



Preparing for Change

BAWAG 2022/30 Strategic Business Plan

UKIA Summer Conference Wednesday 6 July 2022

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BAWAG Membership & Technical Advisor

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Preparing for change

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Broadland Agricultural Water
Abstractors Group
Strategic Business Plan
2022-30

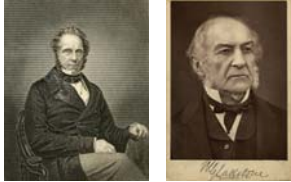
C/o Bure Farm Services
Farm Office
Lower Street
Howton
Norwich
Norfolk
NG12 8JG
June 2022


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How did we get here?



Abstraction management: regulation





Common law

Every riparian owner is thus entitled to the water of his stream in its natural flow, without **sensible diminution or increase**, and without sensible alteration in its character or quality. Any invasion of this right causing actual damage, or calculated to found a claim which may ripen into an adverse right, entitles the party injured to the intervention of the court.”

John Young and Co. v. Bankier Distillery Co 1893


Statutory law

- Water Resources Act 1963
- Abstraction licenses
- Water Authorities
- Water Act 1989
- National Rivers Authority
- Environment Act 1995
- Environment Agency


- Environment Act 2021
- Abstraction permits


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How did we get here?





Abstraction management: technical approaches



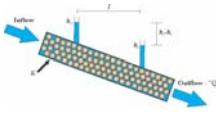






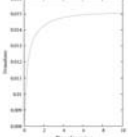
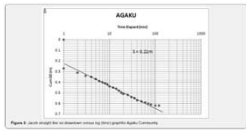


Empirical Laws



Darcys Law 1856

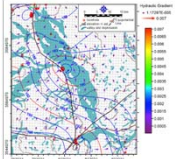

Pumping Test Analysis

Theis Solution 1935

Cooper Jacob Formula 1946

Numerical Groundwater Flow Modelling

MODFLOW 1984

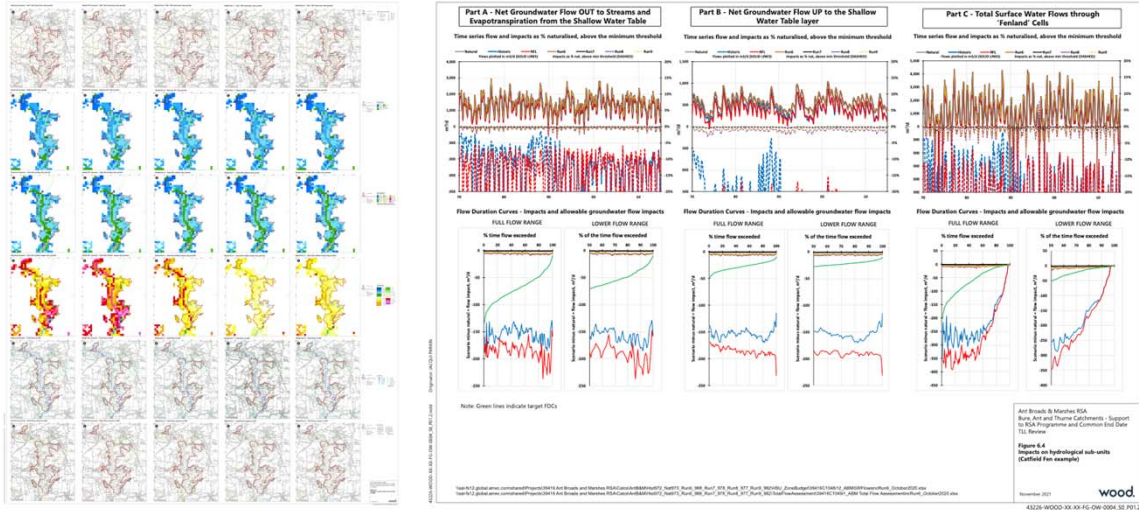
EFI 2008

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Where is here?



Quantitative environmental management systems at catchment scale



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BAWAG today



Broadland Agricultural Water Abstractors Group

- 1. Set-up in 1997 in response to CAMS & Habitats Directive**
 - Voluntary organisation
 - Over 100 members, with many concentrated in Broadland catchment
 - 14.2 Mm³/a licensed volume of abstraction (39 Ml/d)
 - Around 2/3 members use groundwater
 - Set-up as a forum to discuss policy development & implementation
- 2. Working since 2011 with Environment Agency, Natural England & others to define sustainable levels of abstraction in areas close to wetland SSSIs**
 - Complex legal & technical process
 - Expensive, time-consuming & (at times) adversarial
 - Lesson learned is that we should have been better prepared
- 3. In response, Committee & Membership committed to change**
 - Build technical & organisational capacity to engage proactively in modern abstraction management processes
 - Proposal passed unanimously at 2022 EGM & AGM with funding approved for delivery

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Vision for a future BAWAG

Options for Change process: July 2021 to March 2022

1. BAWAG Vision

- Successful food & farming businesses in Norfolk, which conserve & protect the environment

2. Mission

- Water resource management & drought planning for food & farming businesses in Norfolk

3. Values

- Collaborative, trusted, open & transparent
- Producing high quality evidence based work which is technically robust



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Goals & Objectives

What BAWAG will do & proposed indicators of success

1. Secure access to reliable, affordable & sustainable supplies of water

- Agricultural WRMPs at catchment scale
- Masterplans

2. Increase resilience in agri-environmental systems

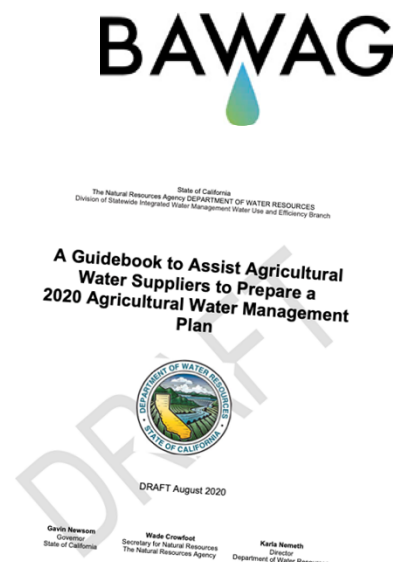
- Web-based drought monitoring system
- Agricultural Drought Plans

3. Deliver enhanced societal & environmental outcomes

- ELMS & related water quality schemes
- Partnership network

4. Build organisational & technical capacity to deliver the other goals

- Catchment level abstractor network & growth in membership
- Capacity to commission & deliver projects



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Tracking progress

Key performance indicators

Reliable, affordable & sustainable water supplies



Key Performance Indicator	Target 2022/23	Target 2023/30
Number of catchments with agri-food WRMPs	Pilot in catchments with 2024 common-end dates	All Norfolk catchments
Numerical groundwater flow modelling capability	Acquire NEAC model & complete training/up-skilling	Routine use of NEAC to support WRMP preparation

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Tracking progress

Key performance indicators

Resilient agri-environmental systems



Key Performance Indicator	Target 2022/23	Target 2023/30
Drought monitoring system	Design & specification for web-based system	Pilot & implement in all Norfolk Catchments
Masterplans	Complete Ant Valley Masterplan	Masterplans in each catchment where WRMP or Drought Plan investment is needed
Drought Plans	Pilot in catchments with 2024 common-end dates	All Norfolk catchments

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Tracking progress



Key performance indicators

Enhanced societal & environmental outcomes

Key Performance Indicator	Target 2022/23	Target 2023/30
Network of strategic partners	MoU with economic & community partner	MoU with other strategic partners
Water-related ELMS	Design & specification of Ant Valley ELMS project	Nutrient neutrality, Chalk stream and other Broadland ELM schemes
Agricultural equivalent of Water Industry National Environment Program (WINEP)	Detailed proposal agreed with NFU & CLA	Implementation of Agri-food NEP or similar

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Tracking progress

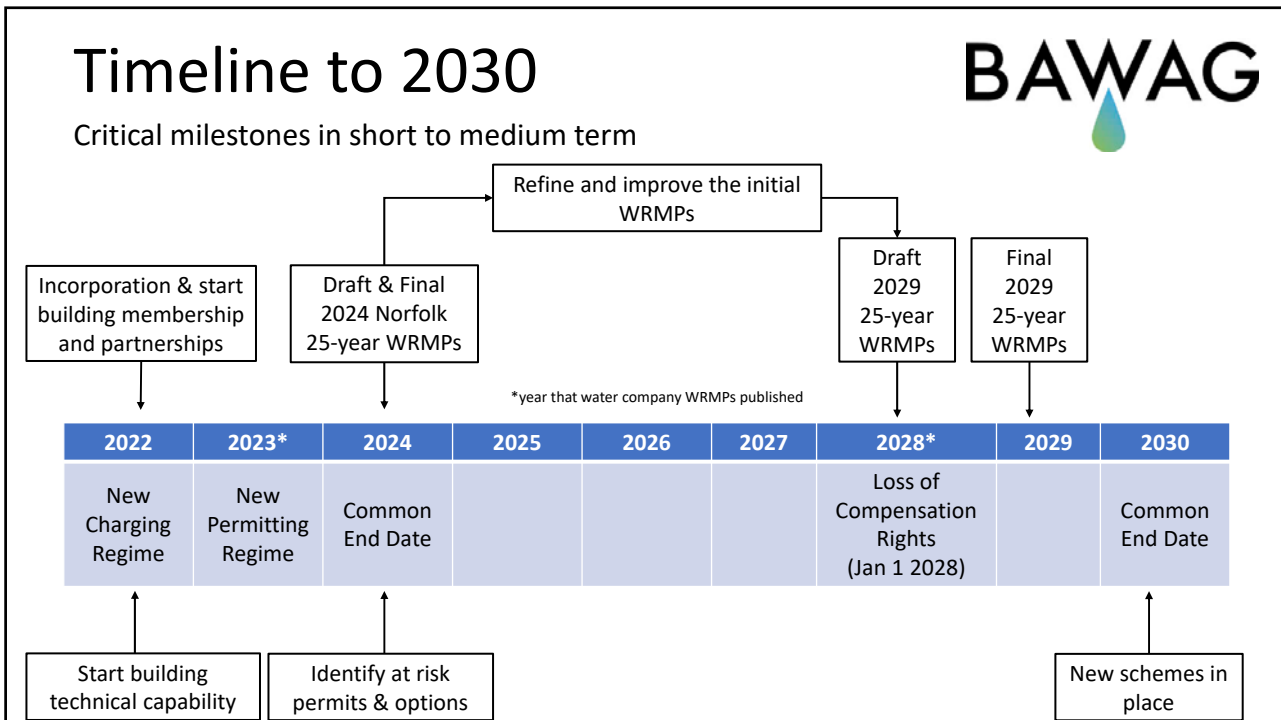


Key performance indicators

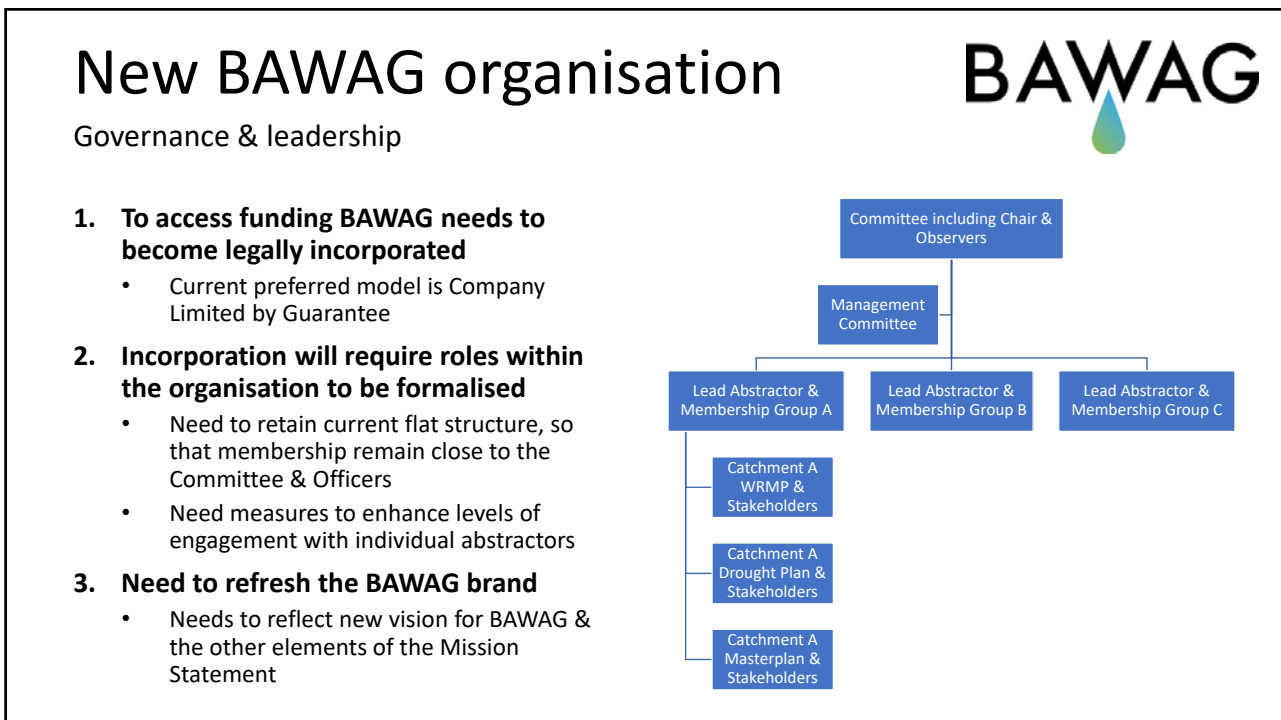
Capacity building

Key Performance Indicator	Target 2022/23	Target 2023/30
Number of members	+20% growth	75% all agri-food abstractors in Norfolk
Number of catchment networks	3 no.	All Norfolk catchments
Number of Staff	1 no.	2-3 no.

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Working in partnership

Getting the best from statutory processes

1. Critical partners

- Environment Agency
- Natural England
- NFU
- CLA

2. High priority partners

- Norfolk County Council
- Broads Authority

3. Successful collaboration will involve working with many others..

- North Norfolk District Council
- Anglian Water
- Cranfield University & UKIA
- Others WAGs & Norfolk farming & environment groups



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BAWAG

Thank you for listening
Any questions?

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