



Environmental  
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## **Appendix A: *In Water We Trust* – Alberta Law and Policy for the protection of Environmental Flows**

### **Water Act provisions serving environmental flows**

The *Water Act* sets out various provisions relevant to the maintenance and restoration of environmental flows (EF), including:

1. The strategy for the protection of the aquatic environment;
2. Water management plans (and approved water management plans);
3. Water Conservation Objectives (WCO);
4. Water allocation transfers and transfer holdbacks;
5. Crown reserves of water;
6. Administrative discretion to:
  - a. amend licences, both prior to and during renewal,
  - b. stop receiving applications for diversions,
  - c. suspend or limit diversions under licence conditions; and
7. Legal process rights for direct participation in water allocation decisions if the decision directly affects you.

#### **Strategy for the Protection of the Aquatic Environment**

The *Water Act* dictates that a framework for water management planning was to be established by the end of 2001 and that a strategy for the protection of the aquatic environment must be included in the Framework document.<sup>1</sup> The *Framework for Water Management Planning* and embedded strategy is not overly instructive in relation to how

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<sup>1</sup> See *Water Act*, R.S.A. 2000, c. W-3 at s. 7.



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water quantity issues will be dealt with (strategically) to protect the integrity of aquatic ecology. It states:<sup>2</sup>

Water withdrawals may reduce flows in rivers and water levels in lakes and wetlands to a point where fish and other aquatic organisms are adversely affected. The challenge will be to balance the water that is needed to protect the aquatic environment with water needed to protect rights granted through licences under the *Water Act*. Water quantity requirements for the protection of the aquatic environment will be balanced in decision-making and planning initiatives under the *Water Act*, including approvals and licences, water conservation objectives and water management plans.

Water quantity objectives are listed to include WCO, instream needs and transboundary agreements.<sup>3</sup> “Achieving protection” relies on existing legislative instruments with no mention about how they will be applied in a strategic manner. A similar approach is outlined for aquatic habitat, which includes instream needs but there is no mention of actual measures to reach a declared environmental state. A description of how the regulatory tools and decisions will achieve “protection” is lacking.

The strategy for the protection of the aquatic environment fails to provide anything but simple assurance that government discretion will balance outcomes. Strategic direction and guidance is not provided and a lack of definitions and failure to articulate relevant empirically measurable outcomes ensures that the “balancing act” is difficult if not impossible to evaluate. This reflects a more general policy tendency to rely on discretion and nebulous motherhood ecological statements with no clear guidance to preserving ecological flows.

### **Water management plans**

Water management plans play various roles within the water management system created by the *Water Act*. Where a plan is created (by Director or another person) but is not approved it may be considered in the water licencing decision.<sup>4</sup> Where the provincial

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<sup>2</sup> Alberta Environment and Sustainable Resource Development, (Edmonton: Alberta Environment and Sustainable Resource Development, undated) online:

<[http://www.environment.alberta.ca/documents/Framework\\_for\\_water\\_management\\_planning.pdf](http://www.environment.alberta.ca/documents/Framework_for_water_management_planning.pdf)> at 26.

<sup>3</sup> *Ibid.* at 28.

<sup>4</sup> *Water Act*, *supra* note 1 at s.51.



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cabinet has approved management plans they form a mandatory consideration of the Director in making these decisions.<sup>5</sup>

The plans are also relevant to:

- Enabling water allocation transfers;<sup>6</sup>
- The matters and factors to be considered in relation to a transfer of an allocation;<sup>7</sup>
- Setting volumes for exempt agricultural users and registered users;<sup>8</sup>
- Setting the number of households that may draw water for household purposes, as defined by the Act;<sup>9</sup>
- Place limitations on diversions within a subdivision in certain circumstances;<sup>10</sup>
- In deciding whether to cease accepting licence applications;<sup>11</sup> and
- In deciding not to renew a licence (where inconsistent with an approved plan);<sup>12</sup>

The plans themselves are forward looking and provide little in the way of certainty for addressing past over-allocation of the resource or changing circumstances in flow. This is particularly the case where an over-allocated basin has a large volume of diversions granted in deemed licences, which are not subject to renewal and updating.

### **Example of the Approved South Saskatchewan Water Management Plan**

The *Approved Water Management Plan for the South Saskatchewan River Basin (Alberta)* closed the majority of the basin to further surface water allocations, enabled water allocation transfers, and set a WCO for the basin at either 45% of the natural rate of flow, or

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<sup>5</sup> *Ibid.* at s.11, s.38 re approvals, and s.51 re licences.

<sup>6</sup> *Ibid.* at s.81.

<sup>7</sup> *Ibid.* at s.81

<sup>8</sup> *Ibid.* at s.19 and at s.73(3).

<sup>9</sup> *Ibid.* at s.21.

<sup>10</sup> *Ibid.* at s.23

<sup>11</sup> *Ibid.* at s.53(3)

<sup>12</sup> *Ibid.* at s.60(3)



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the existing instream objective increased by 10%, whichever is the greater at any point in time".<sup>13</sup>

In addition the plan prescribed the “matters and factors” that must be considered during transfer decisions and licence decisions. The Plan recommended holding back 10% of any transfer amount unless there are compelling reasons not to do so.<sup>14</sup> It is recognized that these holdbacks could “help increase the flows of highly-allocated rivers by a small amount, or at least help offset increases in water use by the new licence holder”.<sup>15</sup>

The matters and factors to be considered in a transfer decision are generally framed in minimizing the likelihood of “significant adverse effects” on:

- The aquatic environment;
- Existing instream objectives and/or WCO;
- Public health and safety;
- Assimilative capacity; and
- Groundwater quantity or quality.

The plan also included various recommendations that could feasibly serve EF, including:<sup>16</sup>

- Improved dam management;
- Improved protection and management of riparian vegetation;
- Encouragement of voluntary actions for flow restoration (particularly during critical periods)

The plan also recommended amending the *Water Act* to allow for WCO licences to be held by private parties when “obtained under the transfer provisions of the *Water Act*, allowing for partial licence cancellations, and allowing for future unallocated water to be part of existing Crown Reservations.”<sup>17</sup>

### **Water conservation objectives: setting and licencing**

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<sup>13</sup> Alberta Environment (Edmonton: Alberta Environment, 2006), online: Alberta Environment and Parks <<http://aep.alberta.ca/water/programs-and-services/river-management-frameworks/south-saskatchewan-river-basin-approved-water-management-plan/documents/SSRB-ApprovedWaterManagementPlan-2006.pdf>> at 8.

<sup>14</sup> *Ibid.* at 12.

<sup>15</sup> *Ibid.*

<sup>16</sup> *Ibid.* at 16.

<sup>17</sup> *Ibid.* at 17.



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Water conservation objectives or WCOs are a primary tool to protect instream flows in the province. WCOs are further defined by the *Water Act* as an amount and quality of water to be necessary for:<sup>18</sup>

- (i) protection of a natural water body or its aquatic environment, or any part of them,
- (ii) protection of tourism, recreational, transportation or waste assimilation uses of water, or
- (iii) management of fish or wildlife,

and may include water necessary for the rate of flow of water or water level requirements.

The setting of the WCO and licencing of a WCO amount are two distinct concepts. Only the government may hold licences for the purpose of implementing a WCO.<sup>19</sup> Once a WCO is established there is no requirement that a licence be issued for its protection. A WCO may be designated by the Director (with public consultation mandated) or may be derived through the water management planning process.<sup>20</sup> A WCO may be used as a reason to not renew a licence under the *Act* at the discretion of the Director.<sup>21</sup> WCOs are also discretionary considerations that the Director may incorporate into decision making around preliminary certificates and in deciding to take a water conservation holdback when authorizing a water allocation transfer.<sup>22</sup>

### **Water allocation transfers and conservation holdbacks**

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<sup>18</sup> *Ibid.* at s.1(1)(hhh)

<sup>19</sup> *Water Act*, *supra* note 1 at s. 51(2) (2) On application by the Government in accordance with this Act, the Director may issue a licence to the Government but to no other person, or may refuse to issue a licence, for

- (a) the diversion of water,
- (b) the operation of a works, or
- (c) providing or maintaining a rate of flow of water or water level requirements for the purpose of implementing a water conservation objective.

<sup>20</sup> For example see the South Saskatchewan River Basin Approved Water Management Plan, *supra* note 13.

<sup>21</sup> *Water Act*, *supra* note 1 at s. 60 (3)(c).

<sup>22</sup> *Ibid.* at ss. 66(3)(c) and s.83(1)



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The passage of the *Water Act* did provide the Crown with a key tool to augment how the prior allocation system worked by allowing the transfer of an water allocation under an existing water licence to another party.<sup>23</sup> These transfers are only possible in an area where an approved water management plan enables them or by order of the Lieutenant Governor in Council.

Transfer applications and decisions are conducted pursuant to Part 5, Division 2 of the *Water Act*. The Director makes the transfer decisions pursuant to the Act and is prohibited by from approving a transfer where he or she is of the opinion that the proposed transfer impairs the water use of other users or is likely the cause a significant adverse effect on the aquatic environment.<sup>24</sup>

This power could feasibly be used by the Crown to purchase environmental or instream flows from senior licence holders so long as a willing seller was identified. The ability to transfer an allocation is also a key enabler of water markets and possibly, water trusts.

A “water conservation holdback” provision in the *Water Act* allows the Director to holdback up to 10% of the allocation being transferred when a transfer is approved.<sup>25</sup> Water conservation holdbacks can only be made at the time of the issuance of the new licence that resulted from the transfer.<sup>26</sup>

What happens to the water being held back may vary but the *Act* stipulates some limitations, namely:<sup>27</sup>

- it may “remain in the natural water body, for the purposes of providing or maintaining a rate of flow of water or water level requirements, without issuing a licence for that water,”
- it may be added to an existing Crown reserve under s.35 (described *supra*); or
- the Director may issue a licence to the Government for the purposes of a WCO under section 51(2).

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<sup>23</sup> *Ibid.* at s.81.

<sup>24</sup> *Ibid.* at s. 82(3).

<sup>25</sup> *Ibid.* at s.83.

<sup>26</sup> *Ibid.*

<sup>27</sup> *Ibid.*



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### Crown Reserves

The government may also reserve the issuance of a Ministerial Order.<sup>28</sup> A priority number can be allocated to the reserved water, mimicking a licence being granted for the reserve water. In this way the Minister may hold or reserve water for specified purposes.<sup>29</sup> The order stipulates the nature and condition on which the water is to be reserved and directs the Director in how the reserved water is to be treated.<sup>30</sup>

For example, the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* was put in place to reserve all water that was not allocated under a licence or registration at the time the order was made.<sup>31</sup> The order outlines when and to whom an allocation may be made by the Director and limits the Director's discretion to allocate water.<sup>32</sup>

### Halting acceptance *Water Act* licence applications.

The *Water Act* empowers the Director with the ability to "close" water bodies from further applications for diversions by stopping acceptance of applications for diversions for a specified time.<sup>33</sup> This process is initiated by providing notice that no further application will be accepted and any applications received by the Director after the notice date will not be accepted (although licences for temporary diversions may still be accepted).<sup>34</sup> This is a discretionary power of the Director accompanied by some specified considerations and the need to conduct a public review if the timeline is to be extended.<sup>35</sup>

This discretion was used in conjunction with the approved water management plan for surface water applications in the *Approved Water Management plan for the South Saskatchewan River*.

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<sup>28</sup> *Ibid.* at s.35.

<sup>29</sup> *Ibid.*

<sup>30</sup> *Ibid.* at s.35(3).

<sup>31</sup> See *Oldman and South Saskatchewan River Basin Water Allocation Order*, Alta Reg 171/2007.

<sup>32</sup> The reserve water may only be issued for use by First Nations, WCO, storage (if it is for the protection of the quality environment), and to improve availability to existing licenced and registered users. *Ibid.* at s.3. Also see the *Oldman River Basin Water Allocation Order*, Alta Reg. 319/2003.

<sup>33</sup> *Water Act*, *supra* note 1 at s. 53.

<sup>34</sup> *Ibid.* at s. 53(4) and 110(4).

<sup>35</sup> *Ibid.* at s.53.



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### **Amending licences**

The *Water Act* prescribes a variety of instances where water licences may be amended, suspended or cancelled.<sup>36</sup> For specific environmental purposes this is limited to instances where there is a “significant adverse effect on the aquatic environment” that has or may occur and effect was not reasonably foreseeable at the time the licence was issued.<sup>37</sup> Licence amendments are further constrained as any changes cannot decrease the allocated volume.<sup>38</sup> Where the Director suspends the licence compensation is payable.<sup>39</sup> This provision has limited value for more senior licences as only those “licences issued under this Act” may be suspended or cancelled.<sup>40</sup>

The Director may cancel a licence where there has been no diversion of any water allocated or there has been a failure to exercise rights granted under the licence.<sup>41</sup>

### **Licence renewals**

Licences issued under the *Water Act* are valid for specific periods of time, after which they must be renewed. There are several discretionary provisions through which the Director may refuse to renew a licence under the act including, if:

s.60(3)

(c) the water conservation objective of a natural water body from which the diversion of water will be made is not being met,

[or]

(d) the renewal, in the opinion of the Director, would cause a significant adverse effect on the aquatic environment.

### **Limiting diversions through licence conditions**

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<sup>36</sup> *Ibid.* at ss. 54 & 55.

<sup>37</sup> *Ibid.* at s. 55(2).

<sup>38</sup> *Ibid.* at s. 55(2).

<sup>39</sup> *Ibid.*

<sup>40</sup> *Ibid.*

<sup>41</sup> *Ibid.* at s.55(1)(f).



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Licences issued under the *Water Act* and predecessor legislation typically include some condition that allow for government discretion to limit activities or review licences to ensure they are meeting the public interest or specific ecological goals (framed as a WCO or otherwise). The nature and scope of government discretion to suspend or limit diversions from historically granted licences is difficult to assess on a broad level, requiring a case by case assessment of the language of the condition itself. There is likely significant litigation risk in any exercise of discretion that would limit diversions for historically granted licences as well, which confounds the use of government discretion operating to protect EF.

### **Participation in decisions – limits to “shared responsibility”**

The structure of our water allocation legislation in Alberta creates a disconnect between the idea of shared responsibility for environmental outcomes and ability of individuals to contribute to environmental flows. While individual Albertans can participate in water management planning processes, their ability to participate directly in decision-making is significantly limited. Participation rights in licence decisions under the *Water Act* are limited to those who are “directly affected” by a decision, a characterization that has been narrowly applied to mean a direct health or property interest.<sup>42</sup>

Licences granted prior to the passage of the *Water Act* and even those granted since its coming into force are largely devoid of mechanisms to allow for EF actions and broader “shared responsibility”.

### **Alberta policy serving environmental flows**

There are various policies that are relevant to the protection of environmental flows in Alberta. The most relevant policy documents and the related outcomes are set out below in Table 1A.

**Table 1A: Policy direction for EF: *Water for Life* evolution**

Policy document	EF goal (summary)	Outcomes include
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<sup>42</sup> See ss. 109 &115 of the *Water Act*, *supra* note 1. This narrow legal test for standing to participate in licence decisions (and appeals) ensures that only private interests are considered in these decisions, something that, in most instances, will be odds with instream flow needs.



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Water for Life: Alberta's strategy for sustainability policy (Water for Life) (2003) <sup>43</sup>	EF goal of "healthy aquatic ecosystems" (HAE) "Albertans are assured that Alberta's aquatic ecosystems are maintained and protected."  Key Directions: <ul style="list-style-type: none"><li>• Knowledge and research</li><li>• Partnerships</li><li>• Water conservation</li></ul>	Short, medium and long term outcomes: <ul style="list-style-type: none"><li>• Protecting critical areas</li><li>• Setting water management objectives</li><li>• Management and allocation to sustain aquatic ecosystems</li><li>• Knowledge and tools are there for protection</li><li>• Communities demonstrate leadership</li></ul>
Water for Life: a renewal (2008) <sup>44</sup>	HAE goal is maintained "Albertans are assured that Alberta's aquatic ecosystems are maintained and protected."  Key directions remain unchanged.	Outcomes include: <ul style="list-style-type: none"><li>• Protection of aquatic ecosystems in critical areas;</li><li>• Establishment of priorities for sustaining aquatic ecosystems to be implemented through watershed plans; and</li><li>• Management and allocation of water to sustain aquatic ecosystems and ensure their contribution to Alberta's natural capital and quality of life is maintained.</li></ul> Key actions include: <ul style="list-style-type: none"><li>• Develop a provincial action plan to improve the health of significantly impacted aquatic ecosystems;</li><li>• Set water conservation objectives on all major basins; and</li></ul>

<sup>43</sup> Government of Alberta, *Water for Life: Alberta's strategy for sustainability policy* (Edmonton: Government of Alberta 2003), online: Alberta Environment and Sustainable Resource Development <<http://environment.gov.ab.ca/info/library/6190.pdf>>.

<sup>44</sup> Government of Alberta, *Water For Life: A Renewal* (Edmonton: Government of Alberta, 2008), online: Alberta Environment and Sustainable Resource Development <<http://environment.gov.ab.ca/info/library/8035.pdf>>.



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		<ul style="list-style-type: none"><li>Finalize and implement a new wetland policy for Alberta.</li></ul>
Our Water, Our Future: A Plan For Action (2014) <sup>45</sup>	Maintains water for life goals with focus on immediate priorities of: <ul style="list-style-type: none"><li>Healthy lakes</li><li>Hydraulic fracturing and water</li><li>Drinking water and wastewater</li><li>Water management</li></ul>	<p>Water quantity/EF actions include:</p> <ul style="list-style-type: none"><li>Examine approaches for establishing protected water through government-led initiatives and support research</li><li>Examine regional opportunities for water and wastewater reuse</li><li>Examine water storage potential in SSRB</li><li>Pilot projects for water storage management opportunities in the SSRB</li><li>Focus on demonstrable increase in water use efficiency and productivity</li><li>Examine potential climate impacts in the SSRB</li><li>Increase knowledge and awareness of lake issues</li></ul> <p>Long term action</p> <ul style="list-style-type: none"><li>Water management system is optimized (through demand and supply side actions) and clarified.</li></ul>

Government actions in support of environmental flows under the policy goal of “Healthy Aquatic Ecosystem” have been slow moving. Some important research into flows and management options has been undertaken including on the Bow River; however, translating the research into environmental outcomes has not been forthcoming.<sup>46</sup>

<sup>45</sup> Government of Alberta,(Edmonton: Government of Alberta, 2014), online: Alberta Environment and Sustainable Resource Development <<http://esrd.alberta.ca/water/water-conversation/documents/WaterFuture-PlanAction-Nov2014.pdf>>.

<sup>46</sup> See Bow River Project, Research Consortium *Bow River Project Final Report* (2010), online: <<http://albertawater.com/bow-river-project-final-report>>



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The setting of water management objectives and priorities through watershed plans is still ongoing in most basins and the “knowledge and tools” for Albertans to “implement actions to maintain or improve Alberta’s water resources” are sparse when it comes to preserving flows (other than voluntary non-use and conservation which results in water remaining instream). WCOs have yet to be set in all basins and specific action plans to improve health have yet to be published.

The focus has remained on partnerships and voluntary action. The original strategy notes:<sup>47</sup>

... citizens, communities, industries and governments all share responsibility for the wise use and sustainability of their watersheds. Albertans must work together to set objectives for the watershed, identify issues, monitor the condition of the watershed and continuously adjust their use of water and activities on the landscape that affect the water.

Water conservation, efficiency and productivity have received significant focus but remain linked to EF in a volunteer fashion.<sup>48</sup> Further a wetland policy for Alberta has yet to be implemented.

### Integrated watershed management plans

Integrated watershed management plans (IWMP) are a product of the *Water for Life Strategy* and are created by regional Watershed Planning and Advisory Councils with the intent of integrating land and water management. IWMPs are purely advisory in their nature (except where a “water management plan” as described in the *Water Act* is embedded within the broader watershed plan).

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<sup>47</sup> *Ibid.* at 15.

<sup>48</sup> Alberta Water Council, *Water Conservation, Efficiency and Productivity: Principles, Definitions, Performance Measures and Environmental Indicators* (Edmonton: Alberta Water Council, 2007), online: Alberta Water Council <[http://www.awchome.ca/Portals/0/pdfs/CEP\\_Definitions\\_Final\\_Report.pdf](http://www.awchome.ca/Portals/0/pdfs/CEP_Definitions_Final_Report.pdf)> at p. 1. The plan states a long term goal as “The overall efficiency and productivity of water use in Alberta has improved by 30 per cent from 2005 levels by 2015 (firm targets to be determined by the Provincial Water Advisory Council)”.

Negotiations had occurred about whether this target and planning process should be mandatory or voluntary. It was contemplated that the use of Conservation, Efficiency and Productivity Plans (CEP Plan) could be used to facilitate gains for ecological flows. While some collateral ecological benefits have likely occurred through the these planning documents there is not set mechanism nor evaluation of “net” benefit or harm to ecological flows as a result of the efficiency and productivity gains. This evaluation of benefits is intended to be carried as future work of the Alberta Water Council.



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The value of voluntary and advisory IWMPs for achieving environmental outcomes has yet to be established. The creation of IWMPs foster relationships within a watershed; however, the implementation of plan outcomes is likely to be *ad hoc* and opportunistic.<sup>49</sup> If incorporated into binding regional plans in the province these plans would have heightened relevance.

Regardless, IWMPs are not likely to drive significant restoration of flows due to the need to overcome legally entrenched diversion rights under the *Water Act*.

### Desk-top EF Method

The Government of Alberta published *A Desk-top Method for Establishing Environmental Flows in Alberta Rivers and Streams* in 2011.<sup>50</sup> The stated intent of the “Method” was “to provide guidance for the issuance of water licences in unaltered (limited or no extractions) flowing water where no site-specific environmental data exists and where the objective remains to provide full protection of the aquatic ecosystem”.<sup>51</sup> The method, being desk-top, recognizes that site-specific information for determining impacts of diversions is preferable and that a “one-size-fits all” approach to diversion impacts on EF must be recognized for what it is.

The Method recommends adopting an EF based on a formula resulting in the flow which is:<sup>52</sup>

the greater of either:

- A 15 per cent instantaneous reduction from natural flow, or

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<sup>49</sup> See Jason Unger, *Consistency and Accountability in Implementing Watershed Plans in Alberta: A jurisdictional review and recommendations for reform* (Edmonton: Environmental Law Centre, 2009), online: Environmental Law Centre <[http://www.elc.ab.ca/Content\\_Files/Files/ELCWtshdPlnImpReviewRecommendations.pdf](http://www.elc.ab.ca/Content_Files/Files/ELCWtshdPlnImpReviewRecommendations.pdf)>

<sup>50</sup> Government of Alberta, *A Desk-top Method for Establishing Environmental Flows in Alberta Rivers and Streams* (Edmonton: Government of Alberta, 2011), online: Alberta Environment and Sustainable Resource Development <<http://www.environment.gov.ab.ca/info/library/8371.pdf>>.

<sup>51</sup> *Ibid.* at 2.

<sup>52</sup> *Ibid.*



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- The lesser of either the natural flow or the 80 per cent exceedance natural flow based on a weekly or monthly (depending on the availability of hydrology data) time step.

The method is focused on being protective of the aquatic environment and is instructive insofar as it can be used as a general benchmark to compare relative allocation levels and EF efforts taken in a specific stream or river.

### **Administrative Guideline for Transfer of Water Allocations**

The Government of Alberta has published guidelines for those seeking to transfer a water licence.<sup>53</sup> These guidelines set out considerations and the documentation required in support of an application.<sup>54</sup> The guideline also sets out sample notice for transfer applications and outlines the general review process (including the evaluation of impairment of other users).<sup>55</sup> The guideline acknowledges that the Government of Alberta may apply for a transfer to allocate water to a WCO licence.<sup>56</sup> The guidelines do not deal with transfers for EF purposes specifically nor do they detail how citizens may more broadly engage in the process.

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<sup>53</sup> Alberta Environment and Sustainable Resource Development, *Administrative Guideline for Transfer of Water Allocations* (Edmonton: ESRD, 2014), online: Alberta Environment and Sustainable Resource Development <<http://esrd.alberta.ca/water/legislation-guidelines/documents/GuidelineTransferWaterAllocation-May14-2014A.pdf>>.

<sup>54</sup> *Ibid.*

<sup>55</sup> *Ibid.*

<sup>56</sup> *Ibid.* at 21.