

Eider Nest Searches in the GMT-1 Area, 2017

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Prepared for
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Fairbanks, Alaska

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FINAL REPORT

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INTRODUCTION

Construction on the GMT-1 project in Northeast National Petroleum Reserve-Alaska (NE NPR-A) and a portion of the Colville River delta began over the winter of 2016/2017. Following the winter construction period, scheduled summer 2017 construction activities included tundra clean-up, pressure testing of new pipelines, and preparation of spill-response sites. Some of these summer activities coincided with the breeding season for Spectacled Eiders. Spectacled Eiders (*Somateria fischeri*) and Steller's Eiders (*Polysticta stelleri*) are listed as threatened species under the Endangered Species Act (ESA) and both species potentially may breed in the GMT-1 area. Spectacled Eiders occur annually at low densities in the GMT-1 area, whereas the probability of Steller's Eiders occurring near GMT-1 is quite low, and there is no evidence of them breeding in or near this area in recent times.

The Biological Opinion for GMT-1 (USFWS 2015), issued under the ESA, contained terms and conditions in the Incidental Take Statement (ITS) that restrict human activity in the area near active Spectacled Eider nests:

T&C 1a. Ground-level activity (by vehicle or on foot) within 200 meters of occupied Spectacled Eider nests, from June 1 through August 15, will be restricted to existing thoroughfares, such as pads and roads. Construction of permanent facilities, placement of fill, alteration of habitat, and introduction of high noise levels within 200 meters of occupied Spectacled Eider nests will be prohibited.

To comply with the ITS, ConocoPhillips Alaska, Inc., contracted ABR in 2017 to conduct a nest search for Spectacled Eiders along the GMT-1 ice road route, where off-pad activities were scheduled to occur between 1 June and 15 August. In addition to tundra clean-up of former ice roads and pads, summer construction activities along the GMT-1 ice road route included work at water-source lakes, spill-response staging sites, and pipeline hydrotest locations. Other off-pad work at other ice roads and pads connecting from the south and east was planned to occur after 15 August and did not require nest searching.

This is the fourth season we have conducted nest searches in support of the planning, permitting, and construction of GMT-1 infrastructure (Seiser and Johnson 2011; Johnson and Seiser 2015, 2016). This report summarizes results of the nest search for Spectacled Eiders performed in 2017 for the GMT-1 project.

OBJECTIVES

The primary objective of nest searching in 2017 was to document the presence or absence of nesting Spectacled and Steller's eiders prior to off-pad activities. If active nests of Spectacled or Steller's eiders were found, their locations would be transmitted to CPAI field environmental staff. Documentation of nest locations allowed CPAI to modify planned activities occurring near nests, as needed. ABR searched for eider nests in designated off-pad work areas and transmitted information on presence or absence of active Spectacled Eider nests to CPAI field environmental staff within 24 hours of the completion of the search in each work area.

STUDY SITE AND METHODS

The study area included the GMT-1 ice road route adjacent to the GMT-1 road and pipeline in NE NPR-A and the eastern portion of the Colville River delta (Figures 1 and 2). Over the winter construction season of 2016/2017, gravel was laid down for the GMT-1 road and pad. During that construction period, the GMT-1 pipeline was added to existing vertical support members between the CD-4 road and CD-5, and extended on new vertical support members from CD-5 to Crea Creek.

We conducted intensive ground-based nest searches for eiders during 19–25 June in potential nesting habitat within 200 m of each side of the GMT-1 ice road, ice pads, water-source access points, and hydrotest locations between the CD-4 road and the GMT-1 pad (Figures 1 and 2). See Seiser and Johnson (2017) for details on how the search area was determined.

A crew of 4–5 people experienced in eider identification searched for nests by walking a regular search pattern with 10–20 m between searchers, providing total coverage of the tundra within search boundaries. Each crew member

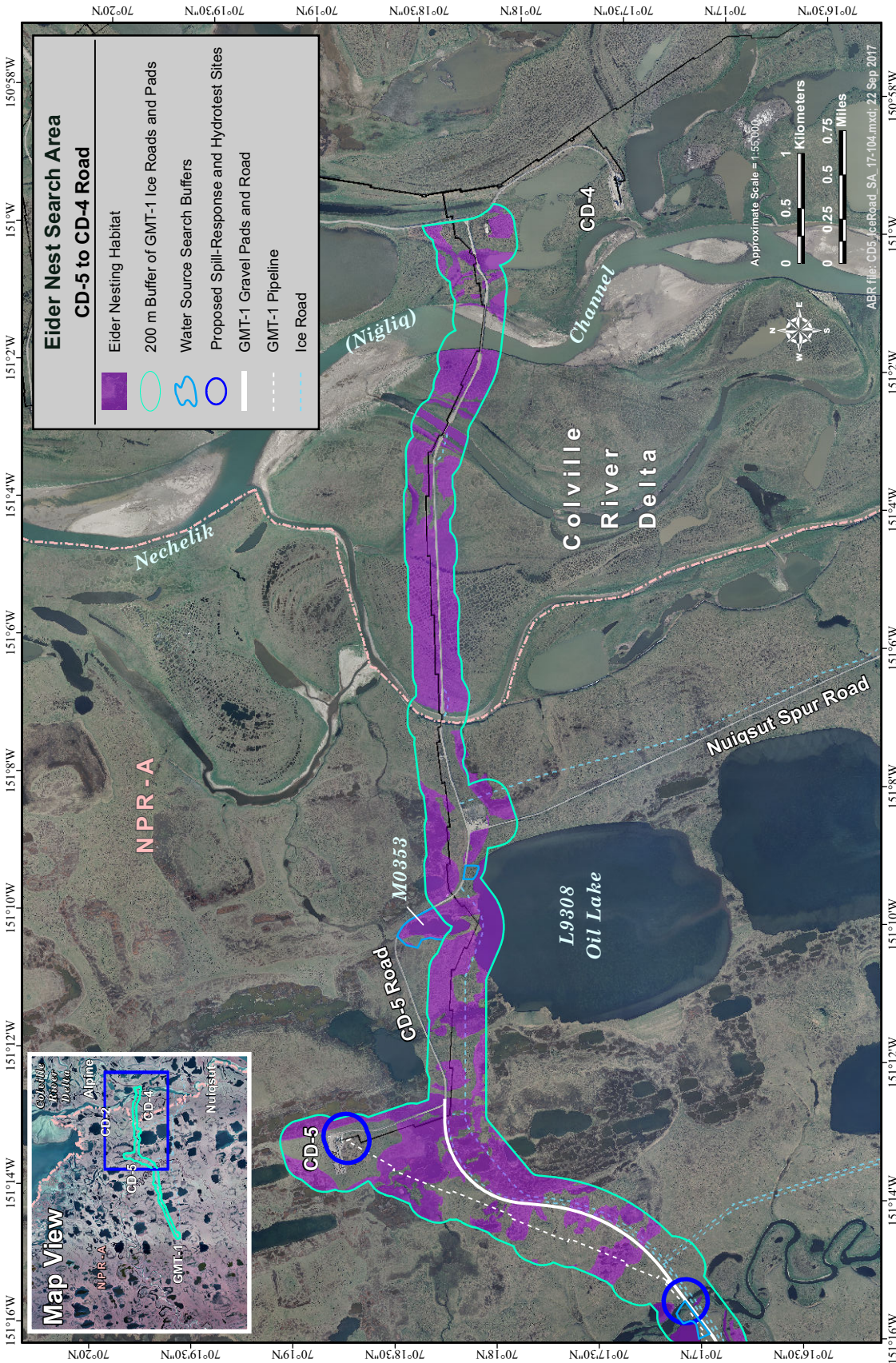


Figure 1. Eider nest search areas for GMT-1 ice road route, water-source lakes, hydrotest, and proposed spill-response sites between CD-4 Road and CD-5, NE NPR-A and Colville River delta, 2017.

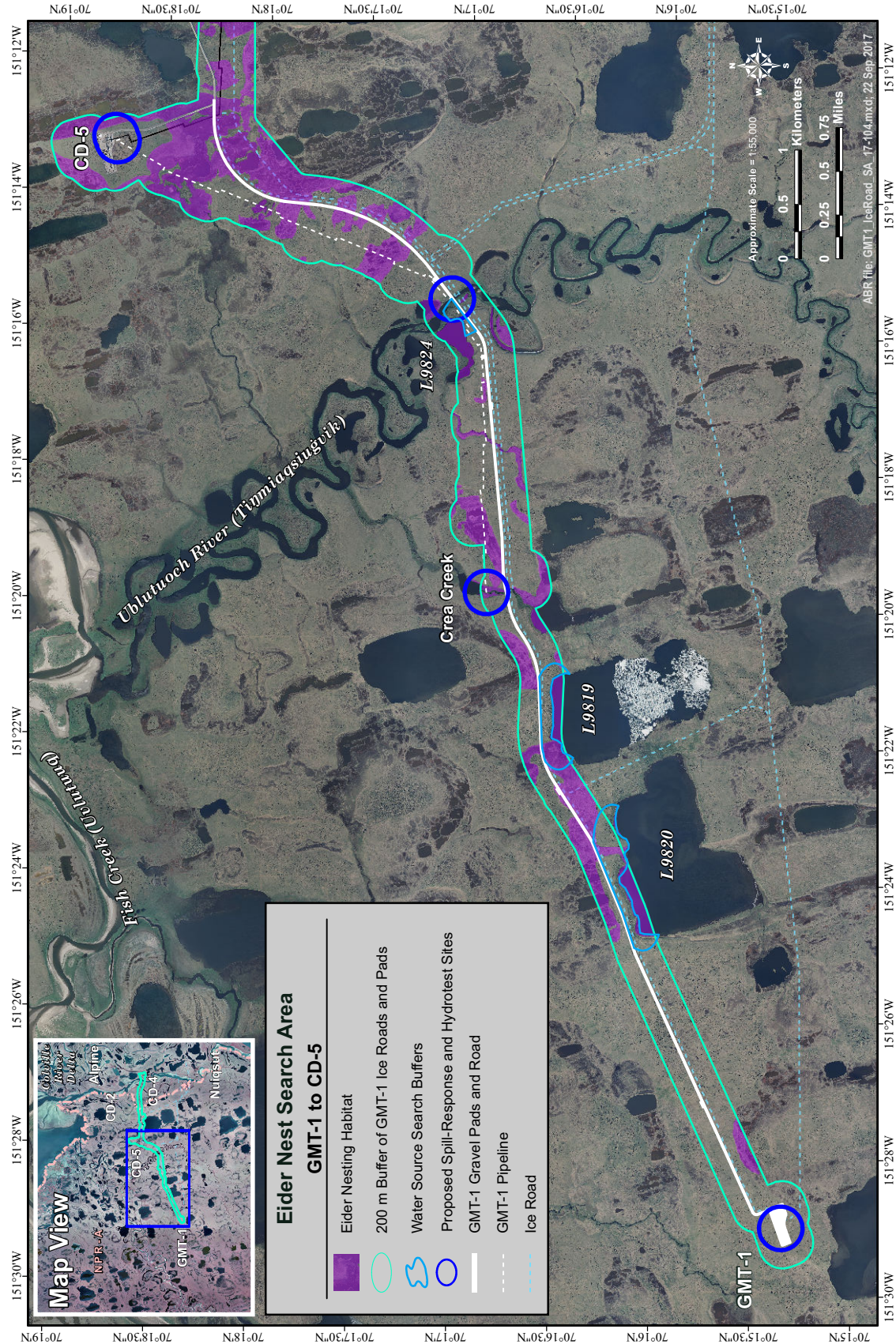


Figure 2. Eider nest search areas for the GMT-1 ice road route, water-source lakes, hydrotest, and proposed spill response sites between CD-5 and GMT-1, NE NPR-A, 2017.

recorded nest locations, nest attributes, and search paths on handheld GPS units. Data were transferred electronically to a database each evening in the field office. Each eider nest was recorded as active if occupied or inactive if no eggs were present. We avoided disturbing incubating Spectacled Eiders, once they were discovered, by approaching nests no closer than needed to identify to species.

We layered the search boundaries over the wildlife habitat map of NE NPR-A (Jorgensen et al. 2003, 2004) to delineate our search area. Within the search-area boundaries, we searched only wildlife habitats that were preferred or frequently used by pre-nesting Spectacled Eiders or used for nesting, as determined by previous studies in the NE NPR-A and Colville Delta (summarized by Johnson et al 2014): Brackish Water, Salt-killed Tundra, Salt Marsh, Deep Water (both with and without islands), Shallow Water (both with and without islands), Deep Polygon Complex, Sedge Marsh, Grass Marsh, Wetland Complex (both Young and Old), Riverine Complex, Patterned Wet Meadow, Nonpatterned Wet Meadow, and all shorelines of waterbodies (Figures 1 and 2). We did not search areas unsuitable for eider nesting (primarily Moist Tussock Tundra and Moist Sedge-shrub Meadow) or where the CD-5 goose plots, which were searched in mid-June (Johnson and Rozell, in prep.), overlapped the nest search area. We incorporated results from those goose plots into our total nest counts. For navigation, we used GPS units capable of displaying search boundaries, habitat types, and aerial-photo imagery.

Water-source lakes were selected by CPAI to withdraw water for conducting hydrotests on pipelines and other purposes. Access points for water withdrawal were typically located along the lake shoreline at a location closest to the road. Human activity at each access point included a foot path and waterline between the road and the shoreline access point. Therefore, we searched a 200 m buffer on each side of line between the road and the access point.

The 3 proposed spill-response sites and 2 hydrotest locations at CD-5 were slated for summer off-pad work. We searched a 200 m radius

around each site, similar to methods used in the Alpine Oilfield (Seiser and Johnson 2016).

Survey boundaries and data collected on eiders and other large waterbirds nesting in the 2017 search areas were electronically submitted to CPAI following the Data Management Protocols for North Slope Field Surveys (version 10.1). Search activities were approved under Federal Fish and Wildlife Permit TE012155-6 and Alaska Department of Fish and Game Scientific Permit 17-132.

RESULTS

ICE ROADS AND PADS

We did not find Spectacled Eider adults or nests during the ground-based survey of potential eider nesting habitat along the GMT-1 ice road and pad locations in 2017 (Figures 1 and 2). We also found no Steller's Eider adults or their nests. Results were consistent with nest searches conducted in 2009, 2015, and 2016 (Seiser and Johnson 2011; Johnson and Seiser 2015, 2016).

In 2017, we searched 519 ha (1,282 acres) of the 1,198 ha (2,959 acres) within the 200 m buffer around the GMT-1 ice road; the remainder comprised habitats not frequently used by nesting Spectacled Eiders (Figure 1). Within the areas searched, we found 235 nests of other large waterbirds: 176 Greater White-fronted Goose nests, 38 Cackling/Canada Goose nests, 8 King Eider nests, and 2 or fewer nests of unidentified goose, Northern Pintail, Willow Ptarmigan, Bar-tailed Godwit, Parasitic Jaeger, Red-throated Loon, and Pacific Loon. Forty-three of these nests were located on the CD-5 Greater White-fronted Goose nest plots. The large number of King Eider nests we found suggests that timing of our nest searches in 2017 was appropriate for finding Spectacled Eider nests.

WATER-SOURCE LAKES

In 2017, no nesting Spectacled Eiders were found in search areas at access points for water-source lakes MO353, L9308 (Oil Lake), L9824, L9819, and L9820 (Figures 1 and 2). The search area for water-source lakes varied according to the length of potential road access (range: ~0.2–1.0 km). These search results confirm the

absence of nesting eiders only in the area used for water withdrawal activities and not along the entire shoreline of the water-source lakes.

SPILL RESPONSE AND HYDROTEST SITES

We did not find Spectacled Eider nests at proposed spill-response or hydrotest sites in 2017 (Figure 2, Table 1). Only 3 proposed spill-response sites were scheduled for off-pad work in 2017. We confirmed Spectacled Eider nesting habitat was present within the 200-m buffer at the Ublutuoch and Crea Creek spill response sites, but was lacking at the GMT-1 pad (Table 1).

The 2 hydrotest sites were only 60 m apart; therefore, the 200 m buffer for each site was merged into 1 search area (Figure 1). As in the other search areas, we did not find Spectacled Eider nests in the hydrotest search area.

SUMMARY

No Spectacled Eider or Steller's Eider nests were found within the search areas for GMT-1 in 2017. We searched the area along the GMT-1 ice road and pads, 5 water-source access sites, 3 spill-response sites, and 2 hydrotest sites in 2017. Neither Spectacled Eider nor Steller's Eider adults were sighted in any of the GMT-1 search areas during nest search activities. The discovery of 8 King Eider nests during nest searches indicated that eider nest searches were conducted during the appropriate time period and in appropriate nesting habitats in 2017.

Table 1. Site descriptions for 4 proposed spill-response equipment sites associated with the GMT-1 project, NE NPR-A, Alaska, 2017.

| Site Name | Location | Site Description | Wildlife Habitat ^a | Habitat Description | Nesting Habitat Present ^b | Comments ^c |
|------------|----------------------------|--|--------------------------------------|---|--------------------------------------|---|
| Ublutuoch | N 70.284657 W 151.25843 | Ublutuoch River pipeline crossing | DOWIP, SOW, RS, NWM, MSSM, MTT, TLDS | Old river channel lined with low willow. Lakes on the west side lack nesting habitat (steep banks or dense shrubs). Lake to northeast is partially ringed with NWM mixed with willow. | Yes | Spectacled Eider nest records: none. Search History: 2009, 2016, 2017. Nesting habitat is limited and isolated. NWM occurs along lake shoreline on NE side of the river, ~100 m from the bridge. |
| Crea Creek | N 70.281387 W 151.33015 | Crea Creek pipeline crossing | DOW, NWM, RC, OBWC, MTT | Low water flood plain surrounded by willow-lined beaded stream draining DOW Water is flowing through the adjacent NWM. Pocket of OBWC. | Yes | Spectacled Eider nest records: none. Search History: 2009, 2016, 2017. Nesting habitat is limited to areas of OBWC. NWM is likely flooded in spring; the rest of lake shoreline is surrounded by MTT. |
| GMT-1 | N 70.25584 W 151.48372 | GMT-1 drill pad | MTT, MSSM, HUM | Gravel pad surrounded by MTT and MSSM. | No | Spectacled Eider nest records: none. Search History: 2017. Site is on a gravel pad surrounded by habitat unsuitable for eider nesting. |
| Fish Creek | N 70.37341 W 151.27274 | ~9 km north of Ublutuoch bridge and ~1.7 km inland from Harrison Bay | BRWA, SKT, SAMA, BAR | Coastal influence. Island covered with SKT or BAR, other shorelines: SAMA surrounding convolved ponds and polygons of BRWA. | Yes | Spectacled Eider nest records: none. Search History 2015. Suitable eider nesting habitat is present. 12 female King Eiders and 2 nests were present in 2015. |

^a Wildlife Habitats = Brackish Water (BRWA), Salt Marsh (SAMA), Salt Killed Tundra (SKT), Deep Open Water without Islands (DOW), Deep Open Water with Islands or Polygonized Margins (DOWIP), Shallow Open Water without Islands (SOW), Shallow Open Water with Islands or Polygonized Margins (DOWIP), River or Stream (RS), Sedge Marsh (SEMA), Deep Polygon Complex (DPC), Grass March (GRMA), Old Basin Wetland Complex (OBWC), Riverine Complex (RC), Patterned Wet Meadow (PWM), Nonpatterned Wet Meadow (NWM), Moist Sedge-Shrub Meadow (MSSM), Moist Tussock Tundra (MTT), Tall/Low/Dwarf Shrub (TLDS), Barrens (BAR), and Human Modified (HUM).

^b Areas containing BRWA, SKT, SAMA, DOW, DOWIP, SOW, SOWIP, DPC, SEMA, GRMA, OBWC, PWM, NWM, and shorelines of all water bodies.

^c GMT-1 nest searches conducted in 2009 (Seiser and Johnson 2011), 2015 (Johnson and Seiser 2015), 2016 (Johnson and Seiser 2016), and 2017.

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