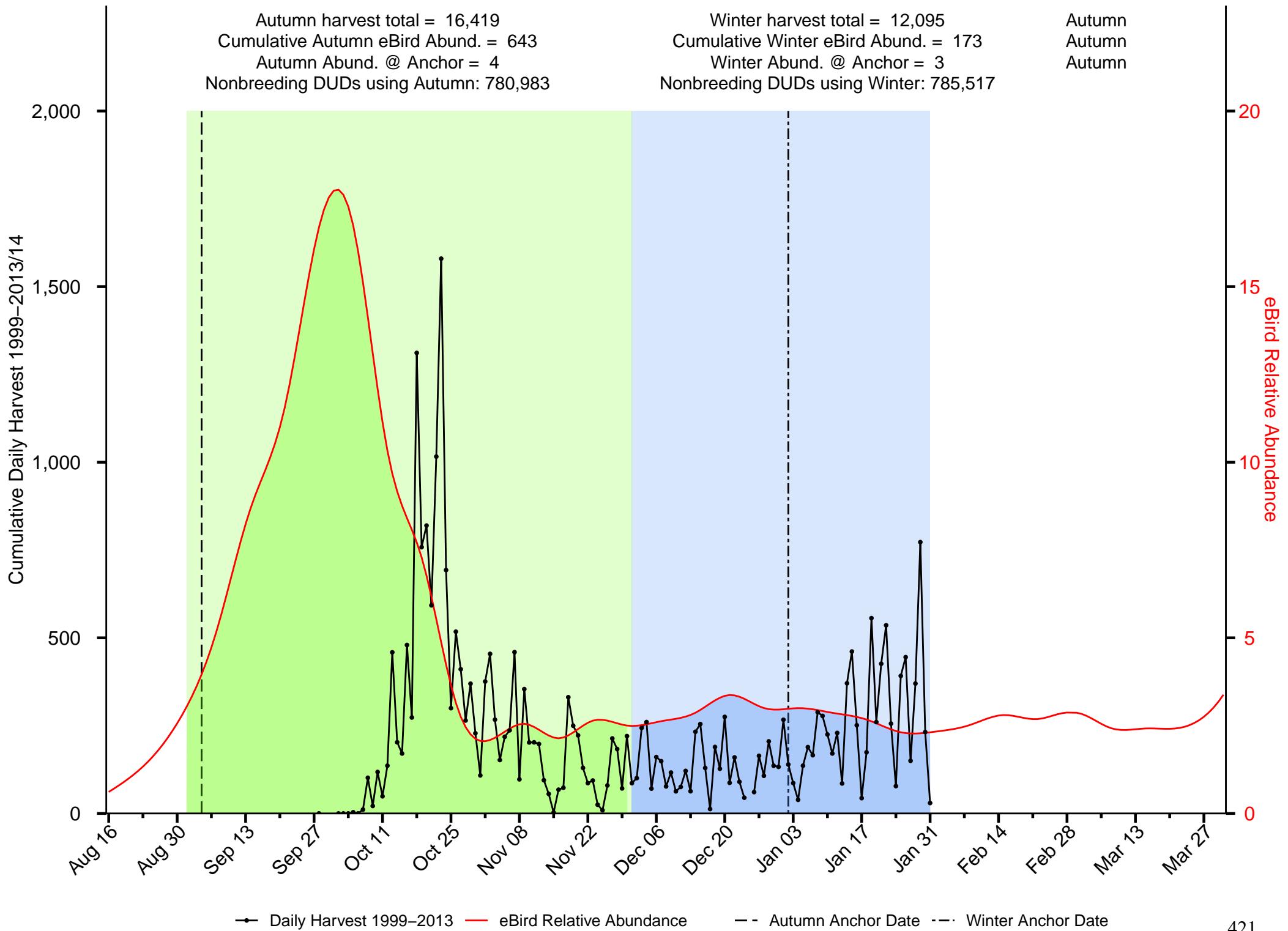
Summary of Barrow's Goldeneye in the Sonoran JV



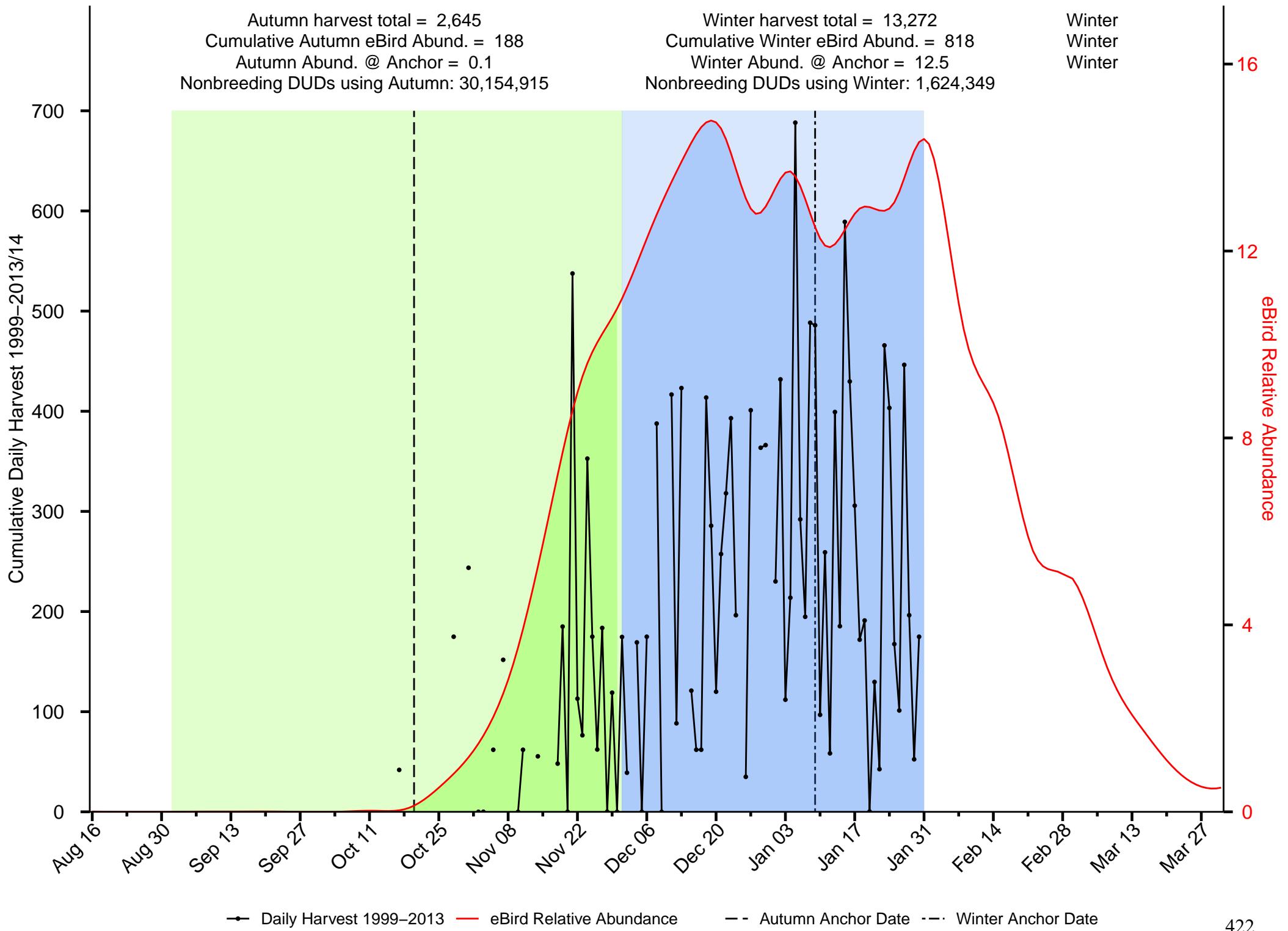
Summary of Bufflehead in the Sonoran JV



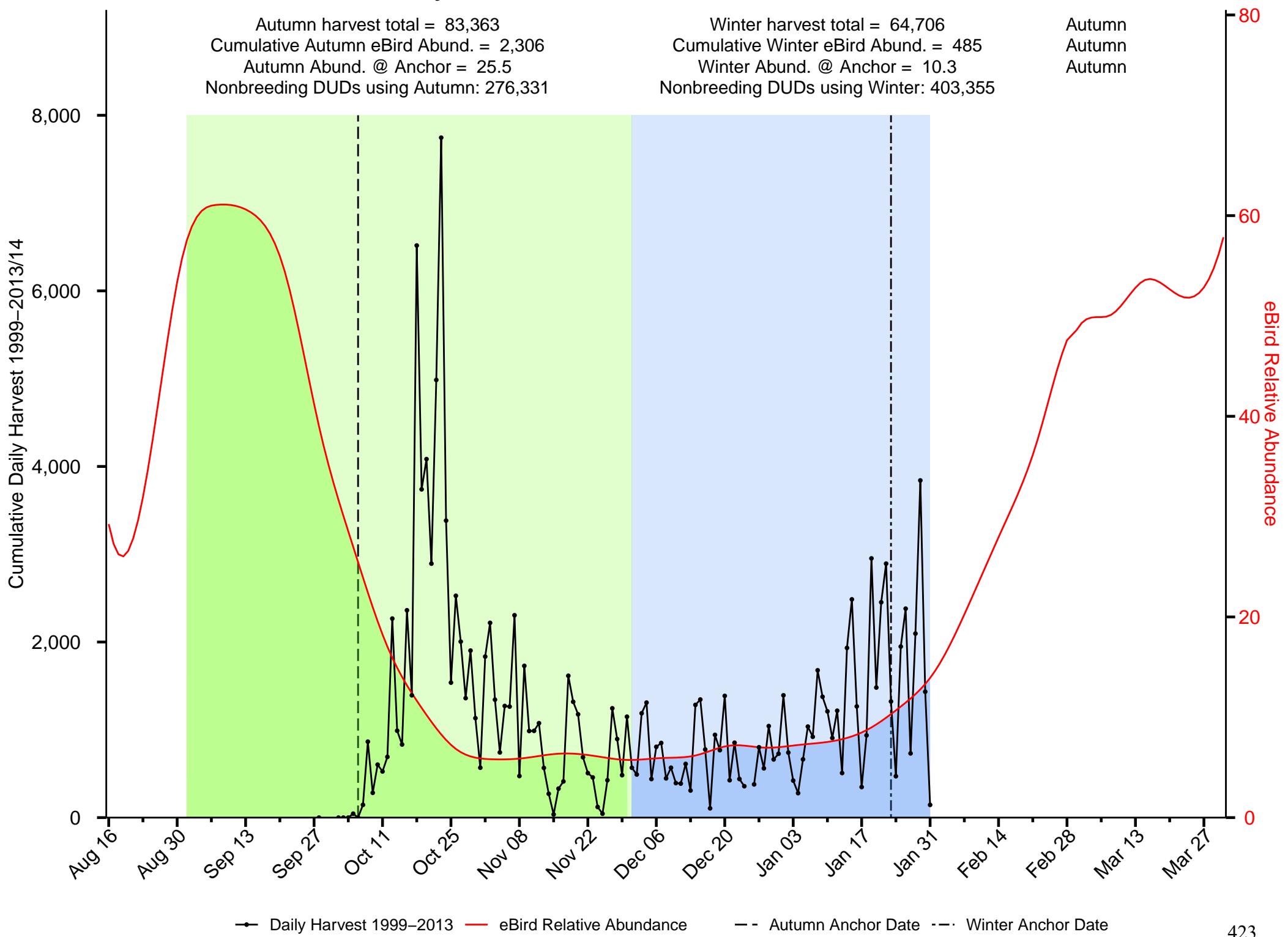
Summary of Blue-winged Teal in the Sonoran JV



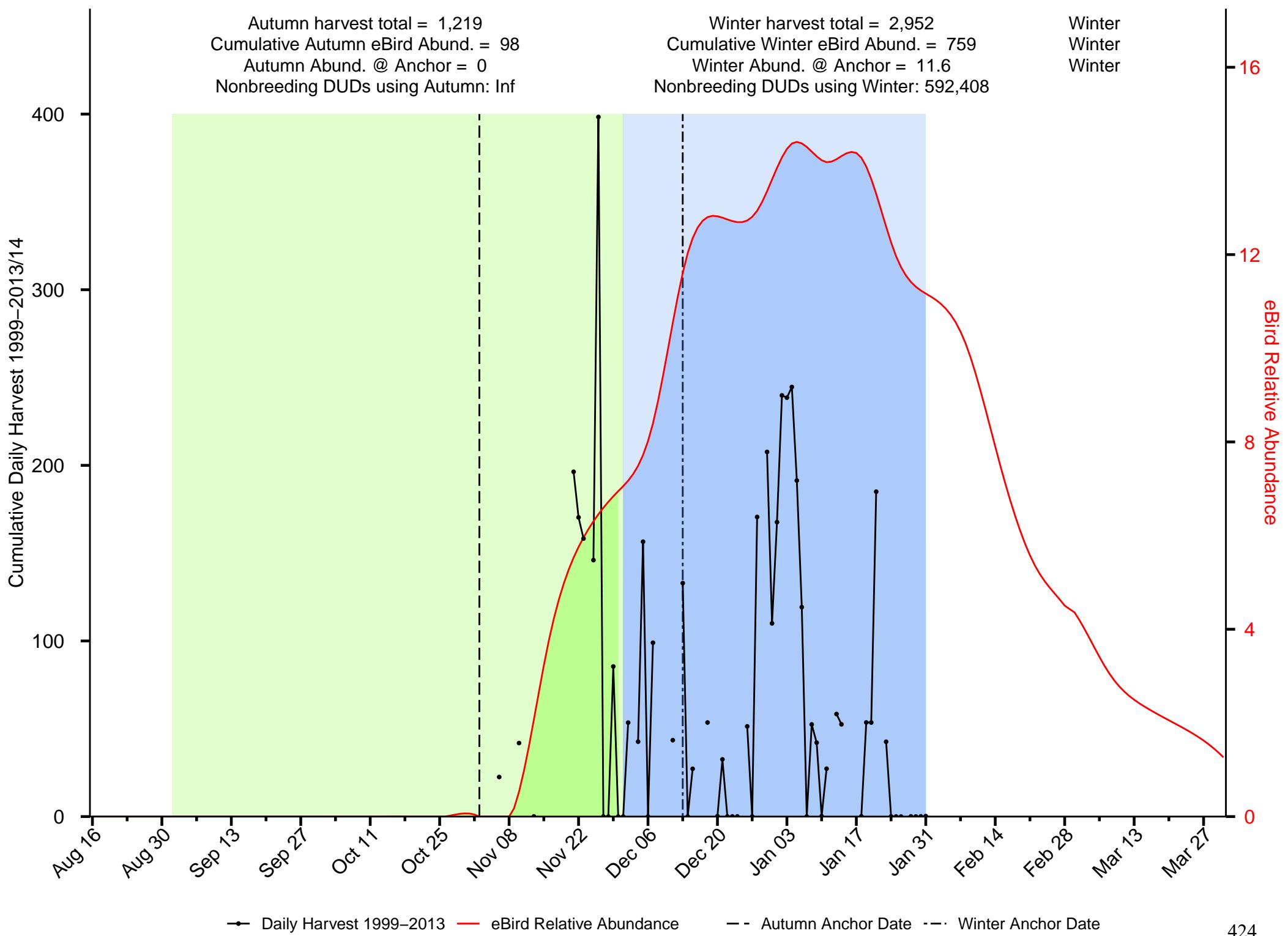
Summary of Canvasback in the Sonoran JV



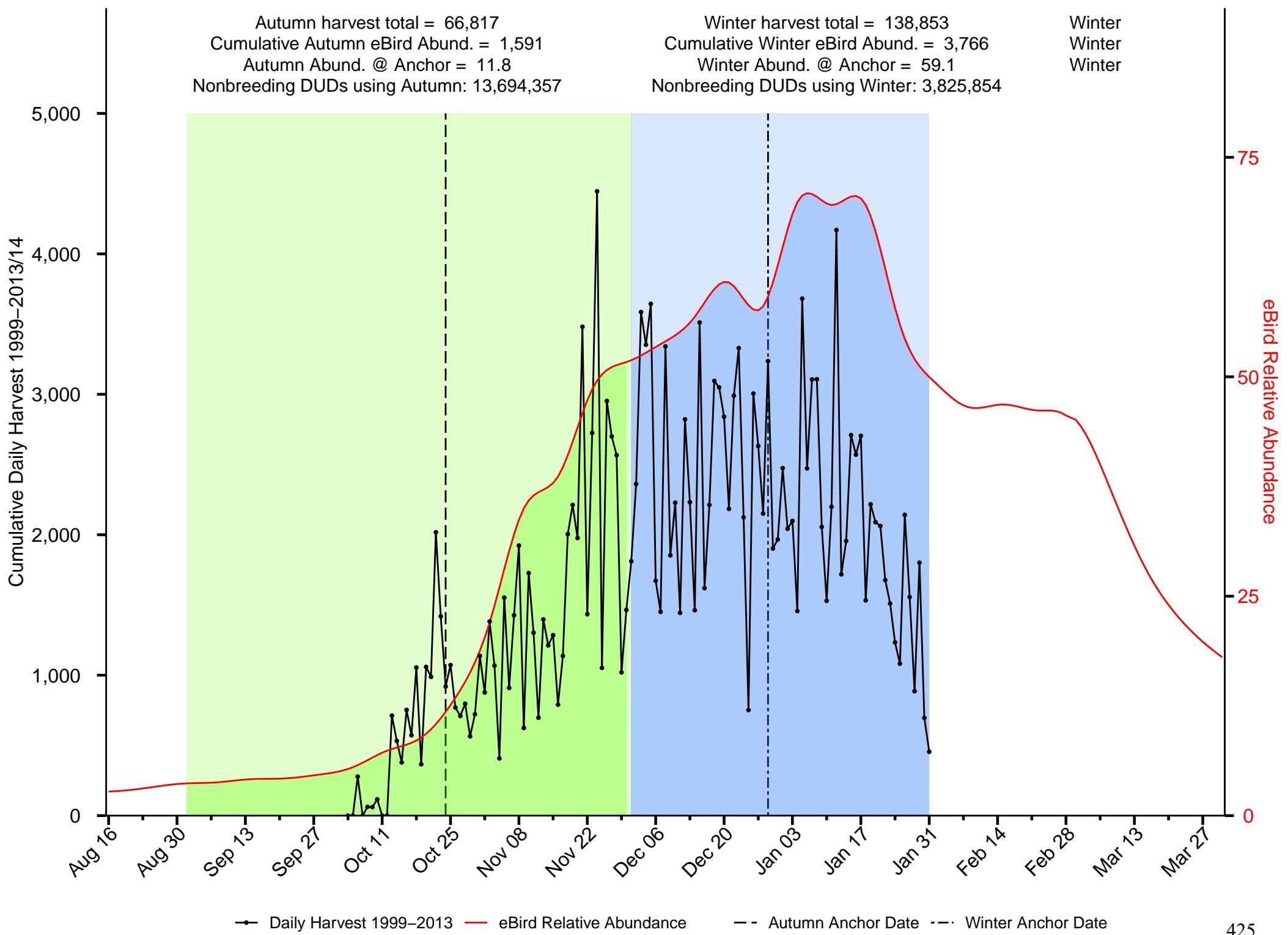
Summary of Cinnamon Teal in the Sonoran JV



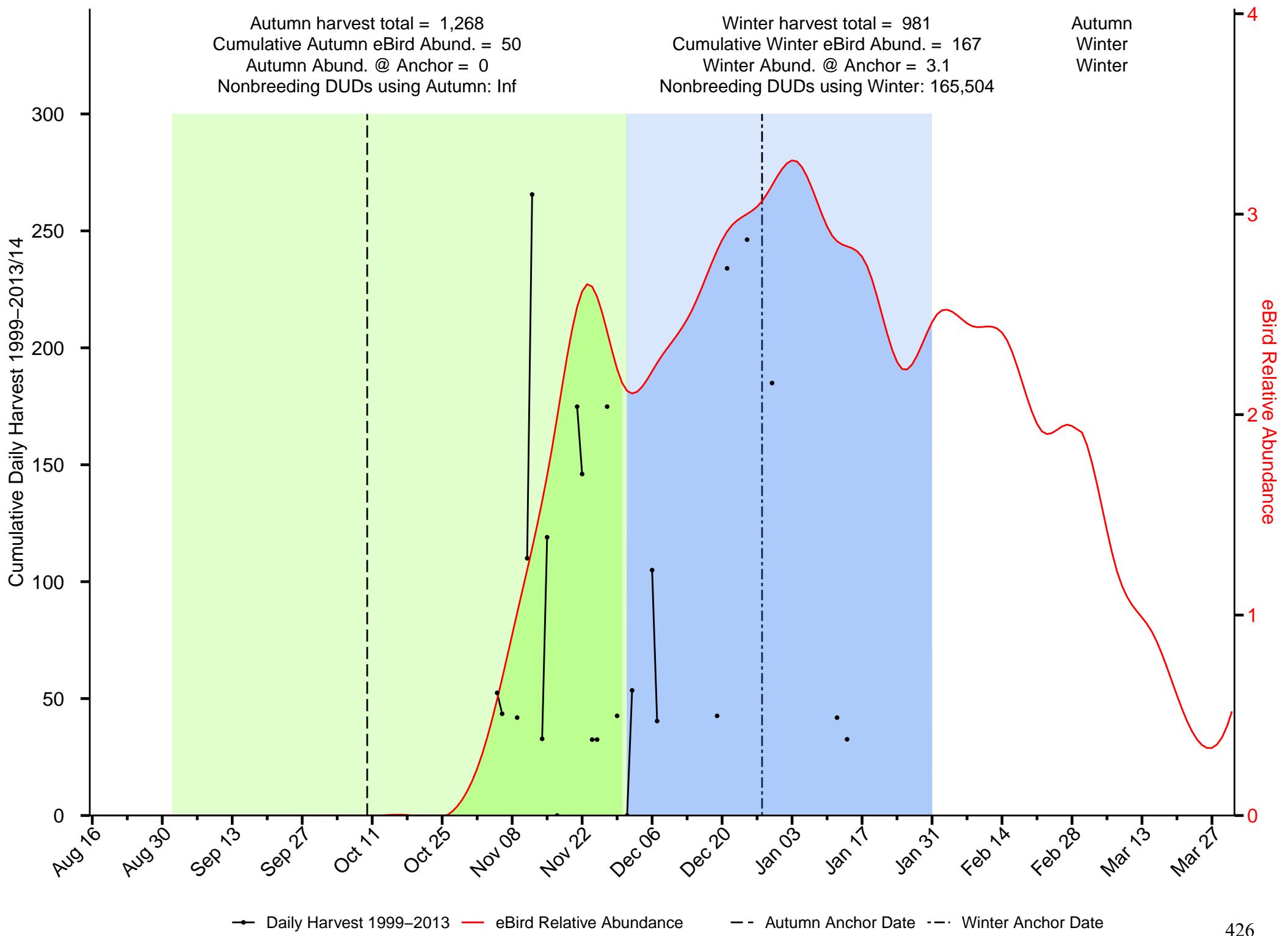
Summary of Common Goldeneye in the Sonoran JV



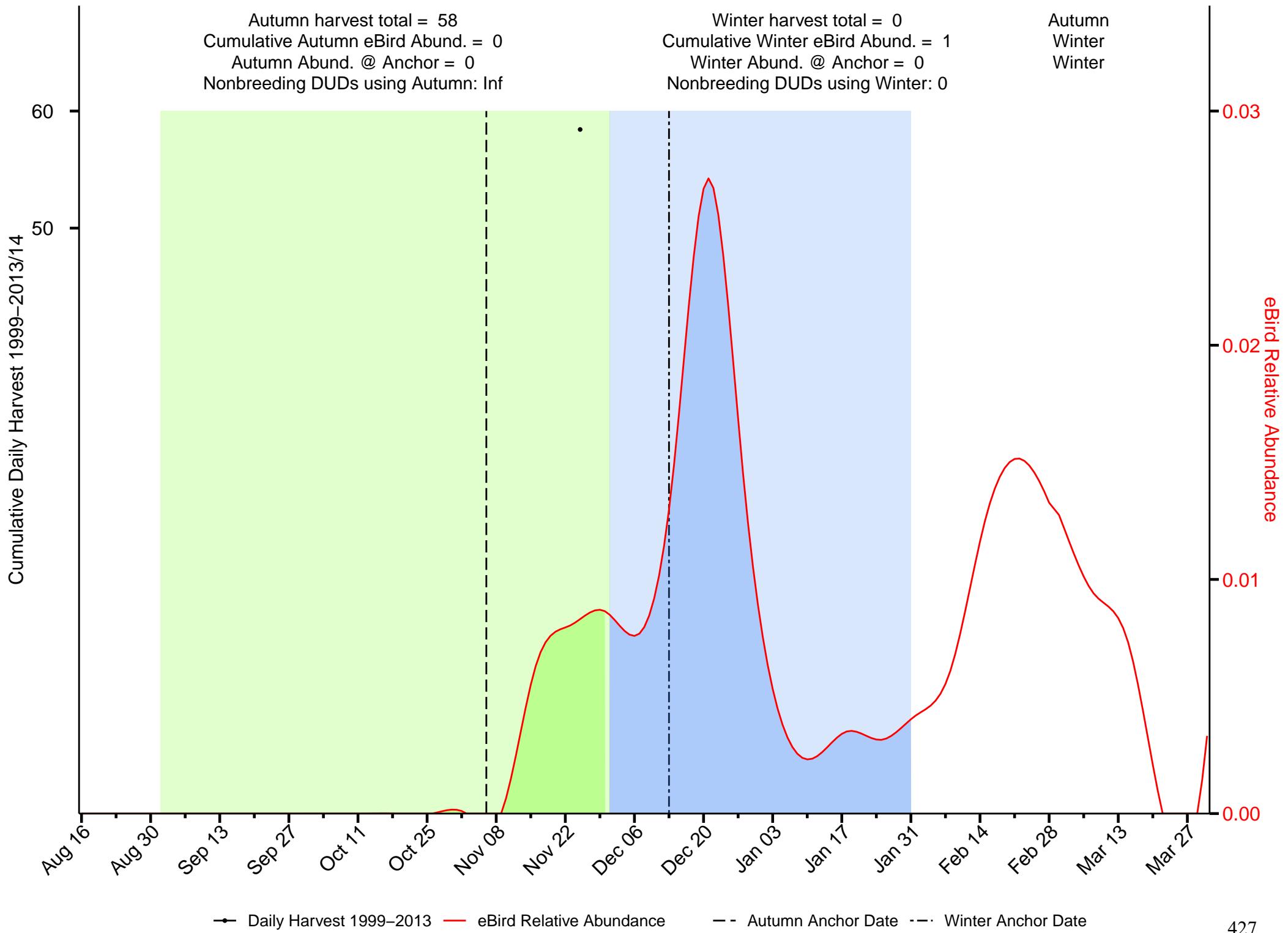
Summary of Gadwall in the Sonoran JV



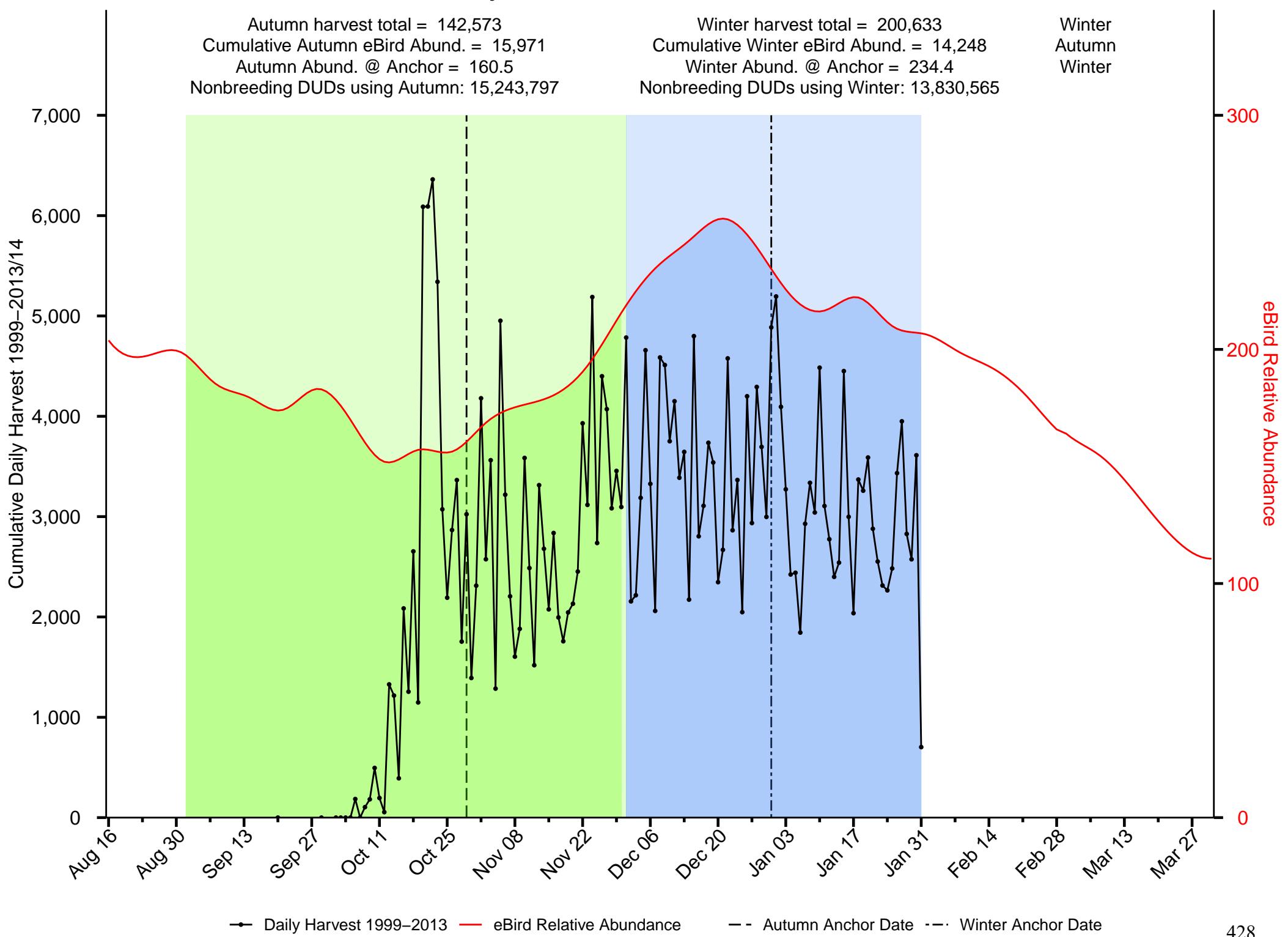
Summary of Hooded Merganser in the Sonoran JV



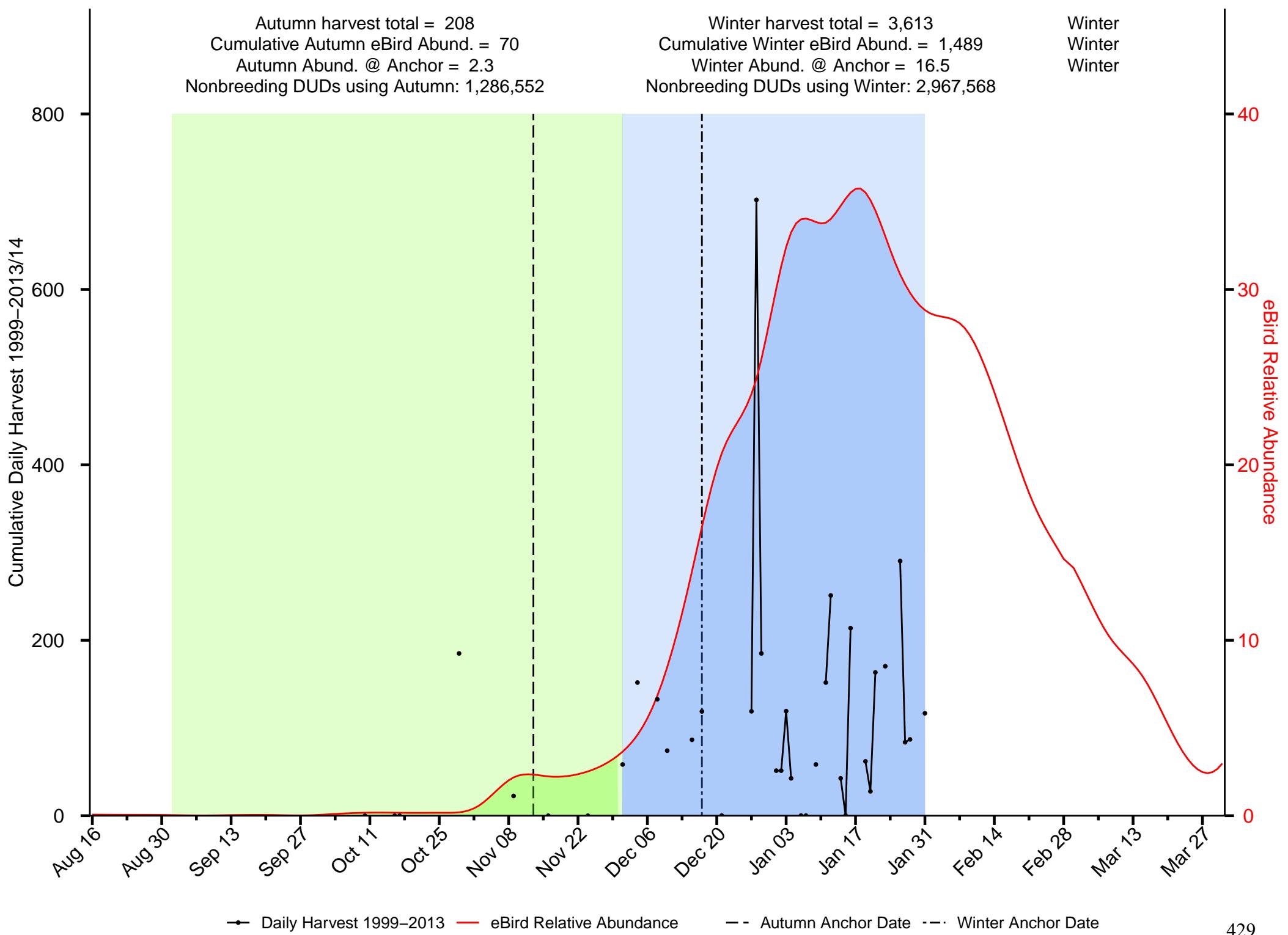
Summary of Long-tailed Duck in the Sonoran JV



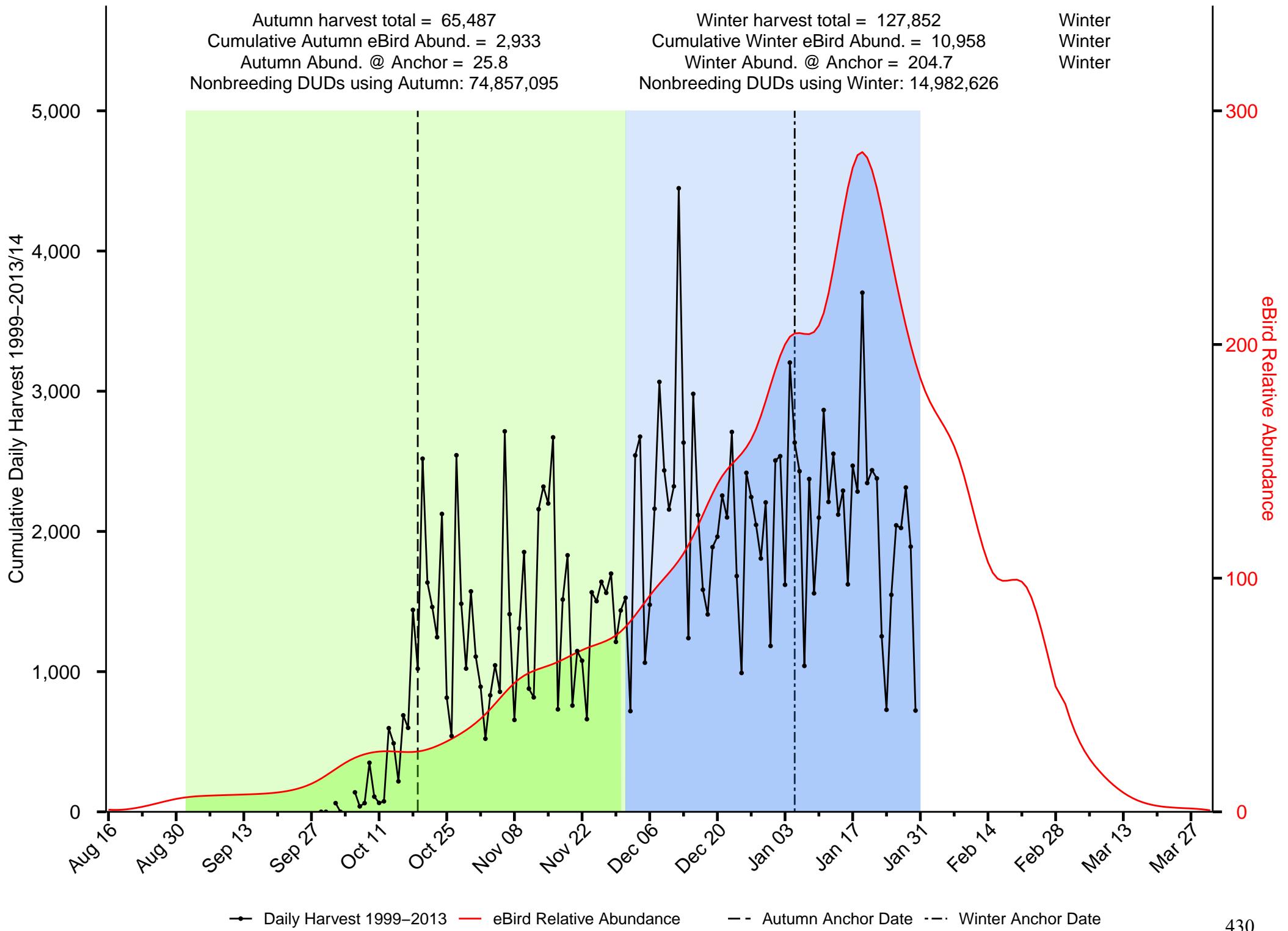
Summary of Mallard in the Sonoran JV



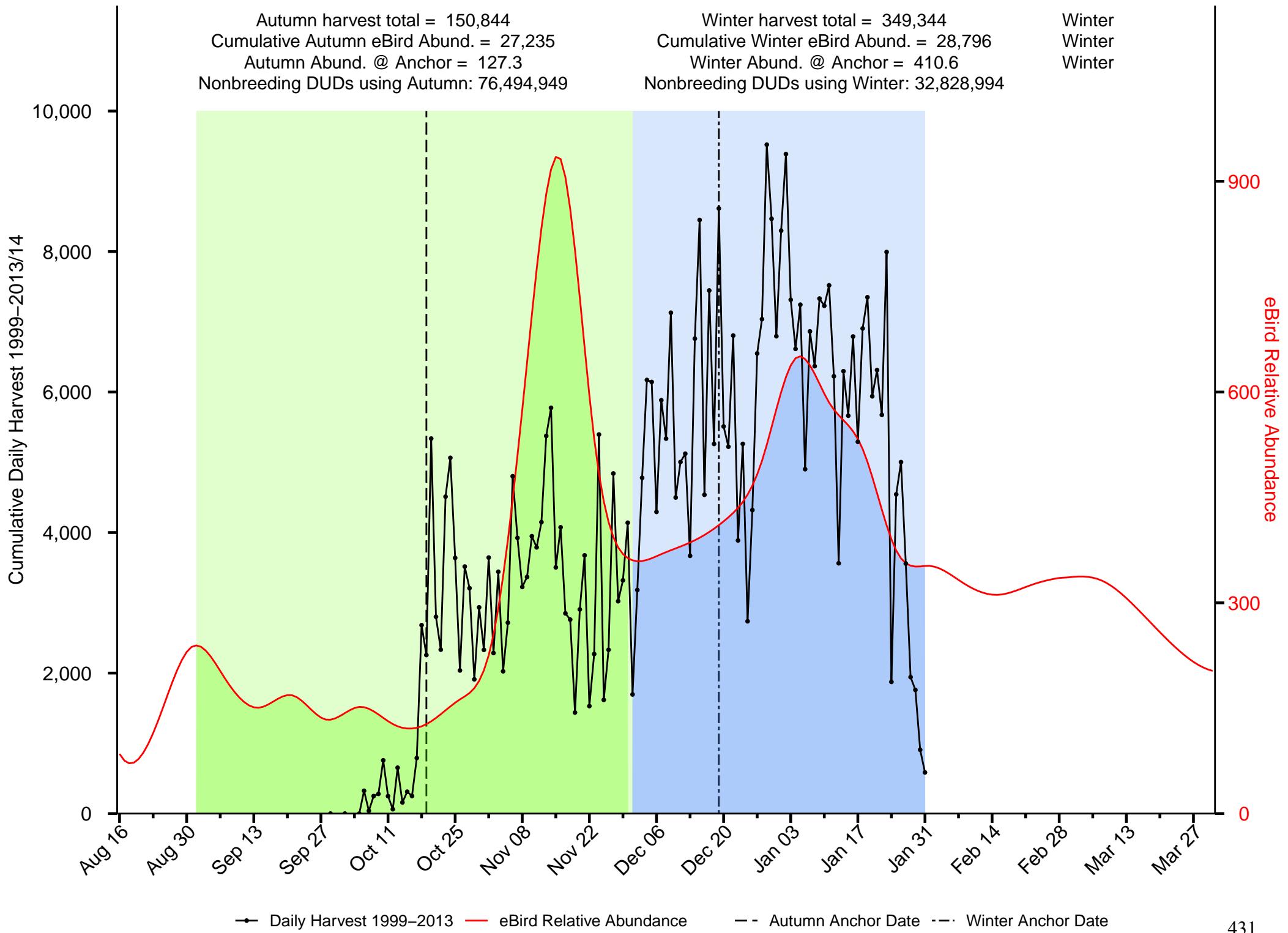
Summary of Merganser in the Sonoran JV



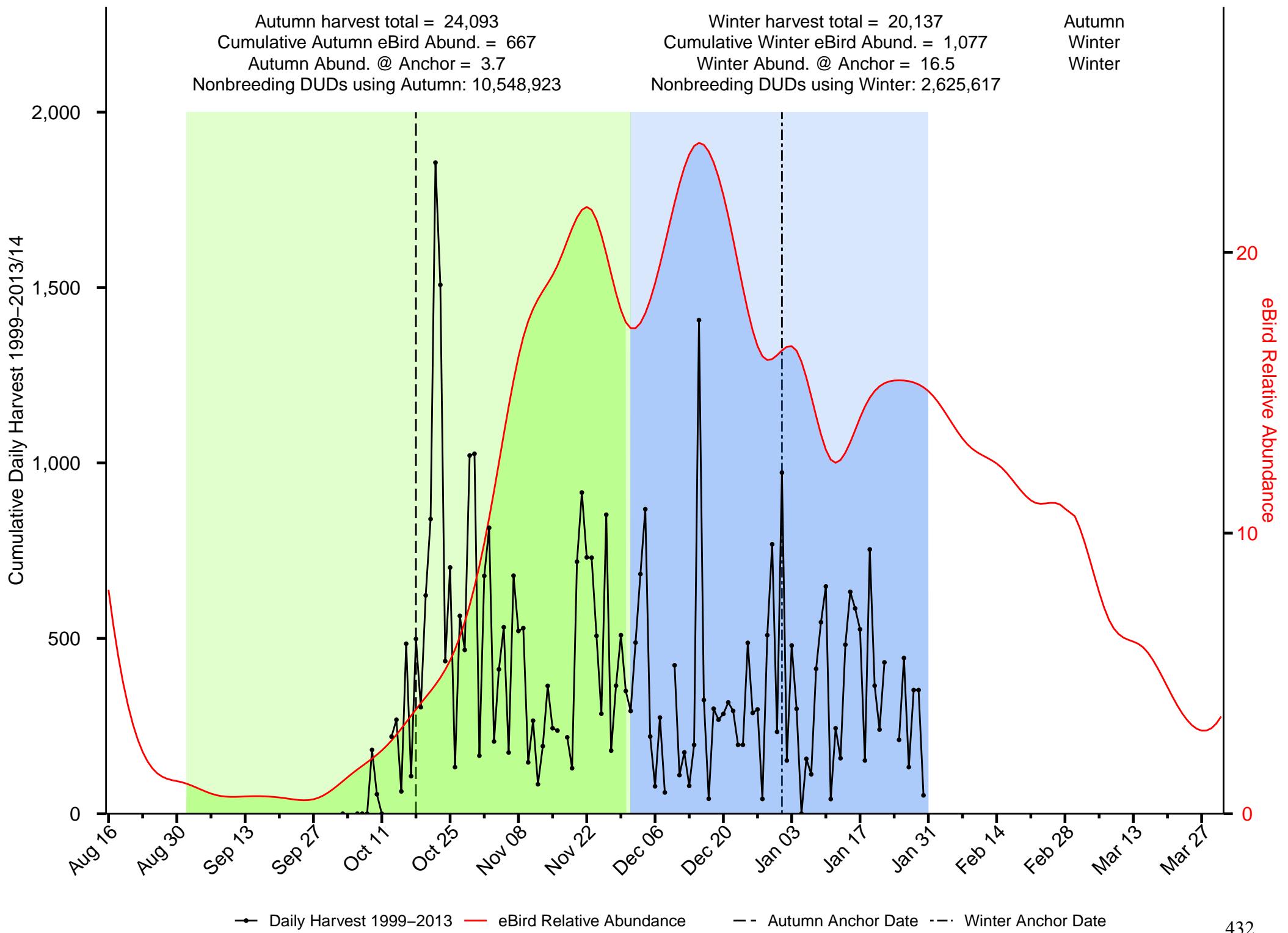
Summary of Northern Pintail in the Sonoran JV



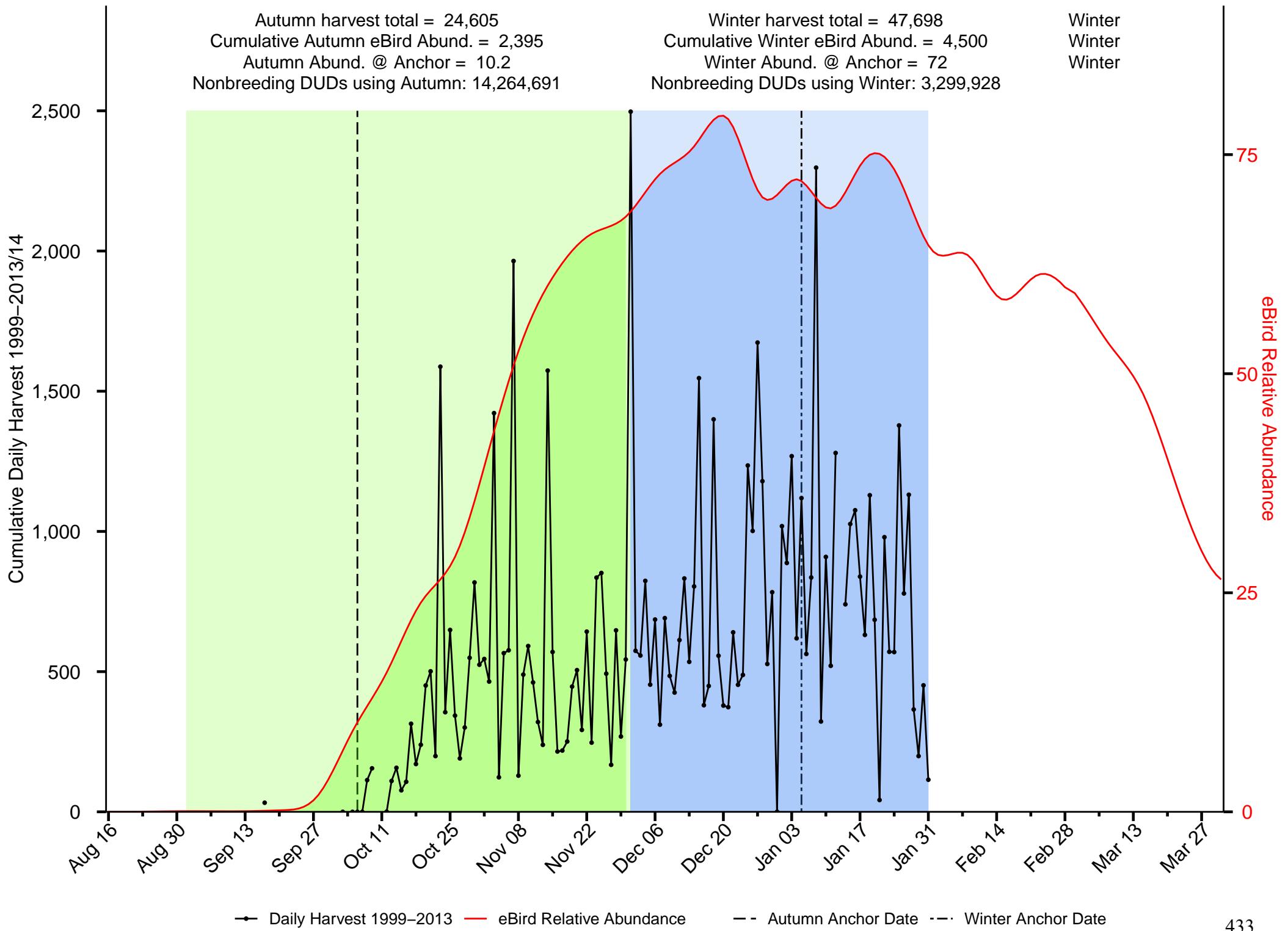
Summary of Northern Shoveler in the Sonoran JV



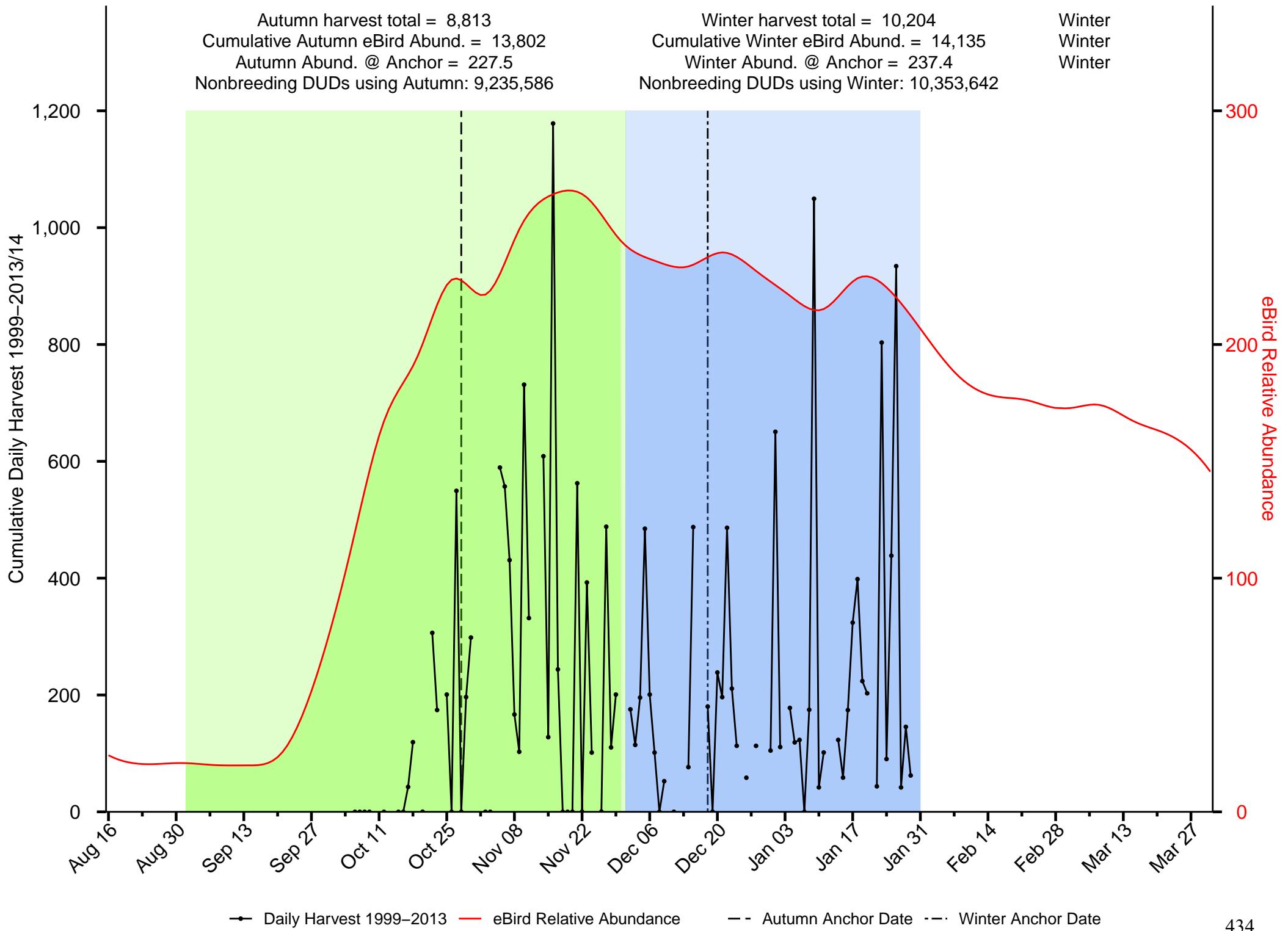
Summary of Redhead in the Sonoran JV



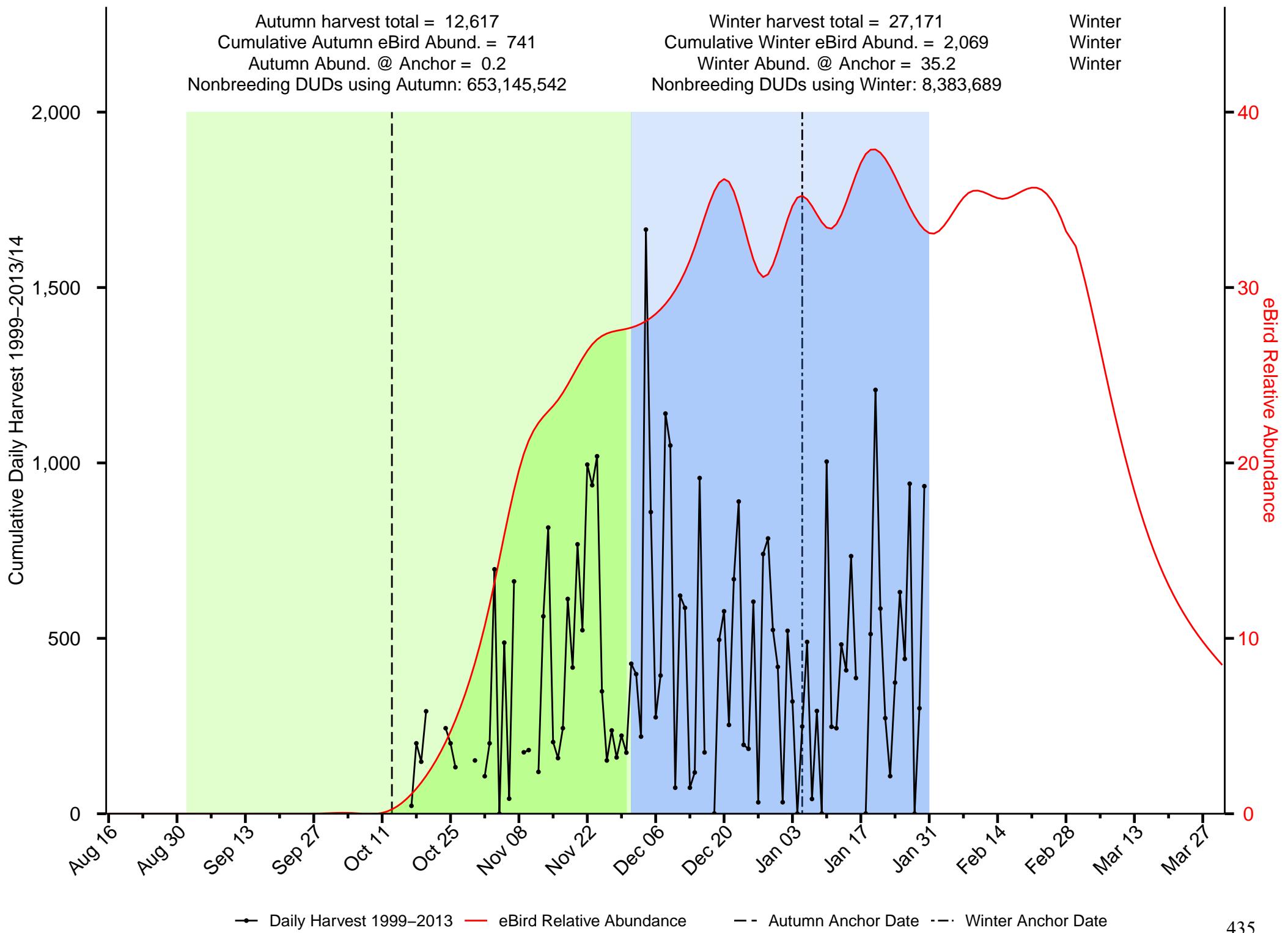
Summary of Ring-necked Duck in the Sonoran JV



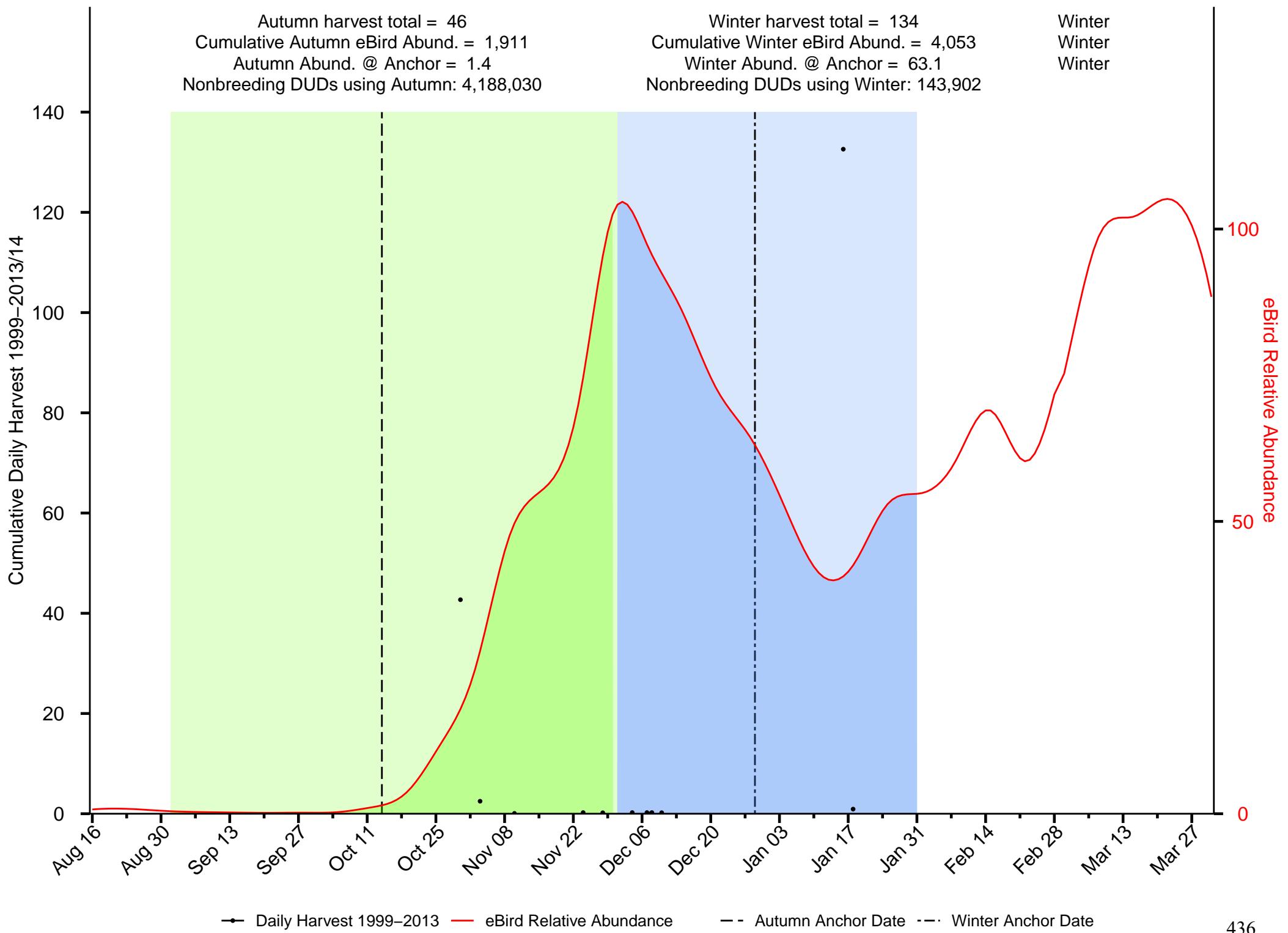
Summary of Ruddy Duck in the Sonoran JV



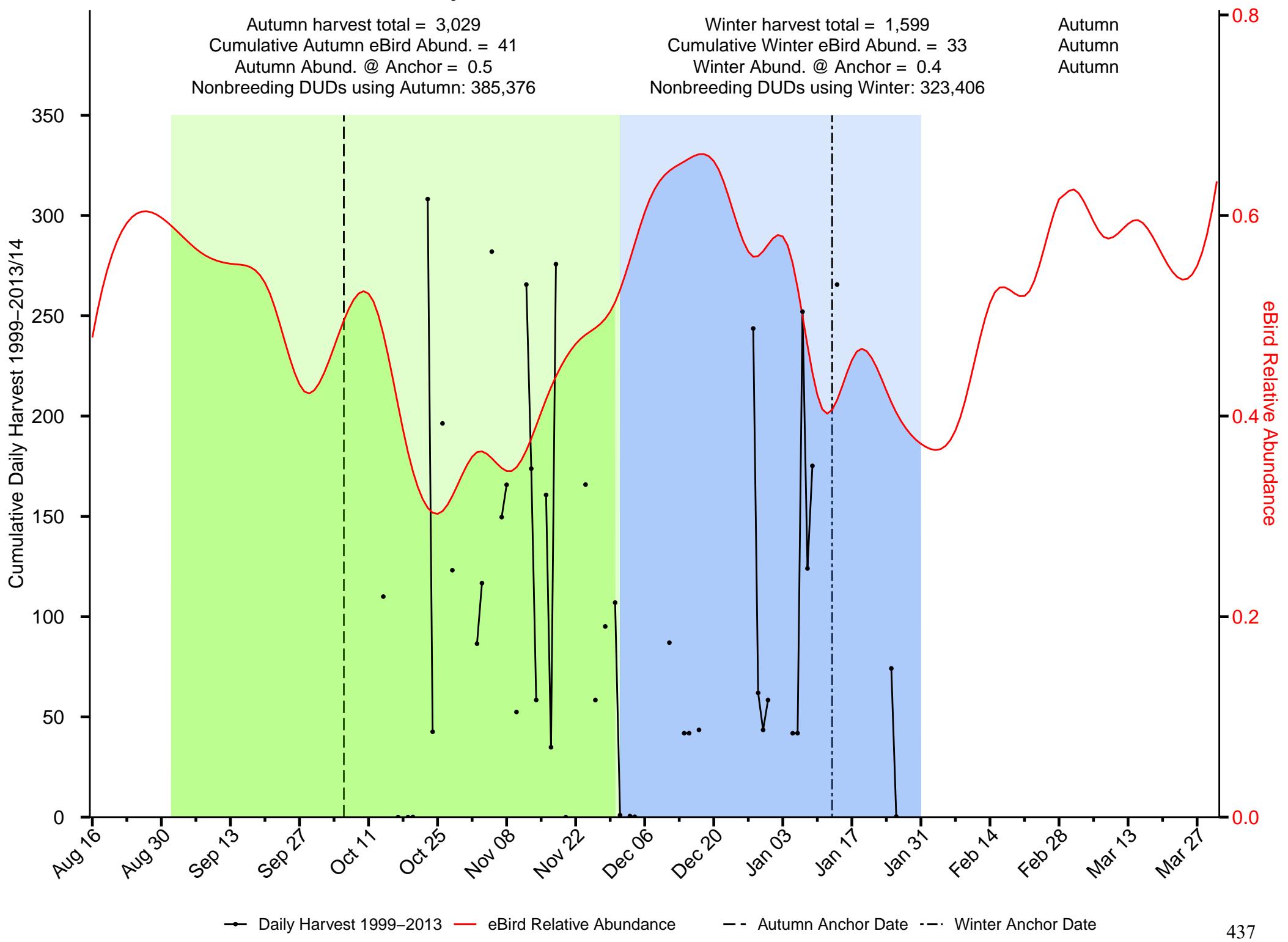
Summary of Scaup in the Sonoran JV



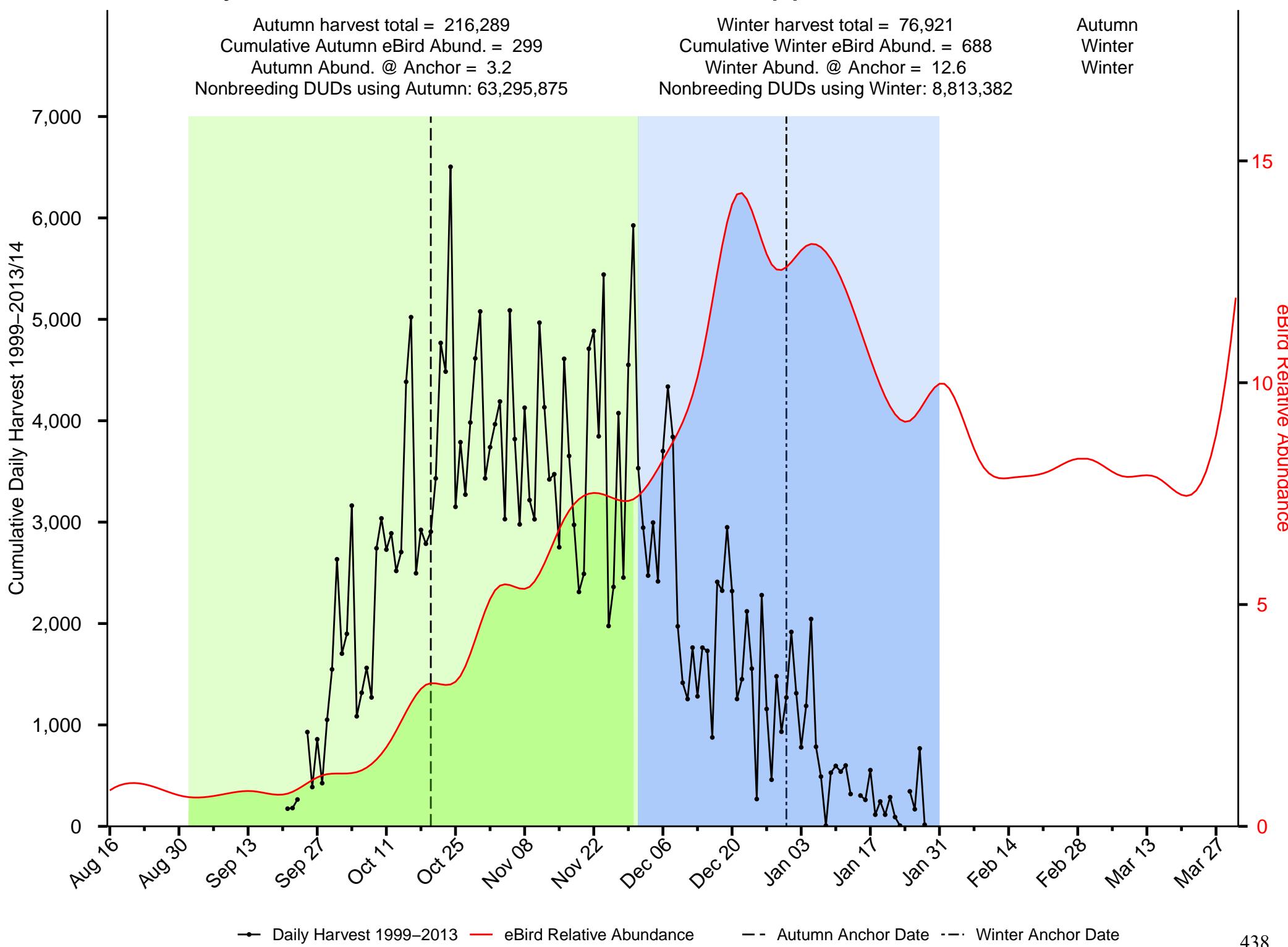
Summary of Scoter in the Sonoran JV



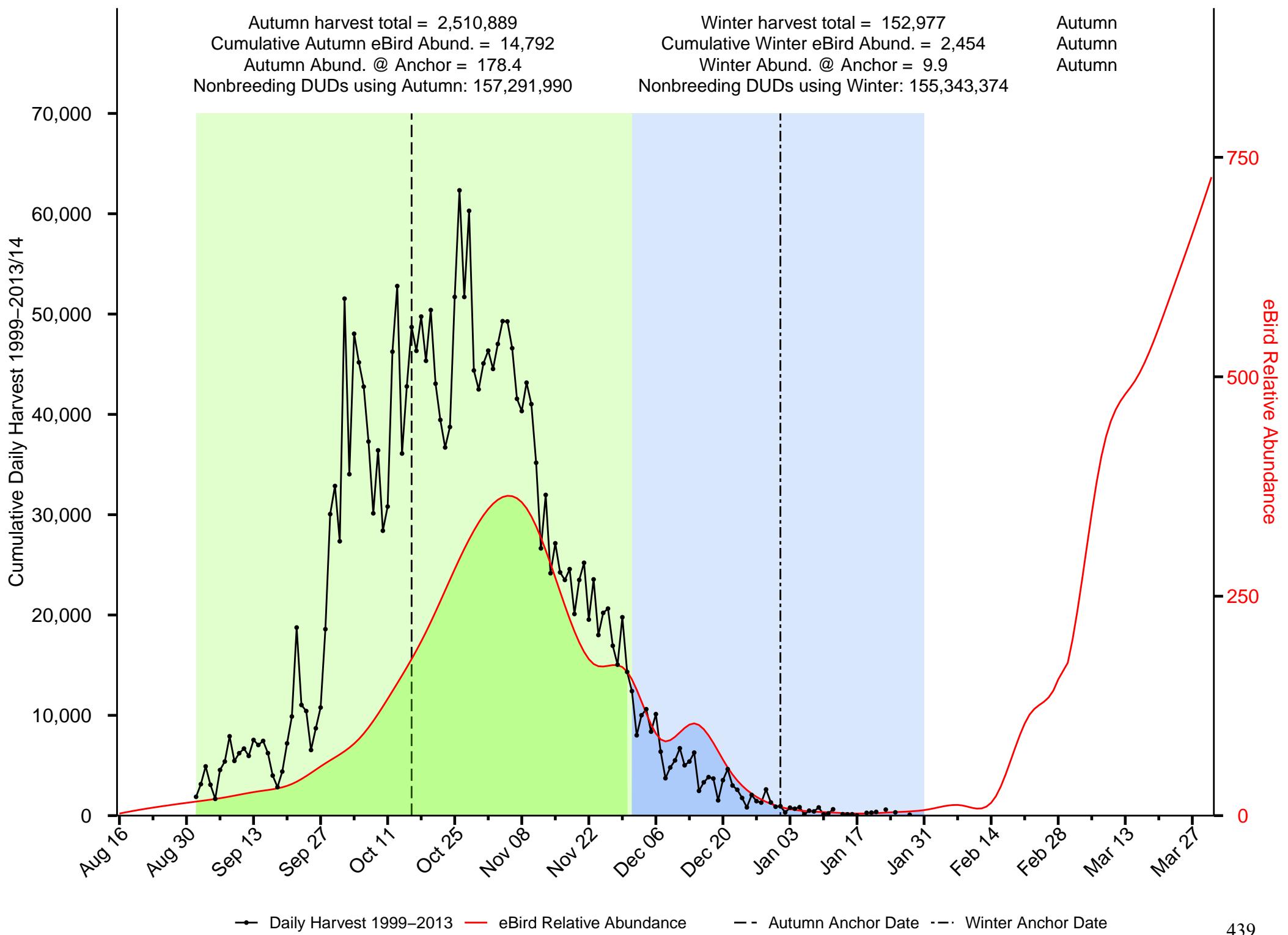
Summary of Wood Duck in the Sonoran JV



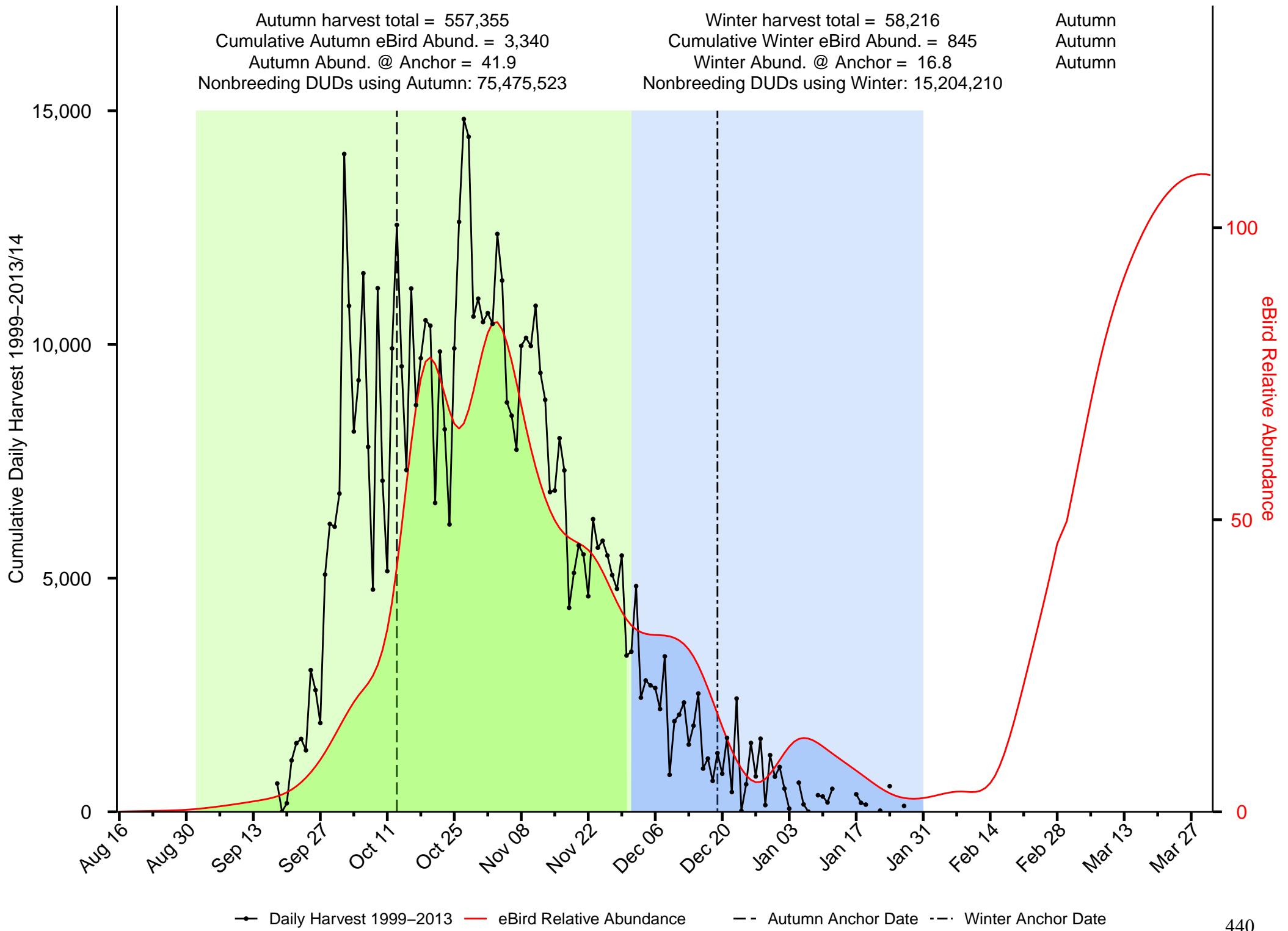
Summary of American Black Duck in the Upper MS River/Great Lakes JV



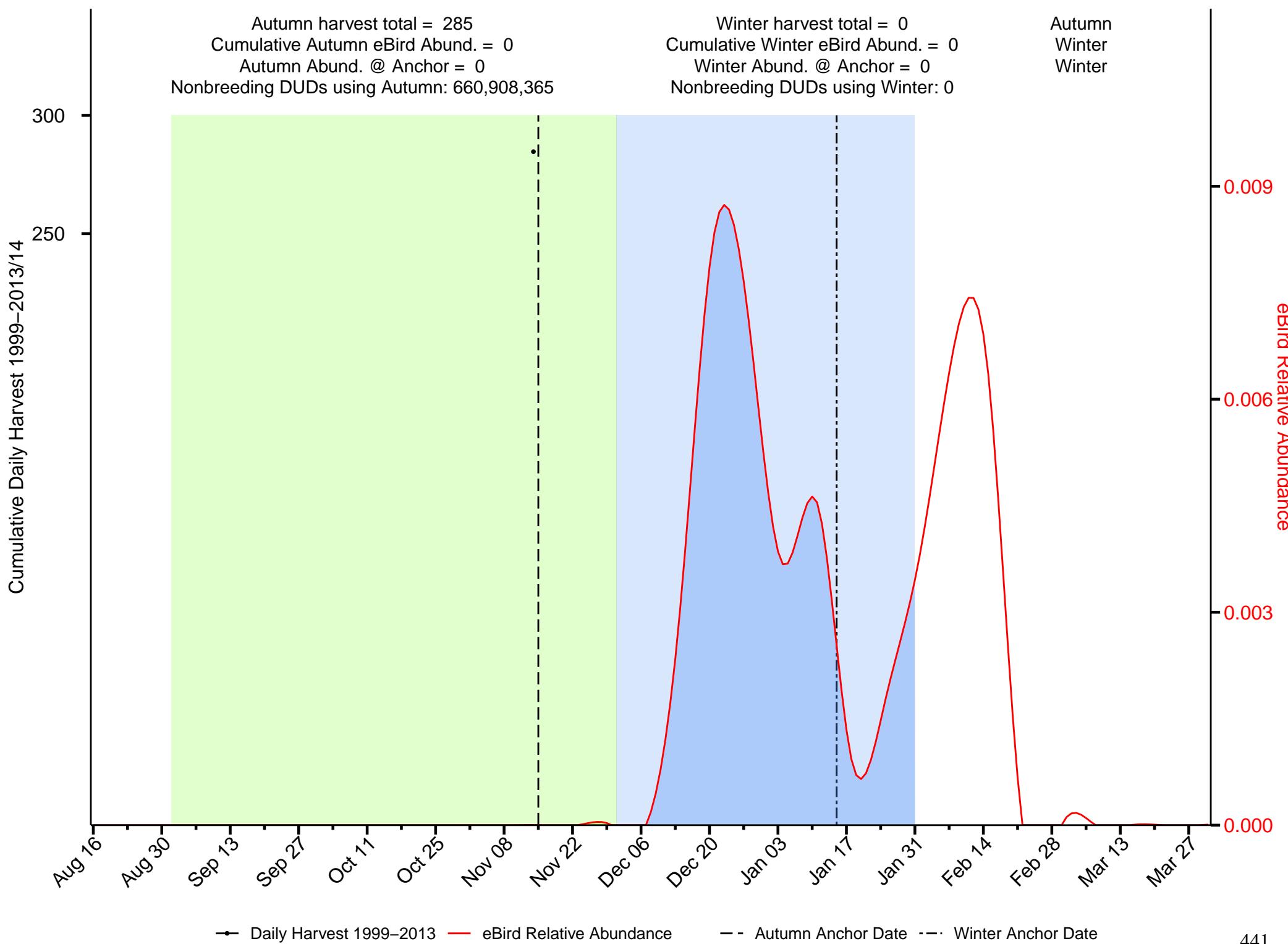
Summary of Green-winged Teal in the Upper MS River/Great Lakes JV



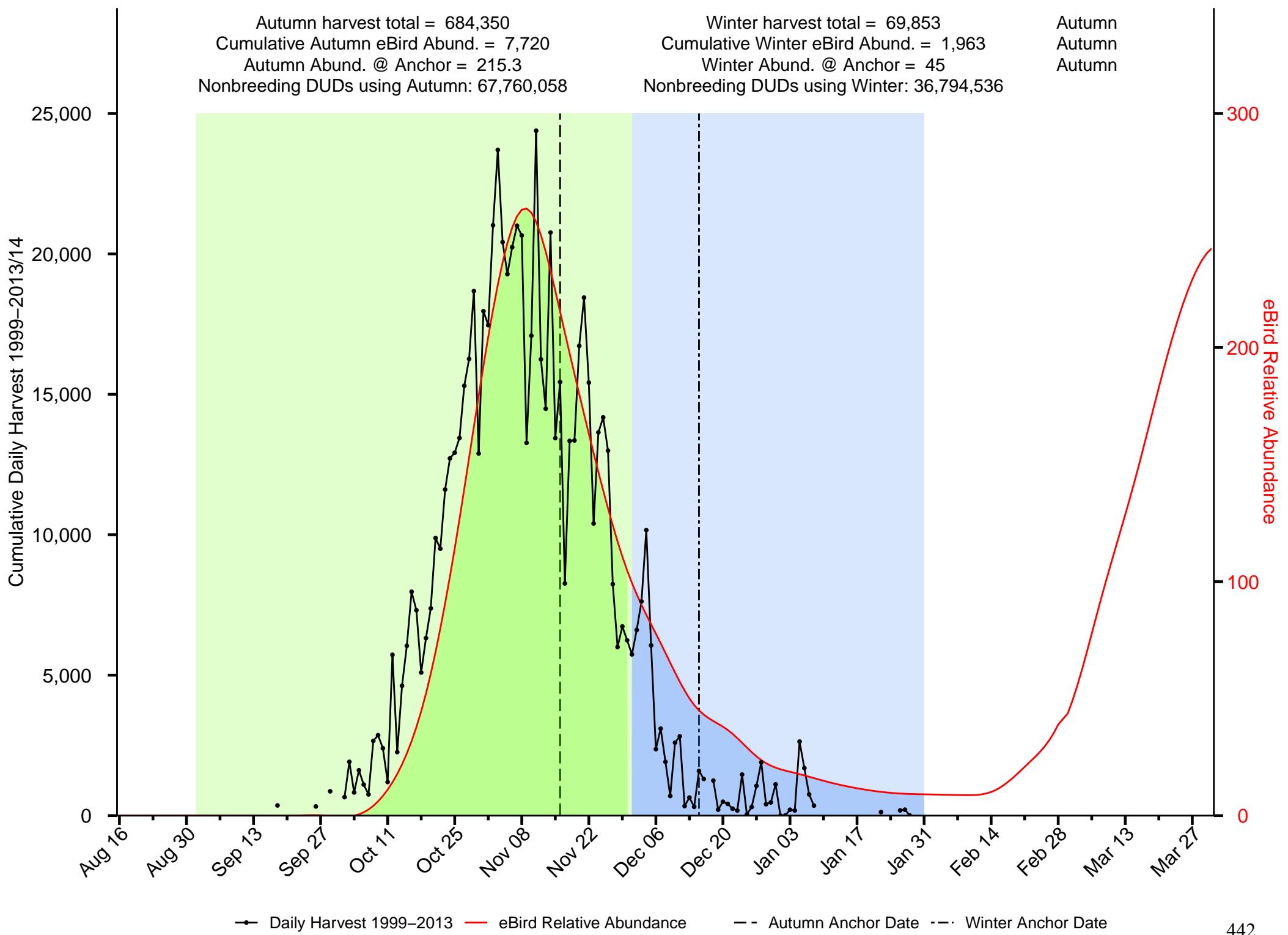
Summary of American Wigeon in the Upper MS River/Great Lakes JV



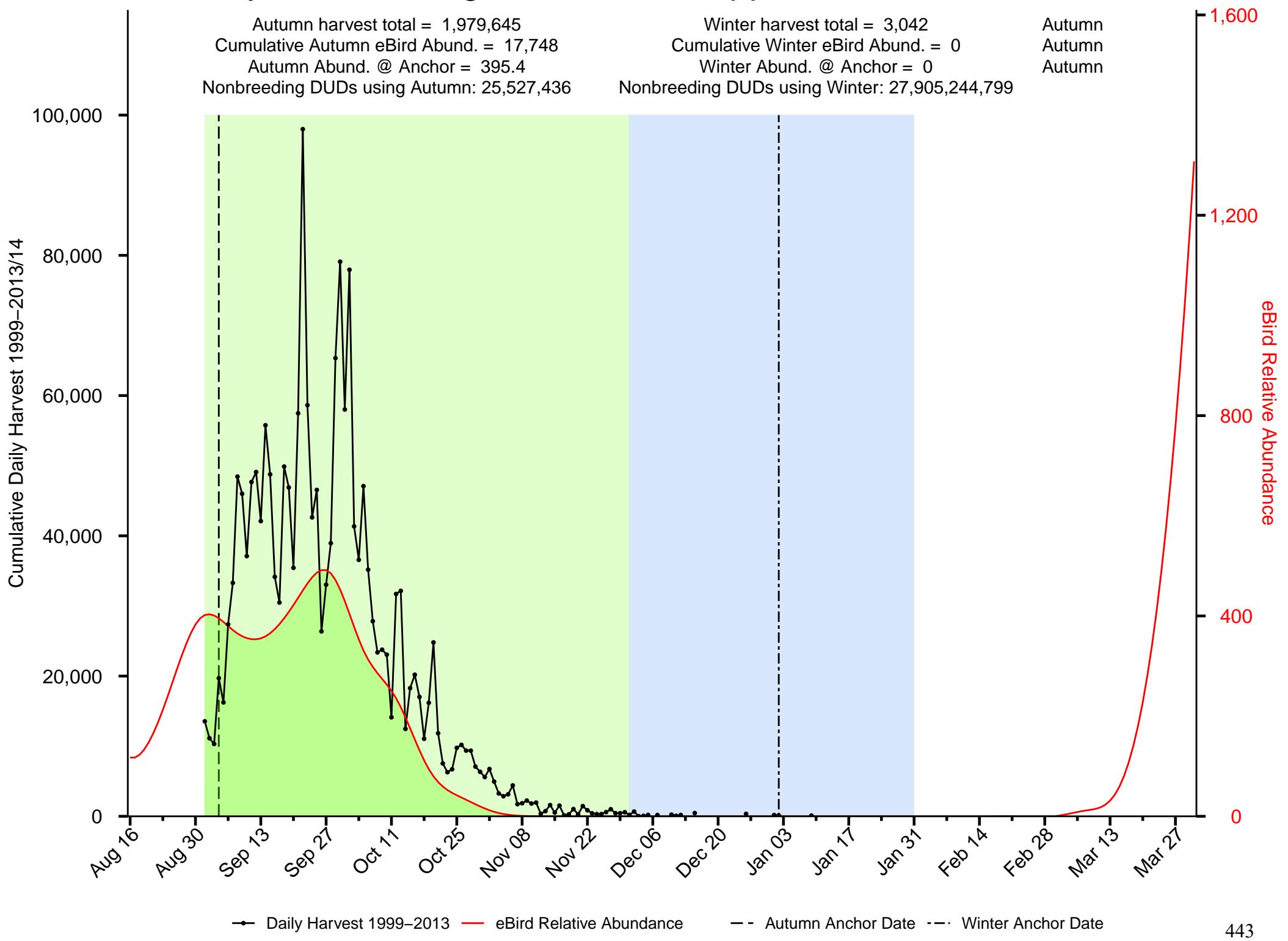
Summary of Barrow's Goldeneye in the Upper MS River/Great Lakes JV



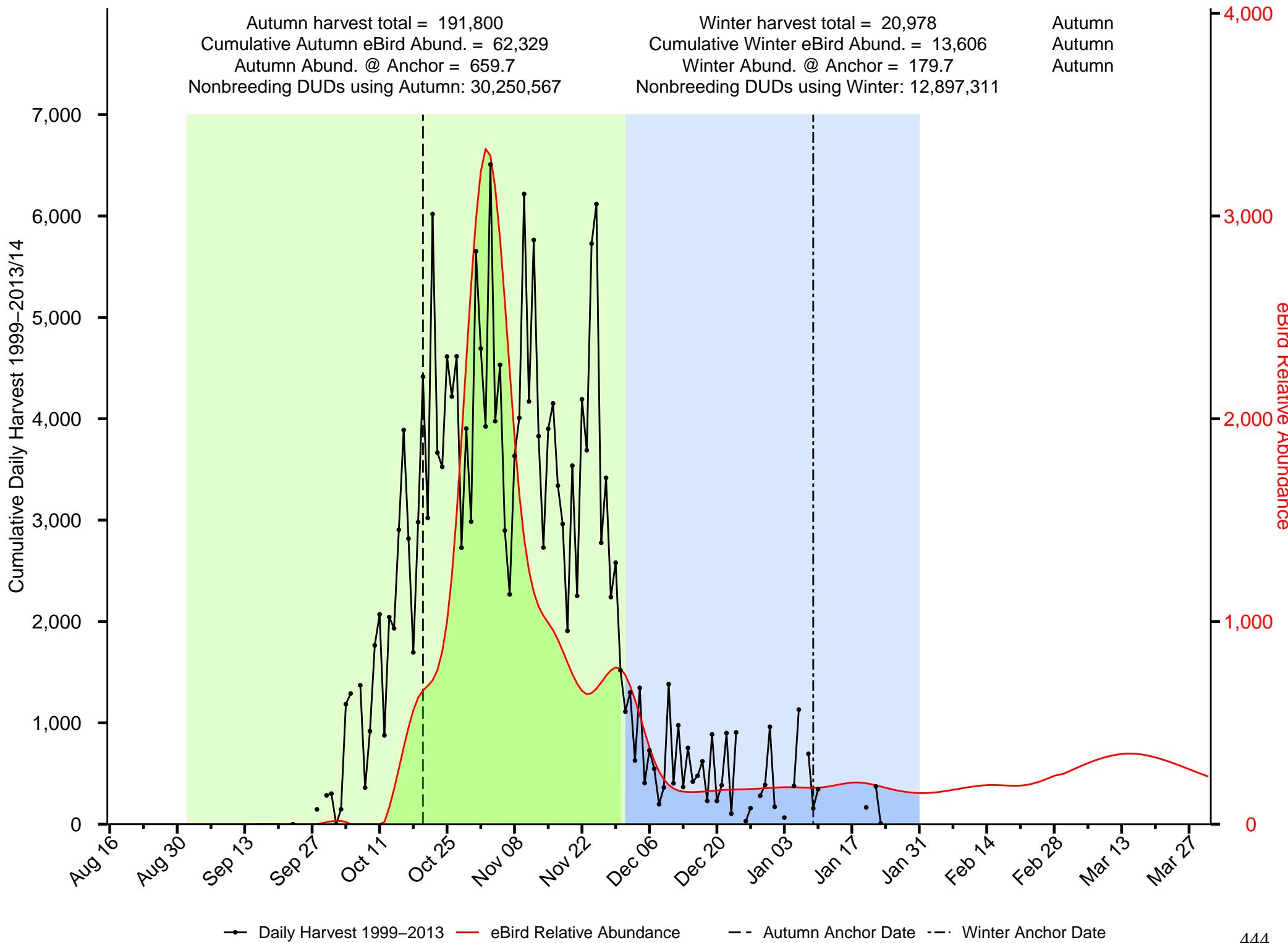
Summary of Bufflehead in the Upper MS River/Great Lakes JV



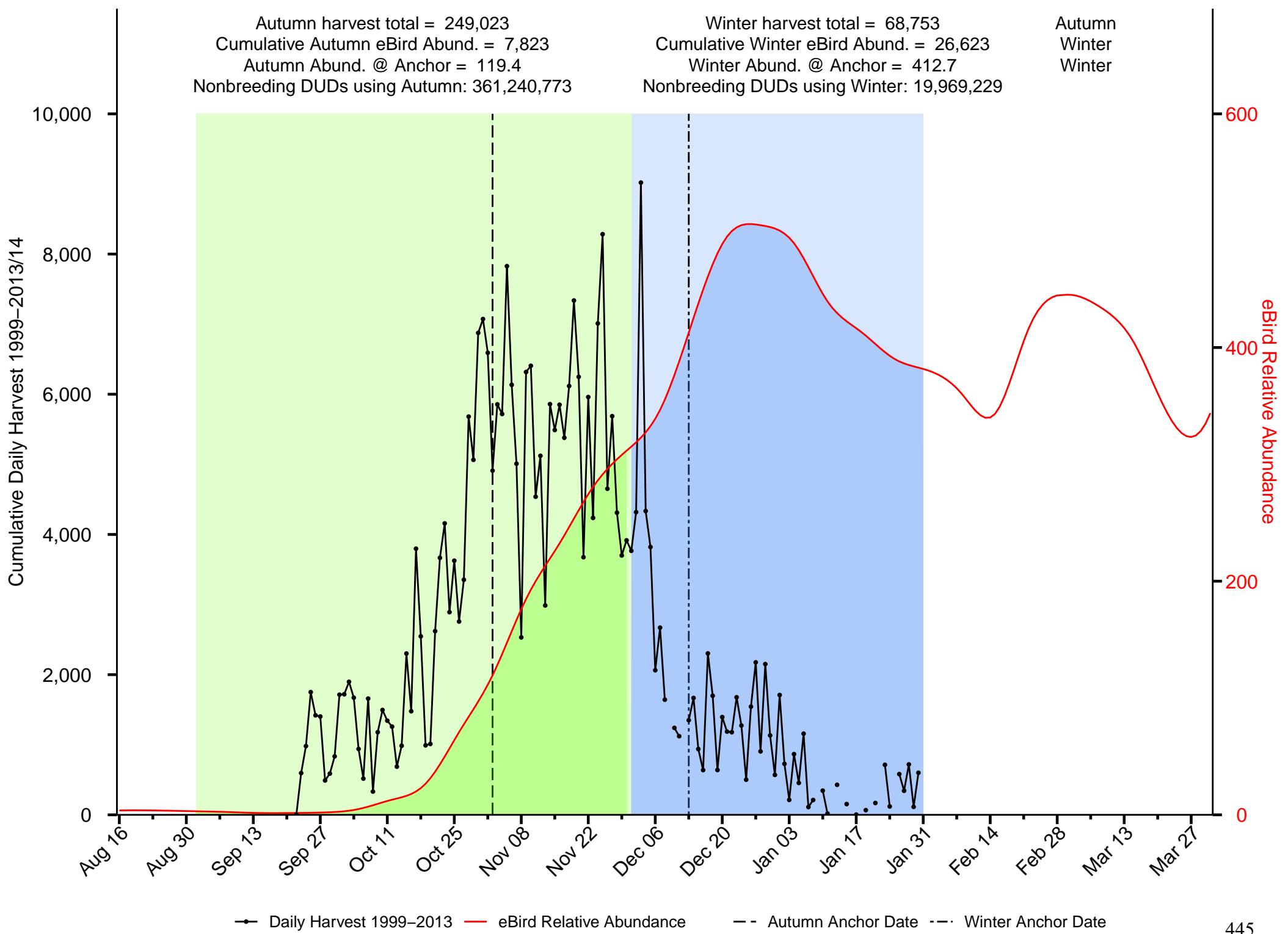
Summary of Blue-winged Teal in the Upper MS River/Great Lakes JV



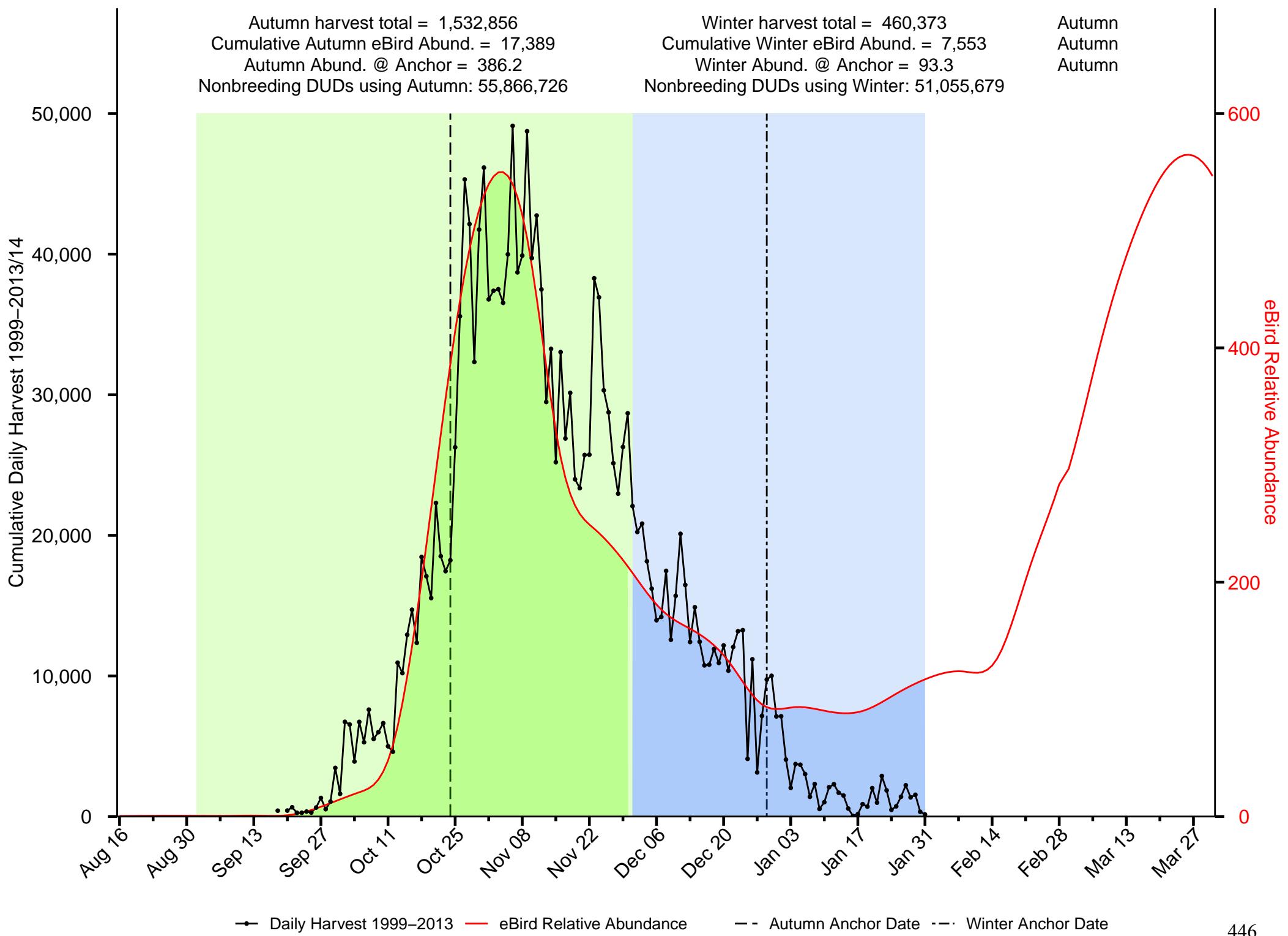
Summary of Canvasback in the Upper MS River/Great Lakes JV



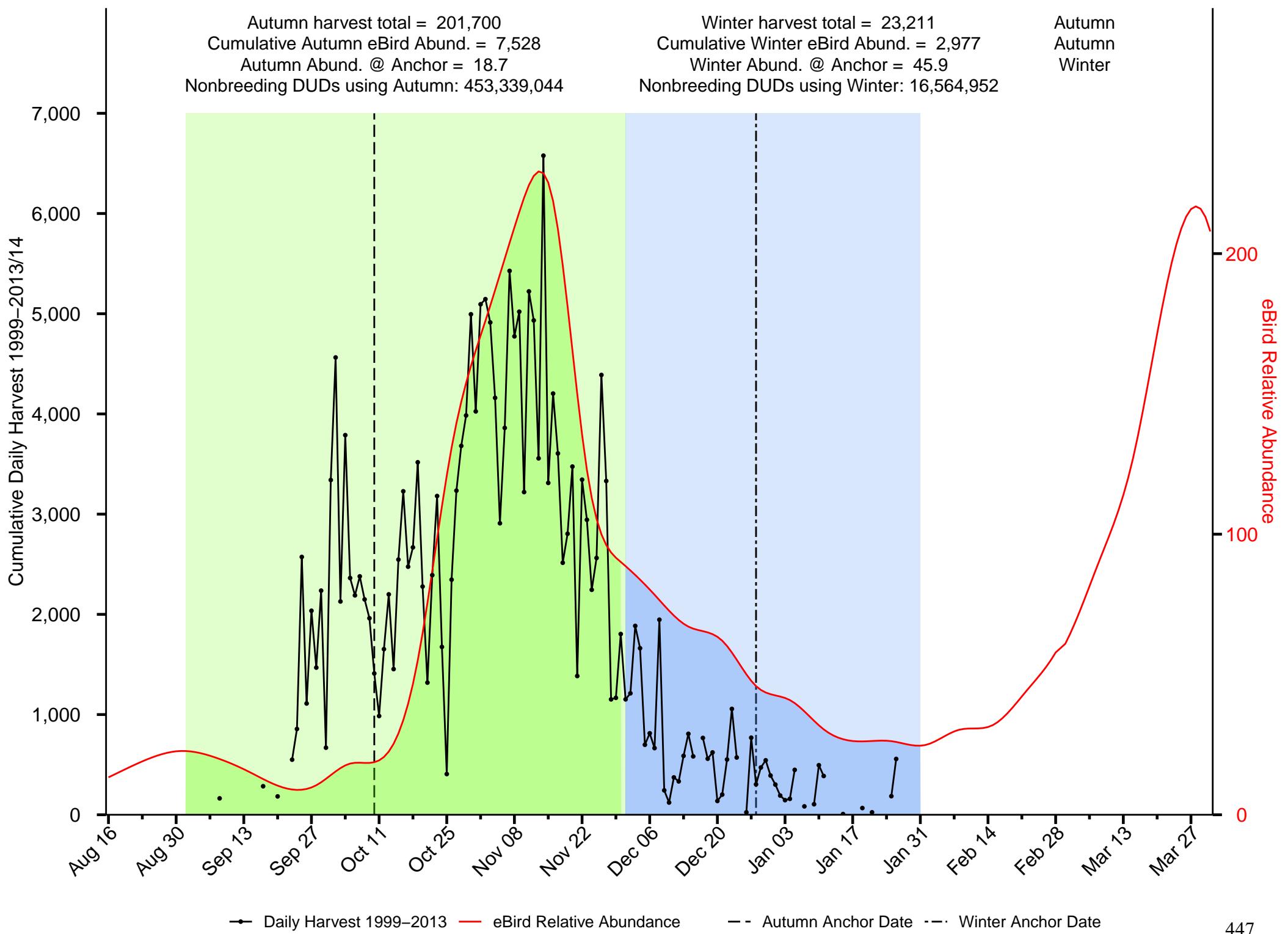
Summary of Common Goldeneye in the Upper MS River/Great Lakes JV



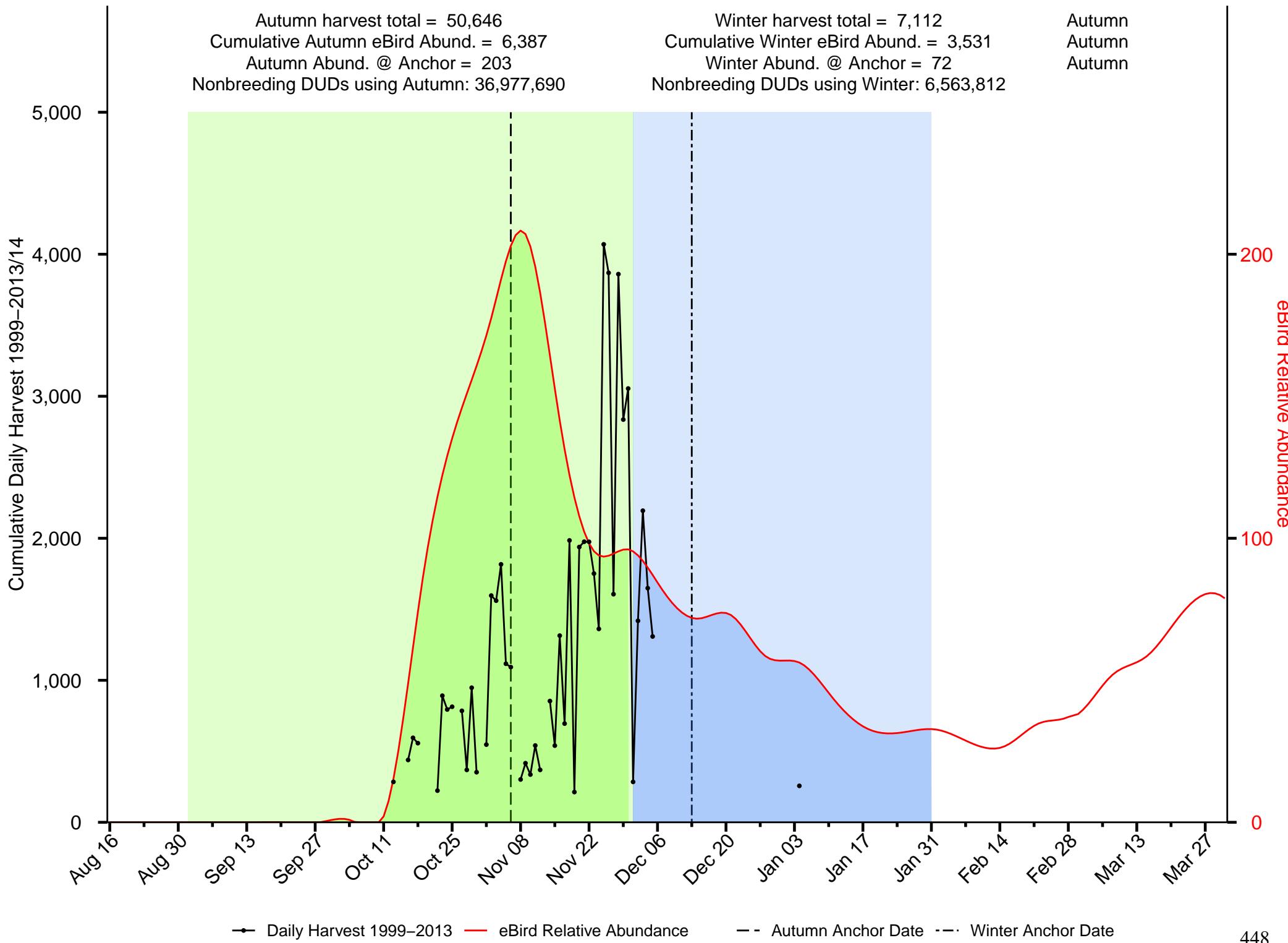
Summary of Gadwall in the Upper MS River/Great Lakes JV



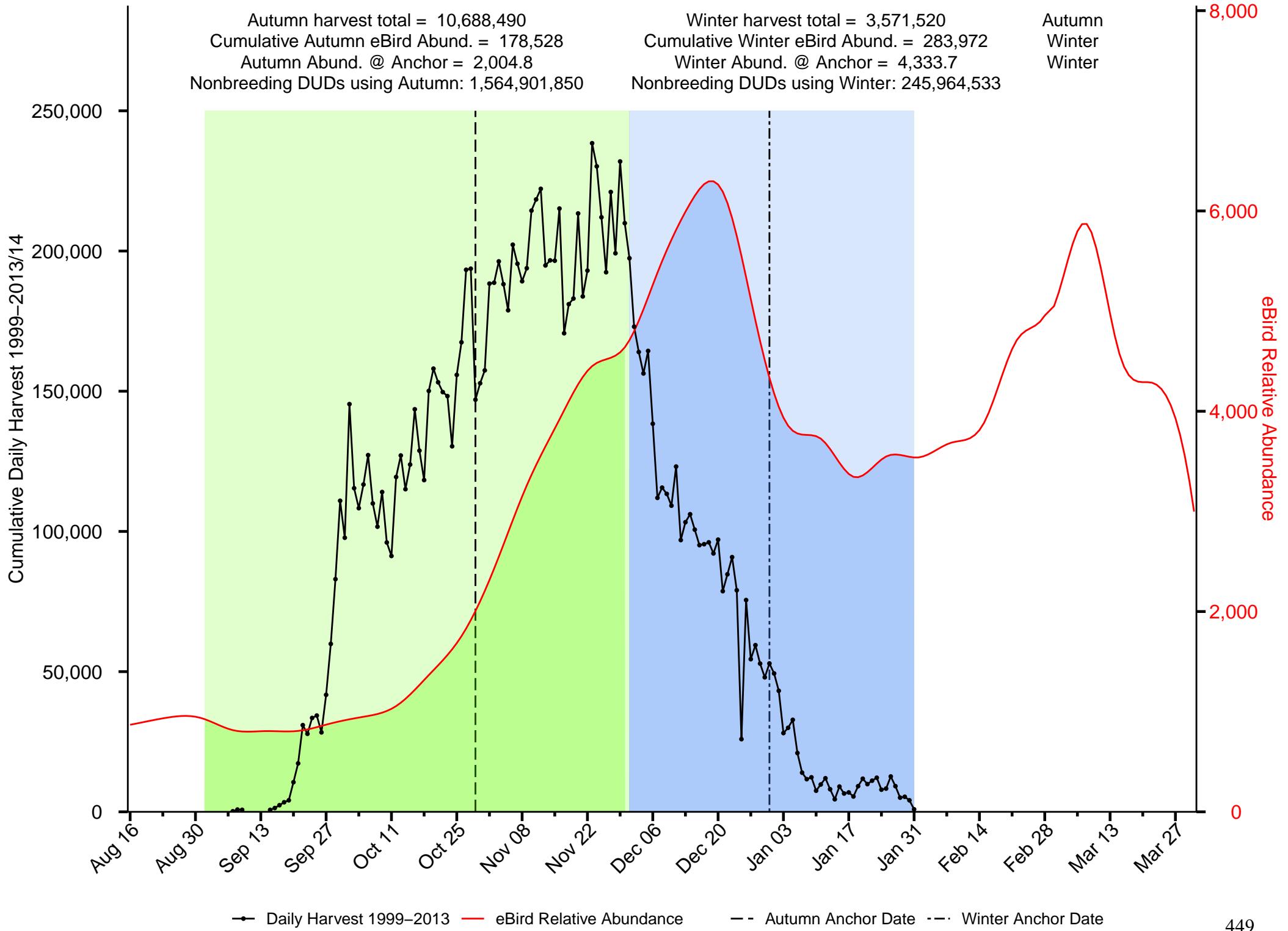
Summary of Hooded Merganser in the Upper MS River/Great Lakes JV



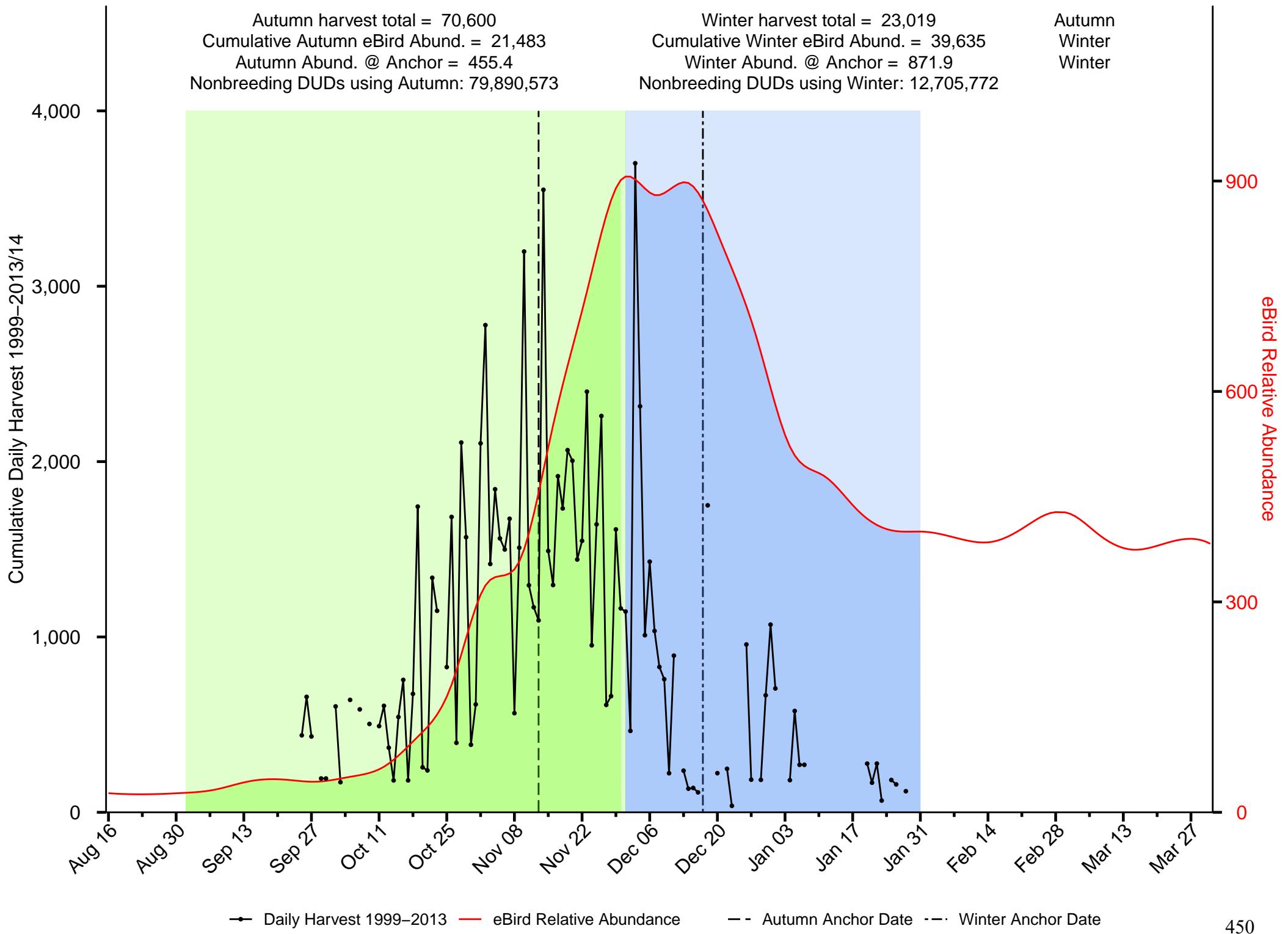
Summary of Long-tailed Duck in the Upper MS River/Great Lakes JV



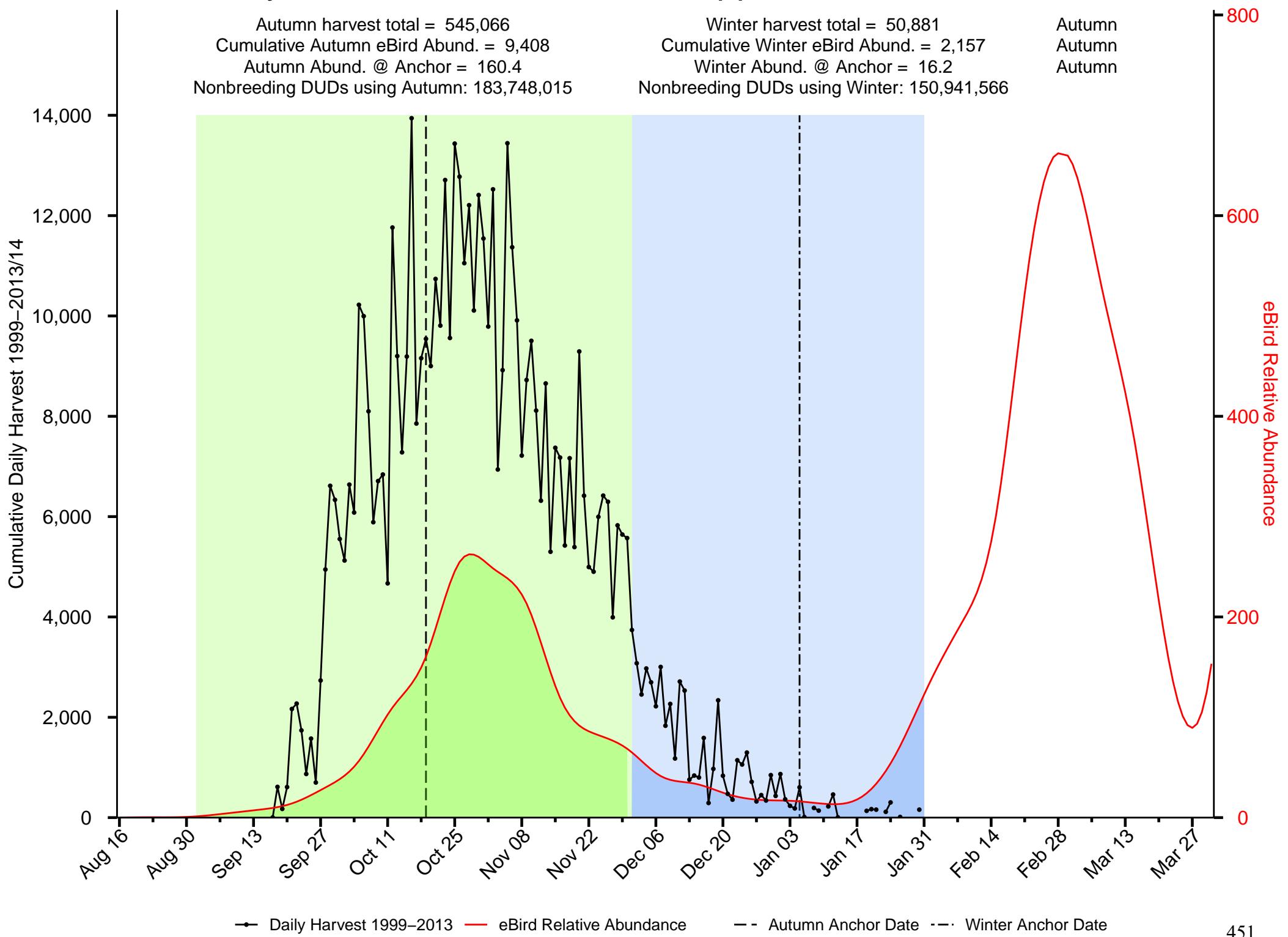
Summary of Mallard in the Upper MS River/Great Lakes JV



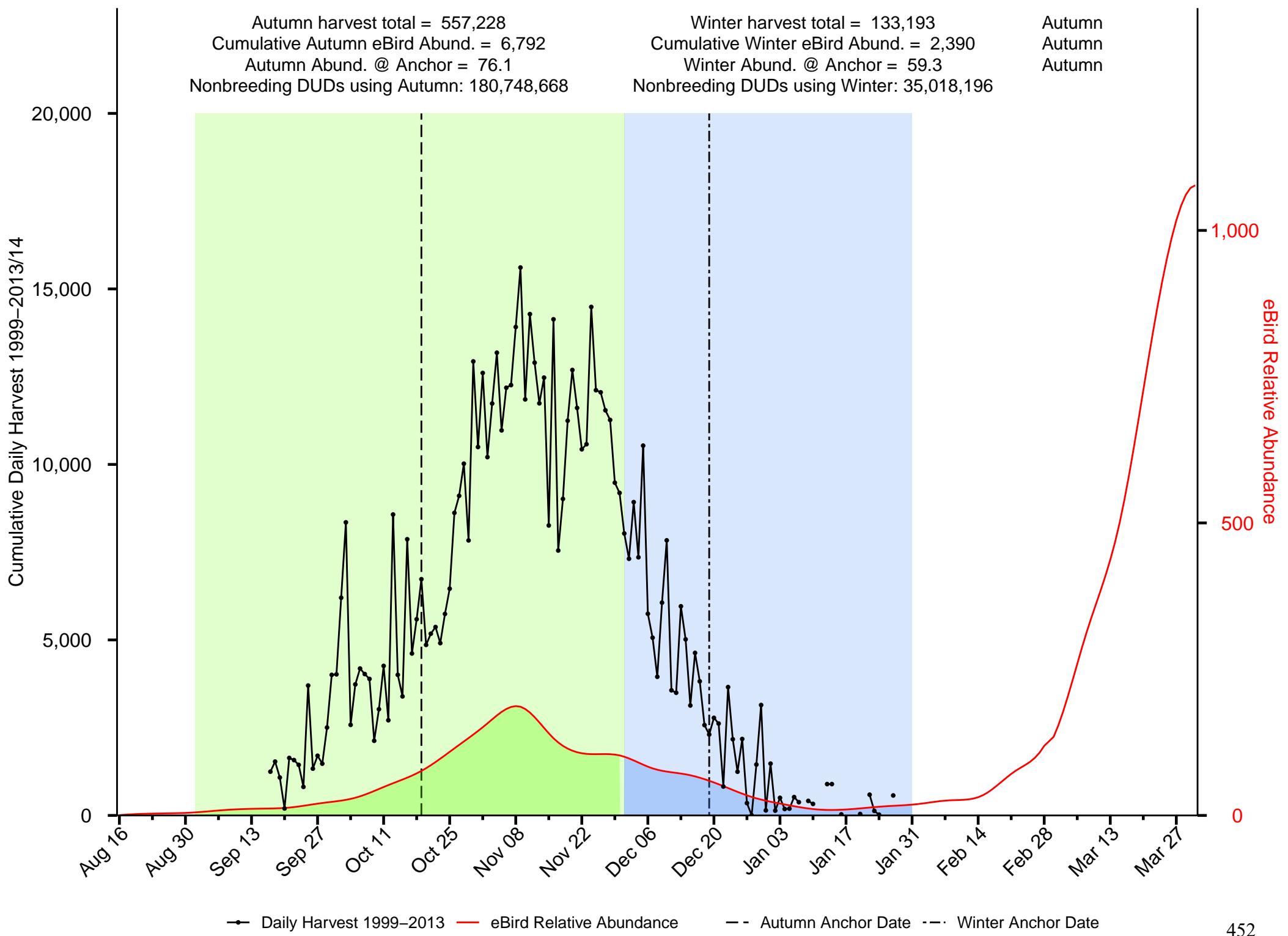
Summary of Merganser in the Upper MS River/Great Lakes JV



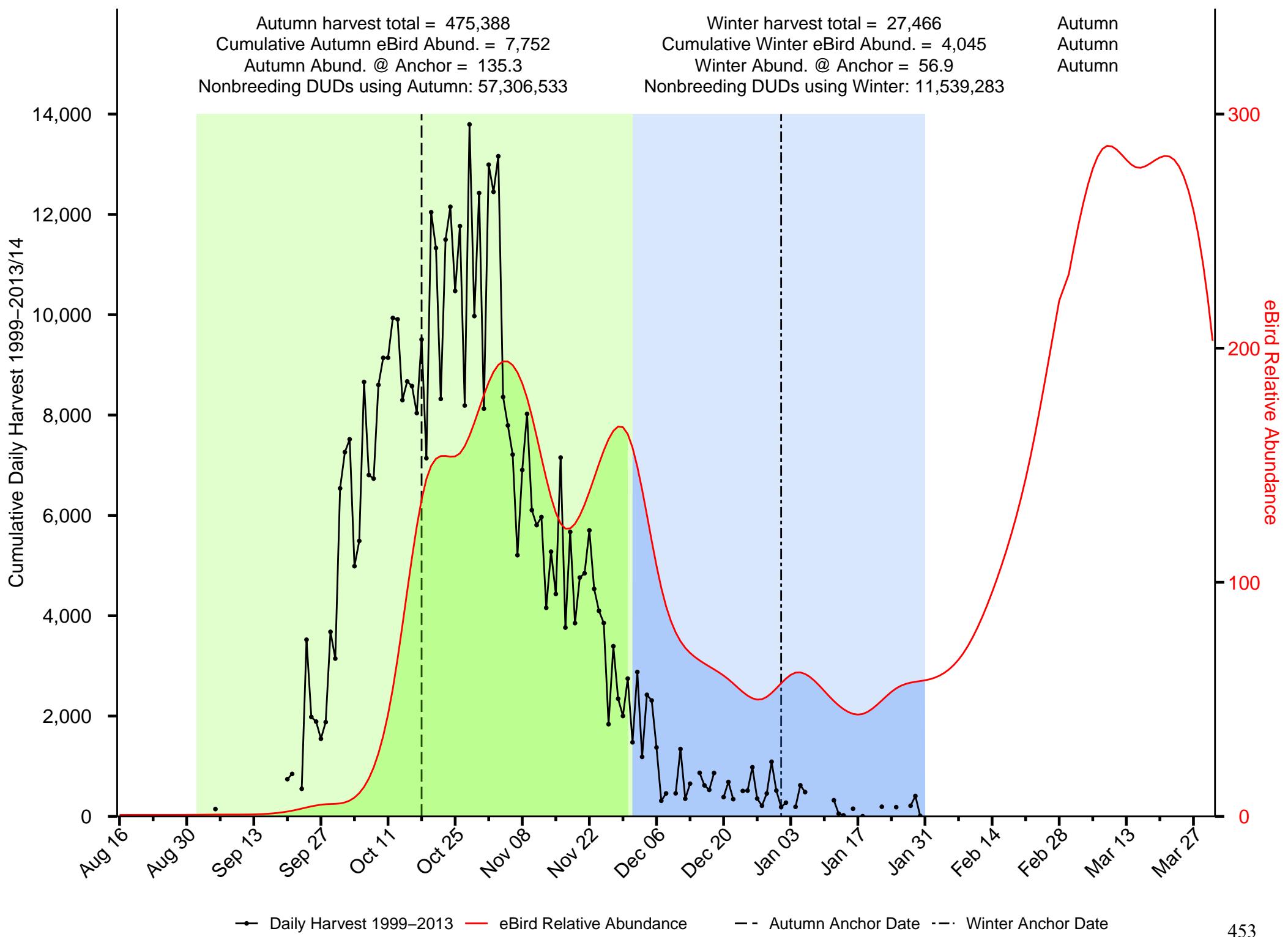
Summary of Northern Pintail in the Upper MS River/Great Lakes JV



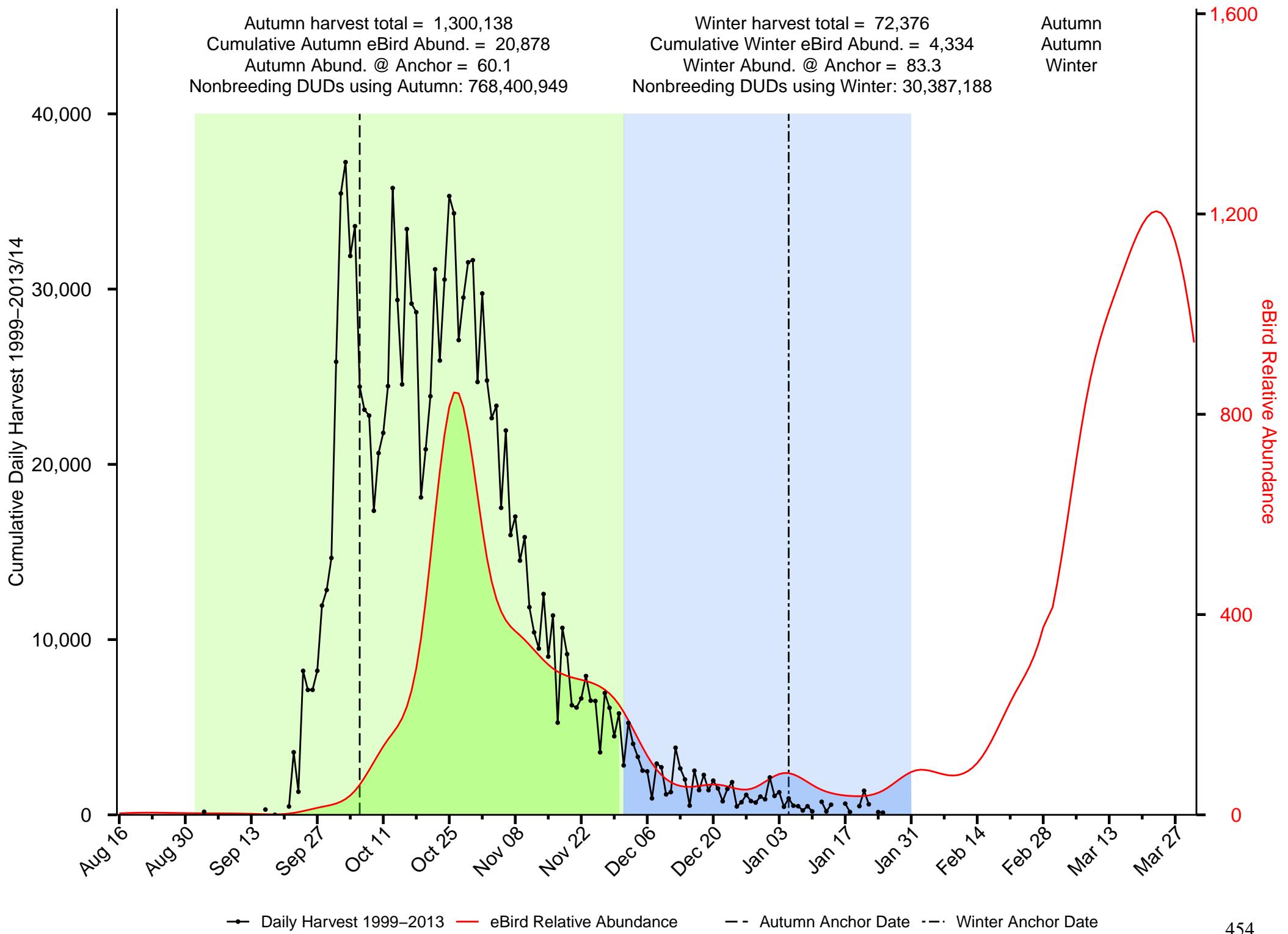
Summary of Northern Shoveler in the Upper MS River/Great Lakes JV



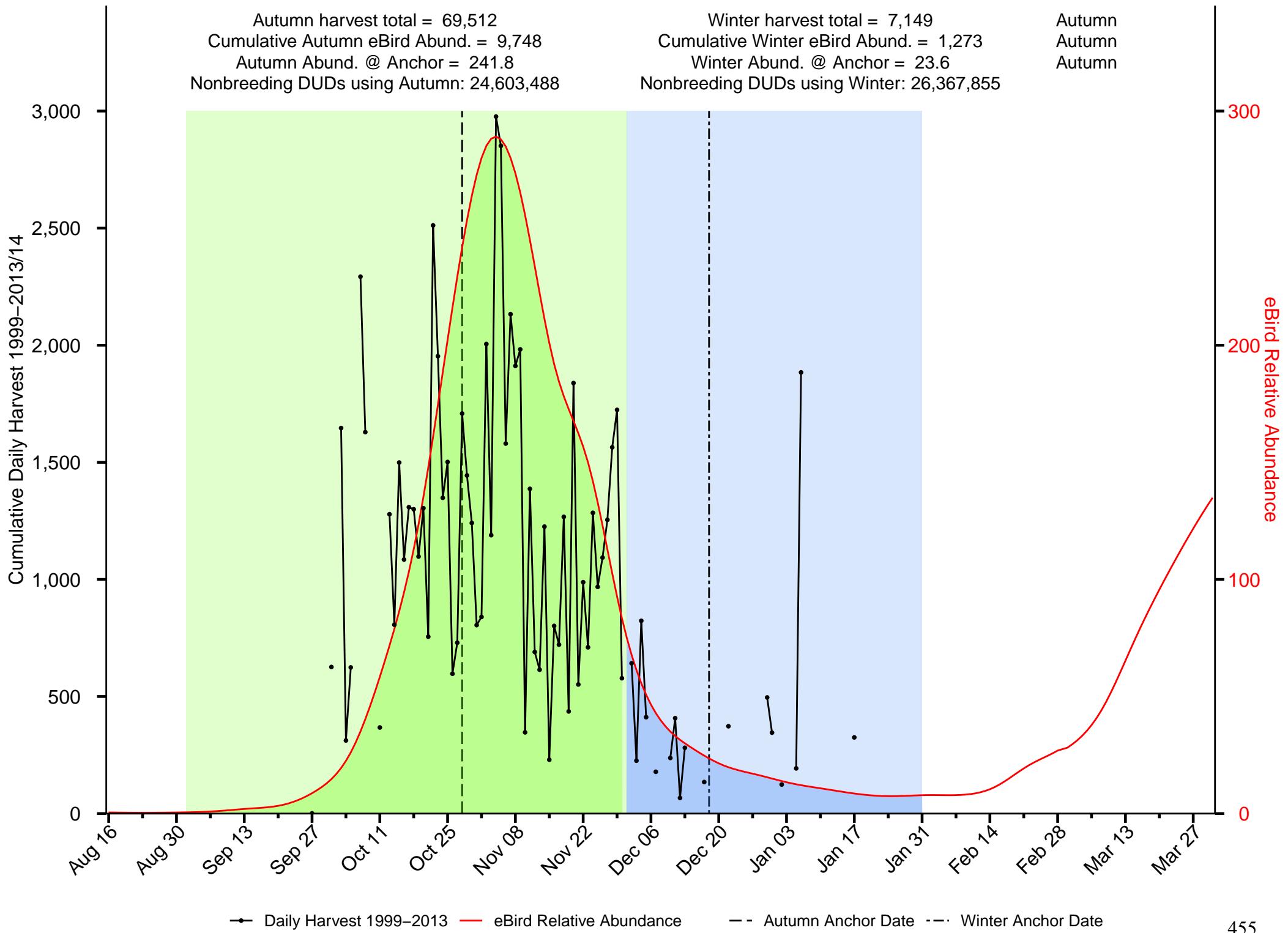
Summary of Redhead in the Upper MS River/Great Lakes JV



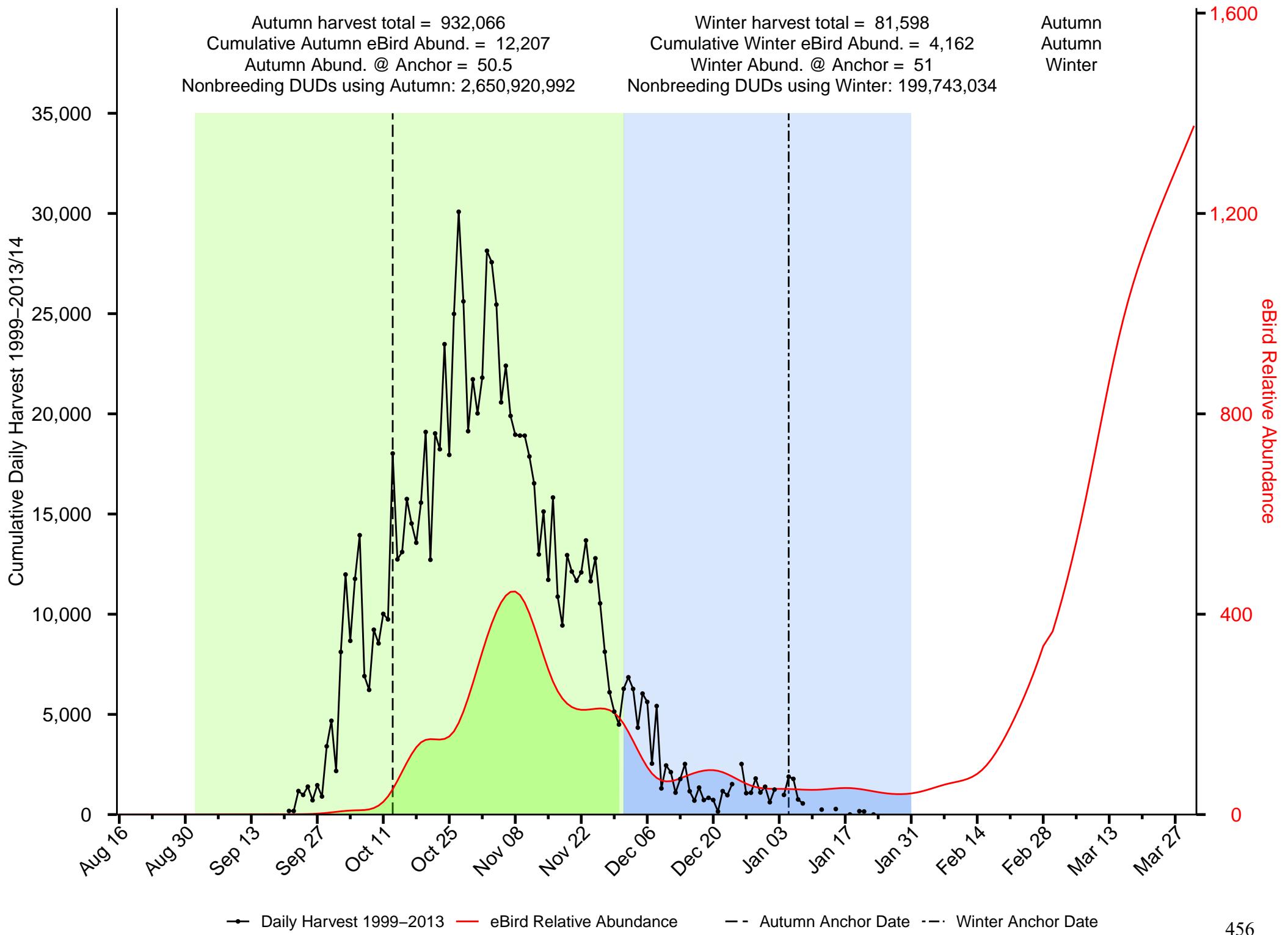
Summary of Ring-necked Duck in the Upper MS River/Great Lakes JV



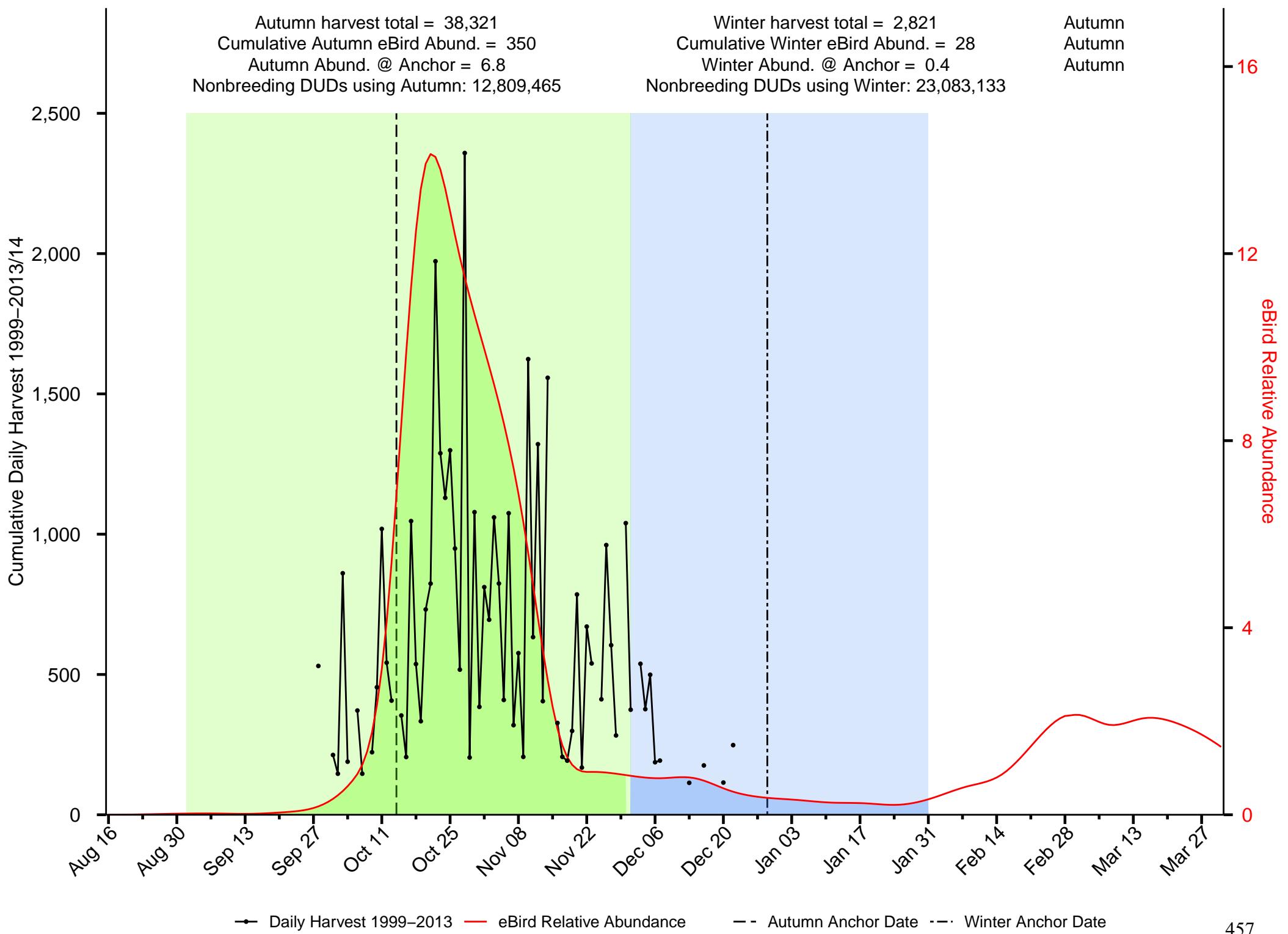
Summary of Ruddy Duck in the Upper MS River/Great Lakes JV



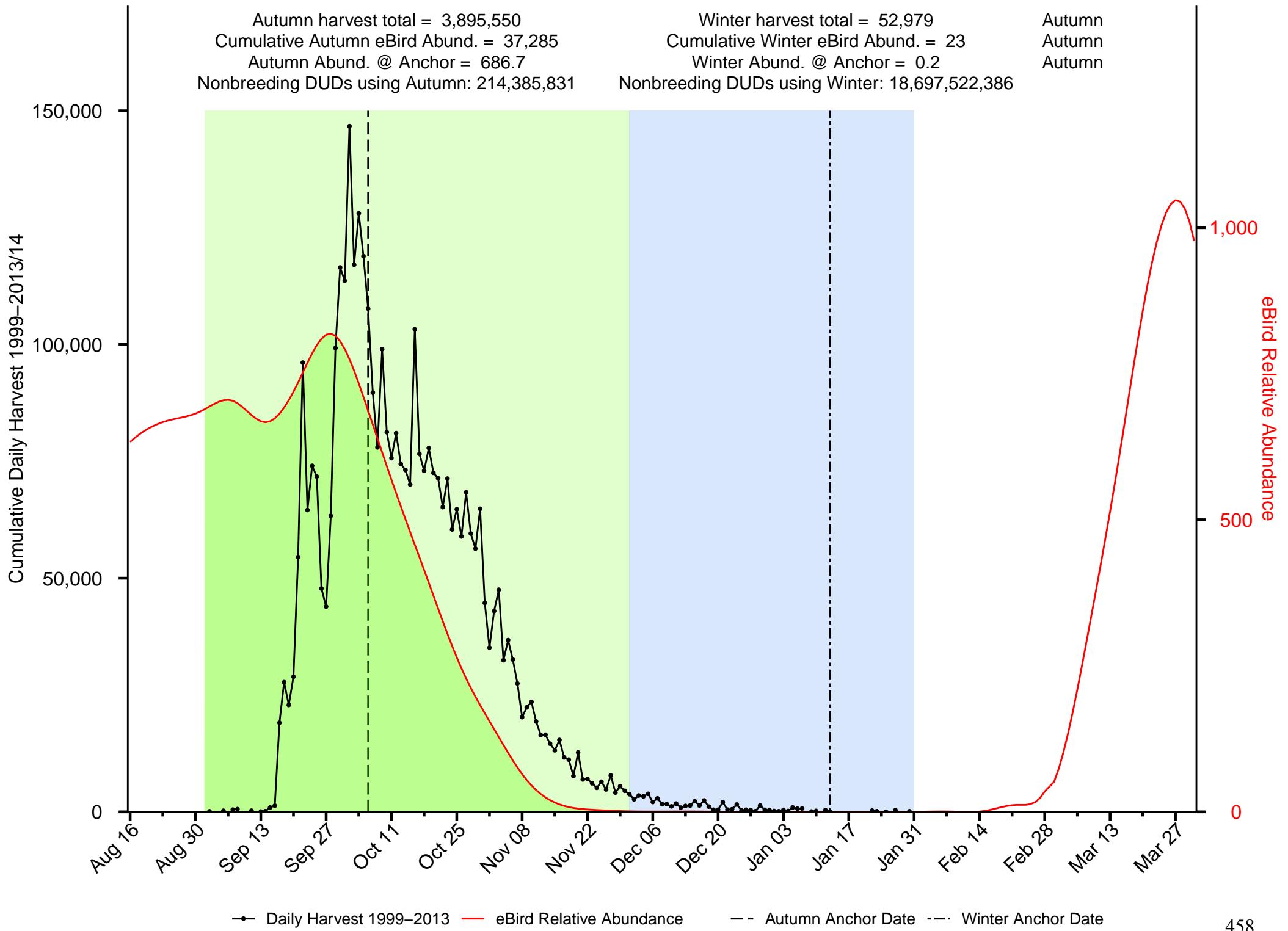
Summary of Scaup in the Upper MS River/Great Lakes JV



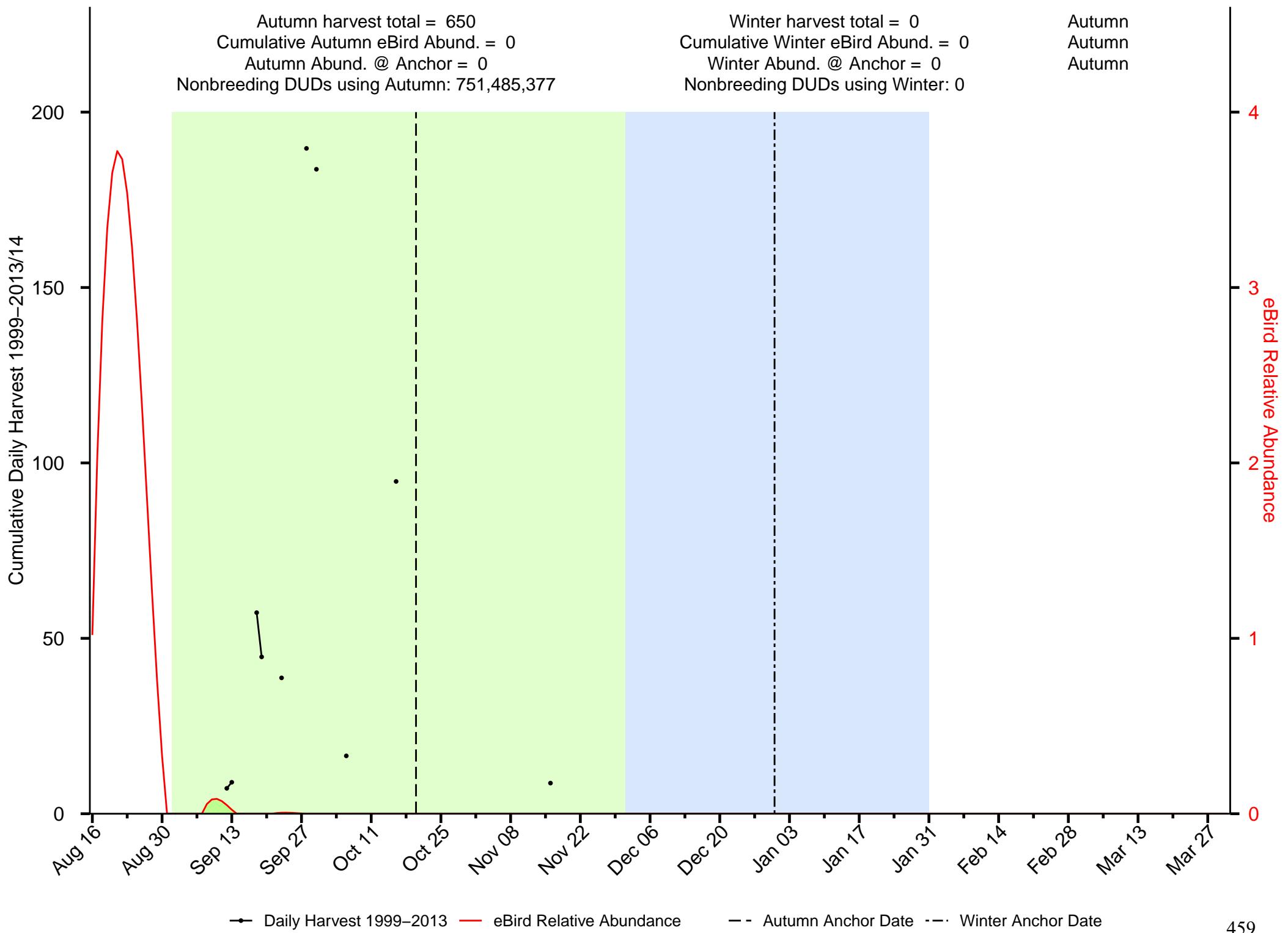
Summary of Scoter in the Upper MS River/Great Lakes JV



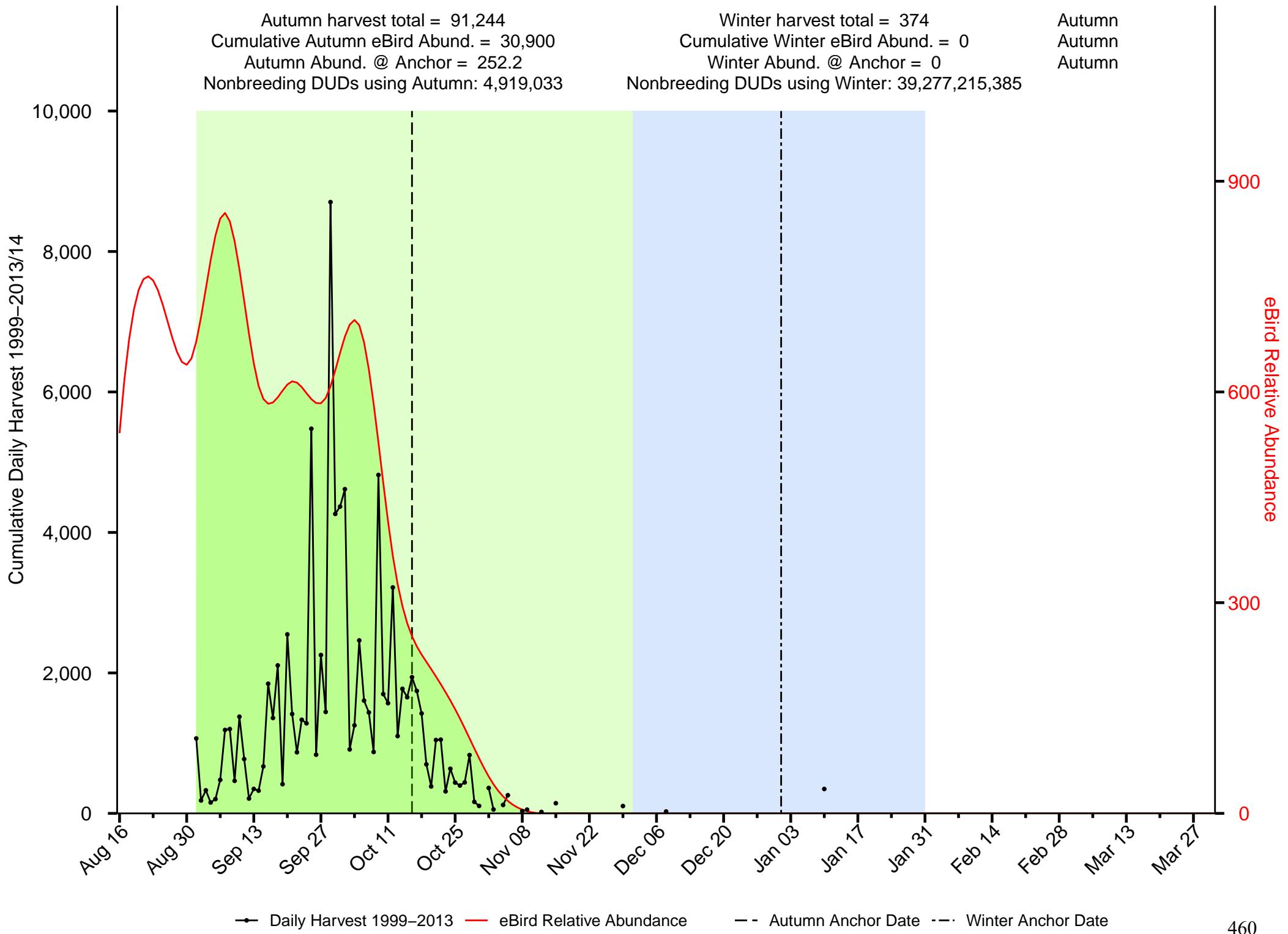
Summary of Wood Duck in the Upper MS River/Great Lakes JV



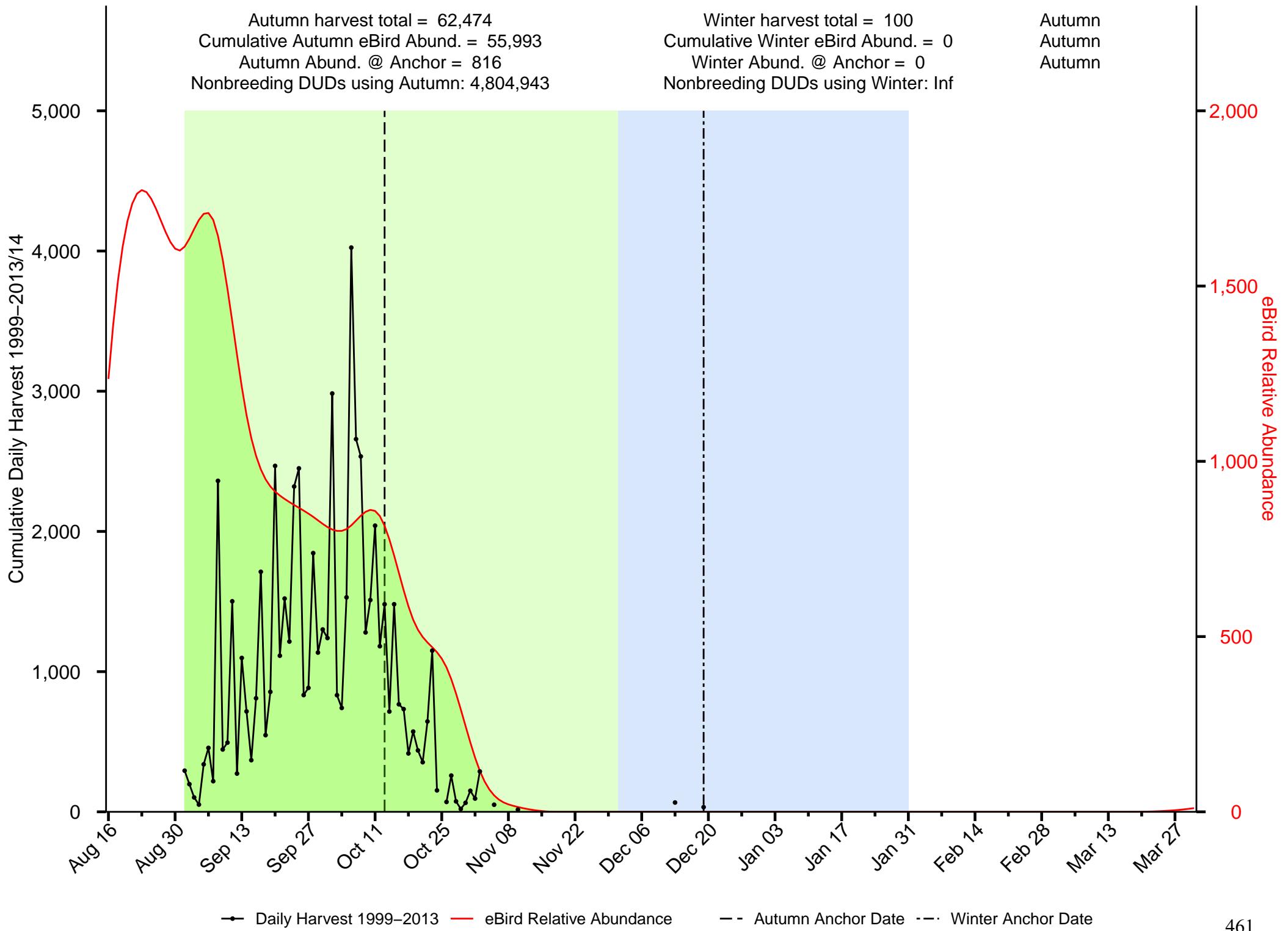
Summary of American Black Duck in the Western Boreal Forest JV



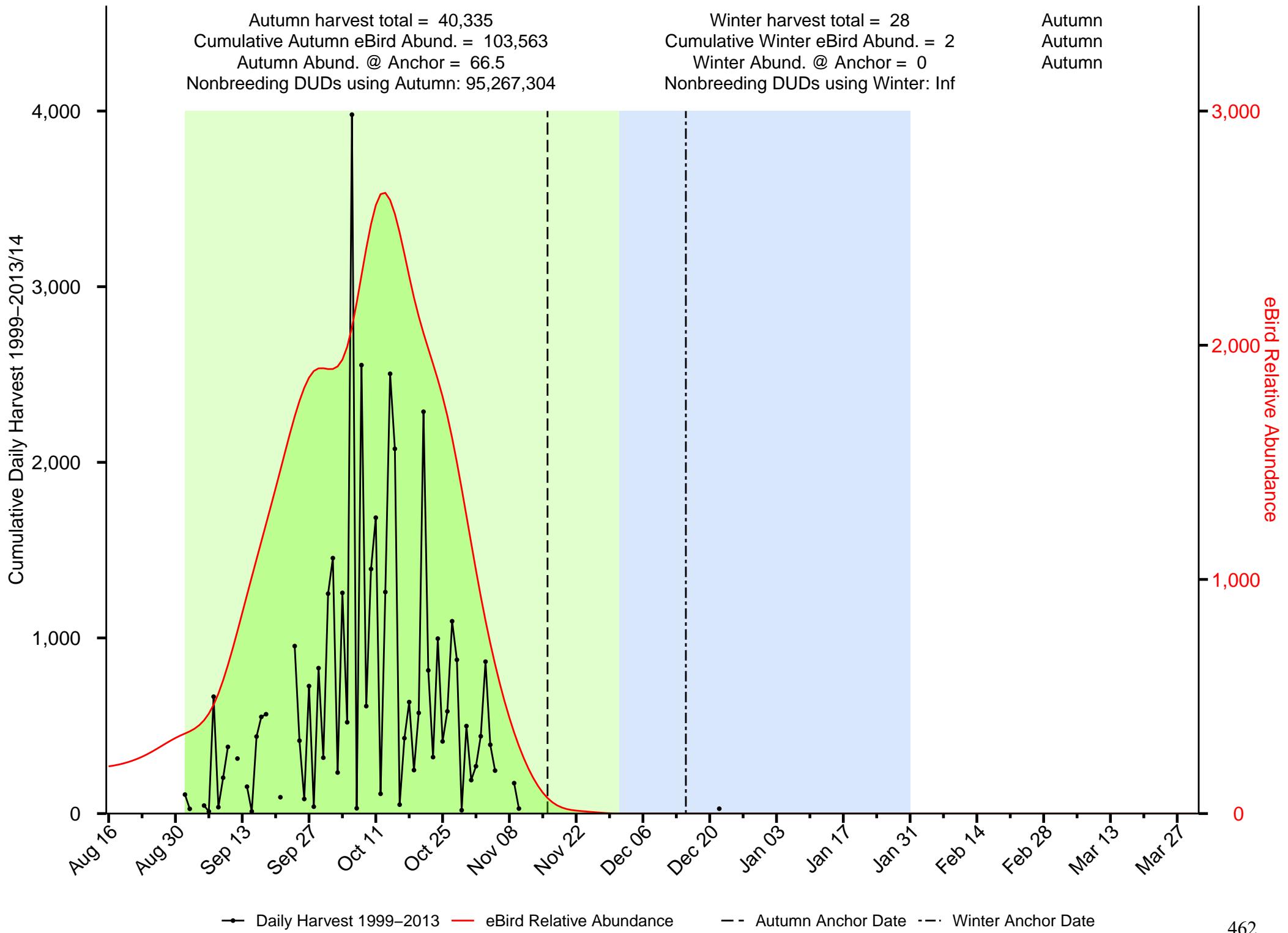
Summary of Green-winged Teal in the Western Boreal Forest JV



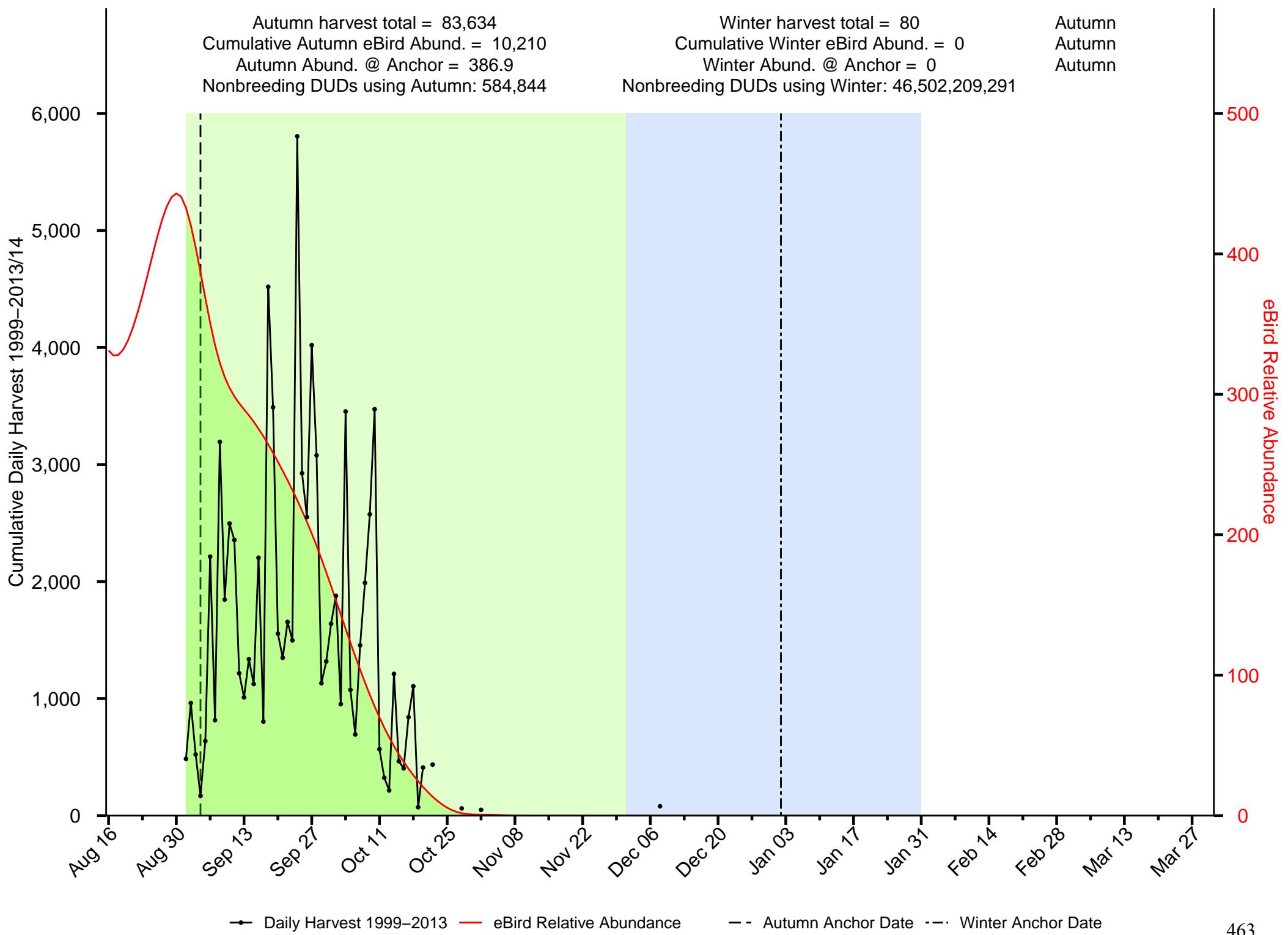
Summary of American Wigeon in the Western Boreal Forest JV



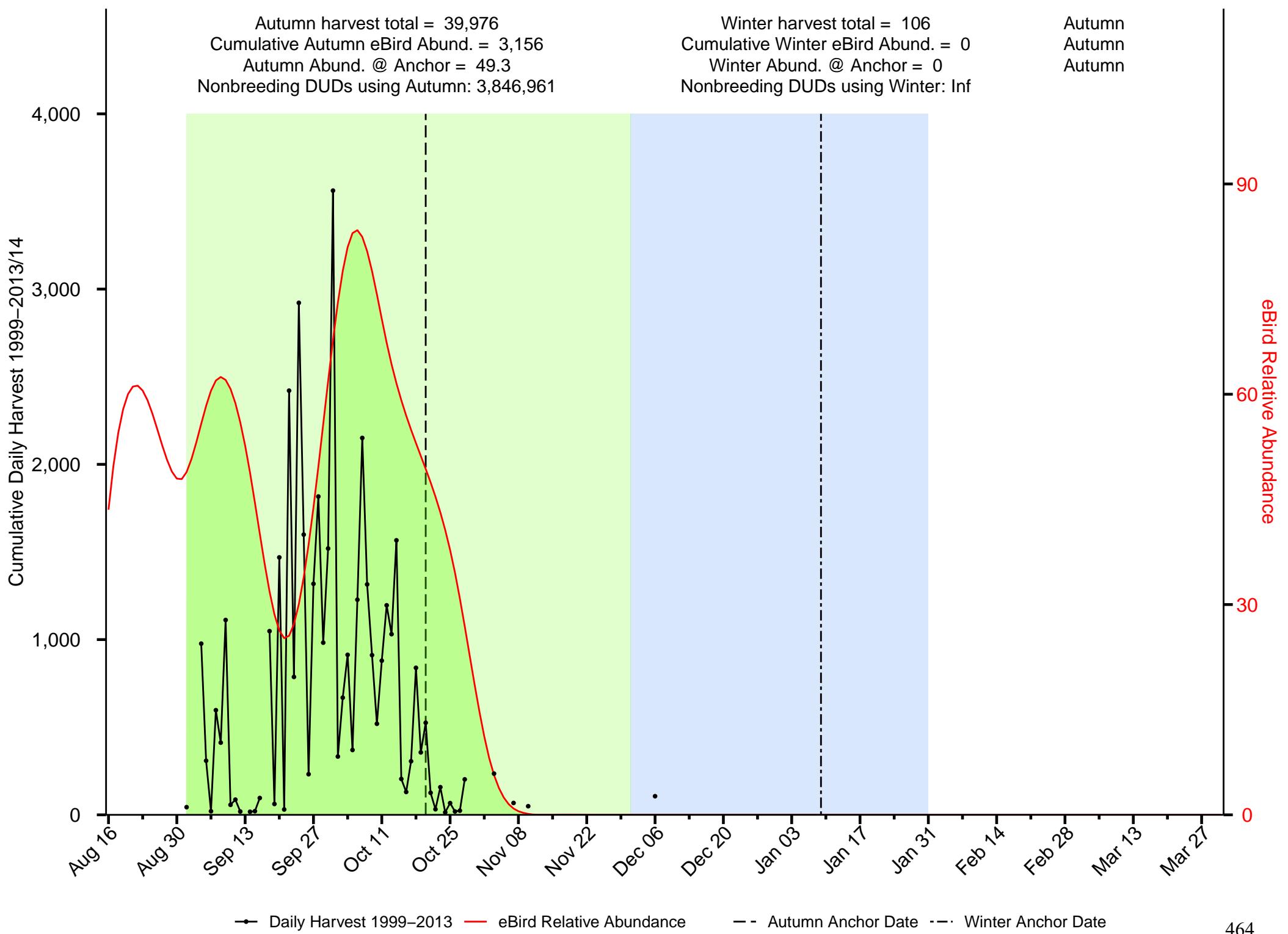
Summary of Bufflehead in the Western Boreal Forest JV



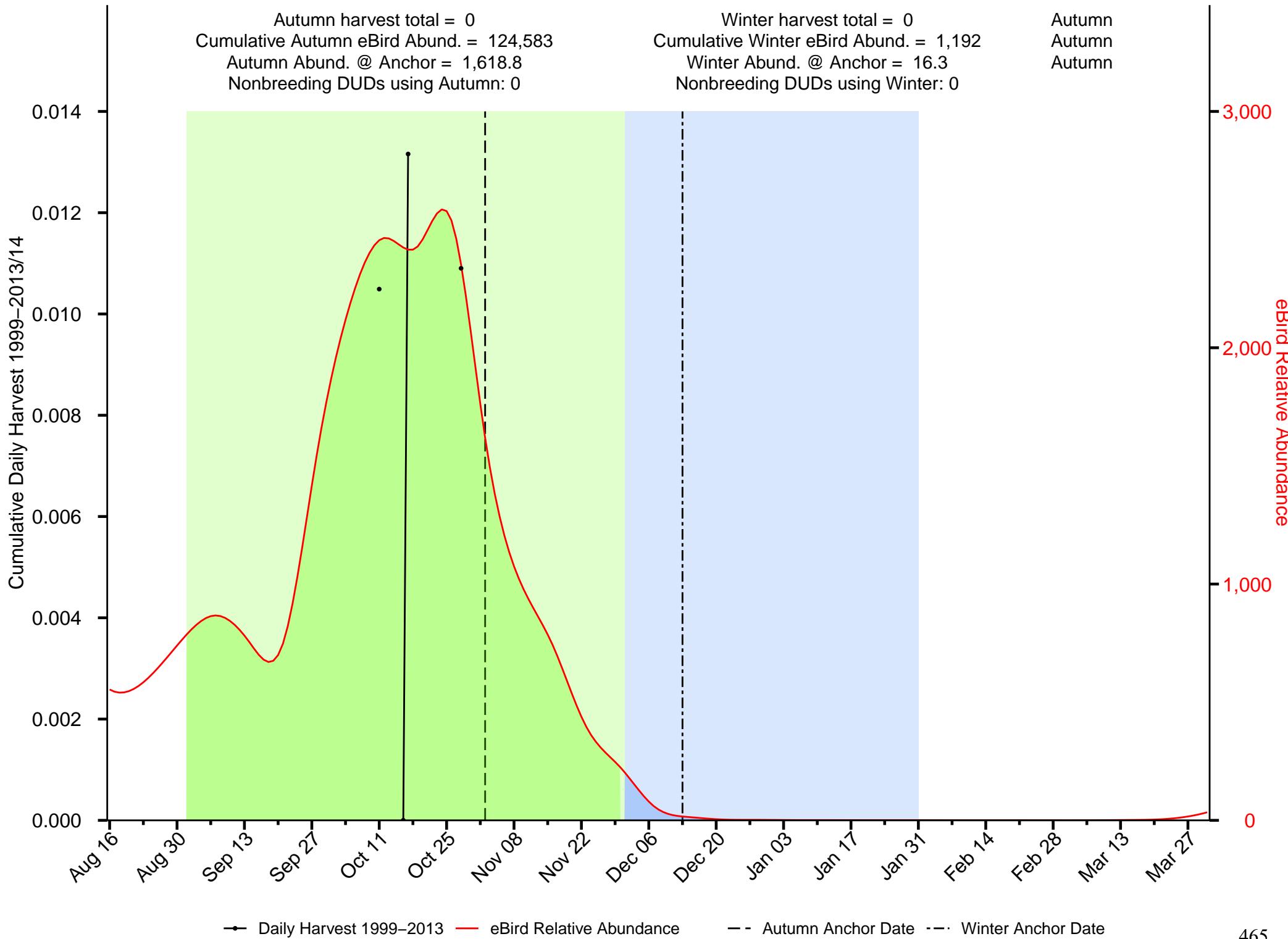
Summary of Blue-winged Teal in the Western Boreal Forest JV



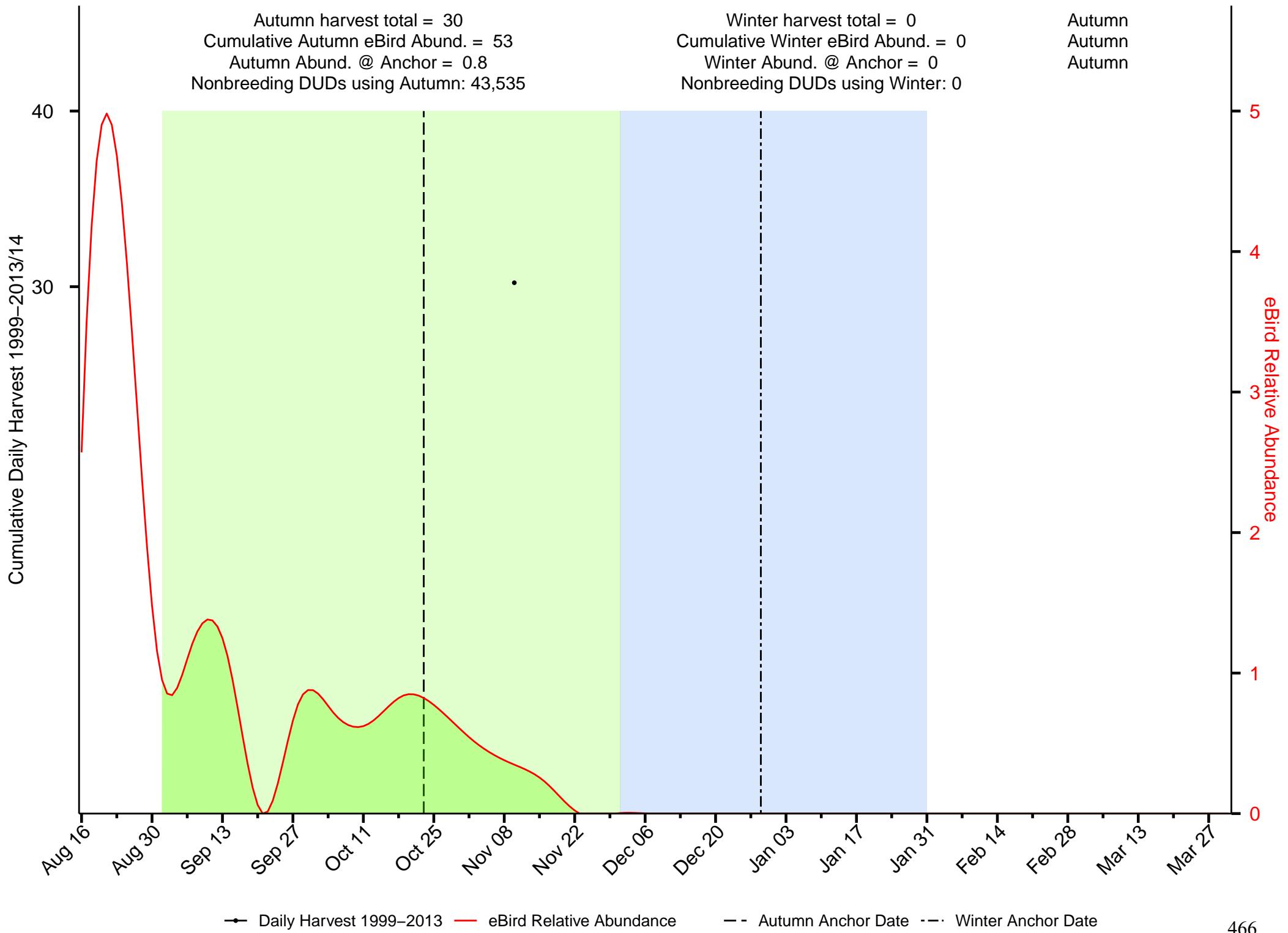
Summary of Canvasback in the Western Boreal Forest JV



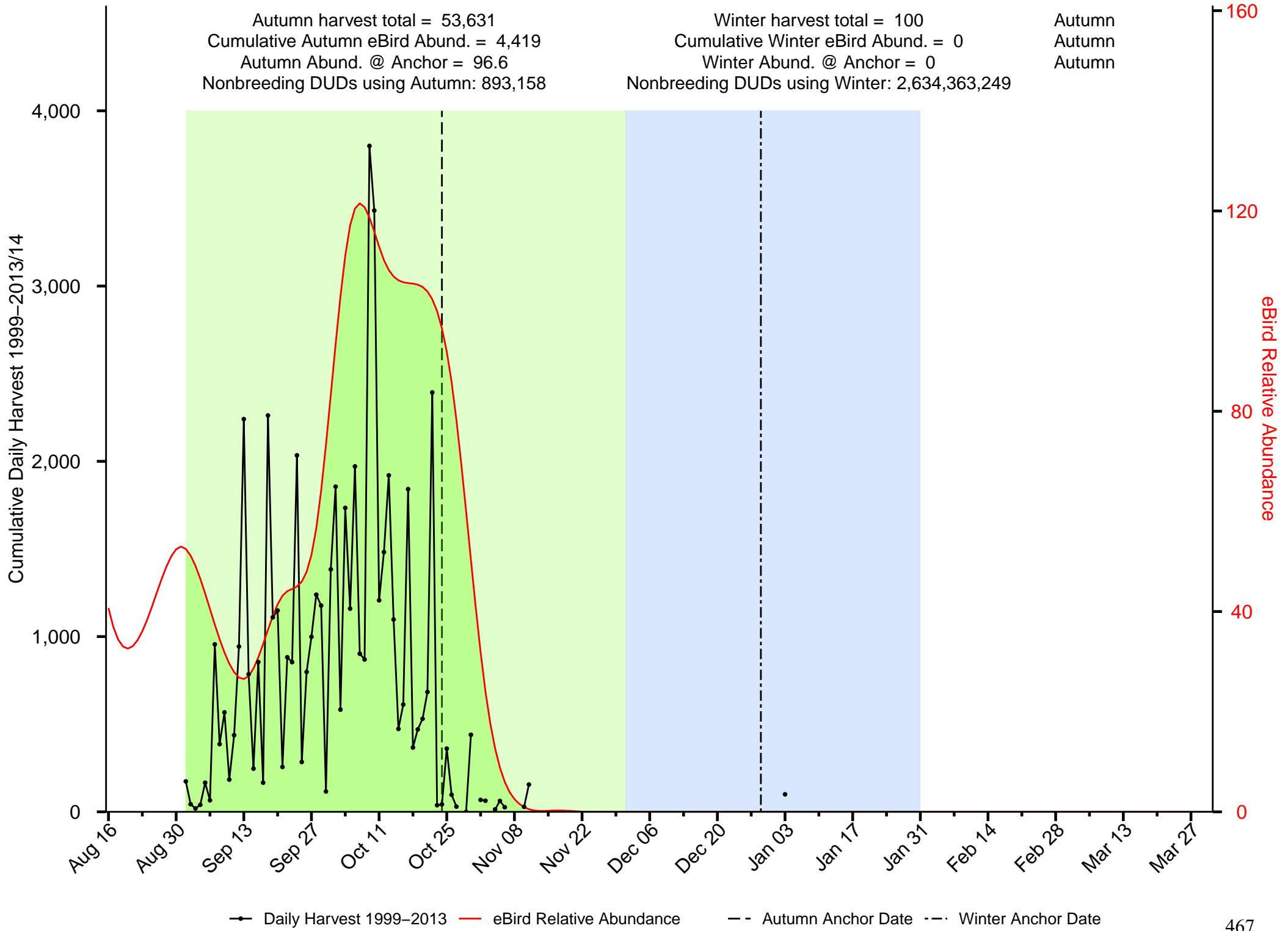
Summary of Common Goldeneye in the Western Boreal Forest JV



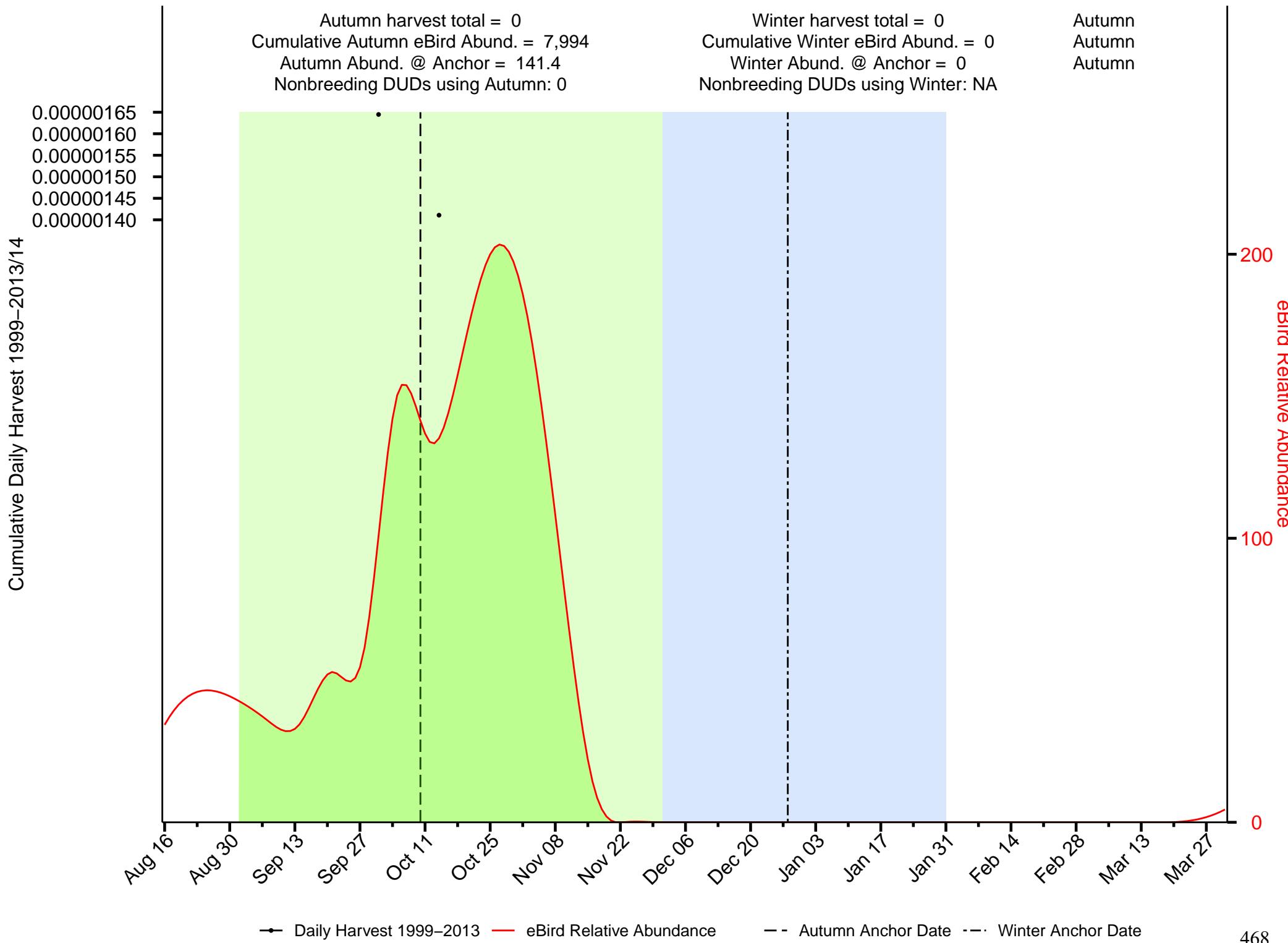
Summary of Eider in the Western Boreal Forest JV



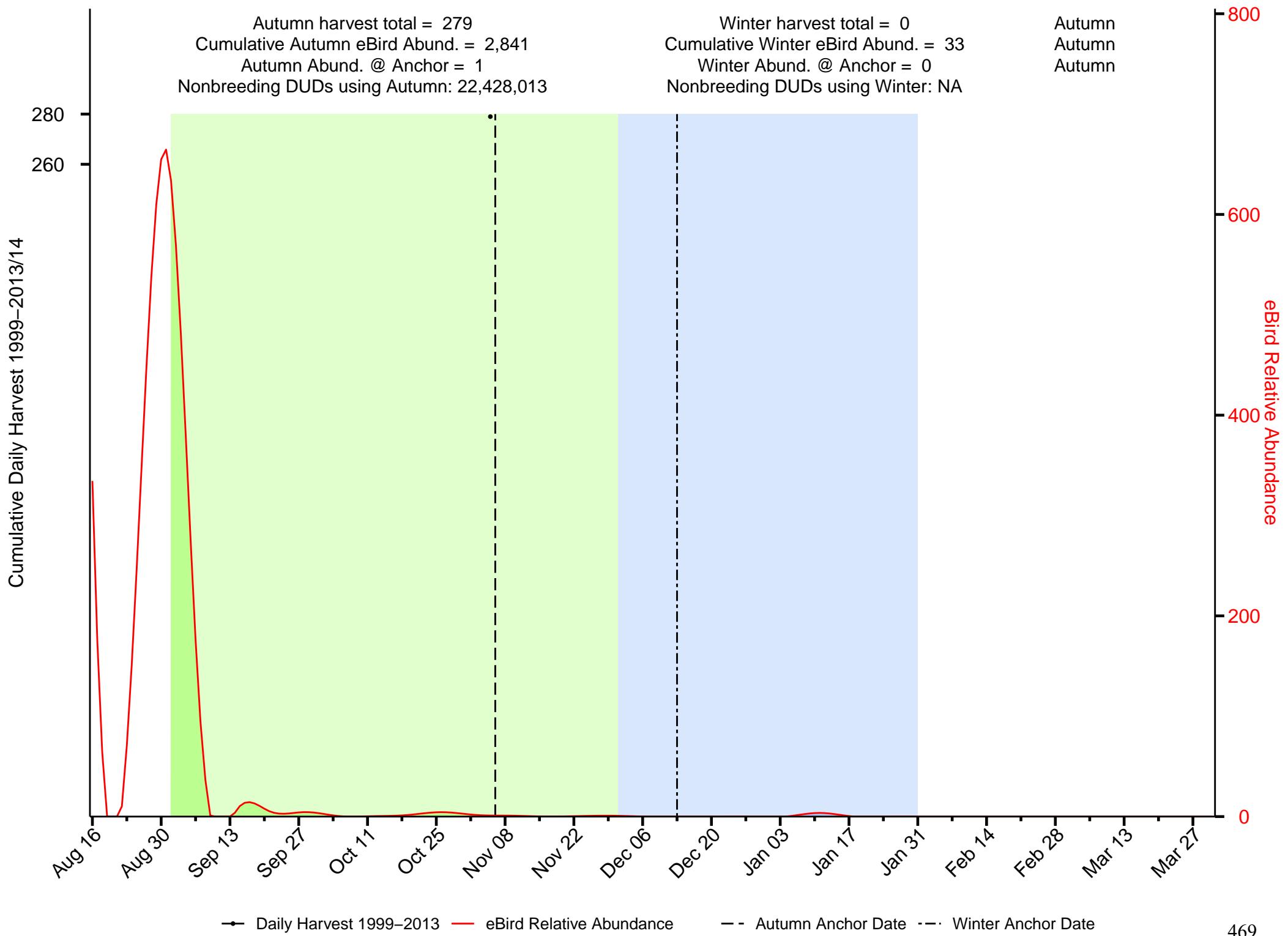
Summary of Gadwall in the Western Boreal Forest JV



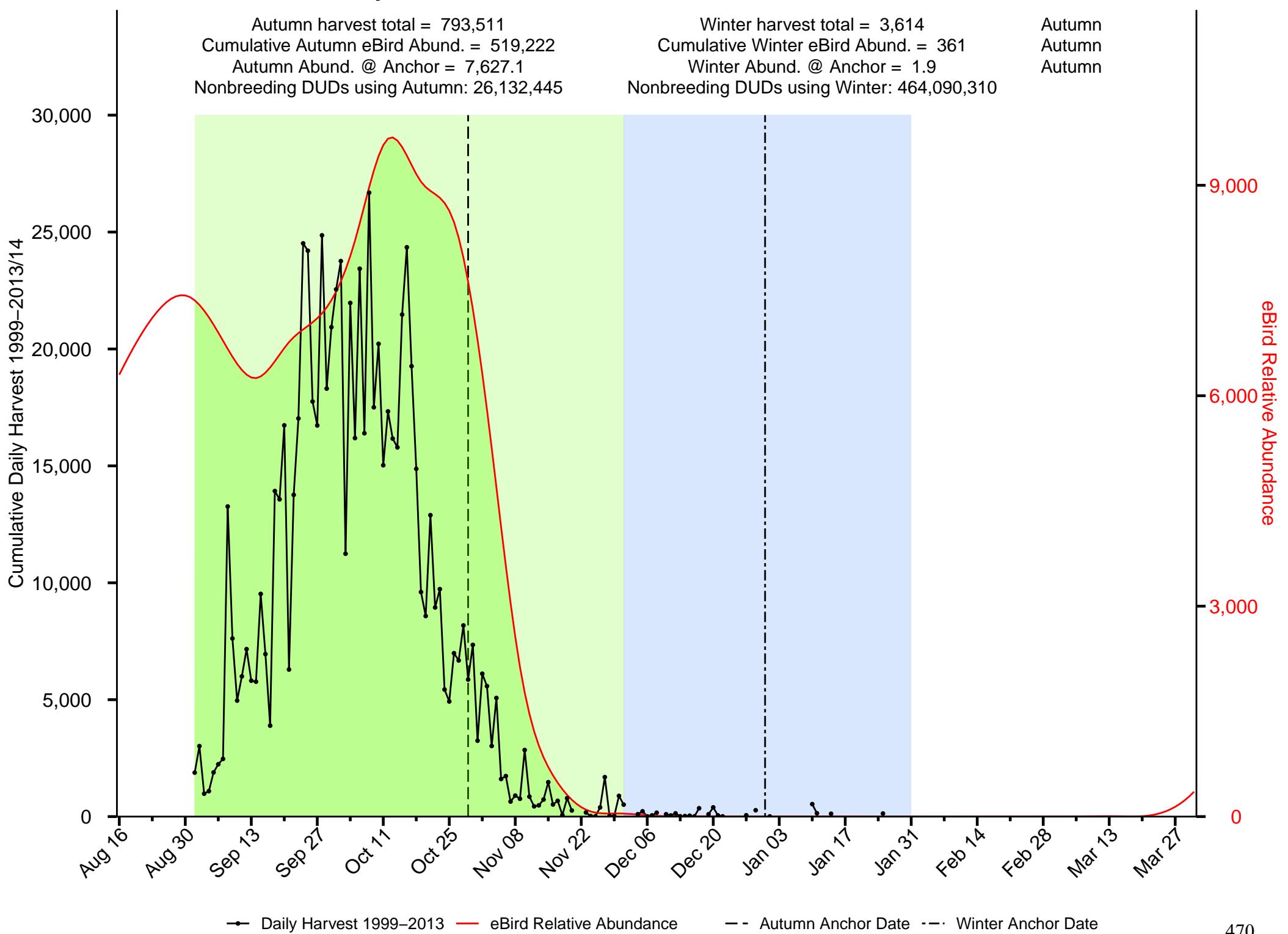
Summary of Hooded Merganser in the Western Boreal Forest JV



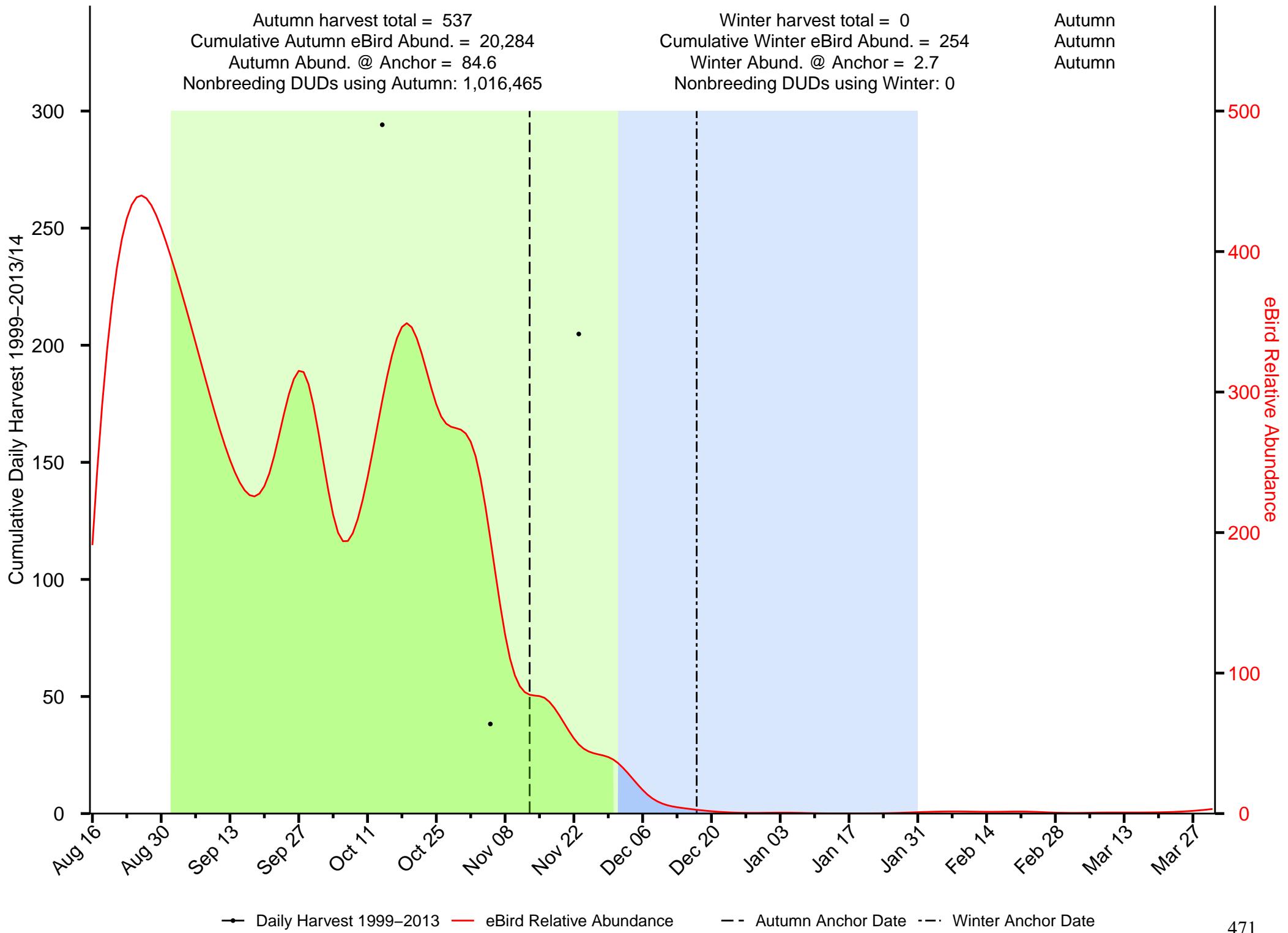
Summary of Long-tailed Duck in the Western Boreal Forest JV



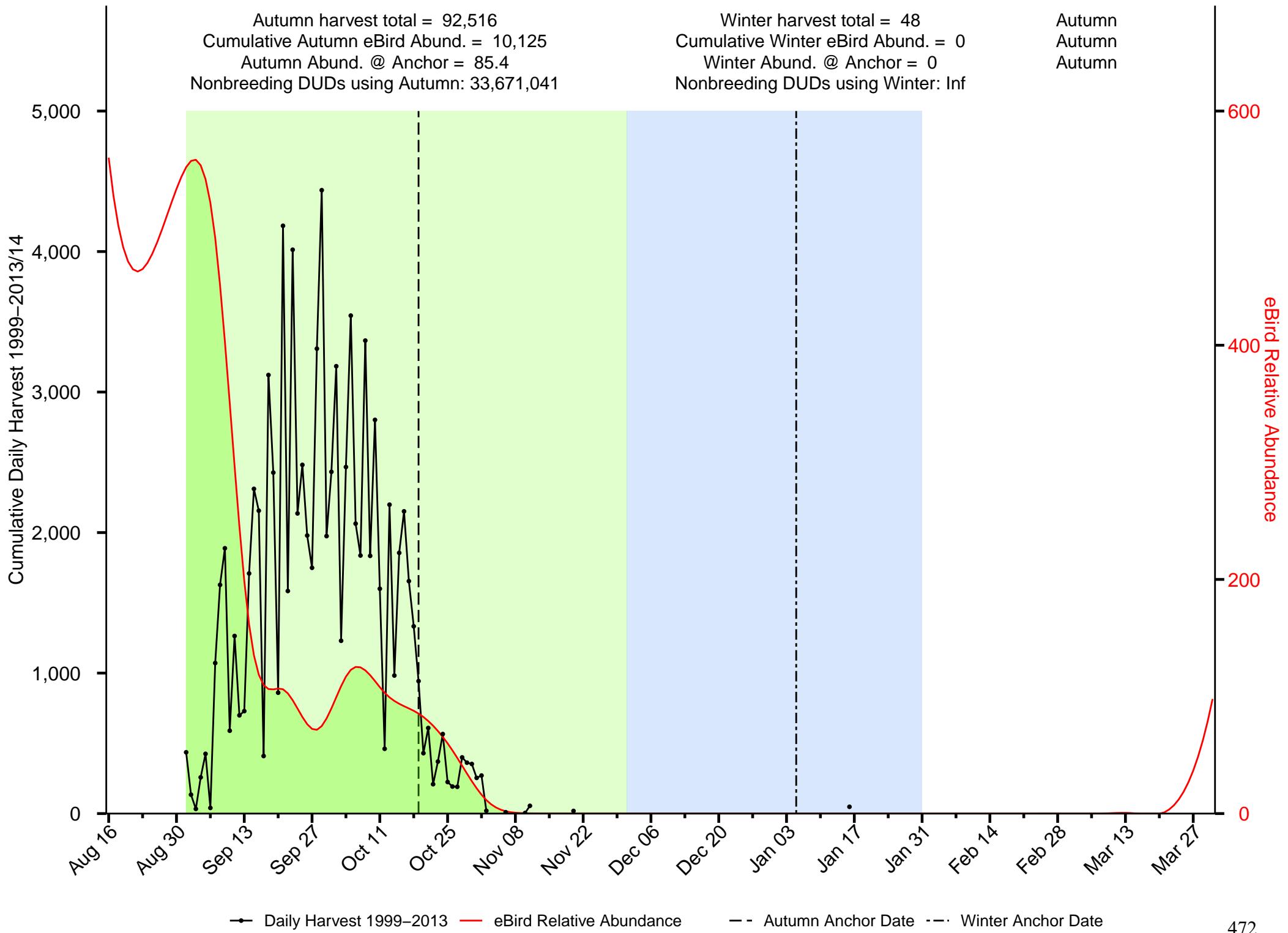
Summary of Mallard in the Western Boreal Forest JV



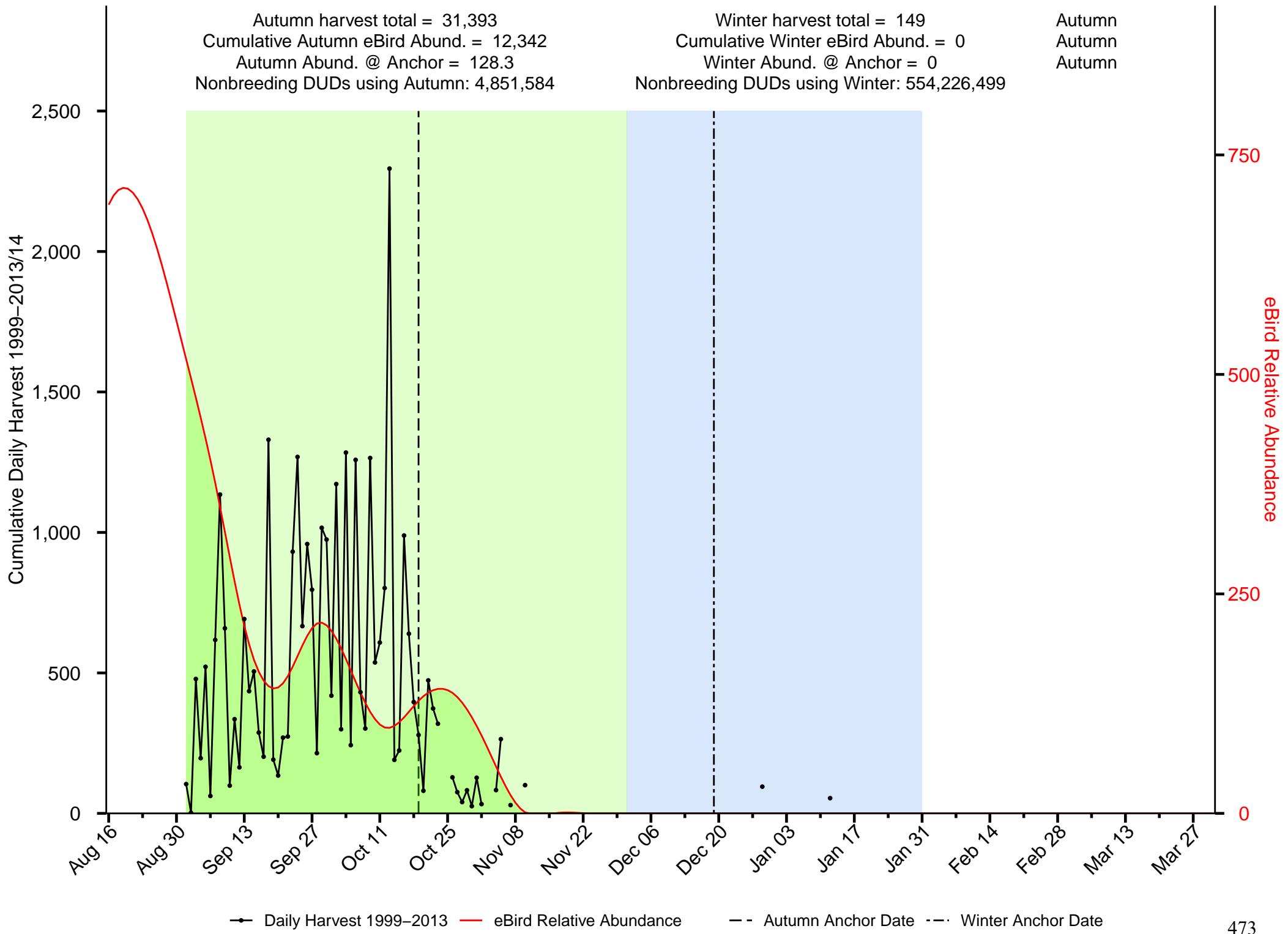
Summary of Merganser in the Western Boreal Forest JV



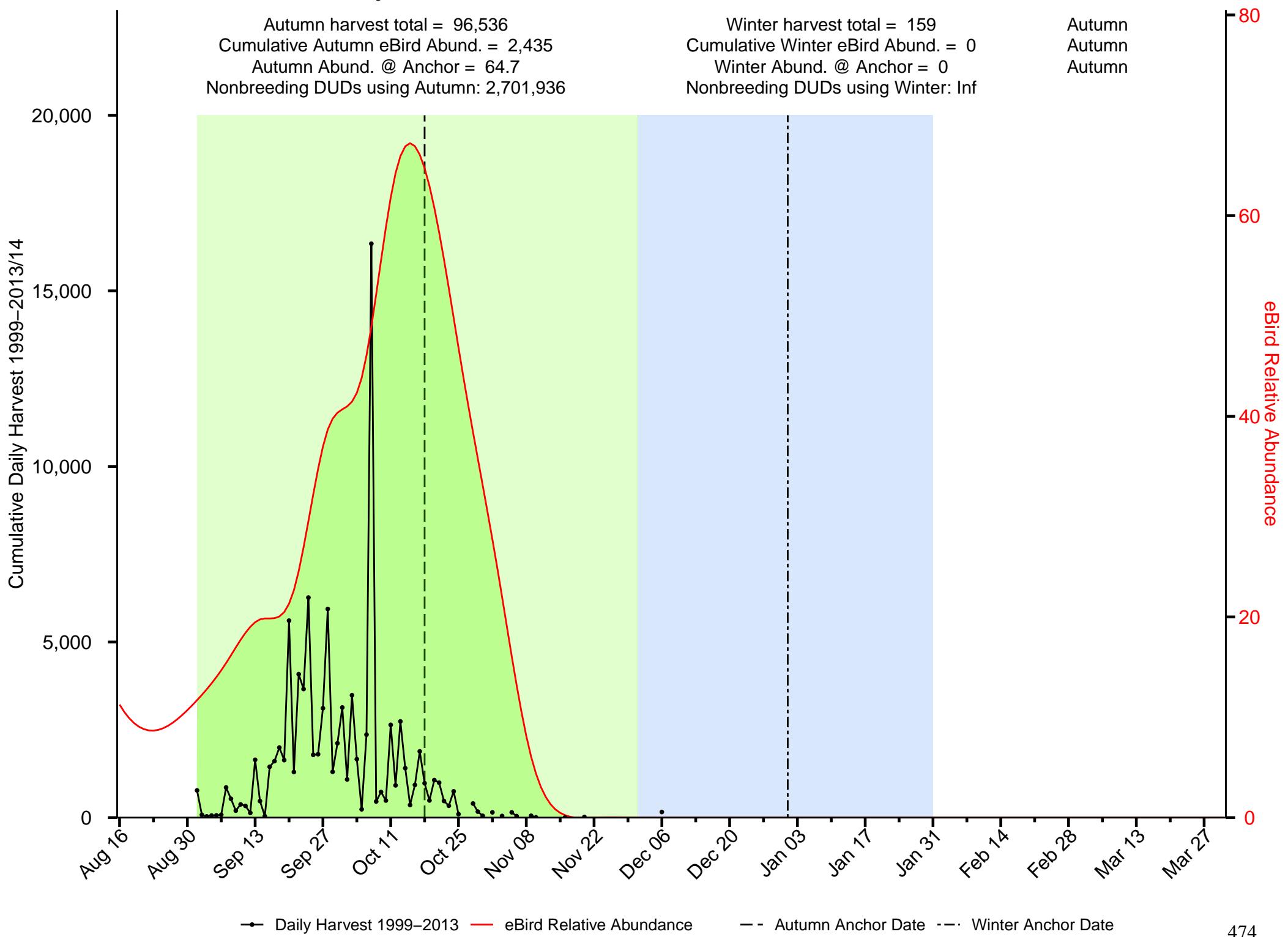
Summary of Northern Pintail in the Western Boreal Forest JV



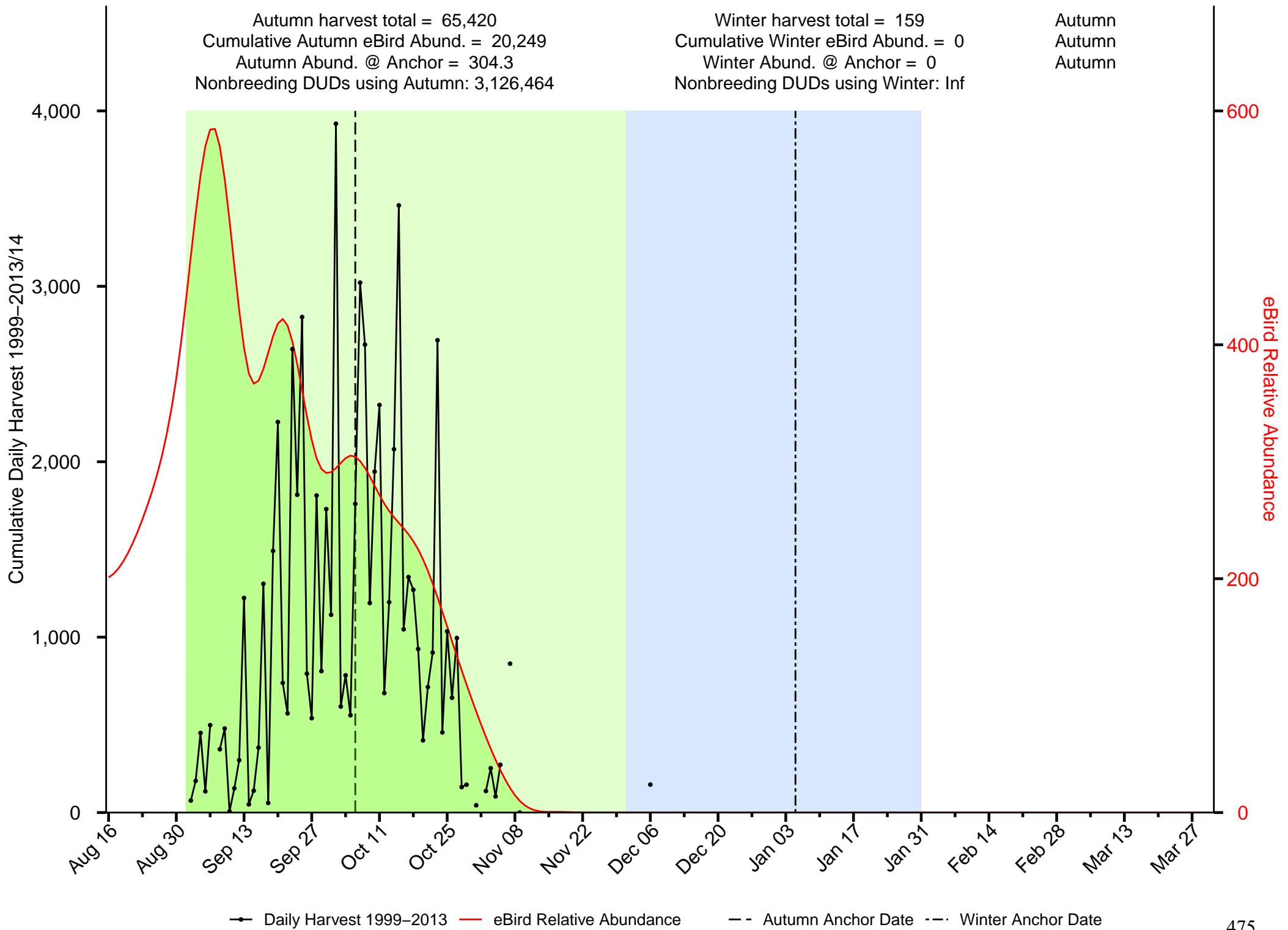
Summary of Northern Shoveler in the Western Boreal Forest JV



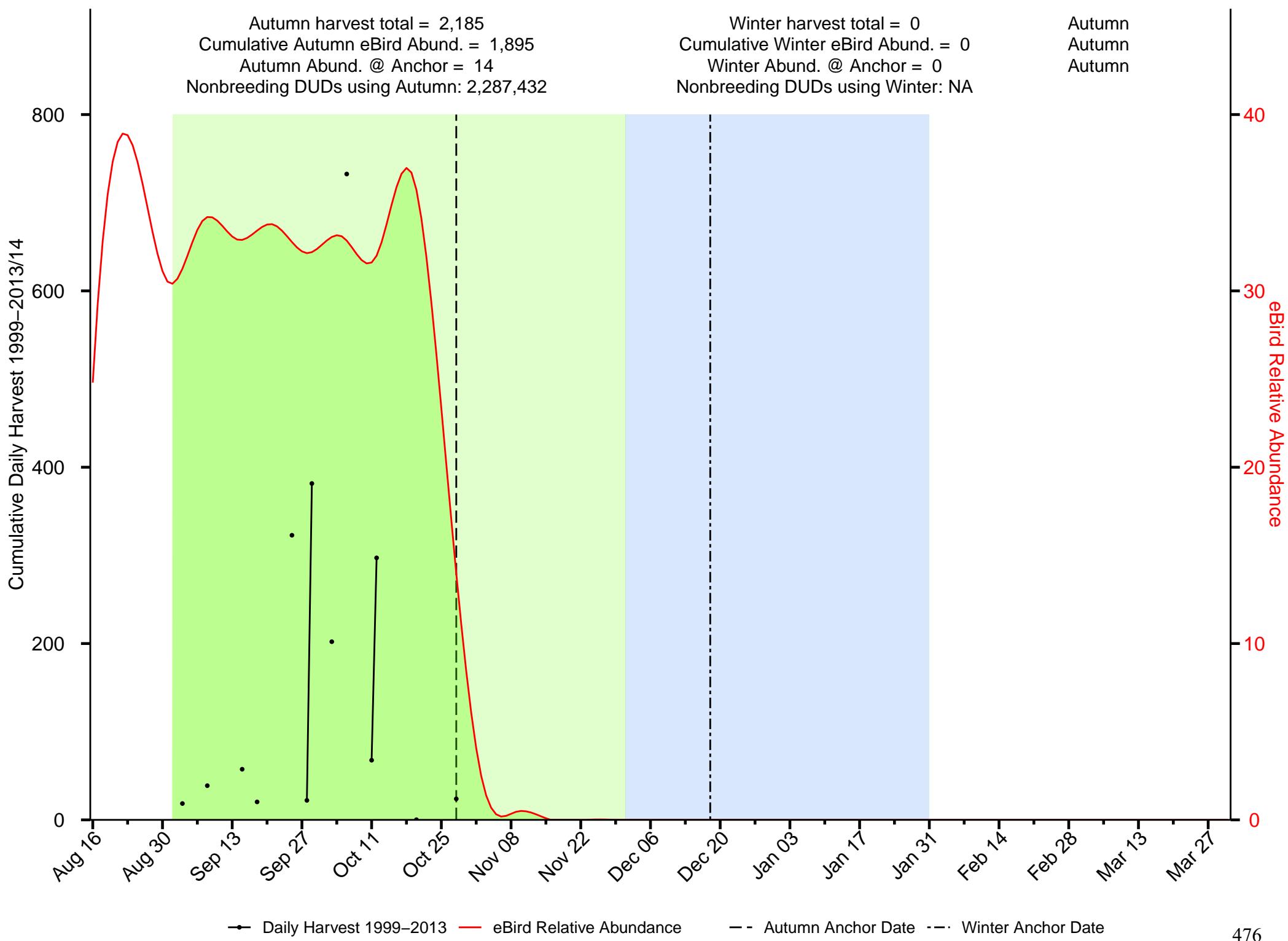
Summary of Redhead in the Western Boreal Forest JV



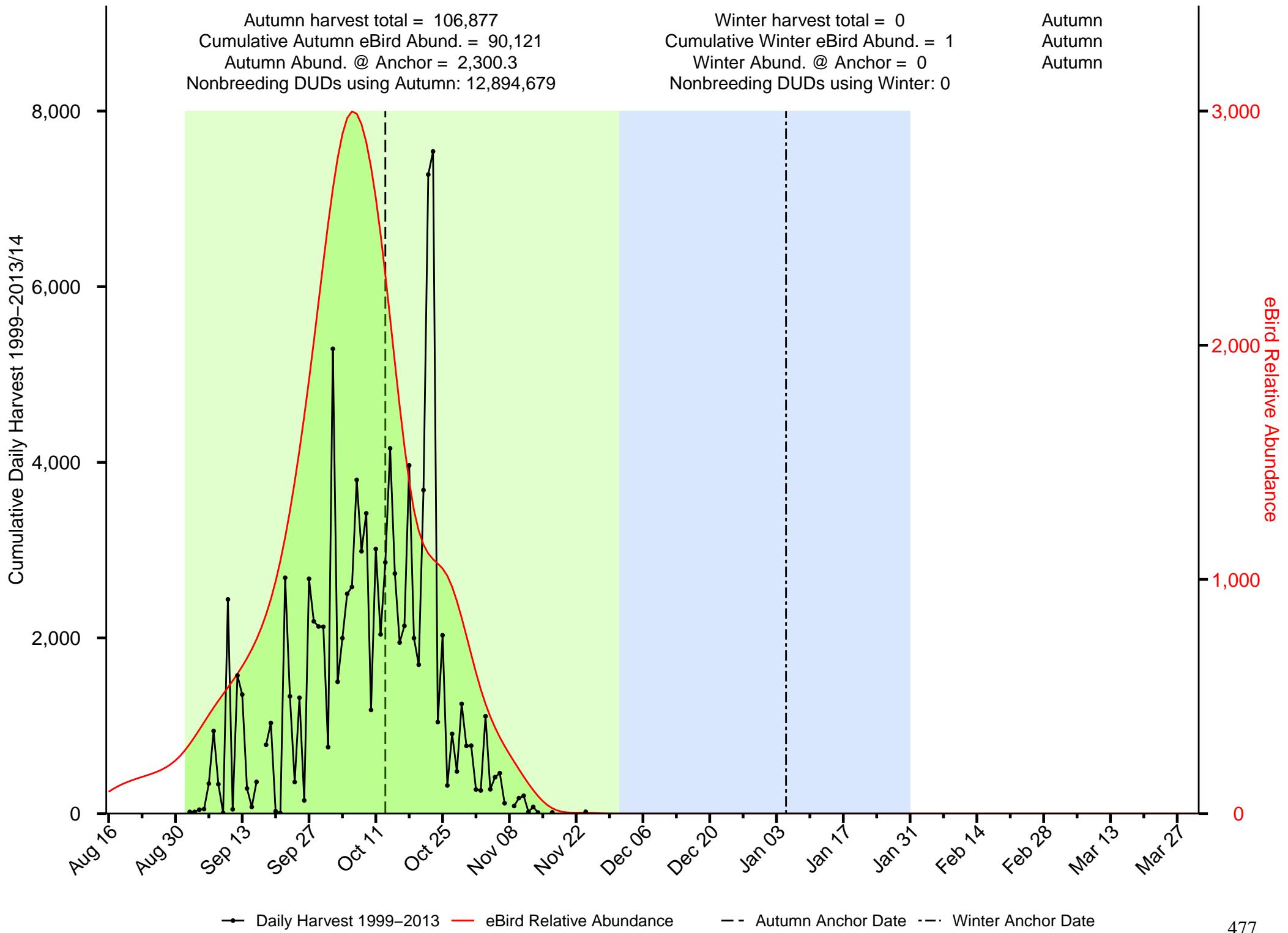
Summary of Ring-necked Duck in the Western Boreal Forest JV



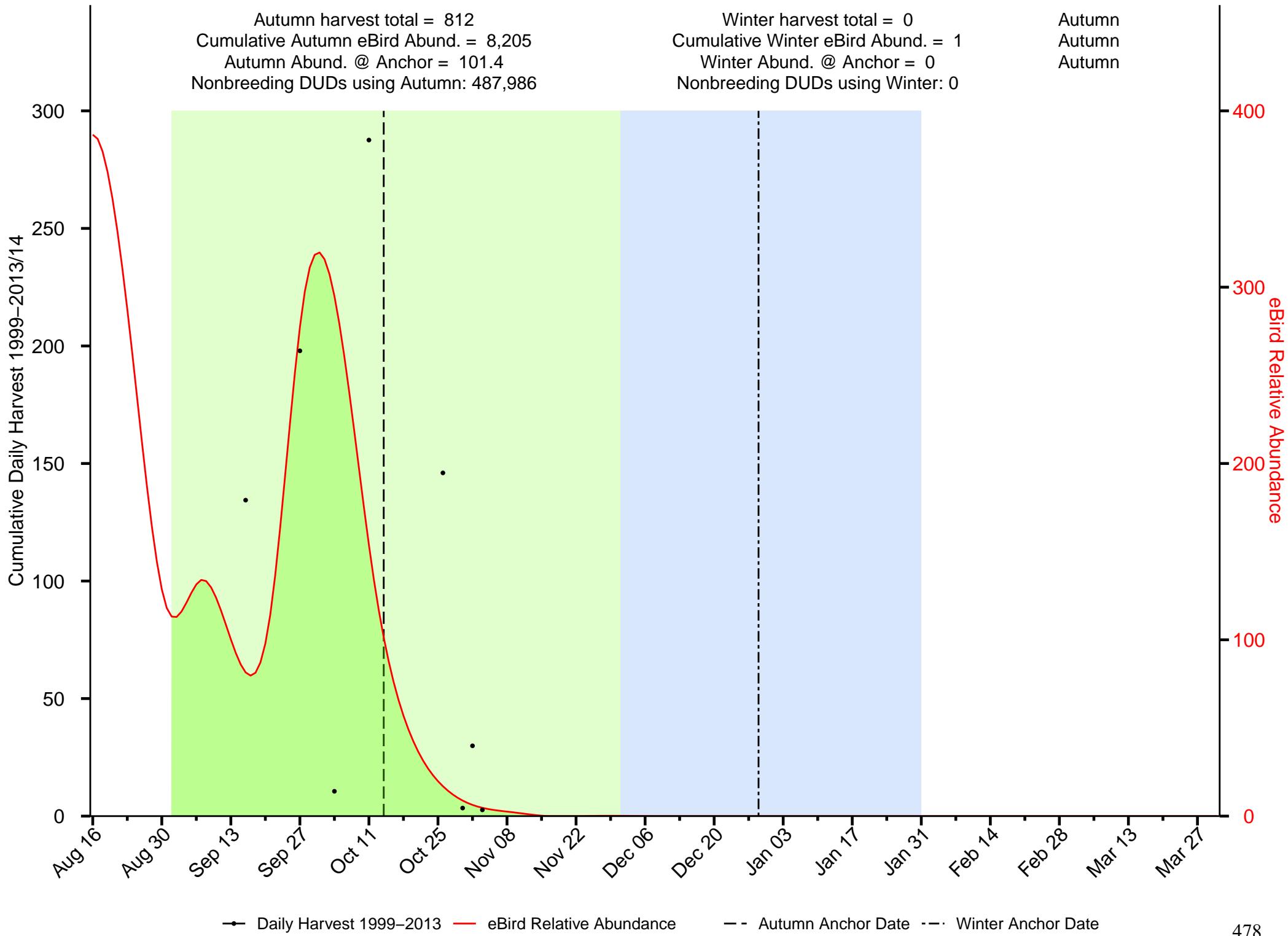
Summary of Ruddy Duck in the Western Boreal Forest JV



Summary of Scaup in the Western Boreal Forest JV



Summary of Scoter in the Western Boreal Forest JV



Summary of Wood Duck in the Western Boreal Forest JV

