



Smart Management for
Small Water Systems

Financial Resiliency for Small Water Systems

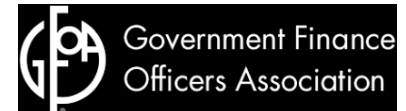
Concord, NH
October 3, 2018



UNC
ENVIRONMENTAL
FINANCE CENTER



NADO
NATIONAL ASSOCIATION OF DEVELOPMENT ORGANIZATIONS
RESEARCH FOUNDATION



This program is made possible under a cooperative agreement with the US EPA.



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Housekeeping



CEU Certificates

If you need a CEU certificate, you will need to confirm the following on the roster today before you leave:

- Is your name spelled correctly?
- Did you provide an email address UNIQUE TO YOU? A unique email address is required to receive your certificate.
- Did you mark the checkbox that you need a certificate?

Within 30 days of the training, you will receive an email with instructions to print your certificate. Emails from EFCN may be blocked or go to your Junk mail. To avoid this issue, add wwwhipps@syr.edu to your email Contacts or check your Junk mail frequently.

EFCN will apply to the water operator state licensing agency for CEU preapproval when applicable. You may be awarded CEUs by your agency. It is your responsibility to confirm with the agency that training meets relevancy criteria established for your license type as some agencies may not apply CEUs to your license if the training topic is not relevant to your position.

EFCN follows the IACET Standard of CEU calculation.

0.1 CEU = 1 Contact Hour or 1 Professional Development Hour

Questions? Please contact wwwhipps@syr.edu

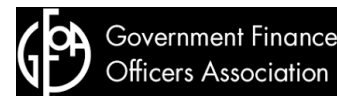


Environmental Finance Center Network (EFCN)

The Environmental Finance Center Network (EFCN) is a university-based organization creating innovative solutions to the difficult how-to-pay issues of environmental protection and improvement. The EFCN works with the public and private sectors to promote sustainable environmental solutions while bolstering efforts to manage costs.

The Small Systems Program Team

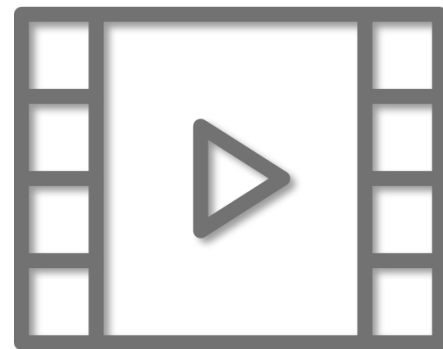
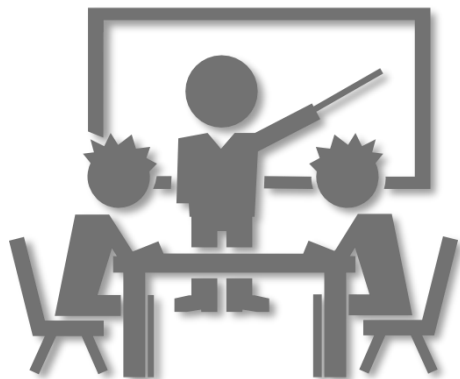
- Environmental Finance Center at The University of North Carolina at Chapel Hill
- Southwest Environmental Finance Center at the University of New Mexico
- Syracuse University Environmental Finance Center
- Environmental Finance Center at Wichita State University
- EFC West
- Environmental Finance Center at the University of Maryland
- New England Environmental Finance Center at the University of Southern Maine
- Great Lakes Environmental Infrastructure Center
- Government Finance Officers Association (GFOA)
- National Association of Development Organizations (NADO)





Smart Management for
Small Water Systems

Smart Management for Small Water Systems Program



Areas of Expertise



Asset Management



Rate Setting and Fiscal Planning



Leadership Through Decision-making and Communication



Water Loss Reduction



Energy Management Planning



Accessing Infrastructure Financing Programs



Workforce Development



Water Conservation Finance and Management



Collaborating with Other Water Systems



Resiliency Planning



Managing Drought



Quick Introductions

1. Name?
2. Organization?
3. Responsibility?
4. Details on your water system
5. What are you most proud of at your water system?
6. What is your biggest issue?



Workshop Objectives

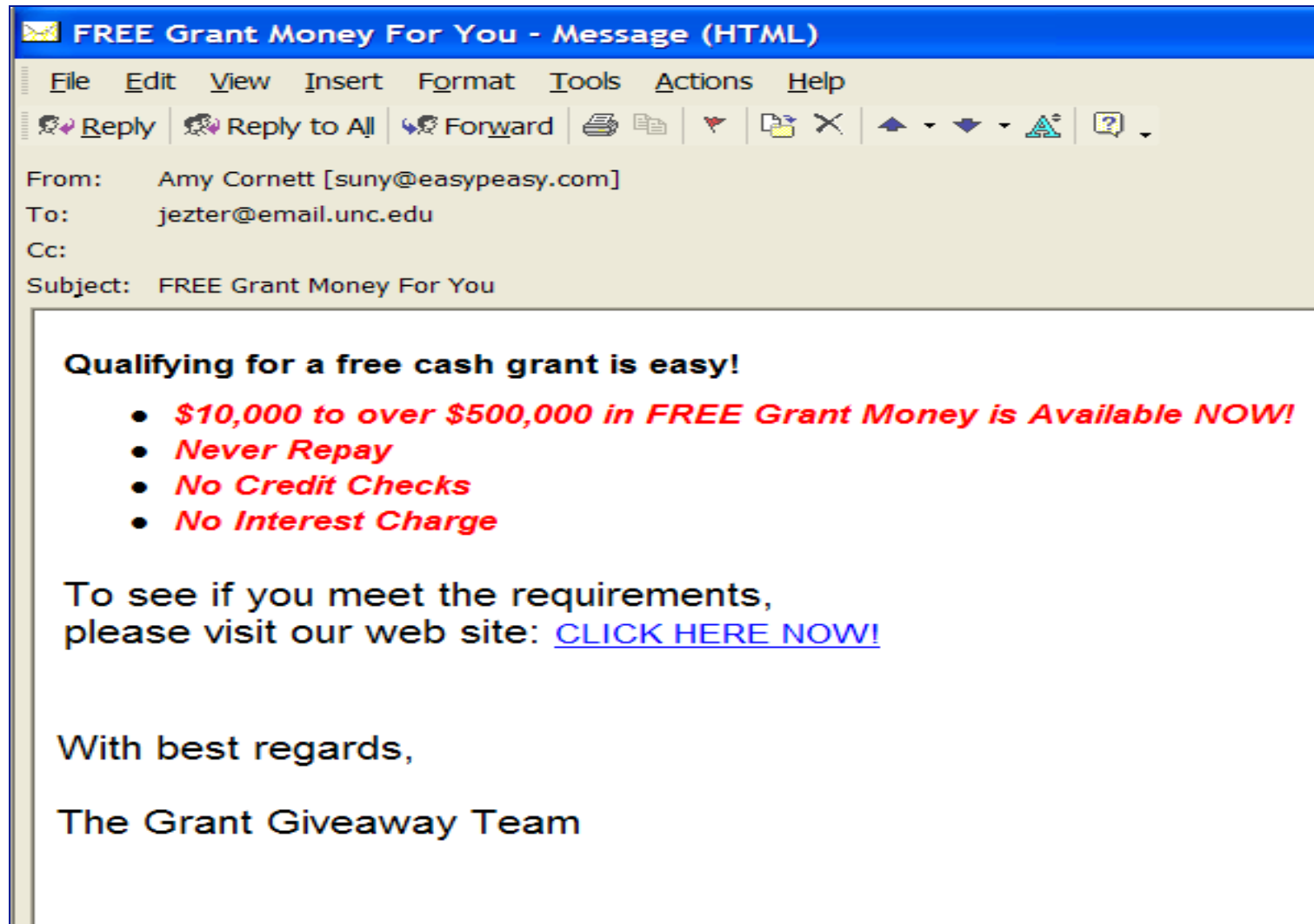
- Have the right staff to achieve system goals
- Learn how to plan for and finance your water system now and into the future
- Provide forum for sharing finance and management perspectives, ideas, and experiences



Agenda

- Infrastructure Funding Programs
- Water Finance 101
- Workforce Development
- Long Term System Planning
- Revenues and Rate Design

Topics Not Covered





World » Nigeria's anti-corruption unit finds \$43 million cash in Lagos apartment

Live TV

U.S. Edition +



Nigeria's anti-corruption unit finds \$43 million cash in Lagos apartment

By Yemisi Adegoke, CNN

Updated 10:03 AM ET, Fri April 14, 2017



Source: CNN

Watch: Millions seized from Nigerian apartment 01:14

Story highlights

Nigeria's anti-corruption agency discovered \$43 million in cash at a Lagos apartment

This is the latest in a string of busts thanks to a new whistleblowing policy

Lagos (CNN) — The Nigerian anti-corruption unit discovered more than \$43 million in US dollars at an upscale apartment in Lagos.

The anti-graft agency said in a statement it raided the apartment Tuesday after a tipoff about a "haggard"

Top stories



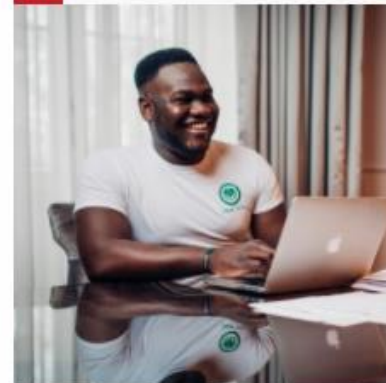
MLB team spent \$900M, still doesn't have a ring



Conservatives accuse the Pope of spreading heresy

Ad

WorldRamit



How to keep close to home

"I still love Nigeria and stay in touch with friends and family there." - Akin.

Infrastructure Funding Programs



40 Years



COBANK™

Building Better Neighborhood





Water Finance 101

Glenn Barnes

Environmental Finance Center

The University of North Carolina at Chapel Hill

919-962-2789

glennbarnes@sog.unc.edu



Session Objectives

- Learn how to think about your water system as a financial entity
- Understand some basic financial facts about water systems across the country



Let's Start With the Basics

- What does your water system do?



Water Systems Serve Multiple Purposes

Sometimes Those Purposes Conflict

- 1) System serves an important **environmental and health purpose** -- protecting community's water resources and supplying community with highest quality drinking water.



Dr. John L. Leal

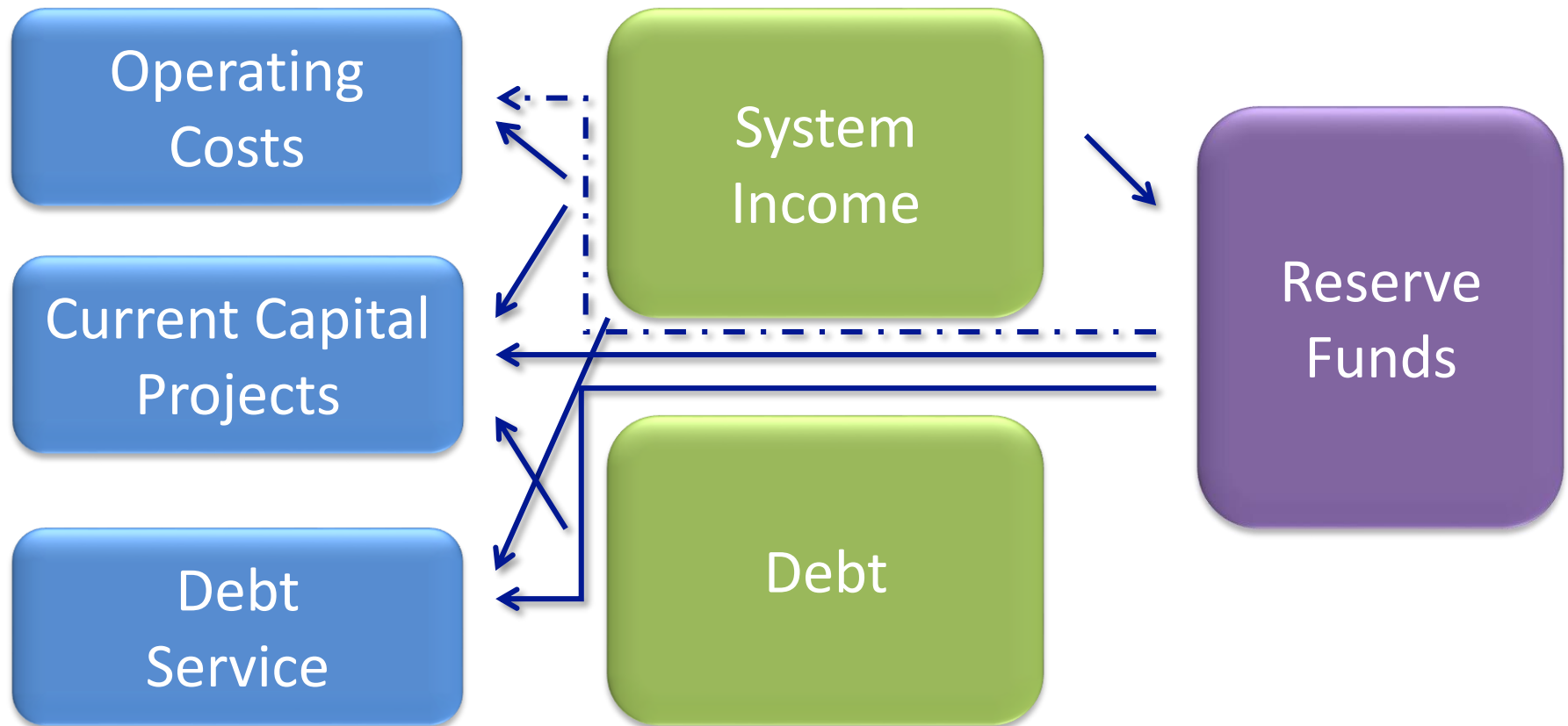


Water Systems Serve Multiple Purposes

Sometimes Those Purposes Conflict

- 1) System serves an important **environmental and health purpose** -- protecting community's water resources and supplying community with highest quality drinking water.
- 2) System serves an important **public service** – providing community with basic services that everyone in the community can afford.
- 3) System serves as a well managed **public enterprise** – putting into practice forward-thinking sustainable business practices.

Water System Finance Diagram





Three Types of Costs

- **Operating Costs**—what you need to run the system day in and day out
- **Capital Costs**—rehabilitation and replacement of existing infrastructure and new infrastructure
- **Debt Service**—what you owe on loans and bonds



Two Types of Revenues

- **System Income**—Money from rates, tap fees, system development charges, grants, penalties, other sources
 - Note: To be a true enterprise fund, not taxes!
- **Debt**—Money from bonds and loans



Many Types of Reserve Funds

- **Capital Reserve Fund**—Infrastructure rehabilitation and replacement
- **Repair Fund**—Known, ongoing maintenance issues
- **Emergency Fund**—Unknown, unanticipated maintenance issues
- **Rainy Day Fund**—Unexpected revenue shortfalls



How Much Do You Need In Your Reserves?

- It depends
- Enough to pay for your most expensive piece of equipment?
- Enough to cover your costs if you had no revenue for two months?
- Enough to cover the projects in your capital improvement plan?

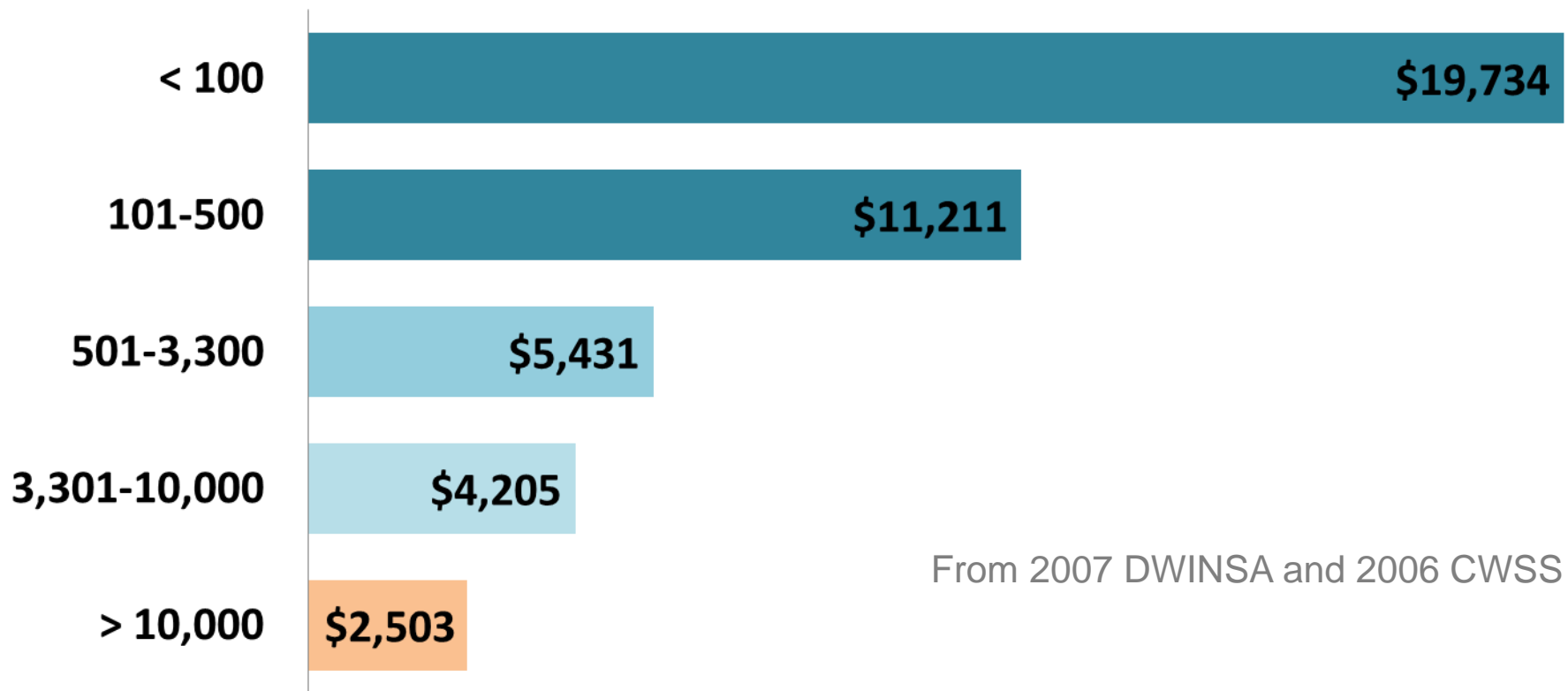


Why does system size matter?

What's the issue with
small systems?



The Infrastructure Needs Per Residential Connection are Much Greater for Small Systems

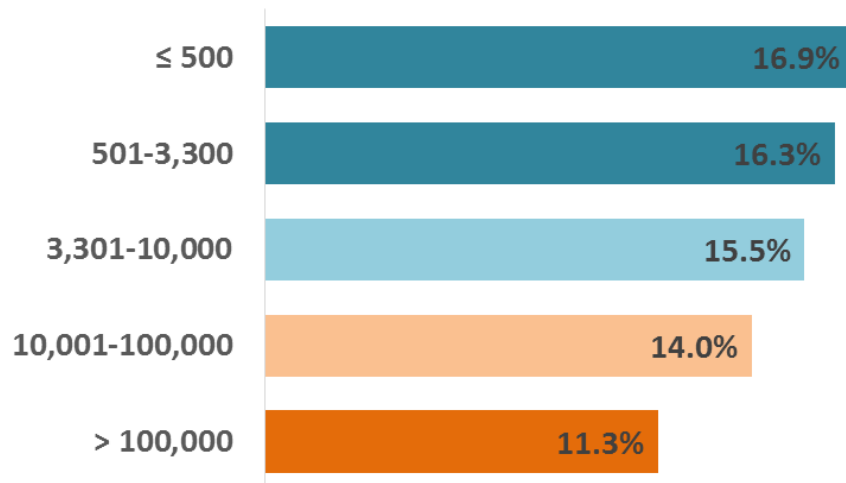


From 2007 DWINSA and 2006 CWSS

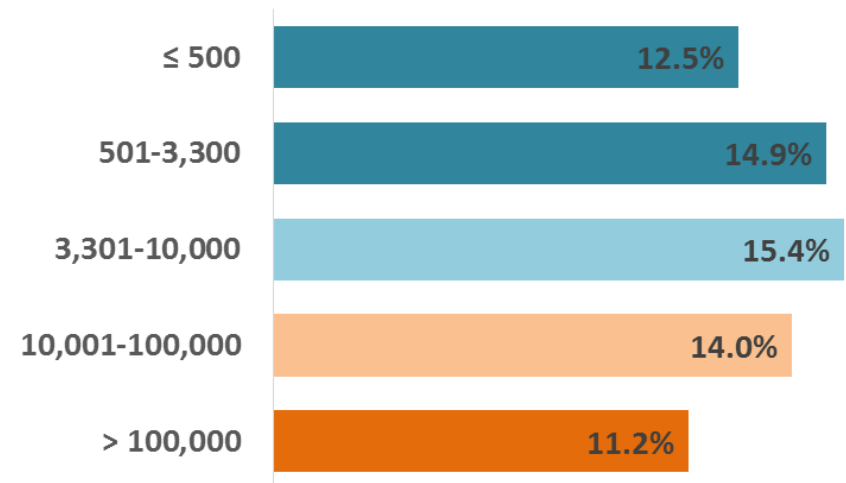


And Small Systems have higher numbers of annual health violations

Community Water Systems



All Systems



From SDWIS Data, July 1st 2015- June 30th 2016