

Supplemental Environmental Assessment

Stormy and Daniels Lake Elodea Eradication Project (August 2013)

April 2014

Prepared by

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May 30, 2014

To: The United States Fish and Wildlife Service (USFWS)

The Alaska Department of Natural Resources has prepared a preliminary Supplemental Environmental Assessment (SEA) that recommends including Beck Lake in the ongoing multi-agency project to eradicate the invasive aquatic plant Elodea from Kenai Peninsula lakes. In 2013, prior to the discovery of an Elodea infestation in Beck Lake, DNR had approved an environmental assessment for Elodea eradication in Stormy and Daniels Lake.

Adding Beck Lake to the ongoing project will support the multi-agency goal of eradicating Elodea from all Kenai Peninsula waterways where it has been discovered, and thereby protecting the ecological integrity of those waterways. Eradication efforts for the specified lakes include use of herbicides as a part of an Integrated Pest Management Plan.

A copy of the preliminary supplemental assessment can be found at:

<http://www.plants.alaska.gov/invasives/pdf/Preliminary%20Supplemental%20Environmental%20Assessment%20April%202014.pdf>. The 2013 environmental assessment are available at:
<http://www.plants.alaska.gov/invasives/pdf/EA-StormyDanielsLakeElodeaEradication2013.pdf> .

Please contact Brianne Blackburn if you have questions.

Attention: Brianne Blackburn
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Sincerely,

A handwritten signature in blue ink that reads "Brianne N Blackburn".

Brianne N Blackburn
Invasive Plant and Agricultural Pest Coordinator

FINDING OF NO SIGNIFICANT IMPACT

Adoption of Alaska Department of Natural Resources Elodea Eradication Project for Stormy Lake, Daniels Lake and Beck Lake

BACKGROUND

The aquatic invasive species Elodea was first discovered in Stormy and Daniels lakes on the northwestern Kenai Peninsula in 2012. In 2013, the Alaska Department of Natural Resources (ADNR) and the U. S. Fish and Wildlife Service (Service) proposed and evaluated a strategy for managing the invasive aquatic plant Elodea in both Stormy and Daniels lakes (ADNR 2013). Treatment of Elodea was deemed necessary because:

1. Elodea, the first submerged freshwater invasive plant to become established in Alaska, has the potential to spread rapidly and negatively affect ecological and economic values on the Kenai Peninsula.
2. Based on surveys of 68 lakes in 2013, it appears that populations of Elodea are currently constrained to three lakes (Stormy, Daniels and Beck) in two watersheds north of the community of Nikiski. Treatment of Stormy and Daniels Lakes was evaluated in the 2013 Environmental Assessment (EA), but Beck Lake was not identified and was evaluated in a Supplemental EA.
3. As these early populations of Elodea become better established, motor boats, anchors, fishing gear, float planes and even waterfowl will be a greater risk to act as vectors facilitating the spread of Elodea on the Kenai Peninsula.

The objective of the proposed project is eradication of Elodea from the affected waterbodies to prevent its spread and establishment of a more widespread infestation on the Kenai Peninsula. The selected alternative includes applying the herbicides fluridone and/or diquat to reduce the biomass and ultimately eradicate Elodea to reduce the threat that the highly invasive species will disperse into the Swanson River and Bishop Creek drainages, or into other lakes, waterbodies, wetlands, streams, and rivers. Many potentially affected watersheds lie within the Kenai National Wildlife Refuge. Treatment plans were proposed, evaluated and a preferred alternative selected for treatment of Daniel's and Stormy lakes in the 2013 EA. During the finalization of this EA, on-going surveys discovered an infestation of Elodea in Beck Lake. The ADNR prepared a Supplemental Environmental Assessment that covered the addition of Beck Lake to the treatment area in 2014.

The EA and the Supplemental EA were prepared to evaluate the effects associated with implementing the treatment plan. These documents comply with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (DOI) (516 DM 8) and Service (550 FW 3) policies. NEPA requires examination of the effects of proposed actions on the natural and human environment.

The EA presented four alternatives: Alternative 1 (not selected) – the “no action alternative”, which would have maintained the status quo and no attempt would be made to control Elodea, Alternative 2 (selected alternative) – Fluridone and Diquat treatment, Alternative 3 – Lake Draining and Alternative 4 – Mechanical Removal and Tarping. Alternative 2 – Fluridone and Diquat treatment was determined to be

the most feasible option and the option most likely to result in eradication of Elodea from these lakes. Alternative 1 would allow Elodea to persist and likely continue to spread on the Kenai Peninsula. Alternate 3 would involve dewatering of Daniels and Stormy lakes, and would result in greater environmental impacts than the selected alternative as well as incur greater costs. Alternative 4 is similar to Alternative 1 in that it would likely not provide for the complete eradication of Elodea from the lakes, and result in increased likelihood of spread to additional aquatic habitats on the Kenai Peninsula.

The Supplemental EA presented two alternatives. Alternative 1 (No Action) would continue management action at Stormy and Daniels Lake only and no treatment would occur at Beck Lake. Alternative 2 (selected alternative) would amend the management action to include treatment of Beck Lake.

FINDING

Based on the review and evaluation of the potential effects of the proposed action as set forth in the EA and Supplemental EA, I have determined that the proposed action of adopting the treatment plans Daniels Lake, Stormy Lake and Beck for Elodea as outlined in the EA and Supplemental EA is not a major action that would significantly affect the quality of the human environment within the meaning of Section 102(2) of the National Environmental Policy Act. The environmental review conducted by the ADNR supports the conclusion that impacts of the treatment plan do not exceed a threshold of significance. Accordingly, the preparation of an Environmental Impact Statement on the proposed action is not required. The alternative of implementing the treatment plan would be the most beneficial to wildlife and habitat resources while facilitating habitat restoration and public use activities at the Refuge. Therefore, the implementation of this treatment plan is not a major federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969. Accordingly, preparation of an Environmental Impact Statement on the proposed action is not required and a Finding of No Significant Impact is warranted.

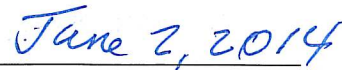
SUPPORTING REFERENCES

Environmental Assessment Stormy and Daniels Lake Elodea Eradication Project. 2013.

Supplemental Environmental Assessment. 2014.



Refuge Manager



Date

1.0 Introduction

In 2013, the Department of Natural Resources (DNR) and the U. S. Fish and Wildlife Service (Service) approved a strategy for managing the invasive aquatic plant elodea in both Stormy and Daniels Lake on the Kenai Peninsula (DNR 2013). Selected management strategies included applying the herbicides fluridone and/or diquat to reduce the biomass and ultimately eradicate elodea to reduce the threat that the highly invasive species will disperse elsewhere in the Swanson River and Bishop Creek drainages, or into other lakes, waterbodies, wetlands, streams, and rivers. Treatment plans were proposed and approved through the preliminary Environmental Analysis (EA) completed in August 2013. Following this process, on-going surveys revealed a third lake, Beck Lake, to be infested with elodea in addition to the previously identified Stormy and Daniels Lake.

This document adopts in part and supplements the Environmental Assessment for the proposed Treatment of Stormy and Daniels Lake for the Purpose of Eradication of Elodea and Maintaining Ecological Integrity of Waterways on the Kenai Peninsula, finalized by DNR and the Service August 2013. A copy of the EA is available online at: <http://www.plants.alaska.gov/invasives/pdf/EA-StormyDanielsLakeElodeaEradication2013.pdf>.

We present two alternatives in this Supplemental Environmental Assessment (SEA): (1) no change to the 2010 EA (no action alternative), and (2) adopt amendments to the 2013 EA (proposed action alternative). Under the first alternative, DNR and the Service would continue its current management plan to treat elodea in Stormy and Daniels Lake as described in the 2013 EA. Under the second alternative (proposed action), the 2013 EA would be amended to increase the scope of the treatment to include Beck Lake in addition to Stormy Lake and Daniels Lake. The proposed change would continue to ensure consistent action towards the management goal of eradicating the highly invasive elodea from the Kenai Peninsula.

We believe the changes proposed in this preliminary SEA would not significantly alter the analysis of impacts for any of the resource areas evaluated in the 2010 EA, nor would it result in any substantive changes in the approved action, and therefore we are not proposing to conduct a new environmental analysis. We believe the proposed amendment falls within the scope of analysis documented in the 2013 EA and that the potential impacts resulting from documenting these changes have been adequately evaluated in this SEA.

This preliminary SEA will be made available for public comment for a 30-day period. Comments received by the public, stakeholders, and agencies will be reviewed and considered. The DNR will disclose its final decision and supporting rationale following the close of the public comment period.

1.1 Purpose and Need for Action

The overall purpose and need for the management of elodea on the Kenai Peninsula is described in the 2013 Environmental Assessment. Readers are referred to these documents for details. The purpose of this preliminary SEA is to implement changes that incorporate new information regarding the extent of

elodea on the Kenai Peninsula. The need for this action is based on the following factors identified in the 2013 field season:

- Elodea, the first submerged freshwater invasive plant to become established in Alaska, has the potential to spread rapidly on the Kenai Peninsula affecting ecological and economic values.
- Based on surveys of 68 lakes in 2013, it appears that elodea populations are constrained to three lakes (Stormy, Daniels and Beck) in two watersheds north of the community of Nikiski. Stormy and Daniels Lakes were identified in the 2013 EA, but Beck Lake was not identified until later.
- As these early populations of elodea become better established, motor boats, anchors, fishing gear, float planes and even waterfowl will be a greater risk to act as a pathway to spread Elodea further on the peninsula.

1.2 Background

As documented in the EA, neither elodea nor other exotic submerged freshwater plants were known to occur on the Kenai Peninsula until very recently. Pfauth and Sysma (2005) did not detect elodea in Vogel, Johnson and Longmere Lakes as part of a larger regional survey of exotic aquatic plants in 2005. However, in September 2012, elodea was incidentally found while Stormy Lake was being treated with rotenone for northern pike. In October 2012, ADF&G and USFWS staff documented elodea in Daniels Lake and in May 2013, immediately after ice-out, a more comprehensive survey by boat confirmed that Daniels Lake was in the early stages of infestation with elodea distribution restricted to five areas along the shoreline. This information led to the drafting and approval of the 2013 EA.

With the recognition that a strategic approach to elodea management could not be determined without a more comprehensive understanding of its distribution on the Kenai Peninsula, USFWS staff surveyed 68 lakes on the western peninsula during summer 2013 (Figure 1) targeting waterbodies that were exposed to likely routes of infection: public boat launches, multiple private homes, road accessible or floatplane charters. Other partners surveyed Beluga Lake in Homer, Trout and Juneau Lakes on Chugach National Forest, and Bear Lake near Seward. Elodea was found in only one additional lake, the 200-acre Beck Lake in the Bishop Creek watershed (Figures 1, 2). Significantly, no other nonnative submerged aquatic plant was detected.

The Kenai Peninsula is in the early stages of infestation by elodea. Based on surveys of 68 lakes in 2013, it appears that elodea populations are constrained to three lakes (Stormy, Daniels and Beck) in two watersheds north of the community of Nikiski. Inflow and outflow of the known infested lakes are a concern as plant fragments may spread to adjacent water bodies, and from there to the connected waters of the Kenai Lowlands on the eastern peninsula. Likely initial vectors on the peninsula are aquaria (Bowmer et al. 1995) and discarded commercial lab kits. However, as these early populations of elodea become better established, motor boats, anchors, fishing gear, float planes and even waterfowl will become the greater risk. Upon evaluating the new 2013 survey information, we have prepared this preliminary SEA.

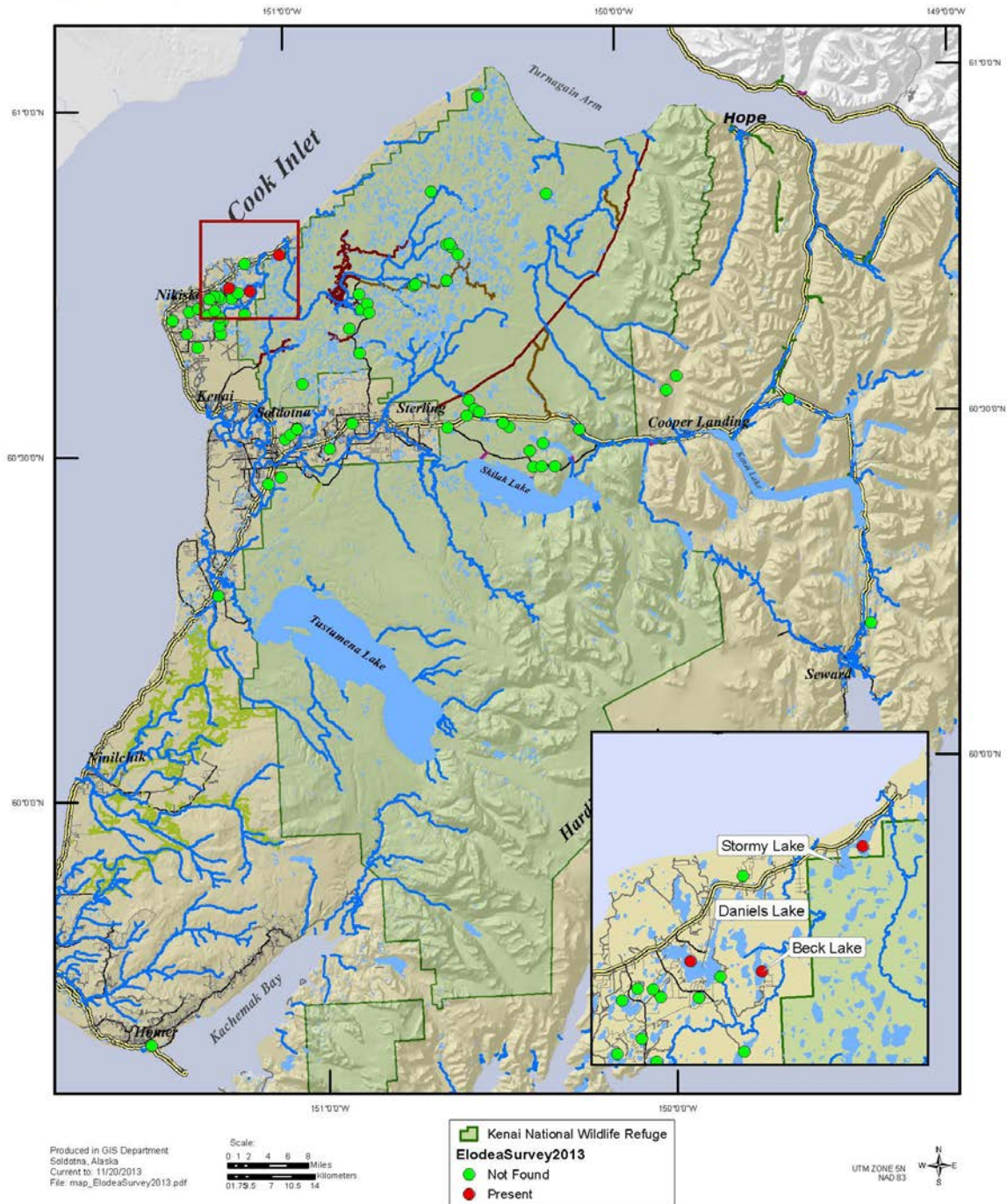


Figure 1. Elodea occurs in Beck, Daniels and Stormy Lakes. It was not found in 65 at-risk lakes on the Kenai Peninsula surveyed in summer 2013: Afonasi, Arc, Barabara, Barbara, Barr, Bear, Bernice, Big Merganser, Bishop, Bottenintnin, Breeze, Cabin, Cecille, Dolly Varden, Douglas, Duck, East Mackey, Engineer, Forest, Georgine (Georgina), Headquarters, Hidden, Imeri, Island, Jean, Johnson, Kelly, Kivi, Lily, Little Merganser, Longmere, Lower Ohmer, Lure, Marie, McLain, Mosquito, Paddle, Parsons, Peterson, Pond, Portage, Pot, Rainbow (Rainbow Trout), Rock, Salamatof, Scout, Spirit (Elephant), Sport, Tern, Thetis, Timberlost, Tirmore, Union, Upper Ohmer, Vogel, Watson, Weed, West Mackey, and Wik.

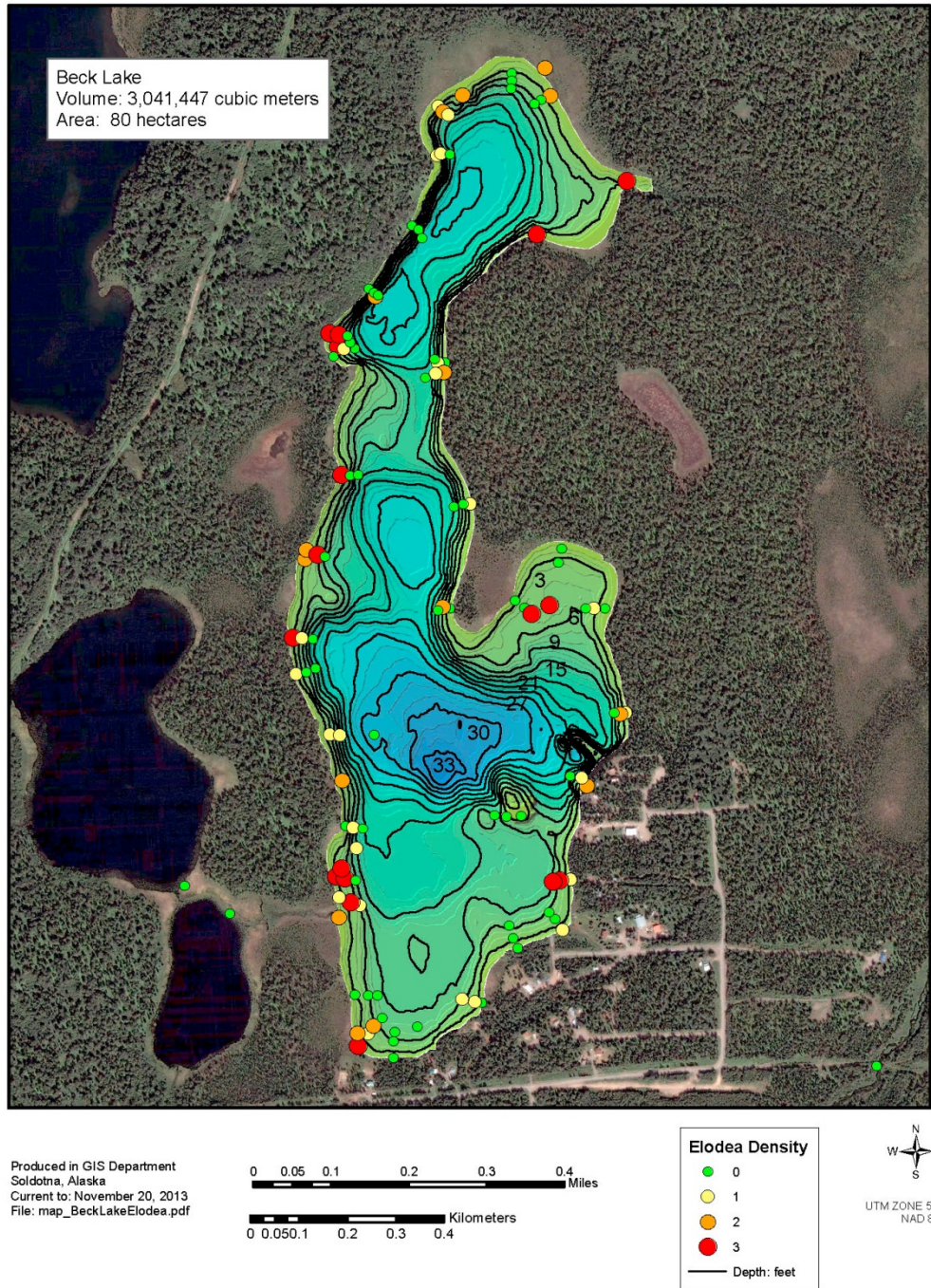


Figure 2. Distribution and relative abundance of *Elodea canadensis X nuttallii* in 200-acre Beck Lake based on a boat survey with throw rakes in July/September 2013.

1.3 Agency Authorities

The Alaska Department of Natural Resources is authorized to control and eradicate the spread of pests per Alaska Statute (AS 44.37.030). The management strategies outlined in the 2013 EA and this SEA

have been developed in conjunction with the U. S. Fish and Wildlife Service and other stakeholder agencies, organizations, and individuals through the Kenai Peninsula Cooperative Weed Management Area. This information has been presented to the public with invitation to participate in the development of project goals in public meetings in February 2013 and April 2014.

1.0 Alternatives

In this section, we present two alternatives. The first alternative would continue the current management plan to treat elodea in Stormy and Daniels Lake as described in the 2013 EA. Under the second alternative the 2013 EA would be amended to increase the scope of the treatment to include Beck Lake in addition to Stormy Lake and Daniels Lake.

1.1 Alternative 1: Continue Management at Stormy & Daniels Lake (no action alternative)

Under the first alternative, DNR and the Service would continue its current management plan to treat elodea in Stormy and Daniels Lake with the treatment objectives to reduce the aquatic invasive plant elodea biomass and eradicate elodea within these waterbodies using the herbicides fluridone and diquat, as described in the 2013 EA. This alternative would not allow for eradication of elodea across the entire Kenai Peninsula as the objective was originally stated in the 2013 EA. Elodea would remain in Beck Lake representing a high risk of spread to other waterbodies and re-infestation of Stormy and Daniels Lake post-treatment.

2.2 Alternative 2: Amend Management to Include Beck Lake (proposed action alternative)

Alternative 2 would amend the 2013 EA to increase the scope of the treatment to include Beck Lake in addition to Stormy Lake and Daniels Lake following the same management objectives outlined in the 2013 EA including treatments using the herbicide fluridone. Beck Lake represents the only other known Kenai Peninsula waterbody with elodea. The proposed change would continue to ensure consistent action towards the management goal of eradicating the highly invasive elodea from the Kenai Peninsula and therefore reducing ecological and economic impacts of elodea. All herbicide use will, by law, strictly conform to the herbicide product label and all permits.

Category	Alternative 1:	Alternative 2:
Geographic Scope	Stormy Lake (403 surface acres) Daniels Lake (621 surface acres)	Stormy Lake (403 surface acres) Daniels Lake (621 surface acres) Beck Lake (197 surface acres)
Herbicide Use	Diquat Fluridone	Diquat Fluridone

2.0 Affected Environment

In the 2013 EA, the environmental review and comments chapter summarizes the relevant physical, biological, and social components of the ecosystem, some of which could be affected by actions associated with the eradication of elodea by DNR and its partners. We incorporate by reference the

narrative presented in the 2013 EA for this chapter for Stormy and Daniels Lake including narrative analyses and the analysis presented in the FONSI including our responses to public comment.

Specific information on Beck Lake is included below.

Location	Size	Outflow	Adjacent Land Ownership
<ul style="list-style-type: none"> • T8N, R11W (Section 36) and T7N, R11W • 2.7 miles south of the Cook Inlet shore, 4.6 miles east of Nikiski and south of the Kenai Spur Highway 	<ul style="list-style-type: none"> • 196.8 acres • 12.5ft mean depth 	<ul style="list-style-type: none"> • 0.6-mile outflow into Bishop Creek 	<ul style="list-style-type: none"> • The southeast shoreline of Beck Lake is within private land ownership (21 parcels) • The Kenai Peninsula Borough, Alaska Mental Health Trust Authority, and CIRI have significant holdings

3.0 Supplemental Environmental Assessment Conclusions

3.1 Is an EIS required?

Based on review and evaluation of the SEA and public comments, the proposed project has been accepted and a finding of No Significant Impact (FONSI) has been issued.

3.2 Public Involvement

The SEA is posted on the ADNR internet site found at:

<http://www.plants.alaska.gov/invasives/pdf/Preliminary%20Supplemental%20Environmental%20Assessment%20April%202014.pdf> and can be mailed directly to persons who request it. Any interested citizens are encouraged to contact the preparers of this SEA to discuss.

Public scoping/notification

A public meeting to discuss this project was held on April 24th, 2014 at the Nikiski Recreational Center from 6pm to 8pm.

Public comment period for the pesticide use permit application for the Stormy, Daniels, and Beck lake restoration project was held from February 26th through March 28th, 2014.

ADNR public notice was issued on April 29th announcing the Elodea Management Project comment period for the Supplemental Environmental Assessment.

The 2013 EA can be found at <http://www.plants.alaska.gov/invasives/pdf/EA-StormyDanielsLakeElodeaEradication2013.pdf> which identifies the public involvement specific to that process.

3.3 Duration of Public Comment

The public comment period for the SEA began on April 29th and concluded May 29th, 2014. No comments were received during the public comment period.

4.0 Contact Persons

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5.0 References Cited

- Alaska Department of Natural Resources (DNR). 2013. Stormy and Daniels Lake Elodea Eradication Project: Environmental Assessment. Kenai Peninsula, Alaska.
- Bowmer, K. H., S. W. L. Jacobs and G. R. and Sainty. 1995. Identification, biology and management of *Elodea canadensis*, Hydrocharitaceae. *Journal of Aquatic Plant Management* 33:13-19.
- Pfauth, M. and Sytsma, M. 2005. Alaska Aquatic Plant Survey Report. Center for Lakes and Reservoirs, Portland State University, Portland, OR.