



# 5<sup>th</sup> Management Plans Work Group Turf Breakout Meeting

December 3, 2020

# Google Form

- Additional opportunity to provide input and feedback on items discussed in the meeting
- Questions are optional so you can choose what you'd like to provide input on
- Responses will be posted anonymously on our 5MP Concepts Webpage
- Please respond by 12/17/2020

Link to Google Form Questionnaire: <https://forms.gle/NLvxnvfPAfNYgSAr5>



# Agenda

- I. Welcome
- II. Recap of Previous Meetings
- III. Development of Turf Conservation Programs for the 5th Management Plans
- IV. Non-Golf Turf Program Overview
  - A. Turf Facilities Data
  - B. Current Conservation Program
- V. Potential Program Updates for Non-Golf Turf Facilities
  - A. Total Landscape vs. Total Turf
  - B. Use Dependent Application Rates
    - i. Logistics & Reporting
- VI. Closing

# Recap from Previous Meetings



# 5MP Turf Breakout - Progress

## Update from Past Meetings:

- \* Detailed existing conservation programs
- \* Discussed goals for 5MP Conservation Program
  - \* Simplicity
  - \* Data-driven
  - \* Equitable
  - \* Reasonable
  - \* Groundwater Reductions
- \* Proposed golf course allotment calculation method
- \* Discussed other turf-related facility considerations
- \* **Today:**
  - \* **Discussion of non-golf turf-related facilities**

## Next Steps for Future Meetings:

- \* Allotment calculation methodology for non-golf turf-related facilities (parks, schools, HOAs, etc.)
- \* Allotment calculation methodology for Golf Courses
- \* Other Turf-Related Facility Considerations
  - \* Effluent Adjustment
  - \* Allotment Additions

## Next Meeting:



February 24, 2021 10:00 am



# Development of Turf Conservation Programs for the 5th Management Plans



# Management Plans

A.R.S. § 45-563 (A)

*“The director shall develop a management plan for each initial active management area for each of five management periods... and shall adopt the plans only after public hearings... The plans shall include a continuing mandatory conservation program... designed to achieve reductions in withdrawals of groundwater.”*

# Fifth Management Plans

## Possible framework for redesign of the Turf Conservation Program under the 5MPs

### Needs:

- “Reduction in withdrawals of groundwater”
- Improved transparency through simplicity
- Balanced, reasonable

### Wants:

- Inclusion of realistic over-seeding practices
- Update of Application Rates
- Streamlining Categories/Additions/Limitations



# Non-Golf Turf Facilities



# Turf Facilities Data

## Number of Regulated Turf Facilities by AMA (2018)

AMA	Park	School	HOA	Cemetery	Misc.	Golf	Total
Prescott	1	1				6	8
Phoenix	149	134	112	15	6	169	586
Pinal	6	14	16		1	10	47
Tucson	30	39	2	4		43	118
Santa Cruz						3	4



# Current Non-Golf Turf Conservation Program

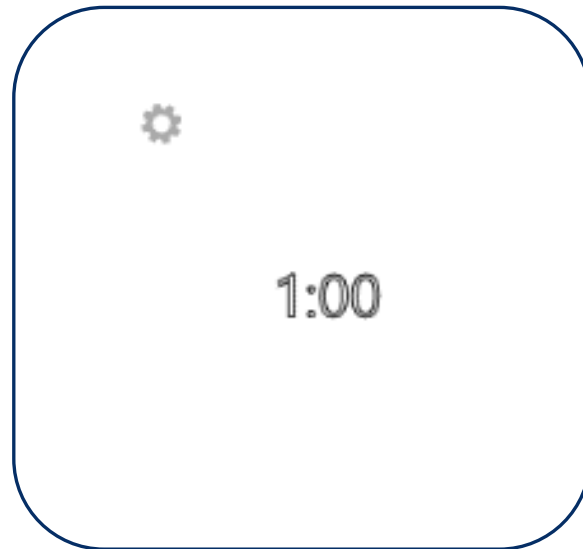
- \* Maximum annual water allotment
- \* For turf-related facilities over 10 acres water-intensive landscaped area
- \* New facilities will be limited to maximum area of 90 acres
- \* Certain exemptions for cemeteries
- \* Conservation program includes allotment additions, effluent adjustments, and flexibility accounts

- \* Maximum water allotment calculation method:
  - \* 3 Application Rates multiplied by Acres in each category

Category	Application Rate (AF/Acre)
Turf Acres	4.45 - 4.9
Low Water Use Landscaped Area	1.5
Total Water Surface Area	5.5 - 6.2



# Questions



# Potential Program Updates for Non-Golf Turf Facilities

# Non-Golf Turf Facility Size

## Potential Update for 5MP

- \* Conservation Program requirement for turf-related facilities:
  - \* Less than 10 Acres
  - \* Total landscaped area rather than water intensive landscaped area

## ADWR Recommendation

- \* Very resource intensive to implement
- \* May reconsider in the future
- \* Other ideas of how this could be implemented?

# Use Dependent Application Rates

## 4MP Allotment Calculation Method

- \* 3 Application Rate Categories:
  - \* Turfed Acres
  - \* Water Surface Area
  - \* Low Water use



## Potential 5MP Allotment Calculation Method

- \* Use-Dependent Application Rates
  - \* Ornamental
  - \* Athletic
  - \* Other?
- \* Application Rate categories for:
  - \* Low Water Use
  - \* Water Surface Area

# Use Dependent Application Rates: Potential Option 1

Category	Application Rate (AF/Acre)
Athletic Turf	5.11*
Ornamental Turf	4.43*
Low Water Use Landscaped Area	0.74
Total Water Surface Area	6.2

\*Application rates will be customized for each AMA. These values reflect the Phoenix AMA.



Subcategory	Percent Athletic	Percent Ornamental	Reduce Withdrawals of Groundwater	Equitable
Park	50%	50%		
School	50%	50%		
HOA	50%	50%		
Cemetery	50%	50%		



# Use Dependent Application Rates: Potential Option 2

Category	Application Rate (AF/Acre)
Athletic Turf	5.11*
Ornamental Turf	4.43*
Low Water Use Landscaped Area	0.74
Total Water Surface Area	6.2

\*Application rates will be customized for each AMA. These values reflect the Phoenix AMA.

Subcategory	Percent Athletic	Percent Ornamental	Reduce Withdrawals of Groundwater	Equitable
Park	25%	75%		
School	75%	25%		
HOA	0%	100%		
Cemetery	50%	50%		



# Logistics & Reporting

- \* Initial allotment is based on assumed default breakdown of turf type unless documentation is provided stating otherwise
  - \* Example: A park with more than 25% athletic fields could submit a form requesting that their allotment reflect the actual percentage.
- \* Documentation could provide an “Allotment Addition”
  - \* Each type of facility would have a maximum allotment addition for each category of turf

# Questions

1:00

- \* Do you have comments about an allotment calculation method using use-dependent application rates?
- \* Are either of the potential turf percentage breakdown reasonable?
- \* Do you have other ideas for potential methods to update the non-golf turf facilities conservation program?
- \* Other Questions/Comments?

# Closing Comments



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- \* **Other Turf-Related Facility Considerations**
  - \* **Effluent Adjustment**
  - \* **Allotment Additions**

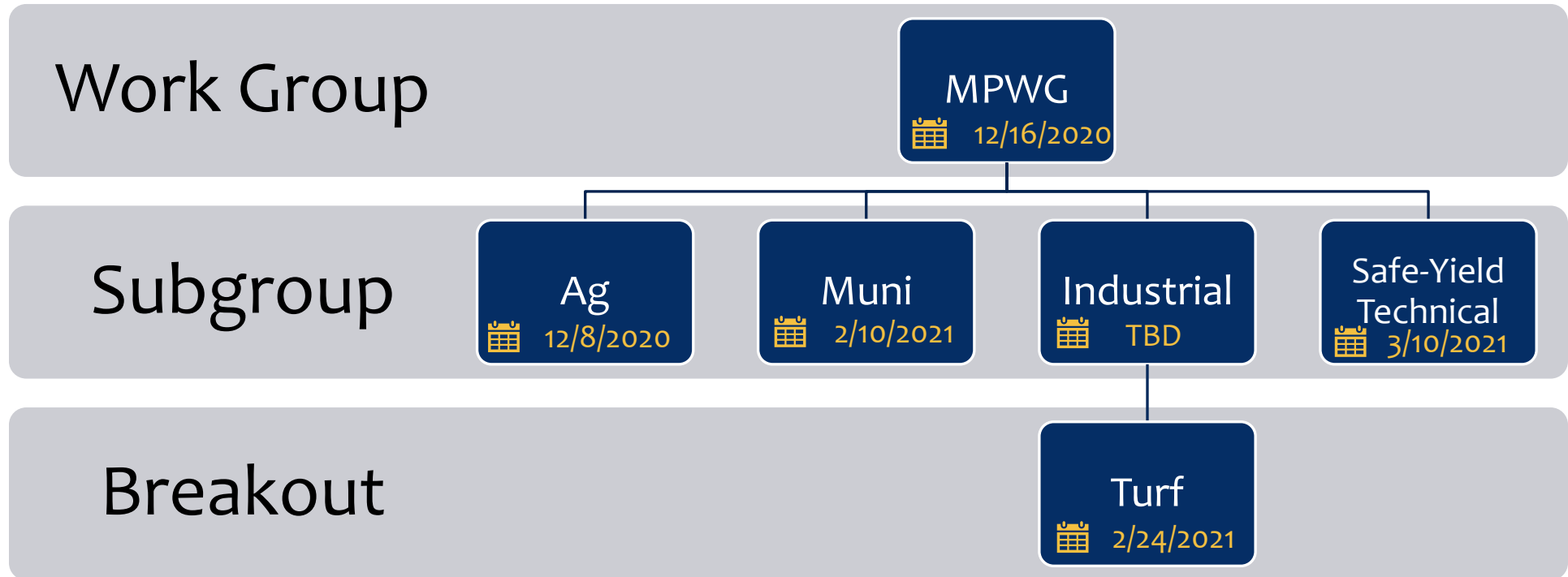
## Next Meeting:



February 24, 2021 10:00 am



# MPWG Subgroups



# Questions?

[managementplans@azwater.gov](mailto:managementplans@azwater.gov)

Management Plans Work Group:  
[new.azwater.gov/5MP](http://new.azwater.gov/5MP)

Full Text of Management Plans:  
[new.azwater.gov/ama/management-plans](http://new.azwater.gov/ama/management-plans)