Guidance special subject: Water-related High Conservation Values (WHCVs)
[Draft: version of 17th September 2018]

This document covers the following:

1. Definition of WHCV

WHCV stands for **Water-related high conservation value**. In simple terms, it applies to any feature of high value to humans or nature which must be protected and conserved, if on the water steward's site or is identified as a catchment shared water challenge. The term 'conservation' is used in a broad sense to include all features of high value. In addition to formally recognized conservation areas, it includes such features as water wells for drinking water supply and water-related features of cultural significance.

AWS provides a basic definition, adapted from the definition adopted by the HCV Resource Network for HCV:

> *Water-related High Conservation Values (WHCVs) are biological, ecological, social, or cultural water-related values identified as important either by local stakeholders or at a national, regional, or global level.*

The lead reference for a comprehensive HCV definition is the Common Guidance for the Identification of High Conservation Vales (Brown et al, 2013). Annex 3 provides dedicated guidance on 'HCVs in freshwater systems'.

AWS does not require a water steward to accurately categorize each feature. Most important is to identify them, to recognize their value and vulnerability, and to include appropriate actions to improve or protect them.

The HCV Network defines six HCV categories, of which the following are adapted and simplified descriptions for corresponding WHCVs. Some features will fall within more than one category. The first four can be grouped as 'Environmental Values', thus indicating three main groups: environmental, community and cultural.

- **WHCV1 Species diversity**: Concentrations of biodiversity (especially for rare and threatened species) dependent on natural water systems. **Examples**: Concentrations of birdlife, fish, plant species (any of which may be seasonal) or any other important and threatened species dependent on natural water systems
- **WHCV2 Landscape-level ecosystems**: Large water-related landscape features supporting endemic wildlife. **Examples**: Significant natural water bodies and features such as rivers, lakes and wetlands.
- **WHCV3 Ecosystems and habitats**: Rare or endangered freshwater ecosystems (not already covered in HCV2). **Examples**: peatlands, karstic systems (cave systems created by water erosion and dissolution over geological timescales)

- **WHCV4 Ecosystem services**: Basic water-related ecosystem services (providing a benefit or protection to humans). **Examples**: flood plains and wetlands (which absorb and attenuate flood flows); springs (providing a natural water supply); aquifer recharge zones; defined groundwater protection zones (often with regulatory status); upper catchment areas critical to maintaining downstream flows and/or water quality
- **WHCV5 Community needs**: Sites, resources and features essential to meeting basic needs. **Examples**: Water sources for drinking water (eg. hand dug wells, boreholes, springs, surface water bodies used for that purpose); Freshwater animal or plant populations relied on by communities for food or other benefits.
- **WHCV6 Cultural values**: Water-related features of important cultural, religious or spiritual value to the community or indigenous peoples. These are features that, more than any other, will require effective stakeholder and community engagement to identify. **Examples**: Waterfall, spring or lake of special cultural significance; mineral water springs

2. Why AWS uses the term WHCV

WHCV In AWS Standard ver 2.0 replaces the term IWRA (Important Water Related Area) of ver 1.0. The reason is to align with terminology, HCV, now used by a growing number of international standards systems. This helps to apply a more consistent and more widely understood approach to identifying sensitive features. In its definition of IWRA, ver 1.0 already referenced HCV as an example. The concept of WHCV remains very similar to IWRA, but is now better supported by a more comprehensive set of definitions and guidance, and in line with other standards systems. Comprehensive application of the HCV concept can require highly specialized and scientific expertise, depending on the complexity of an HCV feature.

The HCV concept is not used universally, which means that, very often, important water-related features will have been identified in a region or catchment without any reference to the HCV definition. It is more important to identify such features using locally available maps, information and stakeholders who may have their own methods and approach. The HCV concept is a tool to help identify important features where existing assessments are limited or absent.

3. The relevance and role of WHCVs within the AWS Standard

One of the four intended Outcomes of the AWS Standard is to achieve the 'healthy status of WHCVs), as stated in the Introduction and Theory of Change.

The organization is required to identify WHCV features on the site (Indicator 1.3.6) and in the catchment (Indicator 1.5.5). It should also identify best practices for maintenance of on-site WHCV features (Indicator 1.8.3), and report on implementation (3.5.3 and 3.5.6).

For on-site WHCV features, the organization is required to restore them (where degraded) and to maintain or improve them (Criterion 3.4), regardless of whether a feature is impacted by the site's water use or wastewater management

For off-site WHCV features in the catchment, the organisation should understand whether its own water use or wastewater discharge, or any other of its activities, have an impact on, or present a risk to the WHCV feature. A feature could also present a risk or impact to the site or its water source. This may require an assessment by a relevant expert. For example, the site's water abstractions may have an impact on water levels or flows at the WHCV feature; or pollution from the site may impact on the WHCV feature's water quality.

Catchment WHCV features may fall within the scope of shared water challenges, for which collective action may be agreed to restore or protect the feature.

4. How to identify WHCV features

Identifying all WHCV features will usually require a combination of methods, combining original research and stakeholder engagement. Suitable methods and information sources include:

- Published maps of recognized conservation sites and legally protected features.
- General maps and satellite imagery
- Regulatory and environmental agencies and water service providers
- Consult with stakeholders, such as landowners, businesses and farms for their views on important water-related features (including their own water sources)
- Conservation groups and NGOs.
- Consult with community representatives on features of cultural value. (Be aware that a feature could be of value to a community not physically located in the catchment).

List all identified features along with their principal category (environmental, community, cultural) a short description, why and to whom they are important. Where a feature is identified by stakeholders but concluded to be of insufficient status to be a WHCV, the organization should provide a justification.

5. How to assess the potential impact on, or risk to WHCV features from the organization

Of most importance is to understand where the organization has an existing physical impact or presents a physical risk to a WHCV. However, it is also important to recognize that even if an absence of physical risk can be determined, there may still be a reputational risk based on a perception by stakeholders.

Understanding physical impacts and risks should start with a conceptual model of the water environment across the catchment. This is a visualization of the landscape and physical structure, and of how water flows through it and where it is stored. (It should not be confused with a computer model, although computer modelling may be used to develop and assess it). The conceptual model may consist of maps and cross-sections, or a 3-dimensional schematic.

The conceptual model should identify all relevant water bodies (including aquifers), water sources and all other WHCVs, and include an understanding of how they are connected, or not connected, from a water and hydrological perspective.

For each WHCV feature, there should be an assessment of the actual or potential impact of the organization on its status. The potential for impact can depend on many factors, including: whether the site and WHCV feature are connected by a common water body; the distance of the feature and its direction (downstream or upstream); and whether run-off from the site can impact on it.

Such assessments will usually require specialist expertise (eg. water or environmental consultant), except in more simple and obvious situations. Below are examples of potential impacts between a water steward' site and WHCV.

Examples of impacts the organization can have on a WHCV feature.

- Borehole abstractions may cause water levels to fall in other boreholes or in a wetland, or cause the flow from a natural spring to reduce
- Surface water abstractions may reduce river flow, or flows entering a wetland

- Wastewater discharge (even if treated and compliant) causes nitrates to rise in a sensitive surface water body and contribute to eutrophication
- Run-off from a farm causes sediment and agricultural chemicals (fertiliser, pesticides) to enter a sensitive water body
- Agricultural chemicals used on a farm (fertilizer, pesticides) infiltrate to contaminate an important underlying aquifer.
- There is a risk that chemicals stored on the site could be flushed away in a heavy storm to contaminate a nearby water body, with a potential knock-on impact of harming or killing plant and animal species

Examples of impacts a WHCV can have on the water steward

- Increasing abstractions from a public supply borehole cause the water level to fall in the site's own boreholes
- Occasional flooding of wetland (although beneficial to its own condition) causes flooding problems at the site

Of course, the priority is to identify if there is a current impact, but secondly to identify risks and potential impacts. It is also valuable to report where the assessment shows there is no risk or a low risk of impact.

The assessment should also consider the scale of an impact. It is misleading to assume any impact is significant. A small and limited impact may be acceptable and reasonable.

6. Actions to address impacts and risks

For any WHCV feature located on site, the AWS Standard requires the organization to restore and protect it, regardless of whether there is an impact or risk link.

For a WHCV feature located off site but within the catchment(s) then actions depend on the impact and risk assessment or whether it is part of a shared water challenge. If there is no impact or risk link between the site and the feature, then no action is required.

Where an impact or risk is identified (through the process outlined in section 6 above), the organisation has a responsibility to stop or reduce the impact, at least to the level it can be classed as insignificant. The action to achieve this will be dependent on the cause of the impact and nature of the WHCV feature. Examples of actions are as follows:

- Improve water efficiency at the site to reduce water abstraction volumes
- Establish a new water source further from the vulnerable IWRA. In some cases, this could mean switching from a private to a municipal water source.
- Upgrade wastewater treatment
- Change the location of wastewater discharge or switch to a municipal service provider
- Change how land is managed so as to reduce run-off from agricultural land
- Install buffer strips between agricultural land and sensitive water bodies
- Improve how chemicals are stored so as to reduce the risk of them leaking or spilling

Some WHCV features may be impacted on, or at risk from others in the catchment (as well as the organization). In this case, actions should be part of addressing shared water challenges to remove or reduce impacts and risk.

7. Background on HCVs

The HCV concept was first introduced within the Forest Stewardship Council's (FSC) Standard in 1999. Detailed definitions and guidance are managed by the HCV Network www.hcvnetwork.org. A number of other standards organizations have also adopted the concept (including Bonsucro, the Better Cotton Initiative and the Roundtable on Sustainable Palm Oil (RSPO). More than 60 private sector companies and financial institutions have adopted in their sustainability reporting. Through its wider use, its scope is adapted to include agriculture and water, with Annex 3 of the main guidance (Brown et al 2013) focused on freshwater HCVs. .

REFERENCE:

Brown, E., N. Dudley, A. Lindhe, D.R. Muhtaman, C. Stewart, and T. Synnott (eds.). 2013 (October). ***Common guidance for the identification of High Conservation Values***. HCV Resource Network.