

MINUTES
PWSCG (47) Meeting
10:00 – 15:30 Thursday 10th October 2019
Church House, **Great Smith Street**, SW1P 3AZ

Attendees

Denise Harker (DH)	Independent Member
James Cross (JC)	Highways England
Duncan Gibbs (DG)	CAA
Clare Dinnis (CD)	Environment Agency
Tammy Newey (TN)	MCGA
Emer O'Connell (EO)	Public Health England
Sarah Jackson (SJ)	PWSCG Secretariat (BEIS)
Paul Riches (PR)	PWSCG Secretariat (BEIS)
Derrick Ryall (DR)	Met Office
Richard Orrell (RO)	Met Office
Will Lang (WL)	Met Office
Mike Gray (MG)	Met Office
Lisa Martin (LM)	Met Office

Actions

	Owner	Action	Date
1.	Secretariat	All PWSCG members to send a short biography and photo to the Secretariat for the new Chair's induction	By 30 th Nov
2.	All PWSCG	Provide the Secretariat with names of any individuals who may be suitable candidates for the Independent Member role	By 1 st Dec
3.	Richard Orrell	Check when the update to the mapping gazetteer that is used in the App will be updated.	By 8 th Nov
4.	Secretariat	Carry out an in-depth review into the 'IMPROVER' project.	tba
5.	Richard Orrell	Share the 'Walters et al' technical paper with the Secretariat	By 8 th Nov
6.	Richard Orrell	Provide a summary of the benefits for customers which the visualisation of data project will provide	By 22 nd Nov Complete
7.	MO PWS team	Provide the Secretariat with a short update note on the continued rollout of loggers under the SurfaceNet programme. What is achievable by end FY2019/20 and the estimated completion date of the rollout.	By 20 th Dec
8.	Secretariat/Lisa Martin	Include an update of the App roadmap at the next Reach PAG	By Reach-PAG meeting
9.	Will Lang	Conduct some sense testing on yellow warnings to check the numbers issued are not reducing the impact they have. Consider surveying areas outside the warning area as part of the ad-hoc survey.	Update for next PWSCG

	Owner	Action	Date
10.	Met Office PWS team	Ensure there is a closer and more consultative working relationship with PHE on the hot and cold service development workstream.	From now on
11.	Secretariat and Mike Gray	Bring back the PWS Planning and Prioritisation item to the January meeting	29 January 2020

1. Welcome & Introductions

DH welcomed attendees and informed the group that she would be chairing the meeting. The appointment of a new Chair of PWSCG had only recently been approved by the Minister and there are outstanding pre appointment checks to complete before the Chair can formally take up their role.

DH and the Secretariat confirmed the apologies which had been received from Nathan Travis, Colin Hord, Ian Hault, William Hall, Fiona Wilson, Jonathan McKee, Tracy Goode, Clair Tindall, Jenny Shellens, Chris Money, Paul Furlong.

Quoracy

The meeting was not quorate and under the Terms of Reference for the group an inquorate meeting may proceed in an advisory capacity to the Chair.

Any decisions made by those present need to be agreed by the other members of PWSCG ex-committee before they can be accepted as the official position of the group.

Minutes & actions from last meeting

PR sought the approval of those present to agree the minutes from the April meeting. PWSCG members present agreed they were an accurate record. Formal sign off would be sought via email with the other members ex-committee.

PR updated the group on the actions from the last meeting. Good progress across all areas. The group were informed that a meeting date has yet to be agreed to hold a PWSCG meeting in Wales but the Secretariat were working with Wales to find a mutually convenient date.

Reports

3.1 BEIS Update

JP informed the group that a new Chair of the PWSCG had recently been approved by Ministers and subject to final checks being completed would shortly take up the post. Admiral Duncan Potts is the successful candidate following a recruitment campaign over the summer. The group welcomed this news and look forward to working with the new Chair once in post.

JP spoke about the priorities for BEIS at present. Brexit remains the key priority and the department has been working hard to make sure that the policy areas it has responsibility for are prepared ahead of the 31st October. Staff have been mobilised to fill key roles but there is always the possibility that greater focus is required which may result in the need for BEIS to scale back some of its effort on the Public Weather

Service temporarily. The group will be kept up to date on any changes in that regard by the Secretariat.

JP informed the group about the outcome of the Spending Review. The SR announcement in September was setting out Resource spending for a further year. The interest within this group will be on any Budget announcement later in the autumn as this will focus on Capital budgets under which the PWS contract is classified as ESA10 which is a Research and Development classification of Capital expenditure.

JP spoke about the diligent work that had been undertaken by both BEIS, Met Office and supported by the PWSCG to set out a strong case for funding the PWS. There are key investments required such as a new supercomputer and future satellites and discussions are continuing between senior officials in BEIS and HMT.

SJ provided some additional information on the background and experience of the new Chair and explained that the Secretariat and Met Office will be providing an induction over the coming weeks. The group were asked if they could provide short biographies and their photos to form part of the induction pack.

DH took this opportunity to inform the group that her term as the Independent Member will come to an end in March 2020. The new Chair will want to consider the make up of the group going forward including that of the IM role but DH suggested that if any members knew candidates that may be suitable for the IM role to let the Secretariat know.

3.2 PWSCG Chair's Update

DH noted the report submitted by the former Chair Wyn Williams which summarised his activity and engagement since the last meeting.

3.3 Independent Member's Update

The group noted the summary report detailing the Independent Member's engagement since the last meeting.

4 FY19/20 Performance

Public Reach Update

LM provided the group with a summary of the PWS Reach activity since the last meeting. There continues to be strong performance with the App which now has over 11m total downloads. There are regularly 2m monthly users and the App ratings on both iOS and Android have improved. The long-term strategy is to focus on indirect reach, working more with partners to ensure syndicated reach of PWS outputs. Recent figures indicated there had been a drop in advertising revenue something the Met Office will look to redress.

The group were updated on the progress to deliver Milestone 2.1 which is to provide an enthusiasts area on the website. The discovery phase of the project is complete. The alpha phase of the project is taking shape and will deliver a number of user requirements such as a full screen map, high resolution global layers and probabilistic data.

Milestone 2.2 analysing user feedback to drive an increase in user satisfaction shows that people want to use weather information to help them plan their time, understand

and interpret the weather forecast and simplify user experience. Over 100k pieces of feedback received and analysed as part of this work.

The members present agreed Milestone 2.2 had been delivered and looked forward to seeing the proposed recommendations actioned by the end of the FY.

National Capability and International

MG updated the group on Met Office performance of a number of key weather metrics under PPM6. Overall performance levels are holding up well, however there have been reductions in the performance in maximum temperature at day 5 and day 7 which are below target. MG informed the group that it was not only Met Office models that had struggled with forecasting maximum temperatures, it was something competitors' models had also struggled with.

MG informed the group of the plans to improve temperature forecasts. A method to improve temperature forecasting performance has been identified and can be implemented quickly. MG said that the introduction of Neural Network (NN) as well as statistical methods in post processing systems would according to the trials performed during summer 2019 lead to a 1-2% improvement in max and min temperatures at longer lead times at sites where there are observations. The changes will be implemented in November 2019.

MG explained that in order to carry out this improvement work as a priority resources had been diverted from the IMPROVER project which will mean a delay to milestone 6.2. The Chair of PWSCG and the Secretariat were consulted in the summer about this re prioritisation and it was approved due to the immediate benefits it would bring to all users of the PWS.

DH referred to a recent example that had come to light through the App which highlighted the maximum temperature issue. There are two site locations 'Heathrow' and 'Heathrow Airport' which were showing temperatures that were about 2 degrees different. RO confirmed that this issue of the two sites would be corrected with a update to the underlying mapping gazetteer, the date of this update would be confirmed.

The group discussed the prioritisation decision taken by the Chair and Secretariat and agreed it was the right thing to do. The group discussed how to respond to the delay in the IMPROVER project as a result. The preferred approach was to accept that milestone 6.2 would not be fully met and that this would be recorded in the April report prepared by the Chair. The group also supported having a revised milestone on IMPROVER in the next CSA as well as asking the Secretariat to conduct an in depth review into the IMPROVER project.

JP enquired about the scope of the IMPROVER project and whether it improves performance across all metrics. RO confirmed that the MO are looking at performance across the UK in terms of temperature and wind direction forecasts for example. Understanding what parameters are important to the group should remain a focus. SJ spoke about the challenge of verification and that decisions about what to monitor have to be considered carefully as it has implications for cost.

The group discussed the further plans to improve temperature forecasts tackling an issue with the global model which shows a 'cool drift' over time and a poor representation of the diurnal cycle. The latter may be corrected by the assimilation of soil moisture within the unified model. Improvements are scheduled to be introduced during the PS44 release in 2020. The group were informed that more detail behind

these model developments is contained within a paper by Walters et al which will be shared with the Secretariat.

The group were provided with an update on the forthcoming parallel suite (PS43) update due for release in November which is ahead of the milestone deadline of January 2020.

The group were given an update on the visualisation work strand which exists to make it easier for operational forecasters to interrogate data. It was agreed that MO would prepare a paper to set out clearly what benefits the group will see from this work.

Record breaking UK temperatures

The group were reminded about the extreme heat event in July that led to the breaking of the all time UK high temperature record in Cambridgeshire. An explanation was given about the ratification process that had to be followed before a new record can be confirmed. The MO had to manage the story around declaring the record having been broken as many media organisations were pressing for a definitive statement to be released on the day as that was when the weather story was at its height with the media and press.

SurfaceNet

The group were informed about the deployment of new loggers as part of the SurfaceNet work which provides better access to real time data from observations. Loggers have been installed at 154 sites which represents 35% of the network which meets the milestone 6 months early. The group requested that a short update note be provided to the Secretariat on how much of the rollout could be completed by the end of the current financial year and an expected completion date.

Next generation lightning detection (LEELA)

The group were updated on the progress to deliver this milestone which is due by March 2020. The system will provide real time lightning strike information. JP enquired about the key benefits of this new system. One of the key benefits will be to distinguish between cloud to cloud and cloud to ground strikes. The group were reminded that warnings for both lightning and thunderstorms were added to the national severe weather warning service. DH enquired whether the service would be included in the App. It was confirmed that the LEELA service was not currently on the App roadmap. It was suggested that an update on the App roadmap should be covered at the next Reach PAG meeting.

EO referred to recently published research that suggested a link between thunderstorms as a trigger of asthma attacks. PHE will be looking more closely at the research and although there is a well defined research question to answer, further investigation into the causal links are required. SJ noted that the data to come out of the LEELA project could potentially help further research in this area.

International

The group were updated on the successes achieved at the WMO Congress in June 2019. The Chief Executive of the Met Office Penny Endersby was elected to the Executive Council and other Met Office staff secured influential positions within WMO. The group were also provided with an update on EUMETSAT satellites.

Weather and Warnings Highlights

WL summarised the main weather events from the summer and presented a summary of the key warnings issued. The summer was wetter than average and warmer. There were three significant hot spells with a record maximum temperature recorded on 25th August. WL noted that the UK's weather warning service is still internationally recognised as a leading service, however there are always elements that can be reviewed to make improvements. SJ spoke about the performance of the warning service for the summer rainfall events which will be looked into in more detail. JP enquired about the number of yellow warnings issued and whether by issuing so many does it reduce the overall impact of the warning. The group agreed it would be sensible to check current thinking and performance of yellow warnings and carry out some further testing. The group also discussed warnings more generally in terms of behaviour change, digital exclusion, the audience of public and responders. The group agreed that the subject of warnings should be revisited as part of the review of the next customer supplier agreement update. JP suggested that it may be worth talking to the Behavioural Insights Team.

The group discussed several other weather events from the summer including the Whaley Bridge Dam incident. An update was provided on the 'nowcasting' trials that took place over the summer. New tools have been introduced as well as upskilling forecasters in the Operations Centre. SJ enquired about applying the learning on nowcasting retrospectively to past events, to gauge the benefit it would bring to the warnings. MO informed the group that the responder workshops sought to find out how nowcasting information could get to responders given the short notice time ahead of these events. The MO confirmed that they are convening a working group to look at the future weather warning service and that a symposium will be arranged in Exeter. There are plans to run a series of responder workshops next year and to recruit 200 volunteers to test responder use of warnings. There will also be a new tool to allow public user testing. The future enhancements to the warning service will be an evolution of the current system. A Beta trial for Hazard Manager will be released in November including mobile access.

The group were also given an update on the international support MO had provided for events such as hurricane Dorian.

Storm naming

The group were updated on the latest developments on storm naming. The current storm naming season was launched at the start of November following a public call for name over the summer. The grouping which previously included the UK and Irish Met Services now includes the Dutch Met Service, KNMI. Several surveys and feedback had been gathered over the year that gives an insight into the impact that storm naming is having. The main findings demonstrated that there is enough evidence to show that storm naming is a powerful and generally positive communication tool for severe weather and warnings. The MO are recommending that a regular review of storm naming is presented to the Met Office Ops committee and PWSCG which the group supported. The group also discussed what research had been conducted into behaviour change and what makes people take action. CD noted that there needs to be a clear understanding about why storms are named and what the result is. CD spoke about her experience with flood warnings where 4-5 years ago the research into flooding information indicated that people wanted to be told what to do and the action

to take and that they need to recognise that they are at risk if they are going to take action.

Hot and Cold Communications

LM provided the group with an update on the activity undertaken to meet milestone 3.1 to report on the effectiveness of hot and cold communications. Over summer 2019 Met Office implemented communications campaigns and focused on periods of extreme heat. The group were informed about research carried out after the August bank holiday heatwave into awareness of the event. A score of 97% was recorded for respondents saying they had seen or heard about the very high temperatures forecast for the bank holiday weekend. The group were informed about the soft launch of the heatwave definition earlier in the year which aimed to provide greater clarity on areas affected, greater control of the message thereby reducing unhelpful sensationalist media hype around hot weather.

LM updated the group on work completed to investigate the need for a possible future service development to communicate extreme heat. Consultation was carried out with the public, media and emergency responders. The evidence points to a need for the PWS to provide more information to help the public make effective decisions when temperatures are forecast to be very high. EO spoke about the need to consult fully and early with PHE as they had already done a lot of work in this area. Every opportunity should be taken to avoid any overlaps and duplication of work effort. The group agreed that there needed to be further consultation and closer working with PHE on this matter. WL acknowledged that communications between MO and PHE in this area should be improved. WL and EO agreed to follow up establishing how the issue should be taken forward between the two organisations.

PWS Planning and Prioritisation

The group agreed that this item should be brought back to the PWSCG at the next meeting.

Milestone Sign Off

The group were updated on the milestones that had been delivered. The members of the PWSCG who were present agreed that they had been delivered except for the visualisation milestone for which more information will be provided.

As the meeting was not quorate the milestones would be signed off ex-committee by email.

Sign off of milestones (MS 1.2, 2.2, 3.1,6.5, 6.6, 6.7a, 6.7b & 6.7c)

7. AOB

Future PWSCG Meeting dates:

- **Wednesday 29th January 2020**
- **Thursday 30th April 2020**