

Automated Geospatial Watershed Assessment (AGWA) Tool Demonstration and Training Workshop Agenda

Date: 13-14 (Thurs-Fri.) October 2016

Location: Room 328, Biological Sciences East, Univ. of Arizona, Tucson, AZ

This two-day training course provides an introduction to the AGWA tool that parameterizes and runs two watershed runoff and erosion models: KINEROS2 and SWAT. The AGWA tool has been designed to investigate the hydrologic impacts of land-cover/land-use change. Through an intuitive interface in ArcMap, and requiring relatively little hydrologic expertise from the user, AGWA identifies areas that are more susceptible to land use impacts and evaluates different management scenarios and/or alternative futures. There will also be specific training for using KINEROS2, and learning to manipulate input files outside of the AGWA framework to address field- and small watershed-scale modeling. Several tutorial tracks will be available that highlight AGWA tools and functionality, including, but not limited to: 1) post-fire watershed assessments, 2) alternative futures and BMPs, 3) green infrastructure 4) stock pond/erosion control dams and 5) better representation of land use and watershed characteristics with KINEROS2. The training also provides an optional ~2 hour ESRI ArcMap refresher for those whose GIS skills may be a bit rusty. If you are not an everyday ArcMap user, this refresher will make the subsequent training much smoother.

Trainers:

Phil Guertin, University of Arizona
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Day 1 (Thursday October 13)

Session I – ESRI ArcGIS Refresher

08:30 – 08:40	Welcome and Introductions
08:40 – 09:45	Refresher: ArcMap basics (Guertin)
09:45 – 10:00	Break
10:00 – 10:20	AGWA Data Requirements and Data Organization (Guertin/Burns)
10:20 – 12:00	Tutorial one: Data Management Tutorial (Burns/Guertin)
12:00 – 01:00	Lunch (on your own, multiple options within walking distance)

Session II - Introduction to AGWA

01:00 – 02:00	AGWA Background, hydrologic modeling basics presentation (Goodrich)
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<https://www.tucson.ars.ag.gov/agwa>

<https://www.epa.gov/water-research/automated-geospatial-watershed-assessment-agwa-tool-hydrologic-modeling-and-watershed>

02:00 – 04:00	Tutorial two, pick from: <ul style="list-style-type: none"> • AGWA: Land Cover Change and Hydrologic Response – San Pedro • AGWA: Land Cover Change and Hydrologic Response – South Platte
04:00 – 05:00	Review on how AGWA works and on the GIS data layers used to generate the derivative parameters (Guertin/Goodrich)

Day 2 (Friday October 14)

Session III – Advanced AGWA Tools and Tutorials

08:30 – 09:00	Overview of KINEROS2: Major model components and limitations (Goodrich/Unkrich)
09:00 – 09:40	Background and Applications of: <ul style="list-style-type: none"> • AGWA Green Infrastructure Tool (Korgaonkar) • Pond Tool (Barlow) • AGWA for Post-Fire Assessment (Burns/Barlow)
09:40 – 10:00	Break
10:00 – 12:00	Tutorial three, pick from: <ul style="list-style-type: none"> • Assessing Constructed Wetlands for development mitigation • Assessing Detention Ponds for development mitigation • Assessing the Influence of Ponds • BAER Process Tutorial (continuation of Data Management tutorial) • BAER Post-fire Treatment Tutorial • Assessing Post-development effects and the impact of Green Infrastructure • KINEROS improved land use representation tutorial • Whetstone Land Cover Modification Tutorial • Whetstone Rainwater Harvesting Tutorial
12:00 – 01:00	Lunch (on your own, multiple options within walking distance)
01:00 – 01:30	Review of AGWA Management Toolkit
01:30 – 02:30	Manipulation of KINEROS2 parameter files to represent best management practices, detention ponds, and urban development, and adjustment of KINEROS2 parameters using observed data (Unkrich/Goodrich)
02:30 – 04:00	Tutorial four, pick from: <ul style="list-style-type: none"> • Assessing Constructed Wetlands for development mitigation • Assessing Detention Ponds for development mitigation • Assessing the Influence of Ponds • BAER Process Tutorial (continuation of Data Management tutorial) • BAER Post-fire Treatment Tutorial • Assessing Post-development effects and the impact of Green Infrastructure • KINEROS improved land use representation tutorial • Whetstone Land Cover Modification Tutorial • Whetstone Rainwater Harvesting Tutorial
04:00 – 04:30	Wrap-up, review, questions, future directions