

<b>Title:</b>	<b>Updated Plan Submission Requirements for Changes in Natural Boundaries</b>
<b>Number:</b>	<b>AEP Administration 2017 No. 1</b>
<b>Program Name:</b>	<b>Provincial Wetlands and Water Boundaries Section</b>
<b>Effective Date:</b>	<b>September 1, 2017</b>
<b>This document was updated on:</b>	<b>August 25, 2017</b>

The Provincial Wetlands and Water Boundaries Section have undertaken a review of its plan examination process in an effort to improve its ability to adjudicate plans that reflect changes in natural boundaries. As a result, a number of process and procedural changes have been made. Going forward, the primary responsibility to undertake all research and quality assurance for the plans and associated packages being submitted will rest with the signing Alberta Land Surveyor. Incomplete submissions will be rejected without further review and will not be placed in the queue until all insufficiencies have been addressed. With adherence to the requirements contained herein, it is anticipated that waiting times will be significantly reduced in most cases. The Wetlands and Water Boundaries Section will implement the following changes to the plan submission requirements beginning September 1, 2017.

## Required Documents

For the purpose of reviewing an application regarding changes in natural boundaries the following documents **must** be included (if pertinent) within the application and submitted in digital format to [Water.Boundaries@gov.ab.ca](mailto:Water.Boundaries@gov.ab.ca):

### I. A Plan of Survey or Descriptive Plan

A plan of survey or a descriptive plan (in PDF or TIF format) suitable for registration at the Land Titles Office (LTO) is required. If the current location of the natural boundary is based on a field survey, refer to [sections "A" and "B"](#) below for plan requirements. Alternatively, if the current location of the natural boundary is based on delineation from aerial/satellite imagery, refer to [sections "A" and "C"](#) below for plan requirements.

Digital plan attached

### II. A Geo-Referenced Drawing File

A Geo-referenced drawing file of the above noted plan should be included.

Geo-Referenced drawing file attached

### III. **Current On-Site Photos**

Current on-site photos of the positions determined for the bank are required if bank determination is by field survey but not required if bank determination is based on a satellite/aerial imagery and a field inspection has not taken place. Photos should clearly show the staked locations along the border between the upland parcel and the bed and shore (i.e. on the surveyed bank) and should generally be taken in a direction parallel with the bank. Photos which do not clearly show the location of the bank, such as those taken in snow covered conditions are not acceptable.

Current on-site photos attached    Not applicable

### IV. **Overlaid Plan on the Imagery**

Alternatively, if suitable photos are not obtainable, the plan can be overlaid on a recent and orthorectified aerial/satellite imagery to support the location of the surveyed bank as shown on the plan. However, if the natural boundary has been delineated from a satellite/aerial imagery, the overlaid plan on the imagery is definitely required. The overlaid plan on the imagery must be plotted digitally with an appropriate scale which shows the background photo clearly.

Overlaid plan on the imagery in a PDF format attached

### V. **Reference Plan(s)**

Reference plan(s) to which the current title is based on and/or refers to is/are required. The appropriate original Township Plan must also be included.

All affected registered plan(s) and township plan(s) attached

### VI. **Current Title(s)**

Current title(s) to the subject land(s) affected by the natural boundary is/are required.

Current title(s) attached

### VII. **Historical Title(s) and Original Grant**

Historical title(s) and original grant are required if islands are located within the affected area by the subject plan, or if the current bank is located along the accreted islands, or if a former island has now connected to the main land, whether there still exists a channel with a definable bank between the two areas of land or not. Also, if the subject parcel of land is located within section 8 or 26 of a township south of the North Saskatchewan River, the historical titles and the original grant are also required.

Historical title(s) and original grant attached  Not applicable

## VIII. **Historical Imageries**

Historical imageries are required if any of the three following situations applies:

### a. **Islands**

If an island is shown as accreted to the upland parcel, or formed for the first time within the water feature. Historical imageries which show the process of the island(s) formation/deformation are required. These imageries must be orthorectified and underlaid your plan in layers within a PDF file.

### b. **Anthropogenic Activities**

If anthropogenic activities (i.e. drainage ditching, construction of structures including those designed to artificially control water levels (dams) or to provide bank stabilization, artificial fill or excavation etc.) have artificially affected the water level in a permanent and naturally occurring body of water, or if any part of the bank within the surveyed area has been modified/alterd by human act, historical imagery that shows the history of that activity (before and after construction, including the most recent available imagery taken prior to commencement of construction) must also be included and must be orthorectified and underlaid your plan in layers within a PDF file;

### c. **Avulsion**

Historical imageries are required where recently an avulsive event (i.e. flood, land slide or other significant natural occurrence) has rapidly altered the location of a natural boundary so that the water feature is now located in a different location than where it was prior to the event. The date of imagery should be as close as possible to the time immediately prior to the event. Historical imagery that shows the history of that event must be orthorectified and underlaid your plan in layers within a PDF file.

Historical Imagery included within the attached PDF file  Not applicable

## IX. **A professional Biologist Assessment Report**

A Professional Biologist Assessment Report should be included if one was prepared for a specific water body within the subject lands. The help of a professional biologists is sometimes required to classify the wetland(s) and determine the extent of aquatic vegetation communities which will assist in confirming the extent of the bed and shore. It is at the discretion of the Alberta Land Surveyor who is

competent in determining the extent of aquatic vegetation communities whether to seek the help of a professional biologist or not.

Professional Biologist Assessment Report included  Not applicable

#### X. **The Alberta Land Surveyor's Report**

The Alberta Land Surveyor's Report must be provided which articulates the basis of the application including all facts relevant to the application. It will summarize the methodology used to determine the bank location, and provide any explanations or details pertaining to any findings which may be beneficial for a water boundary analyst to be aware of.

Alberta Land Surveyor's Report included

#### XI. **A Signed Copy of This Document**

A signed copy of this document by the Alberta land Surveyor must accompany the submission package and all relevant boxes must be checked to ensure that the necessary documents listed hereon have been included. Failure to include this completed checklist will result in a rejection of the package.

A signed copy of this document included

## **Plan Requirements**

### **A. All Plans**

In addition to the Manual of Standard Practice and all the Land Titles Office requirements, plans which show the location of a natural boundary based on field survey and/or delineation from aerial/satellite imagery shall include the following information:

1. A sinuous solid bold line must be used to delineate the current location of the natural boundary where it defines the subject parcel. This also includes the banks of all existing permanent and naturally occurring bodies of water within the affected lands, which, according to Section 3 of the Public Lands Act, their bed and shores are vested in the Crown in right of Alberta (e.g. the remnants of detached oxbows which are not yet accreted to the upland). Rectilinear boundaries are not appropriate, nor will line work with bearings and distances as natural boundaries be acceptable.
2. The previous natural boundary from which the current title is based on must be shown on the plan as a ghosted dashed line and must be labeled to indicate what it is based on (e.g. a previous subdivision plan or an original township traverse). Where the previous bank is based on a Township Plan, the bank must be drawn using the appropriate Township field notes (available from S.P.I.N.). It is essential that the correct version of the Township Plan (as referred to in the title) be used. Scaling line work from the Township Plan is not acceptable and will result in a plan rejection.

3. If the surveyed water feature is a watercourse (river, stream, creek), the direction of flow must be shown with an arrow, and the banks must be labeled as right or left bank (based on looking down stream) accordingly.
4. The natural boundary should also be extended beyond the limits of the subject parcel, (approximately 30 to 50 metres) onto adjacent parcels affected by the application in order to provide an indication of how the shoreline and application fits within the overall area.
5. Where the current location of the natural boundary is not evident due to a recent avulsive flood event and/or anthropogenic activities such as excavation, depositing material, or building erosion protection barriers, the best available evidence (which is usually the most recent historical aerial/satellite photo before the alteration) must be used to show the pre-alteration location of the bank. For those natural boundaries determined by field survey, the extent of alteration near the bank should also be surveyed and labeled on the plan as the limit of fill, excavation, riprap, retaining wall, avulsion/sudden erosion, etc. Furthermore, within the vegetated peripheral area to a water body sometimes the help of a professional biologist is required in order to determine the extent of emergent plant communities which are considered as parts of the aquatic ecosystem of a water body. As supporting evidence for the bank determination, the assessment provided by the professional biologist should also be included within the application package as mentioned above.

## **B. Plans Showing a Natural Boundary Based on Field Survey**

In addition to the Manual of Standard Practice and all Land Titles requirements and those referred to in Section "A" above, plans which show the location of a natural boundary based on field survey shall also include the following information:

1. The current natural boundary must be labeled to indicate the name of the Alberta Land Surveyor who surveyed the bank, as well as the date(s) for which it was surveyed.
2. Sufficient information must be provided (in tabular format or within the main body of the plan) along the natural boundary indicating how the current natural boundary was surveyed (e.g. referenced to nearby survey monuments / traverse line, or geo-referenced coordinates as measured directly on the natural boundary). Dimensions to a natural boundary from a monument or traverse line, or coordinates representing the actual location of a natural boundary should be given to the closest decimetre.
3. Natural Boundaries by nature are ambulatory and as such, monuments should not be placed on a bank to define its current location, although they may be placed in close proximity (in a location where they will not likely be affected by wet or poor soil conditions) in order to reference the bank location. Alternatively, if the bank has been or is being fixed due to artificial draining, construction etc., then it is appropriate to place monuments on the fixed boundary if possible, as represented by straight lines from post to post (not sinuous) together with dimensions between the monuments.
4. Position and direction of all on-site photos must be indicated on the main body of the plan or shown on a sketch. This is best achieved by providing a specific point number and direction on the photo, which matches a point number on the plan or sketch.

**C. Plans Showing a Natural Boundary Based on Delineation from Aerial/Satellite Imagery**

In addition to the Manual of Standard Practice and all Land Titles requirements and those referred to in Section "A" above, plans which show the location of a natural boundary based on aerial/satellite imagery shall also include the following information:

1. The current natural boundary must be labeled to clearly identify the imagery and the date that the photo was taken. The imagery should be the most recent available aerial or satellite imagery suitable for the purpose of bank delineation. It must be orthorectified and geo-referenced to correctly show the location of the bank.
2. If a site visit has taken place and on-site photos of the bank have been taken to support the bank determination, the position and direction of all photos must be indicated on the main body of the plan or shown on a sketch. This is best achieved by providing a specific point number and direction on the photo, which matches a point number on the plan or sketch. In addition, it is required that the bank and other boundaries connected to the bank within the affected area by your plan are marked on the photographs.

Once the plan has been reviewed and any required changes have been made by the applicant and prior to issuing a consent letter, the Wetlands and Water Boundaries Section will request a digital copy of the finalized plan which will be submitted to the LTO for registration without any further modifications.

For any additional clarification and/or information, please send an email to [Water.Boundaries@gov.ab.ca](mailto:Water.Boundaries@gov.ab.ca).

Original signed by:

Date: August 25, 2017

**John Conrad**, Executive Director  
Provincial Program Branch  
Environment and Parks

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**Alberta Land Surveyor's Acknowledgement:**

I \_\_\_\_\_, ALS have read the above document and complied with all the requirements as pertinent to my application to the best of my knowledge and ability.

\_\_\_\_\_  
(ALS signature)

\_\_\_\_\_  
(Date)